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Report No: PAD4225

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
PROGRAM APPRAISAL DOCUMENT

ON A

PROPOSED LOAN

IN THE AMOUNT OF US\$150 MILLION

TO

INDIA

FOR A

CHENNAI CITY PARTNERSHIP: SUSTAINABLE URBAN SERVICES PROGRAM (P175221)

PROGRAM-FOR-RESULTS

September 8, 2021

Urban, Resilience And Land Global Practice
South Asia Region

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CURRENCY EQUIVALENTS
(Exchange Rate Effective March 31, 2021)

Currency Unit = US Dollar (US\$)

US\$1.00 = INR 73.11

INR 1.00 = US\$0.01

FISCAL YEAR
April 1 – March 31

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**ABBREVIATIONS AND ACRONYMS**

AIIB	Asian Infrastructure Investment Bank
APR	Annual Program Report
CCP	Chennai City Partnership
CMA	Chennai Metropolitan Area
CMDA	Chennai Metropolitan Development Authority
CMRL	Chennai Metro Rail Company
CMWSSB	Chennai Metropolitan Water Supply and Sewerage Board
CPF	Country Partnership Framework
CSO	Civil Society Organization
C-SUSP	Chennai Sustainable Urban Services Program
CUMTA	Chennai Unified Metropolitan Transport Authority
DLI	Disbursement-Linked Indicator
DLR	Disbursement-Linked Result
ESSA	Environmental and Social Systems Assessment
FM	Financial Management
GCC	Greater Chennai Corporation
GDP	Gross Domestic Product
GeM	Government e-Marketplace
GoTN	Government of Tamil Nadu
GHG	Greenhouse Gas
GRM	Grievance Redress Mechanism
IA	Implementing Agency
IFSA	Integrated Fiduciary Systems Assessment
IRR	Internal Rate of Return
IRT	Institute of Road Transport
IVA	Independent Verification Agent
M&E	Monitoring and Evaluation
MAWS	Municipal Administration and Water Supply
MTC	Metropolitan Transport Corporation
NGO	Nongovernmental Organization
NMT	Nonmotorized Transport
O&M	Operations and Maintenance
PAP	Program Action Plan
PDO	Program Development Objective
PforR	Program for Results
POM	Program Operations Manual
SCD	Systematic Country Diagnostic
SWM	Solid Waste Management
TPD	Tons Per Day
TNIDB	Tamil Nadu Infrastructure Development Board
ULB	Urban Local Body
VGf	Viability Gap Funding
WRD	Water Resources Department
WRM	Water Resource Management
WSS	Water Supply and Sewerage



TABLE OF CONTENTS

DATASHEET.....1

I. STRATEGIC CONTEXT1

A. Country Context.....1

B. Sectoral (or Multi-Sectoral) and Institutional Context.....3

C. Relationship to the CPS/CPF and Rationale for Use of Instrument.....6

II. PROGRAM DESCRIPTION.....7

A. Government Program.....7

B. Theory of Change9

C. PforR Program Scope.....11

D. Program Development Objective(s) (PDO) and PDO Level Results Indicators.....18

E. Disbursement Linked Indicators and Verification Protocols18

III. PROGRAM IMPLEMENTATION19

A. Institutional and Implementation Arrangements.....19

B. Results Monitoring and Evaluation20

C. Disbursement Arrangements21

D. Capacity Building.....21

IV. ASSESSMENT SUMMARY22

A. Technical (including program economic evaluation)22

B. Fiduciary25

C. Environmental and Social27

V. KEY RISK.....31

ANNEX 1: ADJUSTMENTS TO THE INDIA WORLD BANK GROUP COUNTRY PARTNERSHIP STRATEGY IN RESPONSE TO COVID-19 PANDEMIC33

ANNEX 2. RESULTS FRAMEWORK MATRIX36

ANNEX 3. DISBURSEMENT LINKED INDICATORS, DISBURSEMENT ARRANGEMENTS AND VERIFICATION PROTOCOLS51

ANNEX 4. TECHNICAL ASSESSMENT (SUMMARY)68

ANNEX 5. FIDUCIARY SYSTEMS ASSESSMENT (SUMMARY)78

ANNEX 6. PROGRAM ACTION PLAN88

ANNEX 7. SUMMARY ENVIRONMENTAL AND SOCIAL SYSTEMS ASSESSMENT91

ANNEX 8. IMPLEMENTATION SUPPORT PLAN97



DATASHEET

BASIC INFORMATION

Country(ies)	Project Name	
India	Chennai City Partnership: Sustainable Urban Services Program	
Project ID	Financing Instrument	Does this operation have an IPF component?
P175221	Program-for-Results Financing	No

Financing & Implementation Modalities

<input type="checkbox"/> Multiphase Programmatic Approach (MPA)	<input type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Contingent Emergency Response Component (CERC)	<input type="checkbox"/> Fragile within a non-fragile Country
<input type="checkbox"/> Small State(s)	<input type="checkbox"/> Conflict
<input type="checkbox"/> Alternate Procurement Arrangements (APA)	<input type="checkbox"/> Responding to Natural or Man-made Disaster
<input type="checkbox"/> Hands-on Enhanced Implementation Support (HEIS)	
Expected Project Approval Date	Expected Closing Date
10-Jun-2021	31-Dec-2026

Bank/IFC Collaboration

No

Proposed Program Development Objective(s)

To strengthen institutions and improve quality and financial sustainability of selected urban services in the Chennai Metropolitan Area.

Organizations

Borrower : India

Implementing Agency : State of Tamil Nadu



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COST & FINANCING

SUMMARY

Government program Cost	1,458.00
Total Operation Cost	701.00
Total Program Cost	701.00
Total Financing	701.00
Financing Gap	0.00

Financing (USD Millions)

Counterpart Funding	401.00
Borrower/Recipient	401.00
International Bank for Reconstruction and Development (IBRD)	150.00
Cofinancing - Other Sources (IFIs, Bilaterals, Foundations)	150.00
Asian Infrastructure Investment Bank	150.00

Expected Disbursements (USD Millions)

Fiscal Year	2021	2022	2023	2024	2025	2026	2027
Absolute	0.00	3.00	20.00	35.00	45.00	40.00	7.00
Cumulative	0.00	3.00	23.00	58.00	103.00	143.00	150.00



INSTITUTIONAL DATA

Practice Area (Lead)

Urban, Resilience and Land

Contributing Practice Areas

Health, Nutrition & Population, Transport, Water

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

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

COMPLIANCE

Policy

Does the program depart from the CPF in content or in other significant respects?

Yes No

Does the program require any waivers of Bank policies?

Yes No



Legal Operational Policies

	Triggered
Projects on International Waterways OP/BP 7.50	No
Projects in Disputed Areas OP/BP 7.60	No

Legal Covenants

Sections and Description

[Section I.B.1 of the Schedule to the Program Agreement] The Program Implementing Entity shall no later than one (1) month from the Effective Date, establish and thereafter maintain throughout the period of implementation of the Program, a Program Steering Committee, chaired by the Chief Secretary with the Chief Executive Officer of TNIDB as the ex-officio member secretary, with functions, composition, and responsibilities acceptable to the Bank; to oversee Program implementation activities and provide strategic guidance and policy direction on the Program activities.

Sections and Description

[Section I.B.2 of the Schedule to the Program Agreement] The Program Implementing Entity shall cause TNIDB to maintain, throughout the period of implementation of the Program, a Program Management Unit (“PMU”), headed by its Chief Executive Officer as the Program Director which unit shall be provided with staff, inadequate number, each with terms of reference, qualifications and experience satisfactory to the Bank. The PMU shall remain vested with powers, financial resources, functions, and competencies, acceptable to the Bank, too, among other things, coordinate the implementation of the Program activities by each of the Implementing Agencies in accordance with their respective mandate.

Sections and Description

[Section I.B.3 of the Schedule to the Program Agreement] The Program Implementing Entity shall ensure each of the Implementing Agencies designate, within two (2) months of the Effective Date, a nodal officer to facilitate the coordination of the Program activities implemented under its authority to be maintained, through the period of implementation of the Program.

Sections and Description

[Section I.D.1a of the Schedule to the Program Agreement] The Program Implementing Entity shall cause TNIDB to, and TNIDB shall no later than three (3) months after the Effective Date prepare and adopt the Project Operational Manual in form and substance satisfactory to the Bank.

Sections and Description



[Section I.E.1a of the Schedule to the Program Agreement] The Program Implementing Entity shall cause TNIDB to, and TNIDB shall [appoint within three (3) months from the Effective Date, and thereafter] maintain, at all times during the implementation of the Program, one or more Independent Verification Agent(s) under terms of reference acceptable to the Bank, to verify the data and other evidence supporting the achievement of one or more DLRs as set forth in the table in Schedule 4 to the Loan Agreement and recommend corresponding payments to be made, as applicable.

Conditions



I. STRATEGIC CONTEXT

A. Country Context

1. **India's gross domestic product (GDP) growth had been slowing in the three years before the COVID-19 outbreak, the onset of which is expected to have had a significant impact.** Growth had moderated from an average of 7.4 percent during FY15/16–FY18/19 to an estimated 4.0 percent in FY19/20. The slowdown was caused by a decline in private consumption growth and shocks to the financial sector. Against this backdrop of preexisting weakness, the outbreak of COVID-19 has had a significant impact, with real GDP contracting by 7.3 percent in FY20/21. On the fiscal side, the general government deficit widened significantly in FY20/21, owing to higher spending and low revenues. Given the significant uncertainty pertaining to epidemiological developments, real GDP growth for FY21/22 is likely to be in the range of 7.5–12.5 percent. The expected recovery will put India among the world's fastest-growing economies¹.

1. **Although India has made remarkable progress in reducing absolute poverty in recent years, the COVID-19 outbreak has reversed the course of poverty reduction.** Between 2011–12 and 2017, India's poverty rate is estimated to have declined from 22.5 percent to values ranging from 8.1 percent to 11.3 percent. However, recent projections of GDP per capita growth, considering the impact of the pandemic, suggest that poverty rates in 2020 have likely reverted to estimated levels in 2016². Labor market indicators from high-frequency surveys—including from the Centre for Monitoring Indian Economy—suggest that vulnerability has increased, particularly for urban households. Overall, the pandemic and its economic impacts are estimated to have raised urban poverty, creating a set of 'new poor' that are relatively more likely to be engaged in the non-farm sector and to have received at least secondary education.

2. **India's economic growth is closely associated with urbanization, with cities offering a pathway to rapid poverty alleviation and the achievement of middle-income status.** Since 1991, urban growth has emerged as a major driver of poverty reduction in both urban and rural areas—accounting for about 80 percent of the total fall in poverty.³ Rising labor earnings due to labor movement from agriculture to non-farm work and an unprecedented rise in wages for unskilled labor propelled the rapid decline of poverty in India. By 2030, 70 percent of new employment is expected to be generated in cities, and the number of urban households in the middle class is likely to more than quadruple. Urbanization is placing cities as the main engines of economic opportunities and shared prosperity for the country.

3. **India's urban transition is unprecedented in scale.⁴ If managed well, it can reduce the emissions intensity of India's future growth path and contribute to global climate targets.** By 2040, India's urban population will grow

¹ The IMF projects that India's economy will grow at 11.5 in FY22.

² To address them, the Government of India has deployed significant resources toward social assistance, including toward urban poor households and migrants.

³ Datt, G, M. Ravallion and R. Murgai 2016. "Growth, Urbanization and Poverty Reduction in India," *NBER Working Paper No. w21983*. The authors note that the contribution to poverty reduction happened both directly, through urban growth having a larger impact on *urban poverty*, but even more importantly indirectly, through urban growth having a substantial impact on *rural poverty*. This indicates, they argue, that the growth of cities, which have both bigger populations and higher productivity, has been good for poverty reduction as a whole in India.

⁴ It will exceed the scale of China's urbanization (IIHS, 2020. The potential of urbanization to accelerate post-Covid recovery. Report to the XV Finance Commission).



by an estimated 270 million people, while its rural population is expected to fall by 40 million.⁵ Despite the scale and speed of its urbanization, India is expected to reach 50 percent urbanization only by 2051.⁶ Much of India's urbanization is yet to occur and most buildings and infrastructure that will exist in 2040 are yet to be built.⁷ Consequently, India has an opportunity to shape its emerging urban footprint and opt for a more resilient and lower-carbon urban future. Three areas need special attention. First, it is important to plan for and manage the emerging urban footprint—its physical location, extent, and form. Urban growth needs to be directed away from high-hazard and high-vulnerability areas and key planning decisions need to be taken – compact versus sprawling, high-rise versus low-rise, formal versus informal. Second, infrastructure and building codes and practices need to become greener and resilient. Third, service delivery—including water, sanitation, solid waste management, mobility, electricity—approaches need a quantum shift to ensure inclusive coverage, reliability and sustainability. These decisions will shape the nature of energy demand, transport demand, demand for energy-intensive materials such as steel and cement and, thereby, total urban emissions.

4. **The southern State of Tamil Nadu is one of India's most urbanized states and an economic powerhouse.** By 2011, nearly half (48.4 percent) of Tamil Nadu's population of 72.1 million was already urban. With the rapid urbanization that is underway, the share of the urban population is expected to increase to 63 percent by 2030. Between 2015 and -2020, the GSDP of Tamil Nadu (at constant prices) grew at 7.99 percent--faster than the national GDP growth rate (at constant prices) of 6.71 percent during the same period.

5. **The Chennai Metropolitan Area (CMA) epitomizes both the economic potential and vulnerabilities of the State's rapid urbanization.** The CMA is the fourth-most populous metropolitan area in India and encompasses an area of 1,189 sq km. With an estimated population of about 10.9 million people and an estimated US\$78.6 billion GDP, CMA is also rated as the fourth-largest economy in India. Its diverse economy includes electronic manufacturing, automobiles, and IT/IT-enabled services. The CMA is highly vulnerable to natural disasters, climate change and, as the COVID-19 emergency revealed, to pandemics. Frequent disaster events—such as the devastating flood in 2015, debilitating drought in 2018 and 2019, Cyclone Gaja in 2018, and the ongoing COVID-19 pandemic (2020)—are inflicting substantial economic losses, causing loss of life and livelihoods, and adversely impacting infrastructure and service delivery.

6. **The Government of Tamil Nadu (GoTN) is committed to making Chennai a world-class city—one that is green, livable for all residents, competitive, and resilient to climate change and other shocks.** Given that Chennai is the most significant metropolitan area and economic growth engine of the state, the development of the CMA is prioritized within the Tamil Nadu 2023 Vision that is currently under implementation. Accordingly, the government has already been investing heavily in high-quality infrastructure assets in CMA. GoTN finds, however, that financing for infrastructure assets is neither automatically translating into massive improvements in service delivery for citizens nor transforming the city rapidly enough. Therefore, as a key next step, GoTN is **commencing a program—Chennai 2030—that brings fresh impetus to transformation of the city and its services and, simultaneously, accelerates Chennai's shift to a growth trajectory that is lower-carbon and more resilient.** The Chennai 2030 program not only aims to improve Chennai's livability, productivity, and carbon footprint but also to serve as a **"lighthouse"**—in that experience from the program is expected to directly **inform development approaches for**

⁵International Energy Agency (IEA), India Energy Outlook, 2021.

⁶ Revi et al., 2015, as cited in IHS 2020.

⁷ Total residential floor space is expected to more than double over the next two decades. This translates into a huge growth in demand for energy-intensive building materials, especially cement and steel (IEA, 2021).



three additional metropolitan clusters (Coimbatore, Trichy, and Madurai) as well as other important towns in Tamil Nadu.

B. Sectoral (or Multi-Sectoral) and Institutional Context

7. **The Greater Chennai Corporation (GCC), the largest urban local body (ULB) in the CMA, is directly responsible for delivering several but not all urban services in its jurisdiction.** GCC's population accounts for about 68 percent of the total population of CMA.⁸ GCC's service responsibilities include delivery of local roads and streetlights, stormwater drainage, municipal solid waste management (SWM), health, family welfare services, education, land and estate facilities, public spaces, and pedestrian infrastructure. By contrast, services such as water, sewerage, public transport are provided by separate agencies such as Chennai Metropolitan Water Supply and Sewerage Board (CMWSSB), Metropolitan Transport Corporation (MTC), and Chennai Metro Rail Company (CMRL). Chennai Metropolitan Development Authority (CMDA) is responsible for metropolitan planning and development regulation. Some of these agencies, such as CMDA and MTC, are responsible for planning and delivery of services not only in the GCC area but also in all other local bodies in the CMA. These agencies have a varying degree of autonomy and capacity and report to different state-level departments.

8. **Service delivery responsibilities in Chennai and CMA are fragmented across jurisdictions and service delivery agencies, and service quality, operational efficiency and environmental sustainability are suboptimal.** The complexity and variation of institutional arrangements, performance, and challenges in service delivery are illustrated in the brief discussion below on four essential urban services: water supply and sewerage (WSS), urban mobility, municipal SWM, and public health care.

(a) **Water resource availability, supply, and sewerage.** Chennai is plagued by recurring cycles of flooding and drought. High reliance on surface water makes Chennai particularly vulnerable to the impacts of climate change and extreme weather events. Chennai is widely considered to be among the most water-stressed cities in India and, currently, urban water demand does exceed water availability, at least in the dry season. However, recent analyses reveal that water stress is more a reflection of inadequate management—of water resources, the water supply system, and demand—than of resource inadequacy. A recent study shows that Chennai's water shortages arise not from rainwater shortages but rather from suboptimal harnessing of runoff.⁹ The reasons, identified by other research, include unplanned urbanization that has encroached on natural drainage systems, indiscriminate solid waste dumping in drains and catchment areas, and inadequate maintenance and management of reservoirs. The same factors also explain the recurrent flooding in Chennai. *Resource availability constraints are exacerbated by poor management of the urban water supply system and of demand.* As an organization, CMWSSB is hampered by an inadequate service delivery orientation, insufficient delegation of powers, lack of independent directors on its the Board, and weak performance management processes. The performance of the WSS system in the GCC area is poor and service coverage is partial, especially in the newly

⁸The current population in GCC's jurisdiction is estimated at 7.4 million, while that of CMA is about 10.9 million.

⁹ Sumant N., Ruiz-Barradas, A. and Agniv Sengupta 2021. "The Chennai Water Crisis: Insufficient rainwater or suboptimal harnessing of runoff?" *Current Science*, Vol. 120, No. 1, 10 January 2021 43. The study estimates that harnessing just 42 percent of the winter monsoon runoff in the Chennai basin, and storing it using existing storage capacity, is sufficient to meet demand.



added areas of the city.¹⁰ Water is supplied only on alternate days for a few hours, and water losses in the system are high (non-revenue water is estimated at 40 percent).¹¹ There is little demand-side management given that metering is limited (4 percent of household connections) and charges are extremely low (a flat rate of about Rs 80/month per household connection). High water losses and low charges also translate into poor financial sustainability, with the utility (CMWSSB) recovering only about 50 percent of operations and maintenance (O&M) costs through user charges. About 70 percent of sewage is collected and treated through existing sewage treatment plants, and only about 10 percent is recycled and reused. Overall, to enhance water security and reduce vulnerability to floods and droughts, Chennai needs to move towards integrated urban water resource management (WRM)—one where the Water Resources Department (WRD), CMWSSB, and GCC collaborate on an overarching program that addresses water availability, demand management, water conservation and storage, urban drainage and wastewater management.

- (b) **Mobility.** In recent years, Chennai's transportation mode share has shifted away from public transit and nonmotorized transport (NMT) toward personal vehicles.¹² Higher personal vehicle use contributes to high road fatalities, congestion, air pollution, and greenhouse gas (GHG) emissions. The use of public transport, especially buses, is declining due to limited integration and a shortage in bus services resulting in crowding, limited coverage, and overall low service quality. An estimated 39 percent of the population can only access 30 percent of jobs in a 45 minutes public transport trip. While Chennai ranks as relatively safe city in India, women's overall mobility is harmed by regular harassment, unsafe public spaces and public transport, and systems and services not reflecting their needs. Sector resource allocation reflects neither the current nor the targeted mode shares and provides limited financial incentives for service improvement, given that a large part of the cost to GoTN is implicit as a shareholder rather than explicit in the form of payments for services. The Chennai Unified Metropolitan Transport Authority (CUMTA), created to provide the institutional coordination mechanism across more than ten agencies and organizations, is not yet operationalized. Overall, while Chennai has developed a rather extensive mobility network, its challenge is to deliver seamless and safe citizen-centric mobility services with an emphasis on ensuring integration across modes, improving the quantity and quality of bus services, and expanding pedestrian and cycling infrastructure.
- (c) **SWM.** The efficacy of GCC's SWM services is limited due to lack of adequate infrastructure and systems across the value chain. Chennai generates about 5,100 tons of solid waste per day (TPD), and while about 95 percent of the waste is collected and transported, very little is processed; only about 8 percent is disposed safely owing to lack of sanitary landfills.¹³ Limited processing and disposal capacity has resulted in high levels of waste leakages, increased open dumping, littering and burning of waste leading to rapid environmental degradation, increased flooding risks, serious public health issues and high GHG emissions. In addition, extremely low levels of cost recovery and weak institutional systems for service performance monitoring and contract management

¹⁰Current annual domestic water demand in the city, assessed by CMWSSB, is 1,333 MLD, whereas supply is 800 MLD—primarily through reservoirs and desalination plants. On average, CMWSSB supplies 86 liters per capita per day, against a planning standard/benchmark of 135 liters per capita per day.

¹¹ At least 50 percent of customers' water supply requirement is being met through borewells/dug wells/tankers.

¹²In 2018, buses and NMT accounted for 50 percent of all trips. This includes walking (25 percent), cycling (3 percent), and bus (22 percent)—in Chennai; reliance on these modes is even higher among lower income groups. However, the share of buses and NMT has been falling over time. Use of personal motorized vehicles, especially two-wheelers, has been rising and the latter now accounts for 30 percent of trips.

¹³About 51 percent of the waste generated is 'wet waste' and the rest 'dry waste.' Processing capacities are low—only 500 TPD for wet waste (19 percent of generation) and 300TPD for dry waste (12 percent)—and, consequently, resource recovery is also low (16 percent) and far below potential.



exacerbate GCC's challenge of scaling up needed investments and systems for O&M.¹⁴ GCC needs to focus on waste reduction and resource efficiency measures that decouple urban population growth from waste generation, steadily move up the waste hierarchy towards reuse, recycling and recovery, and enhance the operational and financial sustainability of its SWM system.

- (d) **Health sector.** Chennai has made significant progress in improving reproductive, maternal, newborn and child health (RMNCH) outcomes through better access to services, but quality of care is emerging as a substantial emerging. In addition, there has been a significant increase in non-communicable diseases (NCDs), and yet the public sector primary health care system primarily caters to RMNCH services. Disease surveillance and public health are relatively strong in Chennai, but opportunities for further strengthening the system exist and have been highlighted through the COVID-19 emergency. Chennai has the advantage of significant resources and capacity as well as GoTN commitment to public provision of services, which enables it to provide health services through its own network of health facilities. While Chennai has been relatively successful in the health sector, there remain some systematic weaknesses: shortages in health workers, low capacity to provide a full range of primary health care services, fragmented referral system between primary care facilities managed by GCC and higher-level facilities managed by the state health department, a focus on inputs rather than results, and poor quality of care. Consequently, there is inefficient high use of secondary and tertiary level care for issues that could be dealt with at primary care level, resulting in delayed identification and access to care which contributes to a lack of continuum of care, avoidable acute adverse events, and high out-of-pocket-payments. There is an opportunity for stronger coordination mechanisms between the state and GCC health departments, more active citizen engagement to effectively reach populations with information and services, engagement with the private sector, and cross-sectoral linkages and coordination between health, water and sanitation, and transport departments.

9. **The emerging short- and medium-term challenges across these urban services are strikingly similar in CMA and are indicative of those in other metro regions in India.** As the above discussion suggests, service delivery in most of these sectors in CMA suffers from the following cross-cutting challenges: (i) fragmentation of responsibilities across multiple agencies and jurisdictions; (ii) lack of institutional capacity and mechanisms for integrated planning and delivery; (iii) operating frameworks that focus on investments for infrastructure asset creation rather than on service delivery performance measured in terms of coverage, quality, sustainability and resilience; and (iv) lack of sustainable financing frameworks, with very low own-source revenue generation, excessive reliance on the state government for input-based budget allocations and operating subsidies, and few incentives for cost-effective service delivery and private sector participation.

10. **The COVID-19-induced crisis has highlighted the need for better services and the limitations of current delivery models; it has created an imperative to pivot towards sustainable delivery and building back better.** During the first few months of the COVID-19 pandemic, Chennai was among the 10 large Indian cities that quickly became hot spots and accounted for the majority of cases in the country. As with other city corporations, GCC has been at the frontlines of the response. On the one hand, the pandemic has underscored the need for additional, better, and more resilient services in sectors such as water, sanitation, health, and public transportation. On the other hand, with the severe economic downturn underway, the state, local governments, and utilities are financially strapped and unable to continue delivering highly subsidized services, let alone scale up and improve them significantly. There is a clear understanding across GoTN that it is time to strengthen key service delivery institutions,

¹⁴ O&M cost recovery is estimated at less than 3 percent.



overhaul current service delivery models and pivot towards arrangements that can, over time, deliver world-class services in a manner that is environmentally and financially sustainable as well as socially inclusive.

11. **In response to GoTN’s request, the World Bank has proposed a Chennai City Partnership (CCP) that will bring both financing and knowledge to support the city’s transformation.** The partnership is seen as a programmatic engagement that is multi-phased and commences with a multi-sectoral operation—the Chennai Sustainable Urban Services Program (C-SUSP)—focusing on the institutional and financial changes that can drive significant improvements in service delivery.

C. Relationship to the CPS/CPF and Rationale for Use of Instrument

12. **The Program is consistent with the World Bank Group Country Partnership Framework (CPF) FY18–FY22; report No. 126667-IN, July 25, 2018 discussed at the Board on September 2018.** The India Systematic Country Diagnostic (SCD) recognizes the role of efficient cities as a direct contributor to a resource-efficient growth path for the country. The SCD identifies policies and actions to make cities more productive and livable, including reduction of environmental impacts, strengthening of city finances, and strengthening the public sector. Building on the SCD, area I of CPF focuses on “promoting resource-efficient growth.” The Program will lay the foundation for this through transforming key urban service institutions, realigning incentives and introducing more sustainable delivery models. Further, the Program would also support the World Bank’s strategic objectives of improving human endowments and removing constraints for more and better jobs through the improvement of health services, urban mobility, and access to water and sanitation.

13. **World Bank has been engaged in a long-standing partnership with Tamil Nadu for over three decades through a series of state-level lending engagements in various sectors,** including urban development, roads and transport, public health, disaster risk management, rural development, agriculture, and affordable housing. Tamil Nadu is also supported through several national/multi-state lending engagements. Building on this long-standing engagement, the Bank is well-positioned to respond to the GoTN’s proposal by creating a unique city-level partnership that will, initially, focus on strengthening service delivery institutions and systems in the CMA. Globally, the Bank has a broad and diverse experience of supporting mega-cities and metropolitan areas for the strengthening of planning, governance, financing, institutions, and service delivery systems, especially in Asia, Africa, and Latin America. Over the last few years, the Bank has developed deep multi-sector engagements for urban transformation in other South Asian cities such as Karachi, Dhaka, and Colombo. Hence, given the Bank’s long-standing engagement with Tamil Nadu, successful global experience that can be leveraged, and the alignment of the proposed Program with the India CPF, the Bank is well-positioned to engage in this strategic multi-sector and multi-phased city partnership to support the transformation of Chennai.

14. **The use of the Program for Results(PforR) instrument for this first operation would add value to the implementation of the CCP program** by (i) introducing a focus on critical results rather than the current approach of focusing on inputs and creation of infrastructure assets; (ii) providing incentives to service agencies to progressively move up a ladder of reforms that tackle core policy and institutional constraints; (iii) supporting and influencing a more extensive government program and expenditures framework; and (iv) using and strengthening existing government systems, rather than creating parallel systems and, thereby, contributing to the goal of systems development and capacity building.



15. **The PforR instrument would also provide the foundation for follow-on, sector-specific investment operations.** The proposed project will initiate a core set of institutional reforms (transversal and sectoral), across select urban services, and support some priority investments. It is expected that it will create a foundation for a series of proposed follow-on operations, under the CCP, that will deepen sector reforms and include additional investments in water supply, resilience, urban mobility, and spatial development; the follow-on operations will use either IPF or PforR as financing instruments.

II. PROGRAM DESCRIPTION

A. Government Program

16. **Vision 2023 Tamil Nadu.** The vision document provides a strategic investment plan to improve competitiveness and quality of life in Tamil Nadu for 2012–2023 at a total estimated cost of approximately US\$203 billion. This Government program identifies 10 priority theme areas, including the provision of world-class infrastructure, protection against vulnerability, improving the quality of institutions and governance, and creating 10 world-class cities (including Chennai). The Vision Plan also lays out an Urban Development Sector investment plan, which prioritizes Chennai's development, including improvements in water supply and sanitation services, public transport, SWM, and public health services.

17. **GoTN's new Chennai 2030 program (2021-2030) aims to accelerate Chennai's transformation into a city that is green, livable, competitive, and resilient.** The program is envisaged as a multi-phased program that will pool resources from government sources and development partners and also leverage the private sector for both finance and expertise. It builds on insights and experience gained from ongoing investments and initiatives in CMA, and especially the lesson that investments alone—especially, if they are uncoordinated—are insufficient to achieve transformation of the city. Accordingly, the new program entails several shifts: (i) from disparate vertical initiatives in different geographic areas to a more coordinated multi-sectoral program focused on a single metropolitan area; (ii) from a singular focus on investments to an emphasis on service delivery outcomes; and (iii) a new focus on addressing challenges that are common across different sectors/services and testing new models of service delivery. All program activities will be **structured in the form of three pillars**: (i) strengthening institutions; (ii) enhancing quality of urban services; and (iii) improving financial sustainability of service delivery.

18. **Phase 1 of the Chennai 2030 program—the proposed Government program ('p,' the program)—commences the process of transformation in service delivery and its institutions.** The program (that is, Phase 1 of Chennai 2030) will focus on improving the delivery of selected metro-level services, with infrastructure investments being limited to those that will help realize service improvements in the short term; investments in major/large infrastructure projects will be deferred to Phase 2. These future investments will both deepen and leverage the institutional and systems improvements (enhanced planning, coordination, implementation capacity, and financial sustainability) undertaken by service delivery agencies in Phase 1. The program will be implemented over a 5-year period (2021-26) with the objective of improving the quality of and access to core urban services.



19. **The program will focus on selected services—health, SWM, mobility, WSS—and incentivize relevant service agencies to achieve tangible improvements in service performance.** These services were selected because they: (i) have a high impact on city’s livability, productivity, sustainability and/or resilience; (ii) service performance indicators are below desirable benchmarks and/or there is need to improve the nature and quality of services to meet changing needs of the city and its citizens; and (iii) are linked to each other in a manner that improvement in one can lead to improvements in another. The program’s geographical focus is the CMA, with a particular emphasis on improving service outcomes in the GCC area. Activities under the selected areas are outlined below.

- **Municipal governance, finance, and services (health and SWM).** The program focuses on (i) strengthening GCC’s organizational and financial capacity by addressing critical human resource gaps and improving own-source revenue generation; (ii) improving access to and quality of comprehensive primary health care services delivered by GCC and strengthening disease surveillance; and (iii) strengthening the institutional systems for planning and delivery of integrated municipal SWM services with a specific focus on dry waste recycling and resource efficiency.
- **Urban mobility services.** The program focuses on improving urban mobility, especially public bus transport services and NMT, by (i) operationalizing and strengthening the CUMTA to serve as the main agency responsible for integrated planning and delivery of mobility services in CMA; (ii) investing in expansion and improvement of MTC’s bus services through performance-based contracting linking GOTN payments to quality service delivery; (iii) enhancing women’s safety in public transport and public spaces through a result-based approach; and (iv) investing in GCC’s demonstration “mega-streets” program that will improve streets and public spaces to promote NMT options, including walkability and cycling, and upgrade all utilities along those streets in a coordinated intervention.
- **WRM, water supply, and sewerage services.** The program supports WRD and CMWSSB with policy, institutional, and financing changes to enhance WRM and service delivery. WRM would be improved through (i) preparation of a new Water Act that includes, among others, creation of a Water Regulatory Authority and legislation for groundwater management; (ii) investments in resilient watersheds to improve the water conservation and management; and (iii) operationalization of a system for cascade reservoir management, optimization and enhanced monitoring. WSS services would be improved through (i) incentives to establish and achieve benchmarks for service performance and operational efficiency; (ii) use of performance-based operator contracts for improving services in the core city area; (iii) expansion of network coverage and household connections for WSS in newly added peripheral urban areas, and (iv) incentives for improving O&M cost recovery from user charges.

20. **The program has a total estimated government budget of US\$1.46 billion for the development of institutions, infrastructure, and delivery systems in identified service sectors.** For urban mobility, the government has allocated US\$638.9 million–US\$558.5 million for MTC, US\$68 million for GCC, and US\$12.5 million for CUMTA. For the water sector, the government has allocated US\$268 million–US\$225.7 million for CMWSSB and US\$42.5 million for WRD. For municipal services (health and SWM), the government has allocated US\$541 million for GCC for Program activities. An additional US\$ 12 million is allocated for Program management across all participating agencies. The program would be coordinated and managed by the Tamil Nadu Infrastructure Development Board (TNIDB), which reports to the Finance Department of the state government.



B. Theory of Change

21. **The proposed CCP is envisaged as a programmatic engagement between the GoTN and the World Bank that supports the Chennai 2030 program and aligns with its three pillars.** Specifically, the Partnership adopts a framework with three interlinked results areas to enable a transition to higher-quality, sustainable and resilient services: (i) strengthening institutions; (ii) enhancing the quality of urban services; and (iii) improving financial sustainability of service agencies.

22. **In the absence of fully empowered ULBs that can deliver integrated city management, the Program creates mechanisms for better coordinating planning, management, and service delivery in CMA.** One way to tackle the identified problem of fragmentation in urban management and service delivery would be for Tamil Nadu to implement the 74th constitutional amendment act, passed in 1992, that mandated the setting up and devolution of powers to ULBs as the lowest unit of governance in urban areas. The fact that few states have implemented the act points to the difficult political economy surrounding this issue. It is, therefore, crucial to identify alternative mechanisms for improving urban management and service delivery outcomes. This Program **reduces fragmentation within sectors by creating coordinating institutions and initiates processes for coordinating across sectors.** In the transport sector, it supports the operationalization of the CUMTA to coordinate service provision across providers of bus, rail, road, and pedestrian infrastructure and services. In the water sector, it supports the creation of a Water Regulatory Authority that can oversee allocation across uses and, potentially, help coordinated different initiatives to enhance water availability and security. In the health sector, it creates mechanisms for improving coordination between state and local initiatives and between primary, secondary, and tertiary care facilities. It also supports coordination among different sectors—for example, between health and the water and transport sectors—through planning and investments in relevant cross-sectoral initiatives.

23. **Agency-level reforms are expected to restore the links between finance, service performance, and accountability to the state and citizens.** A key reason for the current state of poor service delivery is that service agencies (GCC, MTC, and CMWSSB) have become increasingly accustomed to receiving support from the state, usually in the form of budgetary resources for inputs and investments, without being held accountable for service outcomes. In parallel, own-source revenue generation—from tariffs, fees and/or taxes—has also fallen, both because of politically-influenced restrictions on rates and poor collection efforts, and this has eroded downward accountability to citizens. Using the CCP Framework of three inter-linked results areas, the proposed series of operations aim to bring back the focus of service agencies to service delivery performance. They will do so by financially incentivizing service delivery performance, steadily helping the agencies improve their own-source revenues and overall financial performance, restoring the links between budgetary allocations and results (upward accountability), and supporting mechanisms for enhancing accountability to citizens and feedback from them (downward accountability). Overall, the CCP Framework offers one way to re-orient infrastructure agencies and financing away from a focus on creating infrastructure assets and towards delivering citizen-centric services that are inclusive, high-quality, resilient, and sustainable.

24. **The C-SUSP is proposed as a first engagement under the Partnership and supports the government program identified as Phase 1 of the Chennai 2030 program.** The C-SUSP, designed as a PforR, incentivizes results and has three features that are worth highlighting. *First*, the C-SUSP directs efforts under the “institutions” pillar on reducing fragmentation in service delivery and vulnerability to climate change and increasing transparency. Therefore, institutional efforts under the C-SUSP focus on both building the capacity of existing service delivery institutions and establishing new institutions and mechanisms that would improve coordination, enhance resilience,



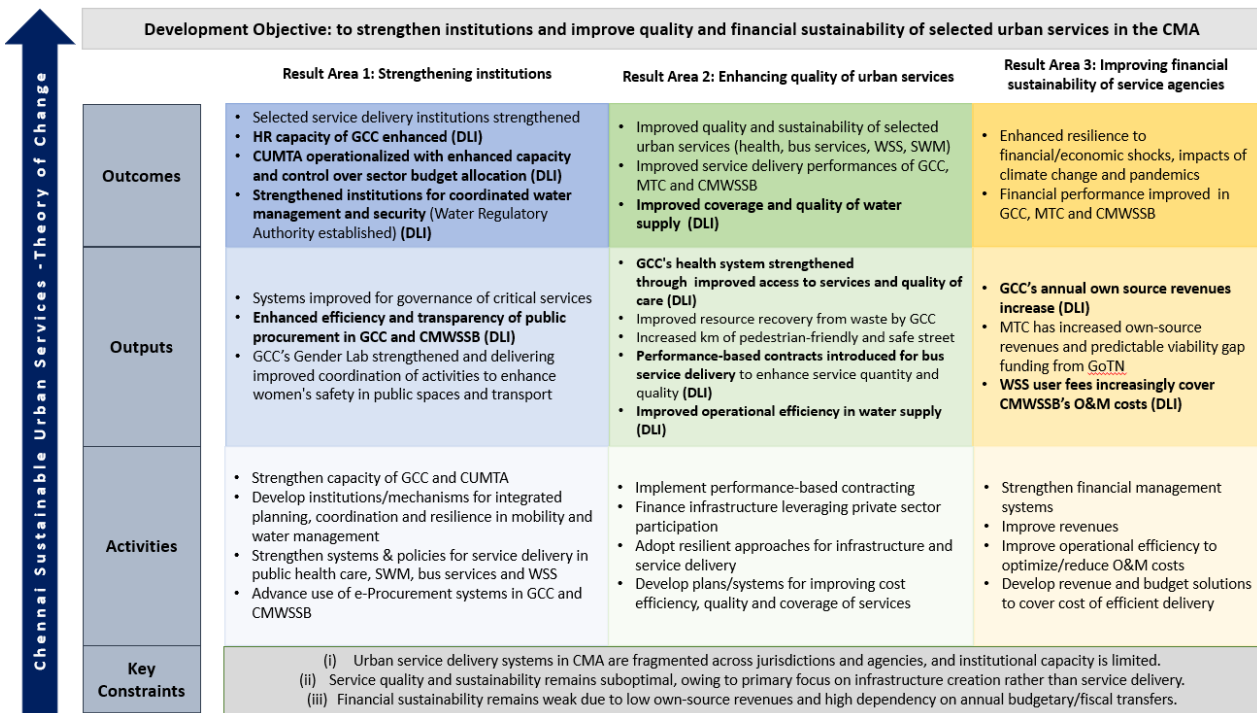
and increase transparency. *Second*, the C-SUSP aims to demonstrate one approach to achieve urban transformation—by selecting and sequencing actions across multiple sectors and overtime to catalyze the process of institutional and service delivery transformation in a single city. *Third*, given that the city has been hit hard by the ongoing COVID-19 pandemic, the C-SUSP supports strengthening of municipal primary public health services and those infrastructure services that can contribute directly to better health and, more broadly, to enhancing resilience and sustainability; this point is discussed further below.

25. **Building Back Better after COVID-19: Selecting services that enhance resilience and sustainability.** In India and in Tamil Nadu, the COVID-19 pandemic has revealed the fault lines not only of health care delivery systems but also of systems for social protection and delivery of basic infrastructure services such as water, sanitation, and transport. It has highlighted the issue of inequitable access to services, housing, and safe public spaces. It has also emphasized the connections between environmental, animal, and human health, and underscored the need to sustain and maintain environmental and eco-system services. These considerations guided the selection of services and activities under the C-SUSP. **The Program enhances resilience to health shocks** such as pandemics by strengthening the primary health care system, improving disease surveillance and public health, and by improving other key services that have a positive impact on health outcomes, that is, water, sanitation, safety in public spaces, and creation of an urban environment that facilitates walking and cycling. **The Program enhances climate resilience and environmental sustainability** by supporting (i) climate adaptation interventions—especially, those that reduce Chennai’s water insecurity and vulnerability to droughts; and (ii) climate mitigation interventions—that is, the shift to greener and more sustainable mobility modes (public transport and NMT), reducing water losses, improving SWM, and reducing municipal waste generation.

26. **Moving key agencies up a ladder of reforms and performance, over time: Phasing of operations.** The phasing of operations under the Chennai Partnership and design of the C-SUSP acknowledges that substantial improvements in institutional systems and service delivery performance take time and can only be realized through an incremental, carefully planned, and phased approach. The Bank’s engagement is currently envisaged as *series of three operations covering at least two phases of the Chennai 2030 program*. The proposed C-SUSP PforR (FY21) is expected to be followed by an operation on Urban Mobility and Spatial Development (FY22) and another on Water and Resilience (FY23); the latter two will support Phase 2 of the Chennai 2030 program which is under development. While the C-SUSP will commence the process of institutional change and service transformation concurrently in multiple service sectors, the reform process will be deepened through follow-on investment projects that would be more sectoral in nature. **Financing under for the follow-on operations will be linked to achievement of critical reforms under the C-SUSP**; this will significantly increase the financial incentives for the participating agencies to advance on the reform agenda. The Partnership may continue bringing other critical sectors or services in during the later years with the same umbrella objective of enhancing urban service delivery in CMA and supporting its transition to a lower-carbon, more inclusive, and resilient growth path.



Figure 1. Theory of Change of the Program



27. **Results areas under the C-SUSP.** The first results area on institutions focuses on activities that enhance capacities, integrated planning, and transversal governance in critical institutions. This is where most of the outcome-level indicators concentrate, several of which are recognized as disbursement-linked indicators (DLIs). The second results area on services supports activities that will commence the process of enhancing the quality and sustainability of selected urban services; higher order improvements will require additional capital investments under follow-on programs. The third results area on financial sustainability requires service delivery agencies to steadily move up a financial capability ladder, with basic reforms in Phase I and deepening reforms in Phase 2. Therefore, the PforR aims to facilitate medium-term outcomes under the latter two results areas, and the DLIs are generally concentrated at the output level. With this approach, the Theory of Change is presented above in Figure 1.

C. PforR Program Scope

28. **The proposed PforR Program would support and strengthen the implementation of the first phase of the government program by focusing on a core set of service delivery improvements across the identified service sectors with US\$701 million in financing over 5 years (2021-2026).** As a subset of the Government program, the PforR Program boundaries are defined as follows:

- **Services.** The Program will cover all the identified service sectors under the Government program including (i) health; (ii) municipal SWM; (iii) urban mobility, with a focus on strengthening bus service delivery, municipal pedestrian infrastructure, and women’s safety in public spaces; and (iv) WRM and urban WSS. In each of these, the Program covers a subset of activities and investments supported under the government program. A key difference between the government program and PforR is that the latter prioritizes support for institutional



changes and new models of service delivery, leaving some of the more traditional investment approaches to the broader government program.

- **Duration.** The Program will be implemented over 5 years (2021–26).
- **Financing support.** The total Program budget is proposed as US\$701million, with US\$ 150 million from IBRD, potential co-financing of US\$150 million from the Asian Infrastructure Investment Bank (AIIB), and US\$401 million as counterpart funding from GoTN.
- **Geographical coverage.** The Program will cover the CMA region. Among the ULBs, there is a special focus on GCC, as the largest and economically most important ULB in CMA.

29. **The PforR Program will focus on supporting activities across the three interlinked results areas (RAs) that correspond to the three pillars of the government program.** The three RAs are: (i) strengthening institutions; (ii) enhancing the quality of urban services; and (iii) improving the financial sustainability of service agencies. The Program will provide financial incentives to the service delivery agencies for implementing key institutional, financial, and service delivery reforms in the respective service sectors and demonstrate concrete improvements across all three results areas. Together, the activities under these three results areas will lead to improved institutional systems, financial capacities, and service levels in CMA.

Table 1. Program Boundaries

	Government Program	Program Supported by the PforR	Reasons for Non-alignment
Title	Phase 1: Chennai 2030	C-SUSP	
Objective	To improve the quality of and access to core urban services in CMA	To strengthen institutions and financing for improving quality and sustainability of selected urban services in the CMA	PforR prioritizes fundamental institutional reforms, only selected investments, and new delivery models
Duration	2021-2026	2021-2026	
Geographic coverage	CMA	CMA	
Results areas	Three pillars focusing on (i) strengthening institutions, (ii) infrastructure and service delivery, and (iii) enhancing financial sustainability of services	Three Result Areas focusing on (i) strengthening institutions, (ii) enhancing the quality of urban services, and (iii) improving the financial sustainability of service agencies	
Overall Financing	US\$1.46 billion	US\$701 million	Balance to be supported by GoTN

30. **Results Area 1: Strengthening institutions.** This results area will support the improvement of key Chennai service delivery entities through critical policy reforms and institutional strengthening. Under this results area support will be provided to (i) create or strengthen institutions that can improve integration and coordination of service delivery across administrative and institutional jurisdictions; (ii) enhance the organizational capability of key agencies; and (iii) strengthen transparency through rollout of e-procurement. The main activities are listed below:



- (a) **Activity 1 - Strengthen the human resource capacity of GCC.** The activity would support the revision of the staffing norms and cadre structure of GCC with a specific focus on professional employee grades (Groups A & B), strengthen the recruitment process for GCC to enable recruitment of better quality of professionals, facilitate reduction in vacancies, and enhance employment opportunities for women as per the revised staffing norms.
 - (b) **Activity 2 - Operationalize and strengthen the CUMTA** as the key coordinating agency for the delivery of urban mobility services across providers of bus, metro, rail, road, and pedestrian services and infrastructure. For CUMTA, priorities include the recruitment of needed technical staff, the adoption of a citizen-centric strategic vision plan (that is, the Comprehensive Mobility Plan), and securing authority for budgetary allocation and oversight of urban mobility investments, building on detailed analysis on functions, skills and roles for CUMTA developed during Program preparation.
 - (c) **Activity 3 - Establish a Water Regulatory Authority** with power to coordinate water resource planning and management and improve water security. The Program will support development of a Water Act that creates, inter alia, a statutory basis for a water regulatory authority and for groundwater water management. It will also support operationalization of the regulatory authority, preparation of a water security options study and plan, and the introduction of a system for cascade reservoir management, optimization, and monitoring.
 - (d) **Activity 4 - Adoption of an e-procurement system by GCC** and CMWSSB to enhance the transparency and efficiency of procurement. The CMWSSB and GCC will prepare e-procurement roadmaps to achieve, in a phased manner, targets related to use of e-procurement, contract management modules, and timely public disclosure of contract awards.
31. **Results Area 2: Enhancing the quality of urban services.** Under this results area, support will be provided to three key service delivery entities—MTC, CMWSSB, and GCC—to improve service delivery outcomes and performance.
- (a) **Activity 1 - Improve the quality of and access to public health services** with a focus on comprehensive primary health care. This activity will support the development, adoption and implementation of a comprehensive Quality of Care strategy and operational plan by GCC; expansion of access to comprehensive primary health care services in UPHCs; strengthening of disease surveillance systems; and development of a comprehensive digital health system in GCC.
 - (b) **Activity 2 - Strengthen the planning and management of municipal solid waste services** and reduce waste generation through improved recycling and resource recovery from dry waste. This activity will support the long-term integrated planning, management, and performance monitoring of SWM services by GCC, to ensure that all performance-based waste management service contracts deliver good quality and socially inclusive services. This activity will also support capacity expansion and efficiency improvement of the resource recovery facilities for dry waste through improved source segregation, logistics and technologies, and integrated system planning for better throughput in selected zones.
 - (c) **Activity 3 - Integrated planning and delivery of safe streets, urban spaces, and utility infrastructure lines.** This activity will support GCC in scaling-up the planning and implementation of 11.6 KMs of pedestrian-friendly multi-utility streets under its “mega streets” program. Mega streets are streets designed to cater to the needs



of all users and activities through equitable allocation of road space. They include pedestrian paths, carry multiple utility infrastructure lines underneath the street surface and often integrate cycling paths and public spaces. In addition, capacity will be built in a new Gender Lab to coordinate and enhance the effectiveness of activities under the Women's Safety in Public Space program supported by GoI's Nirbhaya Fund, with a special emphasis on enhancing women's safety in and use of both public transport and public spaces in the city.

- (d) **Activity 4 - Implement performance-based contracts** for expansion and/or improvement in delivery of bus services in CMA and WSS services in GCC area. This activity includes implementation of public transport service contracts between GoTN and MTC as well as gross cost contracts for bus service provision between MTC and private sector providers (equivalent to services by 500 buses by 2022 and 1000 buses by 2024). It will also support performance-based contracts for improvement of WSS services in the core city area (Zones X and XIII), including household connections, metering and NRW reduction. Incentives will be provided, through DLIs, to MTC and CMWSSB for rolling out contracts and achieving improvements in service performance.
- (e) **Activity 5 - Improved efficiency, quality, inclusiveness, and sustainability of WSS services.** This activity will support CMWSSB in implementation of bulk water metering, establishment of a baseline on non-revenue water (NRW), and actions to steadily reduce NRW and/or unaccounted for water. It will incentivize steady expansion of customer metering and use of volumetric tariffs as a crucial step in influencing user behavior and enhancing demand-side management. It will also support a phased increase in the number of water supply connections with assured daily water supply, including a robust baseline on quality and quantity of service delivery. At a broader level, it will support CMWSSB in initiating reforms that strengthen the quality and accountability of service delivery, including an agreement between GoTN and CMWSSB to achieve targets for a phased improvement of services in terms of duration, volume and quality of supply at the customer end; annual publication and disclosure of a customer report card; and establishment of two independent directors on CMWSSB Board for greater transparency and customer accountability.

32. **Results Area 3: Improving financial sustainability of service agencies.** Under this results area, support will be provided to MTC, CMWSSB and GCC to improve their overall financial performance and the financial sustainability of targeted services.

- (a) **Activity 1 - Strengthen the financial resource base of GCC** to meet its expanding service delivery expenditures in solid waste, public health, and other key municipal services through steady increase in own-source revenues (OSR). This activity will support development and implementation of an OSR enhancement action plan that includes improvements in its property tax administration system (such as coverage, verification of property features, and so on) and fees for services such as SWM and parking. It will also leverage GoTN's ongoing reform efforts that aim at revising the methodology and rates for property taxation in GCC area.
- (b) **Activity 2 - Improve the O&M cost recovery of WSS services** delivered by CMWSSB. This activity will support (i) policy reforms and implementation of a progressive volumetric user charge framework for WSS services; (ii) reduction of operational inefficiencies and costs, for instance, through adoption of energy efficiency measures; and (iii) improvements in the systems for billings and collection as well as financial management (FM). The user charge framework will be designed to increasingly cover O&M costs of WSS service delivery.
- (c) **Activity 3 - Improve revenues and establish transparent Viability Gap Funding (VGF) mechanisms** for MTC. This activity will support improvements in MTC's cost recovery ratio by increasing own revenues, through



increase in ridership, adoption of mechanisms for regular tariff increase for bus services, and enhancement of non-fare box revenues. MTC will develop a five-year business plan, based on which GoTN and MTC will agree on service coverage, quality of services, and efficiency measures. Based on this agreed business plan, GoTN will establish a transparent approach to deliver VGF to MTC to ensure long-term viability of efficient bus services, considering GoTN public transport tariff policy as well as MTC fare and non-fare revenues. MTC will issue an annual performance report to enhance accountability towards citizens.

33. **Climate change co-benefits.** Chennai is highly vulnerable to climate change and to disaster risks such as floods, tsunamis, droughts, and cyclones. The 2019 droughts and the 2015 floods adversely affected the city's economy and had a lasting negative impact on the lives of its citizens. The proposed operation will directly contribute to both mitigation and adaptation efforts. The program will: a) support expansion and share of green modes of urban mobility—buses, walking and cycling—to counter the trend towards the use of carbon-intensive modes and personal vehicles; b) reduce vulnerability of the city to the cycle of floods and drought (events that are expected to increase in severity), by supporting establishment of Water Regulatory Authority to enhance integrated planning, development, management and use of water resources across WRD, CMWSSB and GCC; c) reduce GHG emissions and flooding instances through improved SWM; and d) support digitalization of infrastructure facilities and systems (the value chain) to aid remote operation and enhance resilience. Detailed climate vulnerability context and specific climate adaptation and mitigation actions supported by the Program are presented in Section 2.4 of the Technical Assessment dated April, 2021¹⁵

34. **Leveraging private sector.** The Program seeks to leverage the private sector by (i) implementing performance-based contracts to bring in private sector for improving and expanding bus transport and water supply services in Chennai; (ii) improving revenue generation and cost recovery performance of GCC and CMWSSB and establish transparent VGF mechanism for MTC (these can provide enhanced revenue security for private sector participants); and (iii) strengthening the project structuring and contract management systems in agencies to better manage and monitor the private operator's performance.

35. **Citizen engagement.** One of the pillars for this program is establishing the vision, governance, and institutions necessary for citizen-responsive service delivery. This requires systems and capacities to interface with different stakeholders and a responsive and accessible grievance redressal mechanism for resolving complaints within a reasonable period. The program will support strengthening of systems for: (i) citizen outreach and consultation; (ii) preparation and public disclosure of annual performance reports by GCC, MTC and CMWSSB, (iii) use of consumer feedback and satisfaction surveys to enhance service delivery; and (iv) grievance redressal for all key participating agencies.

36. **Gender.** Tamil Nadu fares better on gender equality than the national average, as reflected in declining maternal mortality and higher female workforce participation. More women are elected as representatives than the mandated one-third reservation. GoTN has now raised the standard with 50 percent reservation for women in local body elections. Recruitments for public sector positions managed by the Tamil Nadu Public Services Commission also have 30 percent reservation for women. Building on GoTN's support for gender equality, *this Program explicitly identifies gender gaps in service delivery and seeks to address*. The main issues are as follow. First, positions for technical jobs reserved for women are underutilized and women often occupy a higher percentage of low paying

¹⁵ See Technical Assessment (prepared by the World Bank, dated April 2021) Section 2.4 on Climate Change Co-benefits of the Program and Table 3: Climate Adaptation and Mitigation Actions by DLL.



formal and informal work positions. Second, poor access to and quality of water supply adversely affects women and girls more than men, in part because they disproportionately carry the burden of collecting water from standpipes, tankers, and handpumps. Third, primary health care has, thus far, underserved women with respect to non-communicable diseases (NCDs). Fourth, the mobility of women and girls is adversely affected by a gender blind approach to urban and transport planning and sexual harassment and gender-based violence in public spaces and public transport; this, in turn, negatively impacts women's access to jobs and leisure and their equal status in society.

37. **Professional positions for women in GCC.** The gender composition of GCC staff varies by departments. For example, the SWM department employs a large number of women but about 90 per cent of them are employed as sanitation workers. The Program will include an assessment of gender gaps in different departments and at different levels within GCC, and will support increased employment of women in professional higher-level positions within GCC [Cadres A and B], to meet the 30 percent reservation target of GoTN policy.

38. **Water supply.** Studies in Chennai confirm that, as in most other parts of India, women and girls are disproportionately responsible for collecting water from non-piped sources when they lack access to reliable in-house piped water service. By providing access to unserved households and steadily improving reliability for all connected households, the program will reduce the physical and time burden on women and girls for water collection.¹⁶ Further, by reducing prevalence of diseases associated with poor quality or inadequate water supplies, it will create direct benefits for all consumers as well as additional time savings for women, given their traditional role as caretakers in the household.

39. **Health.** A key gender gap identified in Chennai with respect to health is the utilization of services for specific diseases that affect only women, such as cervical and breast cancer. These are the most common cancers among women in India, with breast cancer constituting about 19–34 percent¹⁷ and cervical cancer constituting approximately 6–29 percent¹⁸ of all cancers in women. Screening for cancer is known to reduce mortality by facilitating early detection and treatment. However, in Chennai, only 20 percent and 13 percent of women age 15–49 have undergone examinations for cervical and breast cancer, respectively (NFHS-4, 2015–16). The figures for Chennai are lower than the state average (23 percent and 15 percent for cervical and breast cancer, respectively) and even lower compared to other southern states; the latter is in sharp contrast to Tamil Nadu's performance on other health indicators. This is largely because of (i) limited awareness about the diseases; (ii) limited understanding of the *importance* of early detection and treatment; and (iii) screening effort being limited to opportunistic screening at health facilities when women come in for other reasons rather than population-based screening that targets all women within a defined age group. In addition, among those who are hypertensive age 15–49 in Chennai, only 23 percent of women (compared to 53 percent of men) have their blood pressure under control. To address this, the program supports expansion of services for NCDs, including cervical and breast cancer screening, detection, and referrals to higher level facilities for treatment.

¹⁶ Recent research shows that, in Chennai, time spent on water collection by unconnected households accounts for 22 percent of the coping costs of Rs. 658 per month. Amit, R.K. and S. Sasidharan. 2019. "Measuring affordability of access to clean water: A coping cost approach." *Resources, Conservation and Recycling* 141.

¹⁷ Singh, S., J. P. Shrivastava, and A. Dwivedi. 2015. "Breast Cancer Screening Existence in India: A Nonexisting Reality." *Indian Journal of Medical and Paediatric Oncology: Official Journal of Indian Society of Medical and Paediatric Oncology* 36(4): 207–209.

¹⁸ Bobdey, S., J. Sathwara, A. Jain, and G. Balasubramaniam. 2016. "Burden of Cervical Cancer and Role of Screening in India." *Indian Journal of Medical and Paediatric Oncology: Official Journal of Indian Society of Medical and Paediatric Oncology* 37(4): 278–285.



40. **Gender-informed mobility.** Mobility by men and women differs substantially based on the analysis of disaggregated data collected during the preparation of the Comprehensive Mobility Plan (2019) like in other cities.¹⁹ Women in the age group of 20 to 60 years have a higher use of walking and buses than men, as women own fewer personal vehicles. Women undertake more chained trips, experience slower mobility, travel more outside peak hours and are accordingly sensitive to off-peak bus availability and fare integration. From a safety perspective, women are sensitive to the high level of bus overcrowding. The planning and design of services is however currently gender blind as it does not reflect such differences. The current project design reflects those priorities by establishing an institutional mechanism (Gender Lab) to support data-driven and gender-informed planning and design, adjustment in policy and training for planners, while enhancing primary modes for women through bus fleet augmentation and a complete street approach. Gender disaggregated mobility surveys will be undertaken every two years to track the evolution of travel patterns and inform planning and design of services; changes implemented in response to survey results will be recorded.

41. **Women's safety in public spaces and public transport.** Sexual harassment against women and gender-based violence in public spaces and public transport contribute to gender inequality in India and Chennai by adversely affecting women's mobility, especially their access to jobs, services, and leisure activities. According to 2019 National Crime Record Bureau (NCRB) data, Chennai has recorded fewer cases of crimes against women vis-a-vis other metro regions. However, there has been a slight increase in the number of cases between 2017 (642) and 2019 (729). In contrast to the low number of reported crimes, a study conducted by AWARE in Chennai found that more than 50 percent of women interviewed had faced some form of harassment while traveling on public transport.²⁰ Chennai is one of the eight cities selected for the nation-wide safe-city program under the *Nirbhaya Fund* and GoTN has proposed 13 initiatives under it. Under the PforR program, the Bank will support capacity development of the new Gender Lab in GCC with an emphasis on building an integrated approach for implementing the safe-city program in Chennai and adoption of additional initiatives focusing on assessment of current scenario, policy strengthening, evidence-based improvement in transport services/infrastructures, capacity and awareness building, and robust monitoring. It will build the capacity of the 181 Women's Help Line under the program to direct survivors to the right service for support.

42. The Results Framework *indicators for measuring gender outcomes* will include: (i) percent of women employees hired by GCC in professional grades (Groups A and B); (ii) percent of women provided with access to improved water supply services; (iii) increase in percent of women accessing NCD services provided by GCC; (iv) percent reduction in women's and men's perceptions of lack of safety in buses and public spaces; (v) number of cases of gender-based violence (including harassment) in public transport and public spaces reported, handled, and referred to gender-based violence services; and (vi) gender-disaggregated transport survey capturing satisfaction and evolution in travel patterns.

43. **The Program will be jointly financed by the GoTN, the World Bank, and the AIIB.** The World Bank and AIIB are expected to contribute equally to provide a total of US\$300 million in external financing to the Program while the GoTN will provide the remainder US\$ 401 million.

¹⁹ ITDP, Safetipin. "Women and Transport in Indian Cities," 2017

²⁰ The response indicated that 44.5 percent women faced verbal harassment from co-passengers, while a large share of respondents faced physical harassment – 83.7 percent; and non-verbal (visual) harassment – 50.8 percent.



D. Program Development Objective(s) (PDO) and PDO Level Results Indicators

44. The PDO is to strengthen institutions and improve quality and financial sustainability of selected urban services in the CMA. The PDO-level results indicators are as follows:

- (a) Reduction in vacancy rates of Group A & B cadre of GCC to enhance professional capability
- (b) Operationalization of CUMTA with enhanced capacity and control over sector budget allocation to oversee urban mobility in the metropolitan areas
- (c) Improvement in service delivery performance of MTC, CMWSSB and GCC (public health) disaggregated by gender and vulnerable groups²¹
- (d) Percentage increase in GCC annual OSR
- (e) Improved financial performance for WSS service

E. Disbursement Linked Indicators and Verification Protocols

45. **Program resources will be disbursed based on the achievement of 10 DLIs.** These DLIs have been selected to incentivize the more important reforms, new models of service delivery, and achievement of improvements in service quality and performance. The weighing of resources across different DLIs reflects their importance toward achieving the program results. Resources allocated to the DLIs do not represent the total financial outlay required. Program resources will be channeled through GoTN's Finance Department to implementing entities involved in the Program. Table 2 details the DLIs and their allocated funding from IBRD and AIIB. A complete DLI matrix is provided in annex 2.

46. **The achievement of all DLIs will be reviewed and confirmed by the independent verification agent (IVA).** The Program Management Unit will be responsible for reporting on achievement of the Program DLIs each of which includes several disbursement-linked results (DLRs). An independent firm will be contracted by GoTN to conduct third party verification for all Program DLIs to be submitted as part of an Annual Program Report (APR). The DLIs will be verified through a combination of data sources in accordance with an agreed verification protocol as provided in Annex 2. The IVA will deploy a suitable methodology depending on the results area, which may include desk review of documents, baseline surveys, and physical inspection and field visits for projects funded by the Program among others. All disbursement requests to the World Bank will be submitted with the results of the independent verification.

²¹This is a composite index that consists of the following service-specific indicators: (i) WSS: additional households connected and receiving assured water supply of at least one hour daily; (ii) GCC Health: increase in the UPHC Service Provision Improvement index value; (iii) Urban mobility: index measuring increase in quantity of service and in user satisfaction. Each sector will account for one-third of the value of the indicator which will be measured as an index. The performance level identified through surveys will be taken as 100. For details, refer to the Results Framework and monitoring and evaluation (M&E) annex.



Table 2. DLIs and Allocated Financing

Result Area	DLI	Responsible Agency	Allocated Amount (US\$, millions)	
			World Bank	AiIB ²²
1. Strengthening institutions (US\$62.5 million)	1. Reduction in vacancy rates of Group A & B cadres of GCC to enhance professional capability	GCC	7.50	7.50
	2. CUMTA is operational with enhanced capacity and control over sector budget allocation	GoTN/Transport Department and CUMTA	4.00	4.00
	3. Strengthened institutions for coordinated water management and security (Water Regulatory Authority established)	WRD, GoTN	14.62	14.62
	4. Enhanced efficiency and transparency of public procurement (GCC and CMWSSB)	GCC, CMWSSB	5.00	5.00
2. Enhancing quality of urban services (US\$177 million)	5. GCC's health system strengthened through improved access to services and quality of care	GCC	20.00	20.00
	6. Performance-based contracts for bus service delivery to enhance quantity and quality of services	MTC	41.00	41.00
	7. Improved operational efficiency in water supply (performance contract, NRW reduction) and metering for demand-side management	CMWSSB	17.50	17.50
	8. Improved access to water supply (increase in coverage and reliability)	CMWSSB	10.00	10.00
3. Improving financial sustainability of urban services (US\$60 million)	9. Increased annual own-source-revenues in GCC (percentage)	GCC/GoTN	15.00	15.00
	10. Improved financial sustainability of WSS services (with user fees increasingly covering O&M costs)	CMWSSB/GoTN	15.00	15.00
Front end fee	(0.25% of IBRD loan amount)		0.38	0.38
Total			150.00	150.00

III. PROGRAM IMPLEMENTATION

A. Institutional and Implementation Arrangements

47. The Program's institutional framework will rely on a two-tiered government system comprising state level and metropolitan/local level institutions and will be aligned with existing accountability relationships. At the state level, TNIDB, an agency reporting the state's Finance Department (FD), will be the Program coordination agency. A Program Management Unit (PMU) will be established under TNIDB and the CEO of the agency will serve as the Program Director. TNIDB will be responsible for carrying out Program monitoring, coordination and reporting activities and will coordinate closely with the IVA on achievement of DLIs by the sector agencies. To facilitate and support implementation, TNIDB will coordinate with the relevant line departments, that is, the Departments of

²² The DLIs are planned to be financed by the World Bank and AiIB in equal shares; contingent on approval by AiIB Board which will occur after approval by the Bank's Board.



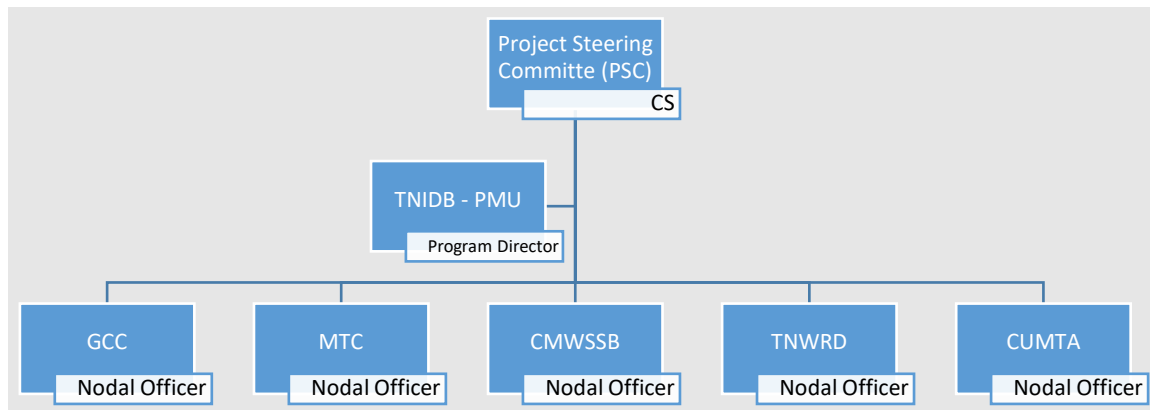
Municipal Administration and Water Supply (MAWS), Urban Development and Housing, PWD, Transport, and Health.

48. The main implementing agencies (IAs) are CMWSSB, MTC, WRD, GCC and, after operationalization, the CUMTA. The IAs will be responsible for implementing the Program activities in their respective sectors and achieving the required results. In each IA, a nodal officer will be designated for Program implementation and necessary technical expertise will be mobilized to ensure timely implementation. These IAs will be responsible for complying with the procurement, FM, environmental and social management requirements, as detailed in the Program Operations Manual (POM) approved by the Bank. For all the periodic reporting and DLI verification procedures, the IAs will report to their respective state line departments and the PMU in TNIDB.

49. A Program Steering Committee (PSC) shall be constituted for strategic oversight, policy direction and monitoring at the state level under the chairmanship of Chief Secretary, with representation of the officials from key state departments and IAs. The PSC would include the Secretaries of Finance, MAWS, Transport, PWD and Health as well as heads of IAs. As Program Director, the CEO of TNIDB will serve as the ex-officio member secretary of the PSC. The PSC will meet quarterly or more frequently, as necessary, and will play a critical role in directing reform activities.

50. Detailed tasks and responsibilities of the PMU and IAs will be described in the POM that has been prepared by TNIDB in consultation with the Bank. The POM will be dynamic; it will be updated during the life of the Program, as necessary; changes will require a no-objection from the Bank.

Figure 2. Program Implementation Arrangements



B. Results Monitoring and Evaluation

51. The results indicators comprise a mix of outcome and output indicators, with clearly defined annual targets to be achieved by IAs. The overall responsibility for Program M&E will lie with TNIDB, who will coordinate with all IAs for timely reporting. The PMU under TNIDB will provide bi-annual Progress Reports to the PSC and the Bank. The Progress Report will include, at a minimum, an account of activities implemented and results achieved in the reporting period, issues and corrective actions, planned and actual details of the work program, evaluation of IA performance, capacity building activities for Program implementation, critical issues for attention, and any other



relevant information. An outline of the Progress Report will be included in the POM. The IVA will confirm achievement of DLIs/DLRs.

C. Disbursement Arrangements

52. **The state will prefund the program and receive reimbursements from the Bank on completion of DLIs.** The state will provide initial budget to IAs every year and after achievement of DLI will transfer the balance DLI amount to IAs. Disbursements will depend on the Borrower providing evidence, satisfactory to the World Bank, that DLI targets have been achieved as per agreed verification protocols. Disbursements will be made against DLIs, irrespective of the program expenditure incurred at the time of releasing the DLIs. Any amount disbursed by the Bank more than the actual amount of expenditures incurred under the Bank's allocated portion of Program financing will be repaid to the Bank.

53. **After effectiveness, GoTN can be submit claims as and when DLIs are achieved following the process outlined here.** PMU will prepare technical reports to document the status of achievement of DLIs based on inputs provided by the IAs. The technical reports will be verified by the IVA, appointed as per terms of reference agreed with the World Bank. On validation of DLIs by the IVA as per the agreed verification protocol, the PMU will communicate the achievement of DLIs, along with the IVA report, and corresponding DLI values to the World Bank. The World Bank will review and issue an official letter to the PMU endorsing the achievement of the DLI target and value. The PMU will submit the disbursement claim of the DLI value to GoI's Controller Aid Accounts and Audit (CAAA). The CAAA will submit the disbursement claim to the World Bank and the funds will be disbursed by the World Bank to GoI under IBRD loan terms. GoI will release funds to GoTN as per agreed financing norms between the Centre and the state. A copy of the Bank's official communications confirming achievement of the DLI(s) will be attached to the disbursement requests. The withdrawal amount against the DLIs achieved will not exceed the amount of the financing confirmed by the World Bank for the specific DLIs. AIIB is expected to fund an equivalent amount on each DLI achievement and will follow similar process of disbursement.

54. **In the case of non-scalable DLIs, the World Bank will disburse the DLI value only upon full achievement of the DLI target.** In the case of scalable DLIs, if partially achieved, the World Bank may authorize withdrawal of an amount lesser than the DLI value allocated to the said DLI target. The remaining amount of the DLI will be disbursed once the DLI target value is fully achieved. In case an IA is unable to achieve the DLI target set out in any year, it will be rolled over for future years till such time the DLI target is achieved. In case the IA is unable to achieve the DLI target (scalable or non-scalable), the World Bank may reallocate the proceeds of the Loan to another DLI, in consultation with the state. DLIs and verification protocols are provided in annex 1.

D. Capacity Building

55. Capacity building activities will support improvements in own-source revenues, strategic planning, and operational models for service delivery in participating agencies. For example, MTC's capacity for bus operations and route planning will be enhanced. Capacity initiatives will also facilitate the collection of data, including on consumer demand, for better decision-making. For example, WRD will enhance its capacity through upgrading systems for the collection, management and use of data and new technologies (such as SCADA and remote sensing data) for WRM, including the monitoring of water use through new water accounting and auditing procedures. For WSS, capacity building will focus on water delivery service improvement and responsiveness, including operational



efficiency improvements and NRW reduction programs. New pilot programs for 24/7 water delivery will provide models for how to deliver quality water services to Chennai at scale. For health, areas for capacity building will include M&E and results-based management, quality of care and comprehensive primary health care. For SWM, support will be provided for preparation of a SWM Master Plan as well as an Action Plan for revenue improvement. Capacity building will be supported through a combination of the Program budget, trust funds, supervision resources, forthcoming operations, and twinning arrangements with agencies in other countries. It is expected that a multi-sectoral technical assistance component will be included in the next Bank-financed operation under the Chennai Partnership.

56. The program will also provide support for cross cutting improvements to FM systems and core business processes in IAs. Apart from additional training in FM and contract management, support will be provided to implement performance-based approaches (CMWSSB, GCC, MTC); MIS and complaint management systems; and regular results reporting and disclosure for greater transparency.

IV. ASSESSMENT SUMMARY

A. Technical (including program economic evaluation)

Strategic Relevance

57. **The Program has high relevance because it tackles a set of difficult service delivery problems that are adversely affecting Chennai's livability, sustainability, and future growth trajectory.** The selection of the urban services is well-aligned with the long-term priorities of the city and the immediate challenges that it is facing. Therefore, the Program focuses not only on improving current service levels in identified sectors but also building systems required to sustainably address rapidly increasing service demands of the city. The Program correctly supports climate mitigation and a transition to a lower-carbon growth path by investing in green transport systems and expanding the use of NMT. The Program contributes to resilience, climate adaptation and mitigation by focusing on addressing Chennai's flood-drought problem. It also contributes to mitigation by enhancing resourced efficiency through reduction in water losses and, thereby, the need for inefficient and high-cost coping strategies adopted by households and CMWSSB. The Program is fully aligned with GoTN's Chennai 2030 program and can help Chennai in its transition to a world class city by greening its growth, enhancing resilience to disasters and climate change, and improving economic competitiveness.

58. **The Program strategically adopts a common framework for identifying issues across sectors and starts by addressing foundational issues that are constraining service delivery in each of the selected sectors and agencies in CMA.** It focuses on cross-cutting systems improvements and a transition away from input-based development and service delivery models toward performance-based, citizen-responsive approaches. The Program objective of strengthening the fundamental institutional capacity for improved and sustainable urban service delivery also aligns with the Bank's FY18-22 Country Partnership Strategy, which emphasizes the need for resource efficient growth approaches to managing India's urban areas.



Technical Robustness

59. **The Program is technically sound, builds on strong government ownership, and reflects lessons from international experience.** Program activities help fill gaps in the institutional and policy architecture for service delivery and complement existing or planned government interventions in water, SWM, health and urban mobility sectors. The activities have strong support and buy in from the implementing entities, state line departments, and the Finance department. The Program's approach, proposed activities and expenditures are in line with the targeted results areas and are informed by the Bank's experience on local government/urban service improvement PforRs in Pakistan, Morocco, Gaza and the West Bank, Ethiopia and Vietnam, among others. As noted earlier, the Program design and rationale draws from previous Bank experience with multisector metro "platform" engagements in Karachi, Dhaka, Colombo, Addis Ababa, and Lagos.

60. **Sector-specific activities are informed by strategic policy level dialogue along with a suite of comprehensive diagnostics and technical assistance activities.** Separate institutional diagnostics and gap analyses for each of the sectors identified areas for staffing improvements (GCC), planning, administrative and operational reforms (WRD, CUMTA, CMWSSB, GCC), tariff and own-source revenue maximization (GCC, CMWSSB), overall sector financing and funding (transport), IT, data and operating systems upgrades (WRD). The findings and recommendations from these studies informed the design and prioritization of activities and targets to be achieved under the Program. A more detailed summary of sectoral technical assessments is provided in annex 3.

Program Expenditure Framework

61. **The Program's expenditure framework includes GoTN and partner investments.** Table 1 below summarizes the Program expenditure items. The identified expenditure items are fully aligned with the government priorities as set out in the Chennai 2030 program. The proposed expenditure items are targeted towards providing financing to the participating agencies for undertaking investment, reform and institutional development activities that are critical to improve the service levels and performance in CMA.

62. The Program expenditures include (i) consultancy services and capacity building activities; (ii) infrastructure investments and service delivery contracts (includes works and performance-based contracts for creation of assets and delivery of services); (iii) O&M expenditures (including staffing, consumables, and so on); and (iv) goods, services, and equipment for systems development, across all the identified sectors. Expenditures on *consultancy services* would include those related to technical studies and plans such as the water security optimization plan, MTC's business plan, SWM plan, revenue enhancement plans, and support for rolling out performance-based contracts. *Infrastructure investments and service delivery* contracts would include priority expenditures such as expansion of the sewerage network, household water and sewerage connections and metering, augmentation of the bus fleet for public transport, development of pedestrian-friendly streets (that also carry multi-utility networks), resource recovery and recycling centers for solid waste, development of resilient watersheds (for example, reprofiling of drainage channels and rejuvenation of reservoirs to augment carrying capacity), and performance-based contracts for mobility and water services. *O&M expenditures* would include those for delivery of public health services, GCC's staffing, CUMTA's operational and establishment expenditures, Gender Lab, and so on. Expenditures for *goods, services and equipment for systems development* would include those required for WRM and reservoir management, waste management service monitoring, e-procurement, and digital health systems.



63. The total Program financing of US\$701 million will be used as follows: (i) ~56 percent financing for capital expenditures; (ii) ~35 percent for service O&M and staffing costs; and (iii)~9 percent financing for studies, capacity building and systems development. The US\$300 million external financing provided by World Bank and AIIB will be used as follows: (i) ~72 percent for capital expenditures; (ii) ~18 percent for service O&M and staffing costs; and (iii) ~10 percent for studies, capacity building and systems development activities. The expenditure items have been finalized based on the program activities that are critical for achieving the targeted results (DLIs/DLRs) and the agency level budgetary allocations to be provided by GoTN for these activities under the government program. The eligible expenditure categories and items are fully aligned and anchored within the GoTN’s budgetary system for MTC, GCC, CMWSSB and WRD. The Program’s expenditure framework is provided in the Technical Assessment (annex 3) and a summary is presented in table 3.

Table 3. Program Expenditure Framework

S. No.	Sector-wise allocation (Projections for next 5 years)	Total Program expenditures (US\$ m) (a)	External financing (World Bank+AIIB) (US\$ m) (b)	External financing as a percent of total(b/a)
1	Mobility (MTC and CUMTA)	158.0	79.5	50
2	WRM (WRD)	42.5	29.5	69
3	WSS (CMWSSB)	153.0	89.5	58
4	Municipal Services (GCC ^a)	340.5	99.5	29
5	Program management and IVA	7.0	2.0	29
	Total	701.0	300.0	43

Note: This includes SWM, public health, mega-streets, and Nirbhaya funds.

64. Exclusions. The Program excludes activities assessed to have a significant adverse impact on the environment and/or people as defined in the World Bank Policy and Directive on PforR Financing. It also excludes works, goods, and consultancy contracts above the thresholds specified by the Bank’s Operations Procurement Review Committee (OPRC). As part of implementation support, the Bank will screen activities to ensure that no high-risk activity is included in the Program and that there is compliance with PforR policy requirements.

Economic Analysis

65. The Program is expected to provide significant economic benefits through policy and institutional reforms and improvements in delivery of critical services. Enhancements in quality of basic urban services such as health, water supply and sanitation, SWM and public transport are fundamental for improving the quality of life and economic performance of cities. Given that several of the benefits—especially those related to institutional strengthening and broader efficiency gains—are hard to quantify, only a subset of the benefits has been included in calculation of the Economic Rate of Return (ERR) for the Program.

66. Using only a subset of quantifiable benefits but full costs, the Program has an ERR of 21percent. The cost-benefit analysis includes the following benefits by sector and/or intervention. Benefits associated with improvement in bus services arise from the proportion of trips that shift to buses and away from higher-cost and more carbon-intensive modes such as personal vehicles (cars and two-wheelers) and auto rickshaws. The benefits include: (i) savings to users of new bus services, given its lower cost relative to alternatives; (ii) reduction in GHG emissions



which lowers CO₂ abatement costs; (iii) reduction in accidents due to reduced congestion. The primary benefit arising from improved *public health services* is a reduction in Disability Adjusted Life Years (DALYs). In Chennai, NCDs are estimated to account for 65 percent of the disease burden, and the service improvements are assumed to lead to 1.0 percent reduction in DALYs among the population likely to use the municipal UPHCs. The benefits arising from improvement in *WSS services* are: (i) reduction in coping costs for newly connected households, including reduction in time saved in collecting water; (ii) reduction in coping costs for connected households, arising from improved quality and reliability of services; and (iii) reduction in DALYs due to reduction in incidence of water-borne diseases. For improved *WRM and flood mitigation*, the primary (quantified) benefit is reduction in losses from flooding. For improved *SWM*, the benefits are: (i) value of waste recovered; and (ii) reduction GHG emissions (in CO₂ equivalents) due to improved recycling and reduced volume of waste requiring treatment.

67. **The sensitivity analysis indicates that a 10 percent decrease or increase in benefits will result in ERRs of 23 percent and 18 percent respectively.** As noted above, the ERR is a conservative estimate since benefits that are more difficult to quantify have not been included, for example, benefits from strengthening service agencies, improved efficiency and costs of procurement, reduction in water losses, increase in property value due investment such as mega streets, customer accountability and grievance redressal mechanism, and so on. The analysis covers a period of 15 years. It includes capital expenditure for the period FY21 to FY26 and benefit accounting stops in 2035, even though the life of and benefits from several assets (for example, WSS investments) is likely to be 30 years.

B. Fiduciary

68. **An Integrated Fiduciary Systems Assessment (IFSA) of the Program was conducted in accordance with Bank Policy and Directive for PforR financing.** The FM and Procurement systems for this PforR are predicated on extant country systems. The IFSA concludes that the present systems together with proposed Program Action Plan(PAP) and DLI will provide reasonable assurance that the financing proceeds will be used for the intended purpose, with due attention to the principles of economy, efficiency, effectiveness, transparency and accountability. The IFSA identified key fiduciary risks and recommended system improvement and capacity strengthening mitigation measures that will be implemented during the life of the Program. Based on the IFSA, the residual fiduciary risk is assessed as 'Substantial'. The summary of Fiduciary Assessment is outlined in annex 4 and the IFSA detailed report is attached as a standalone document which presents an analysis of the overarching FM, Procurement and Anti-corruption framework. Other than PAP, the required fiduciary actions to be operationalized by each IA will be detailed in the POM.

69. **This is a multi-sector and multi-agency program coordinated by TNIDB and implemented by four parastatals and one department.** Assessment of procurement and FM systems of all the IAs (except CUMTA) was carried out. Assessment of CUMTA, a new agency, will be completed soon after it is operational. Procurement is carried out by all agencies in accordance with the Tamil Nadu Transparency in Tenders Act(TNTTA), 1998; the associated rules, 2000 and 2012 (the latter for PPP procurement) that meet the core public procurement principles of value for money, economy, efficiency, integrity, transparency, fairness and accountability. Procurement is essentially guided by TNTTA, the applicable Delegation of Financial Powers and Rules (DFPR), Government Orders (GOs) and the broader framework of the Indian Contract Act, the Sale of Goods Act, and the guidelines issued by the Central Vigilance Commission (CVC). FM arrangements in the state are guided by Tamil Nadu Finance Code (Volume I and II), Accounts Code (Volume I and II), Treasury Code (Volume I and II), Budget Manual (Volume I and II), PWD Code and periodic GOs, and are reasonably well established and followed. TNIDB will be responsible for overall coordination, management, and oversight of the Program. The overarching framework of FM and



Procurement systems across the IAs are similar; however, the practice of the applicable rules and regulations may slightly vary across them. The IFSA has identified gaps based on which DLI4 has been included for improving public procurement efficiency by CMWSSB and GCC. Additional fiduciary actions are included either in the PAP or the POM and will be closely monitored.

70. **Exclusion.** The Program is not expected to procure any large contracts valued at or above the OPRC thresholds for a **'Substantial'** risk rating, that is, US\$75 million for works, US\$50 million for goods and non-consulting services, and US\$20 million for consultant services. The IAs shall report to the World Bank if any large contracts appear during Program implementation. The World Bank will also monitor fiduciary systems and contract management reports to identify any large-value contracts throughout the Program implementation.

71. **Procurement Systems of the IAs were assessed and found to have required processes and procedures for Program implementation; actions to mitigate the identified fiduciary risks are included in a DLI and the PAP.** In accordance with the 'Program Expenditure Framework' and the 'Program Boundary' there are various capital expenditure and operational expenditure activities to be carried out by different sectors and selected agencies. Program will finance procurement of goods, consultancy services, civil works, hardware and IT systems, and transport service contracts, including VGF. Program operational and administrative costs associated with the implementation units include remuneration and salaries of staff deputed/assigned to the Program, building rentals, annual maintenance, recurring administrative and general expenses, training, and workshops. The IAs will use standard bid and contract documents; use of Government e-Marketplace (GeM) portal, appropriate staffing and their training and capacity building shall be included in POM and compliance shall be ensured. Inadequate procurement planning and oversight is another risk identified at the IA levels. Risk will be mitigated by a PAP action which will require public disclosure of the procurement plan and contract award information; and regular monitoring using key performance indicators.

72. **The existing FM framework will be followed for the program.** Each IA would prepare an annual work plan and budget requirements for the year, intimate to the administrative department, and get the same incorporated in the state budget. A separate program budget would be created, and annual allocation would be provided by the state. In case of fund flow, the existing system of using bank accounts would be followed for parastatals and payment through treasury would be followed for the department. All entities (except WRD) should have a program bank account operational before negotiations. The Finance Department should issue a comprehensive GO, including budget and fund flow arrangements, the timelines for transfer of funds to these entities, and conditions for transfer, if any. Given that budget head creation and GO issuance is required before negotiations, GoTN completed these actions in February 2021. Parastatals follow double entry accrual-based accounting while WRD follows cash-based accounting system. Except MTC and TNIDB, all IAs have computerized accounting systems. Accounting systems currently followed in these entities would be followed for the Program. In case of parastatals, program accounting would be followed; for TNWRD, accounts would be maintained under the program budget head. Interim financial reports are not required for the program. TNIDB will submit the status of overall program expenditure along with program reports submitted to the Bank every six months for information.

73. **The program audit report needs to be submitted within nine months from end of the financial year.** External audit for TNWRD would be done by the state office of CAG, who would be requested to provide a separate report for selected Program related budget heads. For other IAs, a Chartered Accountant (CA) firm would be hired to provide a consolidated program audit report covering both financial and procurement aspects. While the internal



control framework is robust, internal audit is weak across IAs. Program expenditure reconciliation will be undertaken at the end of the Program.

74. **Governance and Accountability Systems: Under the larger governance framework of India, all government departments and agencies are covered under the Right to Information (RTI) Act 2005.** The CAG also carries out compliance and performance audits annually, and audit-related queries are reported to the Legislature and Public Accounts Committee for recommendations and actions. Central /State Vigilance units have jurisdiction and power to undertake an enquiry or cause an enquiry/investigation to be made on any information that a public servant has exercised or refrained from exercising his powers, for improper or corrupt purposes.

75. **This Program will be subject to ‘Guidelines on Preventing and Combating Fraud and Corruption in Program-for-Results Financing’ dated February 1, 2012 and revised on July 10, 2015.** These guidelines shall be applied in an unrestricted manner on all activities within the ‘Program Boundary’. Requirements under these guidelines include but are not limited to: (i) borrower’s obligation on informing the World Bank about all fraud and corruption-related allegations and investigations, (ii) the World Bank’s right to conduct administrative enquiries, and (iii) ineligibility of debarred firms for contract awards. To ensure that procurement related complaints are treated in a timely and fair manner, each IA will set-up a dedicated complaint handling system, allowing complaints to be posted by interested parties. Also, specific arrangements are defined in action items to ensure compliance on anti-corruption guidelines of the World Bank. In order to operationalize implementation of the various areas covered in the ACGs, TNIDB shall act appropriately as outlined in annex 4. Overall TNIDB being the nodal agency will be responsible for collating, monitoring, and referring the complaints on Fraud and corruption to the Project Director. The project Director based on TNIDB recommendation can refer a fraud and corruption case to the State vigilance commission, if and as required for investigation.

C. Environmental and Social

76. **An Environmental and Social Systems Assessment (ESSA) has been conducted by the Bank** for the proposed PforR to ensure consistency with the basic principles described in Policy and Directive for the Program Financing for Results. The findings are summarized below, and details are provided in annex 5.

Environment

77. **Environmental assessment.** The assessment is based on desk review and virtual consultations with staff of IAs. The assessment focused on borrower’s environmental management systems – both regulatory and organizational (Core Principle 1) and public and worker safety (Core Principle 3). The assessment confirmed consistency with the environmental Core Principles, and exclusion of activities ineligible for PforR financing.

78. **Environmental management systems.** Capacities for environmental management vary across sectors and, overall, are assessed to be satisfactory. The IAs have appropriate regulatory procedures. The compliance procedures of Department of Environment and State Pollution Control Board are adequate to mitigate impacts associated with Program activities. The National Green Tribunal (NGT) orders relevant to the city’s environmental assets and performance are reviewed periodically and implementation ensured at the highest level of the GoTN. However, there are gaps in enforcing environmental regulations for which capacity strengthening is needed. Stakeholders’ feedback was considered in identifying capacity needs and relevant actions are included in the PAP or POM.



79. **Environmental risks and impacts.** Activities related with WSS, WRM and urban mobility sectors have construction-related negative impacts such as air pollution, dust and noise pollution, worker and public safety, and generation of scrap and debris. These impacts are expected to be localized, temporary and reversible, and can be mitigated effectively through management measures. Upstream investments planned in the SWM sector under the Program contribute to establishing a circular economy and will have positive benefits by reducing solid waste. However, these investments have to be planned to manage negative impacts that might arise during implementation. The Program's support to MTC for improvement in urban bus services will bring positive environmental impacts city-wide by reducing traffic congestion as well as GHG emissions.

80. **Environmental risk rating.** The environmental risk is rated Moderate given that (i) there is sufficient regulatory systems and organizational capacity to deal with the environmental impacts associated with the Program, and (ii) environmental impacts associated with the program activities are expected to be localized, temporary and reversible, and can be mitigated effectively through management measures. Gaps in institutional capacity will be addressed as part of the PAP.

81. **Recommendation for improving environmental management system.** Given weak enforcement of environmental regulations, it is necessary to build the capacity of IAs. Enhancing organizational capacity on contract management, including preparation of bidding documents, is required to ensure that Environmental Health and Safety (EHS) requirements (including COVID-19 pandemic measures) are included. These are relevant for WSS as well as WRM sectors. Pertaining to SWM, the proposed upstream dry waste recycling activities are new to GCC. Their capacity (pre-investment reviews, safety protocols and monitoring) to manage environmental impacts needs to be enhanced. In public health, strengthening of bio-medical waste management (documented procedures, regular audits, monitoring and adopting COVID-19 practices) in the primary and community health care facilities will be required.

Social

82. **Social assessment.** The Assessment reviewed the social policies, legal framework and capacity of government institutions and systems (Core Principles # 1, 3, 4 and 5)²³ to deliver quality services to achieve social development outcomes. Findings indicate that government has enabling laws and policies to address the effects of the program and associated risks. The challenges are largely in terms of ensuring the operationalization and enforcement of these regulations as well as bridging the gap in Institutional systems and capacity for evidence-based reporting on social development outcomes. Social risk is rated as **Substantial** (see annex 5).

83. **Social management systems.** The main IAs require capacity support to address the associated social risks, many of which are common across sectors. Therefore, measures will be included in the POM to strengthen systems

²³ #1 – environmental and social management systems are designed to (a) promote environmental and social sustainability in the Program design; (b) avoid, minimize, or mitigate adverse impacts; and (c) promote informed decision-making relating to a Program's environmental and social effects; # 3- environmental and social management systems are designed to protect public and worker safety against the potential risks associated with (a) the construction and/or operation of facilities or other operational practices under the Program; # 4 – environmental and social systems manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement and assists affected people in improving, or at the minimum restoring, their livelihoods and living standards; and # 5 environmental and social systems give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of Tribals, Tribal Groups or Tribal Populations, and to the needs or concerns of vulnerable groups.



for institutionalizing reporting on performance of laws and policies. In addition, IAs may need to bring in additional expertise on social management (community engagement, gender, communication, and MIS).

84. **Social risks and impacts.** The risks vary across IAs. It is likely that the investments by WRD, CMWSSB and GCC (Mega street) will lead to construction-induced adverse impacts that may lead to temporary loss of livelihood. These impacts also pertain to inequitable distribution of benefits from resilient watershed, and exclusion of women and other vulnerable groups from the coverage of health, SWM, drinking water and sewerage services. Weak systems on accessible grievance management and feedback mechanism; stakeholder's engagement; processes to address SEA-SH (Sexual exploitation and abuse – Sexual harassment) at workplace and public places; implementation of welfare measures for workforce and limited institutional capacity to manage these risks limits the opportunity to achieve social development outcomes. The activities to support the Gender Lab to ensure safe mobility of women on bus services provided by MTC will positively impact the ridership of the women passengers.

85. **Recommendations for improving social management system.** For the program to manage social risks and enhance social benefits, the PAP focuses on strengthening institutional capacities and reporting on social risk management. The following activities are recommended to support the implementation of the PAP.

- (a) **Capacity.** Ensuring availability of adequate skilled human resource within the IAs to manage social risk and improve access to opportunities created by the program for the vulnerable. A customized and comprehensive Capacity Development approach needs to be considered for delivering training.
- (b) **M&E system to track performance on social management.** Most IAs are well equipped with IT-based monitoring systems. The system for data collection and monitoring on social management needs to be augmented towards preparation of evidence-based reports for informed decision making, enhancing positive outcomes, and mitigating risks.
- (c) **Social Inclusion:** A key pillar of improved service delivery is outreach to the most vulnerable. The IAs will carry out activities as outlined earlier for addressing the key issues faced by the vulnerable population. It is recommended that disaggregated data on beneficiaries (women, persons with disability, Below Poverty Line, scheduled caste, minorities, and other backward classes) is periodically tracked. Infrastructure and service delivery will integrate universal design principles to facilitate access for persons with disability, senior citizens, women, and other vulnerable groups.
- (d) **Citizen feedback and grievance redress mechanism (GRM) to benchmark services.** Some IAs, such as GCC, have robust grievance redressal system with real time reporting while others require strengthening and improvement. For all IAs, it is recommended that the GRM protocol includes an option for complainant's satisfaction before closure of the complaint. To strengthen service delivery, annual customer feedback surveys and social audits should be considered.
- (e) **Closing gender gaps.** The program will support multiple initiatives to address the gender gaps in identified service sectors, as outlined in earlier sections.



- (f) **Management of land acquisition and resettlement.** The Screening Criteria will be used to exclude activities that may entail land acquisition from private owners²⁴including permanent and long-term impact on non-title holders. Development of Mega Streets is likely to affect the street vendors adversely, for which the state has adequate safeguard provisions for restoration of livelihoods²⁵ that can be monitored. Investments in WSS are likely to have temporary adverse impact on non-title holders for which the approach will be to minimize and reduce the duration of the temporary impact and ensure that mitigation measures are implemented under contract management.
- (g) **Labor welfare measures especially for the contracted and daily wage workers.** All IAs have a mix of permanent and temporary staff- some hired and managed directly while some through contracted agencies. Improvement in services for transport, health, solid waste, and so on foresees recruitment of workforce, while some activities would engage construction workers. The labor law requirements are embedded in the contracting structure for hiring of workers. IAs could consider strengthening their reporting mechanism on welfare of workforce as part of overall contract management and for performance-based contracts.

86. **Stakeholder engagement, consultations, and disclosure.** During the program preparation (i) mapping of stakeholders (direct and indirect) was undertaken and (ii) consultations were held with interest groups across all sectors. Following the sector-specific consultations, draft ESSA was disclosed on the Bank external website on March 16, 2021, and virtual city-wide stakeholder consultation held on March 24, 2021. The final ESSA includes feedback from government officials, Residential Welfare Associations, opinion leaders, nongovernmental organizations (NGOs), civil society organizations (CSOs), and other relevant interested groups received and re-disclosed on respective IA websites and World Bank external website. With limitations on organizing consultations with the direct beneficiaries due to COVID-19 pandemic a road map for consultation is detailed out in ESSA to be implemented by IAs and will be included in the POM to complete within 6 months of ease of travel.

87. **Communities and individuals who believe that they are adversely affected as a result of a Bank supported PforR operation, as defined by the applicable policy and procedures, may submit complaints to the existing program grievance redress mechanism or the WB's Grievance Redress Service (GRS).** The GRS ensures that complaints received are promptly reviewed in order to address pertinent concerns. Affected communities and individuals may submit their complaint to the World Bank's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of the Bank's non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the 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 GRS, please visit <http://www.worldbank.org/GRS>. For information on how to submit complaints to the World Bank Inspection Panel, please visit <http://www.inspectionpanel.org>.

88. All actions required as per ESSA findings will be part of either the PAP or the POM. Details of such required actions and other recommendations and findings of ESSA as well as overall Program principles will be specified in the POM.

²⁴ The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 and 2017 Rules provide for rights to fair compensation in case of land is required from private entities.

²⁵ Protection of Livelihood and Regulation of Street Vending Act 2014 and corresponding Rules and Scheme. This provides legal protection and livelihood restoration measures



V. KEY RISK

89. **Overall, this PforR faces substantial risks to achieving its development outcomes.** Currently, the risks associated with sector strategies and policies, and stakeholder management are rated 'High'. The risks associated with political status and governance, macroeconomic status, institutional capacity for implementation and sustainability, as well as fiduciary, environment, and social risks are rated 'Substantial'; while the risks associated with technical design of the Program are rated 'Moderate'.

90. **The Program faces high level of risks related to sector strategies as well as stakeholder management because implementation of the proposed reform agenda for services improvement entails a significant shift from status quo. This will require proactive and careful stakeholder management.** Improvements in coordination and integration mechanisms amongst different agencies will entail significant changes in the sector strategies, implementation structures, and/or policies. Even though the state leadership is committed to the reform agenda, the efforts may face resistance from within the government system during Program implementation. The Program design operationalizes effective incentive mechanisms and implementation monitoring systems for managing and mitigating these risks; nevertheless, the risks are high. In addition, implementation of the identified reforms will require proactive and effective management of a wide range of stakeholders such as the service delivery agencies, workers unions, CSOs, NGOs, political leadership, and communities at large. It is evident from the past experiences of urban reforms in India and in Tamil Nadu that the political economy of issues such as changes in urban service delivery approaches, tariffs, and contracting processes is complex; therefore, stakeholder risks need to be well-identified and managed through proactive communication, awareness generation and consultation. The Program prioritizes stakeholder consultation and management mechanisms as a critical element of the reform implementation process, that are co-owned by the state government and the service delivery agencies.

91. **Macroeconomic risk is rated Substantial.** While Tamil Nadu has conformed to fiscal deficit targets in the past and has a relatively low level of public debt compared with the average for all states, the decline in growth due to the COVID-19 crisis had a strong impact on revenue collection in FY20/21. At the same time, the state's expenditures are estimated to have gone up substantially. The GoTN is projecting a sharp recovery in revenues going forward, but this is predicated on a strong economic recovery in FY21/22 which is looking increasingly uncertain due to the resurgence of COVID-19 infections. However, the government's receipts will be bolstered by an increase in transfers from the central government, mainly in the form of grants recommended by the 15th Finance Commission.

92. **The Program also faces substantial political and governance related risks owing to upcoming elections and potential political turnover.** Tamil Nadu's state assembly elections are concluded in April and results are expected in May 2021 and Chennai municipal elections are scheduled in the second half of 2021. Political headwinds may increase with the upcoming state assembly and local assembly elections in Chennai and may pose broader political economy related risks, which need to be carefully managed and mitigated to the extent possible. As such, it is to be expected that Program implementation period will go through uncertain political environment resulting from potential political turnover at the state and/or local government level. Also, as in other similar Programs, fraud and corruption risks also need to be considered. Political risk will be mitigated through a broader set of activities focusing on stakeholder engagement, dissemination, and Information Education Campaigns (IEC) that discuss the changes that can deliver robust service delivery systems in a rapidly urbanizing context. High level policy dialogues have also been carried out with the GoTN for effective mitigation of these risks by institutionalizing the reforms and



their implementation in the government system in a way that is co-owned by the state, the agencies and the communities.

93. **Institutional capacity related risks are substantial for implementation and sustainability.** The key service delivery agencies have traditionally followed an approach where they rely on input-based budget allocations for building infrastructure in a fragmented and uncoordinated manner without measuring the improvements in service outcomes for the citizens of Chennai. Therefore, the envisaged transition of these agencies towards close monitoring of overall service delivery performance, an emphasis on improved financial performance, and the use of results-based financing is likely to be hard and will require significant effort and time. Shift from an infrastructure focused approach to a service delivery focused approach will require fundamental changes in the institutional systems and processes adopted by these agencies to plan, deliver and manage infrastructure assets and services, that will be gradual and incremental in nature. The Program design has identified a combination of DLIs and investment items in expenditure framework, that together will serve as a strong-incentive to enable this shift and adequate capacity building/handholding support will also be provided to all the agencies for implementation of new approaches and instruments; the process will, nevertheless, be difficult and risks will remain substantial.

94. **The fiduciary risk is rated Substantial.** Given the decentralized nature of the Program, there is an inherent risk associated with variations in fiduciary capacity, compliance and co-ordination of FM and procurement processes. The fiduciary risks will be mitigated through development of guidance to address procurement transparency and accountability including streamlining complaint handling, strengthening assessment of internal controls, strengthening of assessment of financial controls at implementing agency level. The actions to mitigate the fiduciary risks have been included in the PAP (Annex 6). With implementation of these mitigation measures, the fiduciary systems are anticipated to provide reasonable assurance that Program funds will be used for the intended purpose. However, the risk is still retained as substantial on account of the inherent risk and the same shall be re-assessed as the implementation progresses.

95. **The environment and social risks combined are rated Substantial.** In breakdown the environmental risk is rated as 'Moderate' given that (i) there is sufficient regulatory systems and organizational capacity to deal with the environmental impacts associated with the Program; and (ii) environmental impacts associated program investment are expected to be localized, temporary and reversible. While the social risk is rated as 'Substantial' due to varying institutional capacities to manage challenges such as gaps in reporting of legal and policy enforcement, inadequate tracking of social and development outcomes, weak systems to close complaints and access GRM systems, and citizen apathy in the absence of structured engagement and feedback mechanisms. The actions to mitigate the environmental and social risks have been included in the PAP (Annex 6).



ANNEX 1: Adjustments to the India World Bank Group Country Partnership Strategy in Response to COVID-19 Pandemic

1. **The COVID-19 pandemic affected economic activity significantly.** In response to the pandemic, the Government of India (GoI) implemented a strict nationwide lockdown between March and May 2020 to prevent the spread of infections. As a result, supply chains and economic activity were disrupted. The lockdown was lifted gradually, from June 2020 onwards. This allowed economic activity to resume from the second quarter (July to September 2020) onwards.

2. **Real GDP growth contracted by 7.3 percent in FY20/21²⁶—mainly due to restrictions on economic activity and mobility leading to large contractions in private consumption and investment.** However, growth is expected to rebound in FY21/22 (within a range of 7.5-12.5 percent). The financing needs of the GoI are expected to rise significantly. The sharp economic slowdown has affected revenues disproportionately with general government revenues declining by over 10 percent in FY20/21. At the same time, expenditure needs have risen. As a result, the general government deficit is expected to have risen to over 14 percent in FY20/21 and Public and Publicly Guaranteed debt to have reached 90 percent. The bulk of the required financing is expected to be sourced from domestic markets which have enough liquidity, with minor contribution from international borrowing.

3. **The COVID-19 pandemic has exacerbated the vulnerabilities for traditionally excluded groups, such as youth and women.** The lockdown, in the first quarter of FY20/21, appears to have had a major impact on household consumption. Mean per capita consumption is estimated to have dropped by 36 percent over April-July 2020 y-o-y. Available household survey data indicate that relative to the “traditional poor” the most affected population were relatively younger, more urban and educated. With the end of the lockdown, however, household consumption seems to have recovered to almost pre-pandemic levels. In addition, interstate migrants are at risk of increased poverty and destitution. Estimates from the Economic Survey highlight that the magnitude of interstate labor migration in India was close to 9 million annually between 2011 and 2016 and migrant remittances in lower-income states like Bihar accounted for 35.6 percent of gross state domestic product (GSDP) in 2011–12. MSMEs that account for the largest non-farm employment (30 percent) with about 20 percent female participation are considered to have been impacted the most due to lockdown.

4. **Fiscal and monetary policies aimed at managing the impact of the pandemic, together accounted for more than 10 percent of GDP in FY20/21:**

- **Pradhan Mantri Garib Kalyan Yojana (PMGKY), to protect the poor and vulnerable impacted by Coronavirus Containment Measures,** expected to cost approximately \$ 23 billion.
- **MSME support** includes Emergency Credit Line Guarantee Scheme for INR. 3 trillion²⁷, INR 200 billion subordinate debt for stressed MSMEs, INR. 100 billion to provide equity funding for MSMEs with growth potential and change in the definition of MSMEs, by increasing investment limits and firm turnover, to help incentivize firms to grow.
- Agriculture infrastructure fund - proposed financing facility of INR. 1 trillion (to be funded by NABARD) to promote post-harvest management infrastructure and, Micro-food enterprise - INR. 100 billion for technical upgrade and promotion of clusters of local products.
- Outlay of Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) - a universal employment

²⁶ National Statistics Office, Ministry of Statistics and Program Implementation (MOSPI)

²⁷ Details: <https://pib.gov.in/PressReleasePage.aspx?PRID=1625306>.



guarantee program, is increased by INR. 400 billion.

- Increased state government borrowing-limit, from 3 percent to 5 percent of GSDP (additional INR. 4.28 trillion).
- Long- Term Repo Operations (LTROs) and Special Liquidity window: To alleviate cash flow pressures, the Reserve Bank of India has conducted LTROs and Targeted LTROs for a total amount of INR. 9.6 trillion (about 4.5 percent of GDP) since February 2020. Moreover, a Special Liquidity Facility for mutual funds of INR. 500 billion was opened on April 27, 2020, to ease liquidity pressures on mutual funds.

WBG support for responding to the crisis

1. **In alignment with its global response, the WBG has been closely supporting Gol's strategy, which consists of three phases.** In the first phase, the Gol tackled the health aspects, and partnered with the Bank for a \$1 billion health project. In the second phase, Gol invested \$23 billion in social protection program to support the poor and vulnerable communities during the lockdown, and the Bank provided financing of \$1.15 billion. In the third phase, Gol focused on economic stabilization and reducing the costs of the lockdown. This includes support to MSMEs and their workers during lockdown by committing about 1.5 percent of GDP to MSME finance. The Bank financing of \$750 million is supporting this program to provide liquidity for their balance sheets, to mitigate against potential solvency problems and job losses, and to lay the foundations for a stronger MSME financing ecosystem in the recovery phase.
2. **Additionally, the Bank activated the Contingent Emergency Response Component (CERC) in five projects to support the state governments' COVID-19 relief efforts.** Moreover, many projects made special provisions for COVID-19 Assistance Packages within their project scope. Going forward, the Bank will be supporting the Gol as follows:
 - **Saving lives:** Other than the ongoing health programs, the Bank is a potential partner with Gol on its flagship program of Atmanirbhar Swasth Bharat Yojna which aims at strengthening the health sector in the country by strengthening healthcare services, health emergency preparedness and response and strengthen core capacities as per the International Health Regulations. In addition, the Bank is exploring innovative ways of support to the state and central governments through upcoming operations in the education and health sector.
 - **Protecting poor and vulnerable people:** The third phase of the Social Protection program is aimed at strengthening the capability of the state and national governments in India to respond to the needs of informal workers through a resilient and coordinated social protection system. Some upcoming projects have specific COVID-19 components supporting this pillar, e.g. Fisheries Sector COVID-19 Response and Recovery, and Resilient Kerala Program for Results.
 - **Sustainable growth and job creation:** The Bank is preparing a project on raising and accelerating MSME productivity which will focus on strengthening institutions and markets. Job creation is a special focus under the infrastructure projects as well.
 - **Strengthening policies, institutions and investments for rebuilding better:** This is an all-encompassing theme under the India CPF and is integrated in most of the projects. The upcoming engagement with the National Disaster Management Agency on Seismic Risk Mitigation Project is one such example.
3. **The IMF does not have an active lending program in India. However, it undertakes regular macroeconomic supervision and Article IV consultations twice yearly.** The Bank and IMF teams regularly exchange views and information. The partnership with other donors was brought to fruition in both the Social Protection and MSME COVID-19 response DPLs. Within the Social Protection DPL, the Bank has worked in collaboration with the Asian



Development Bank (ADB), Agence Française de Développement (AFD), and Kreditanstalt fuer Wiederaufbau (KfW). The Japanese International Cooperation Agency (JICA), Asian Infrastructure Investment Bank (AIIB), the New Development Bank (NDB) and International Fund for Agriculture (IFAD) are also exploring potential parallel financing in upcoming operations. Discussions are ongoing to expand the World Bank's TA through additional funds from the Bill and Melinda Gates Foundation (BMGF) and the United Kingdom's Foreign, Commonwealth and Development Office (FCDO).



ANNEX 2. RESULTS FRAMEWORK MATRIX

Results Framework

COUNTRY: India

Chennai City Partnership: Sustainable Urban Services Program

Program Development Objective(s)

To strengthen institutions and improve quality and financial sustainability of selected urban services in the Chennai Metropolitan Area.

Program Development Objective Indicators by Objectives/Outcomes

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
RA1: Strengthening Governance and Institutions for Service Delivery							
Reduction in vacancy rates of Group A & B cadre of GCC (Text)	DLI 1	Vacancy level for Group A and B cadre at 23 percent. (30% women to be hired as per GOTN Policy).	GoTN issues a Government Order that provides for: (i) an updated recruitment policy for GCC (recruitment through TNPSC for Group A & B cadre); (ii) revised staffing positions at GCC for Group A & B cadre.	N/A	Vacancies in Group A & B as per revised staffing pattern lowered by 12 percentage points.	N/A	Vacancies in Group A & B as per revised staffing pattern lowered to < 5 percent.
Operationalization of CUMTA with enhanced capacity and control over sector budget allocation to oversee urban	DLI 2	No staff, no budget	CUMTA Stage 1 staffing in place	(i) CUMTA approves CMP; (ii) CUMTA Stage 2 staffing in place	N/A	(i) Stage 3 staffing; (ii) CUMTA is approving overall sector funding annually	(i) CUMTA established and has approved sector vision (CMP); (ii) staffing in place; (iii) control over



Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
mobility in the metropolitan areas (Text)							sector funding
RA2: Enhancing Efficiency & Quality of Services							
Improvement in service delivery performance of MTC, CMWSSB and GCC, disaggregated by gender and vulnerable groups (Text)		Inadequate baseline of service performance (water, transport, health)	Baseline survey of service performance carried out. Composite index created to measure service improvements and baseline value is 100. Data and information breakdown by gender and vulnerable groups are designed.	Index improves to 105	Index improves to 110	Index improves to 120	Index improves to 130
Citizen and customer feedback for improved accountability of service delivery Institutions (CMWSSB, MTC, GCC for solid waste management and health) (Text)		NA	Protocols established for regular: (i) customer surveys (annual or biennial) and collection of other customer-end service delivery data; (ii) citizen feedback surveys; and (iii) dissemination of findings to citizens and customers (for services and activities within Program scope).	Surveys and reports on customer feedback and satisfaction begin in second year for relevant services.	Mid-term citizen feedback survey implemented		End-term citizen feedback survey implemented. System established for regular collection, internal use, and dissemination of both citizen and customer feedback.
RA3: Improving Financial Accountability and Sustainability							
Percentage increase in GCC	DLI 9	No revenue improvement	Preparation and	15 percent increase in	30 percent OSR increase	45 percent increase in	60 percent increase in



Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
annual OSR (Text)		plan, Rs 1240 crores (INR) OSR from 2017/18	adoption of OSR improvement action plan by GCC Council	OSR over baseline	over baseline	OSR over baseline	OSR over baseline
Improved financial performance for WSS services (Text)	DLI 10	CMWSSB to provide FY 21 financial statement to confirm baseline. (User charges revenue is approx. 54% of Revenue expenditure in FY 20)	User charges revenue > 50% of Revenue expenditure	User charges revenue > 60% of Revenue expenditure	User charges revenue > 70% of Revenue expenditure	User charges revenue > 80% of Revenue expenditure	User charges revenue at least 90% of Revenue expenditure



Intermediate Results Indicator by Results Areas

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
RA1: Strengthening Governance and Institutions for Service Delivery							
Enhance efficiency and transparency of public procurement in GCC and CMWSSB (Text)	DLI 4	GCC uses e-tendering and CMWSSB uses it partially. Bid evaluation, award and contract management is done offline.	(i) prepare and adopt e-procurement roadmap; (ii) prepare and adopt standard procurement bid document; and (iii) complete training of all procurement staff	(i) Use of online evaluation for at least 25% tenders by value; (ii) use of contract management modules of e-procurement system in at least 10% of the tenders by value.	(i) Use of online evaluation for at least 50% tenders by value; (ii) use of contract management modules of e-procurement system in at least 20% of the tenders by value.	(i) Use of online evaluation for at least 60% tenders by value; (ii) use of contract management modules of e-procurement system in at least 30% of the tenders by value.	(i) Use of online evaluation for 75% tenders by value; (ii) use of contract management modules of e-procurement system in at least 50% of the tenders by value. (iii) At least 75% of the contracts by value awarded are disclosed within service standards published in Citizen's Charter.
Reduction in women feeling unsafe in buses and public spaces (Text)		No publicly available record	(i) Establishment of a baseline, ii) Number of cases of gender-based violence in public transport and public spaces reported, handled and referred to gender-based violence services, publicly available	N/A	NA	10 percent reduction in women feeling unsafe	20 percent reduction in women feeling unsafe
Strengthen institutions for coordinated water management and security	DLI 3	No Water Act and no Water Regulatory Authority	New Water Act, including establishment of a water regulatory	Water Regulatory Authority established and operationalized.	Cascade decision support system including	N/A	N/A



Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
(Text)			authority and groundwater regulation, submitted to the Cabinet	Water Security Plan completed and adopted.	enhanced monitoring system is established and operational		
RA2: Enhancing efficiency and quality of services							
Strengthening GCC's health system through improved access to and quality of care (Text)	DLI 5	No Quality of Care Strategy and Operational Plan; zero UPHCs providing at least 7 out of 12 CPHC service packages; 10% public and select private sector facilities contributing to disease surveillance; zero UPHCs/UCHCs with NQAS full certification	i) Development and adoption of Quality of Care Strategy and Operational Plan by GCC	(i) At least 5 UPHCs providing at least 7 out of 12 CPHC service packages (ii) At least 20% of public sector and private sector health facilities annually reporting P forms at least 80% of weeks (iii) At least 5 UPHC or UCHC facilities with NQAS full certification	(i) At least 20 UPHCs providing at least 7 out of 12 CPHC service packages (ii) At least 35% of public sector and private sector health facilities annually reporting P forms at least 80% of weeks (iii) At least 20 UPHC or UCHC facilities with NQAS full certification	(i) At least 40 UPHCs providing at least 7 out of 12 CPHC service packages (ii) At least 50% of public sector and private sector health facilities annually reporting P forms at least 80% of weeks (iii) At least 40 UPHC or UCHC facilities with NQAS full certification	(i) At least 70 UPHCs providing at least 7 out of 12 CPHC service packages (ii) At least 70% of public sector and private sector health facilities annually reporting P forms at least 80% of weeks (iii) at least 60 UPHC or UCHC facilities with NQAS full certification
Improved SWM efficiency (Text)		(i) No SWM Plan (ii) Fragmented KPI monitoring system for performance-based Collection & Transport contracts (iii) [4.8%] TPD of resources recovered from dry solid waste in selected zones (in zones 4, 5, 6 & 8)	20-year SWM Master Plan prepared and adopted by GCC	Integrated SWM service performance management system operationalized in GCC for monitoring SWM service KPIs.	10% amount (TPD) of resources recovered / recycled from dry waste (in zones 4, 5, 6 & 8) over baseline	N/A	15% amount (TPD) resources recovered / recycled from dry waste (in zones 4, 5, 6 & 8) over baseline



Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Increased availability of pedestrian-friendly multi-utility streets (Text)		Mega-streets pilot completed, ready to be scaled-up		5KMs of mega-streets development completed	11.6KMs of mega-streets development completed		11.6KMs of mega-streets development completed
Performance-based contracts for bus service delivery (Text)	DLI 6	No performance contracts for bus services	DOT awards performance-based contract with MTC for efficient service delivery in bus transit (10% of existing service)	(i) DOT awards long term contract to MTC (30% of existing services); (ii) MTC awards performance-based Gross Cost Contracts with private operators for quality-based bus service provision (equivalent to services by 500 buses); (iii) GoTN provides viability gap funding for (i) and (ii)	N/A	MTC awards performance-based Gross Cost Contracts with private operators for quality-based bus service provision (equivalent to services by 1000 buses)	MTC has 1000 buses operating under gross contract
Improved operational efficiency in WSS (Text)	DLI 7	No policy for metering or bulk metering adopted by CMWSSB	(i) Policy for metering adopted (ii) Bulk water metering implemented	(i) Metering of 90% high-rise and commercial connections (ii) CMWSSB awards performance-based contract for water supply distribution in zones 10 and 13	(i) Metering of 30% domestic connections (G+2 and below) (ii) NRW / unaccounted for water reduced by 5% (Incentive for every 1 % reduced)	i) Metering of 50% domestic connections (G+2 and below) (ii) NRW reduced by an additional 5% over previous year	(i) Metering of 80% of domestic connections (G+2 and below) (ii) NRW reduced by an additional 5% on last year
Improved access to water supply (Text)	DLI 8	Inadequate baseline on service performance	CMWSSB enters into a Service Delivery Performance Agreement	At least 5% additional HHs connected and getting assured 1 hour of	At least 5% additional HHs connected) and getting 1 hour of	At least 5% additional HHs connectioned and getting 1 hour of assured	At least 5% additional HHs connected and getting 1 hour of assured water



Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
			with GoTN and MAWS Establish service level benchmark through baseline survey of HH connections and hours of supply	water supply.	assured water supply.	water supply	supply; (minimum cumulative target is an additional 20% of HHS over baseline).
Accessible and effective grievance redress management for employees and citizens (Text)		No GRM system		Systems strengthened and/or developed for registering, tracking, escalating and closing the complaint after complainant feedback. MIS to be one point source for data on GRM (MTC, GCC, CMWSSB, WRD)	80% of the grievances redressed and closed following complainant satisfaction within 30 days of registration	90%of the grievances redressed and closed following complainant satisfaction within 30 days of registration	90% of the grievances redressed and closed following complainant satisfaction within 30 days of registration
RA3: Improving financial accountability and sustainability							
MTC improved revenues from traffic, viability gap funding and non-tariff revenues (Number)		1,571.00	1,600.00	1,800.00	2,200.00	2,400.00	2,600.00



Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Reduction in vacancy rates of Group A & B cadre of GCC	Reporting of vacancy rates in selected positions based on the adopted recruitment policy and staffing plan.	Biannual	Staffing Headcount/Roster/Organograms for GCC	Review of staff headcount/roster data, new hirings in comparison with adopted employment policy and plan targets	GCC, PMU
Operationalization of CUMTA with enhanced capacity and control over sector budget allocation to oversee urban mobility in the metropolitan areas	Progress tracked by completion of intermediate and end target milestones, i.e., adoption and implementation of a staffing plan, sector vision and transfer of sectoral budget authority to CUMTA.	Biannual	Project progress reports, HR and staffing data, government circular on approval for sector funding control	MTC/CUMTA shares relevant reports and documents including staffing plans, approvals for sector funding under CUMTA, adoption of CMP	MTC, CUMTA, PMU
Improvement in service delivery performance of MTC, CMWSSB and GCC, disaggregated by gender and vulnerable groups	This indicator measures relative improvement in service delivery performance through the implementation of the Program using a composite index to be developed during the first year. In parallel, the baseline will also be identified through surveys. The methodology will define the data and	Annual	Customer database, services database, HMIS, and surveys by each agency	Each agency provides service data and customer data, along with disaggregation. Complemented by information from customer feedback surveys, where needed.	GCC, CMWSSB, MTC, PMU



	information breakdown as needed. Suggested composite index includes the following indicators: (i) WSS: additional households connected and receiving assured water supply of at least one hour daily, (ii) GCC Health: increase in the UPHC Service Provision Improvement index value, (iii) Urban mobility: index measuring increase in quantity of service and in user satisfaction. Each sector will account for one-third of the value of the indicator which will be measured as an index. The performance level identified through surveys will be taken as 100.				
Citizen and customer feedback for improved accountability of service delivery Institutions (CMWSSB, MTC, GCC for solid waste management and health)	Measures citizen feedback on service delivery improvements.	Biannual	Survey database and reports by each agency	Each agency provides the survey data and reports.	GCC, CMWSSB, MTC, PMU
Percentage increase in GCC annual OSR	Indicator will track the percentage increase in OSR from a baseline of 1240 crores in 2017-18	Biannual	GCC revenue data statements	Reporting of annual revenue data and comparison to baseline amount	GCC, PMU



Improved financial performance for WSS services	Increase in user charges as a share of revenue expenditures.	Biannual	Budgets and revenue collection data from GCC, CMWSSB	Budget and revenue analysis based on year-to-year changes in amounts/rate of collection	CMWSSB, PMU
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Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Enhance efficiency and transparency of public procurement in GCC and CMWSSB	GCC and CMWSSB will adopt an e-procurement roadmap(in Year 1). Indicator will measure the achievement of targets set out under the e-procurement policy.	Biannual	Procurement plans and contract data	Adoption of respective e-procurement roadmap, and conducting annual assessment of e-procurement contracts for each agency	GCC, CMWSSB, PMU
Reduction in women feeling unsafe in buses and public spaces	Indicator measures reduction in perceived lack of safety in buses and public spaces. Number of cases of gender-based violence (including harassment) in public transport and public spaces reported to 181 Women’ helpline, handled and referred to gender-based violence services, publicly reported	Annual	Survey	Annual survey of gender and public space perceptions (men and women) recording evolution relative to prior periods to be carried out by GCC gender lab.	GCC/Gender Lab, PMU
Strengthen institutions for coordinated water management and security	Progress tracked by milestones, as mentioned in the targets.	Biannual	Project progress reports, government circulars on the operationalization of WRA,	Review and verification of progress reports, circulars/notifications	WRD, PMU



			and adoption of water security plan and cascade system.		
Strengthening GCC's health system through improved access to and quality of care	The indicator will track (i) expanded provision of a comprehensive package of primary health care services at UPHCs; (ii) development, adoption and implementation of a comprehensive quality of care strategy for GCC; (iii) quality certification of GCC's UPHCs and UCHCs through NQAS; and (iv) improved disease surveillance through increased reporting of p-forms in public and private sector health facilities.	Biannual	HMIS & UPHC facility registers for provision of services in CPHC package; GCC administrative data (GO) and Quality of Care Strategy content; Gol and GCC administrative data on NQAS certifications; GCC administrative data on p-form submission by facility.	GCC health facilities, other public and private health care facilities in Chennai	GCC Health Dept, TN DoHFW, PMU
Improved SWM efficiency	Measures completion and adoption of a SWM master plan and SWM service performance system. Also tracks improvements in the	Biannual	GCC circular/ letter on SWM master plan and performance	GCC reports	GCC, PMU



	amount of dry waste recovered/recycled.		management adoption, GC C SWM department reporting on recovery/recycling rates of dry waste, based on 7 percent current baseline.		
Increased availability of pedestrian-friendly multi-utility streets	Tracked through completion of a pilot and subsequent street improvements per km.	Biannual	Implementation/ construction reports	Contractor provides implementation progress and completion reports	GCC, PMU
Performance-based contracts for bus service delivery	Indicator tracks award of performance-based contracts: (i) between GoTN and MTC for existing services; and (ii) between MTC and private operators for additional bus services. The number of buses added is tracked in absolute numbers.	Biannual	GoTN circular. Signed performance-based gross cost contracts. Annual report from MTC	GoTN letter/ circular confirming performance-based contracting of services with MTC. MTC's signed performance-based gross cost contracts for bus provision. IVA confirms the number of buses operating under performance-based contract and confirms GOTTN budget allocation to support all performance-based contracts	MTC, PMU



Improved operational efficiency in WSS	Following the CMWSSB adoption of a metering policy, the indicator will track changes (in % terms) in metered connections for commercial and domestic connections (high rise and low-rise buildings). It will also track award of performance-based contracts for water distribution and improvements in NRW reduction.	Biannual	Water connections and metered water connections, audit of water supply network to establish NRW baseline and track reduction in NRW	Use of online M&E system for counting of new, operation meters installed for high-rise commercial and domestic domestic connections. Audit of water network to identify changes in NRW	CMWSSB, PMU
Improved access to water supply	Following the completion of a service level baseline survey, the indicator will track improvement in the number of connections and the connected households with an additional 1 hour of water supply.	Biannual	Recurrent service level benchmark survey	Recurrent service level benchmark survey	CMWSB, PMU
Accessible and effective grievance redress management for employees and citizens	Will track performance of system in registering, tracking, and closing complaints.	Biannual	The MIS to be one-point source for data on GRM (MTC, GCC, CMWSSB)	Use of MIS.	CMWSSB, GCC, MTC, WRD, PMU
MTC improved revenues from traffic, viability gap funding and non-tariff revenues	Indicator measures evolution of MTC revenues in Rs Crores	Biannual	MTC finance division annual revenue	Review of annual tariff revenue data in MTC budget	MTC, PMU



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ANNEX 3. DISBURSEMENT LINKED INDICATORS, DISBURSEMENT ARRANGEMENTS AND VERIFICATION PROTOCOLS

Disbursement Linked Indicators Matrix				
DLI 1	Reduction in vacancy rates of Group A&B cadre of GCC to enhance professional capability			
Type of DLI	Scalability	Unit of Measure	Total Allocated Amount (USD)	As % of Total Financing Amount
Outcome	Yes	Text	7,500,000.00	5.00
Period	Value	Allocated Amount (USD)		Formula
Baseline	Vacancy level for group A and B cadre is 23 percent			
Year 1	GoTN issues a Government Order that provides for: (1.1) An updated recruitment policy for GCC Group A & B; (1.2) Revised staffing positions at GCC for Group A & B.	2,500,000.00		(1.1) 1,250,000; (1.2) 1,250,000
Year 2	(1.3) Percentage decrease in vacancies in Group A & B as per revised staffing position.	5,000,000.00		(1.3) \$275,000 for every percentage reduction in vacancies from baseline of 23% upto a maximum of \$ 5,000,000
Year 3	same as previous year	0.00		same as previous year
Year 4	same as previous year	0.00		same as previous year
Year 5	same as previous year	0.00		same as previous year



DLI 2	Operationalization of CUMTA with enhanced capacity and control over sector budget allocation to oversee urban mobility in the metropolitan areas			
Type of DLI	Scalability	Unit of Measure	Total Allocated Amount (USD)	As % of Total Financing Amount
Outcome	No	Text	4,000,000.00	2.67
Period	Value		Allocated Amount (USD)	Formula
Baseline	No staff, no budget			
Year 1	(2.1) Hiring or deputation of 10 CUMTA staff has been completed as provided for in the CUMTA Operational Manual		250,000.00	-
Year 2	(2.2) CMP adopted by CUMTA, and (2.3) Stage 2 staffing in place (20 staff) as provided for in the CUMTA Operational Manual		1,750,000.00	(2.2) \$1,000,000; (2.3) \$750,000
Year 3	-		0.00	-
Year 4	(2.4) Stage 3 staffing in place (40 staff) as provided in the CUMTA Operational Manual, and (2.5) CUMTA approves overall sector funding allocation annually		2,000,000.00	(2.4) \$1,000,000; (2.5) \$1,000,000
Year 5	-		0.00	-



DLI 3		Strengthened institutions for coordinated water management and security		
Type of DLI	Scalability	Unit of Measure	Total Allocated Amount (USD)	As % of Total Financing Amount
Outcome	No	Text	14,625,000.00	9.75
Period	Value		Allocated Amount (USD)	Formula
Baseline	No Water Act and no Water Regulatory Authority			
Year 1	(3.1) The draft Water Act, including establishment of a water regulatory authority and groundwater regulation, submitted to the GoTN Cabinet		3,750,000.00	-
Year 2	(3.2) Water Regulatory Authority established and operationalized, (3.3) Water Security Plan is completed and adopted through a Government Order.		8,375,000.00	(3.2) \$5,875,000 (3.3) \$2,500,000
Year 3	-		0.00	-
Year 4	(3.4) Cascade decision support system including optimization and enhanced monitoring system is established and operational through a Government Order		2,500,000.00	-
Year 5	-		0.00	-



DLI 4				
Enhance efficiency and transparency of public procurement in GCC and CMWSSB				
Type of DLI	Scalability	Unit of Measure	Total Allocated Amount (USD)	As % of Total Financing Amount
Output	Yes	Text	5,000,000.00	3.33
Period	Value		Allocated Amount (USD)	Formula
Baseline	GCC: Use of e-tendering, with offline evaluation, award and contract management CMWSSB: Partial Use of e-tendering, with offline receiving of bids, evaluation, contract award and management			
Year 1	GCC and CMWSSB each (4.1) prepare and adopt e-procurement roadmap and (4.2) standard bidding documents and (4.3) complete training of all procurement staff		500,000.00	\$250,000 for GCC, and (4.3); \$250,000 for CMWSSB. Each on completion of all the actions in the DLR
Year 2	(4.4) Percent increase of tenders (by value) that are evaluated online, (4.5) Percent increase of tenders (by value) that are managed via modules of e-procurement system.		4,000,000.00	(4.4) 13,333.33 for every % increase, (4.5) \$20,000 for every % increase over the baseline upto \$1M for GCC and \$1M for CMWSSB, resp
Year 3	same as previous year.		0.00	same as previous year
Year 4	same as previous year.		0.00	same as previous year
Year 5	(4.6) At least 75% of the contracts by value awarded are disclosed within service standards published in Citizen’s Charter.		500,000.00	(4.6) \$250,000 each for GCC and CMWSSB



DLI 5				
GCC's health system strengthened through improved access to services and quality of care				
Type of DLI	Scalability	Unit of Measure	Total Allocated Amount (USD)	As % of Total Financing Amount
Output	Yes	Text	20,000,000.00	13.33
Period	Value		Allocated Amount (USD)	Formula
Baseline	No Quality of Care Strategy and Operational Plan at GCC; zero UPHCs providing at least 7 out of 12 CPHC service packages; 10% public and select private sector facilities contributing to disease surveillance; zero UPHCs/UCHCs with NQAS full certification			
Year 1	(5.1) Development and adoption of Quality of Care Strategy and Operational Plan by GCC through issuance of a Government Order		1,800,000.00	(5.1) To be achieved by June 30, 2022
Year 2	(5.2) Increase in number of UPHCs providing at least 7 out of 12 CPHC service packages.		8,750,000.00	(5.2) \$125,000 for every additional UPHC over the baseline providing the CPHC service package (up to an aggregate amount \$8,750,000.
Year 3	(5.3) Increase in the percentage of public and selected private health facilities contributing to disease surveillance by submitting P-forms reports to GCC for at least 42 out of 52 weeks in a given FY.		4,200,000.00	(5.3) \$70,000 for every percentage increase over the previous year (up to an aggregate amount of \$4,200,000)
Year 4	(5.4) Increase in number of UPHCs/UCHCs with NQAS full certification.		5,250,000.00	(5.4) \$87,500 for every additional UPHC/UCHC over the previous year (up to an aggregate of \$5,250,000)



Year 5	same as previous year.		0.00	same as previous year.
DLI 6	Performance-based contracts for bus service delivery to enhance quantity and quality of bus services			
Type of DLI	Scalability	Unit of Measure	Total Allocated Amount (USD)	As % of Total Financing Amount
Output	Yes	Text	41,000,000.00	27.33
Period	Value		Allocated Amount (USD)	Formula
Baseline	0.00			
Year 1	0.00		0.00	0.00
Year 2	(6.1) Contract signed between DOT and MTC (for at least five-year and 10 percent of MTC fleet) and viability gap funding mechanism established; (6.2) Bus services contracted (equivalent to service capacity of 500 buses and inclusive of viability gap funding)		16,000,000.00	(6.1) \$4,250,000; (6.2) \$23,500 for every bus that is part of the service contract (or contracts) up to 500 buses
Year 3	same as previous year.		0.00	same as previous year.
Year 4	(6.3) Bus services contracted (equivalent to 500 additional buses to Y2 and inclusive of viability gap funding for 1000 buses)		25,000,000.00	(6.3) \$50,000 for every bus that is part of the service contract/s in addition to those included in the DLR for the previous FY
Year 5	same as previous year.		0.00	same as previous year.



DLI 7				
Improved operational efficiency in water supply				
Type of DLI	Scalability	Unit of Measure	Total Allocated Amount (USD)	As % of Total Financing Amount
Output	Yes	Text	17,500,000.00	11.67
Period	Value		Allocated Amount (USD)	Formula
Baseline	No metering policy			
Year 1	(7.1) Policy for customer metering adopted by CMWSSB (7.2) Bulk water metering completed		1,500,000.00	(7.1) \$750,000 to be achieved with one year of effectiveness date, (7.2) \$750,000
Year 2	(7.3) Metering of 90% high-rise and commercial connections completed, (7.4) CMWSSB awards performance-based contract for water supply distribution in zones 10 and 13		8,000,000.00	(7.3) \$500,000, (7.4) \$7,500,000
Year 3	(7.5) Increase in metering of low-rise (Ground+2 and below) domestic connections (7.6) reduction in NRW or unaccounted for water		8,000,000.00	(7.5) \$52,632 for every percent increase in domestic metering; (7.6) \$266,667 for every percent reduction in NRW over the baseline
Year 4	same as previous year.		0.00	same as previous year.
Year 5	same as previous year.		0.00	same as previous year.



DLI 8		Improved access to water supply services		
Type of DLI	Scalability	Unit of Measure	Total Allocated Amount (USD)	As % of Total Financing Amount
Outcome	Yes	Text	10,000,000.00	6.67
Period	Value		Allocated Amount (USD)	Formula
Baseline	Baseline to be established			
Year 1	(8.1) Establish service level benchmark (SLB) baseline through survey including baseline household connections and hours of supply, (8.2) Service performance agreement between CMWSSB and GoTN's Department of Municipal Administration and Water Supply (MAWS).		1,500,000.00	(8.1) \$500,000, (8.2) \$1,000,000; each To be achieved within nine months from the Effective date.
Year 2	(8.3) At least 5% additional HHs are connected and receiving assured 1 hour of water supply daily (Year 2-5) in the added areas, while maintaining the 1 hour of assured daily supply for HHs from the previous year.		8,500,000.00	(8.3) \$425,000 for every percent increase in HH connections upto an aggregate of \$8,500,000
Year 3	same as previous year.		0.00	same as previous year.
Year 4	same as previous year.		0.00	same as previous year.
Year 5	same as previous year.		0.00	same as previous year.



DLI 9				
Percentage increase in GCC annual own source revenues (OSR)				
Type of DLI	Scalability	Unit of Measure	Total Allocated Amount (USD)	As % of Total Financing Amount
Output	Yes	Text	15,000,000.00	10.00
Period	Value		Allocated Amount (USD)	Formula
Baseline	No revenue improvement plan, Rs 1240 crores (INR) OSR from 2017/18			
Year 1	(9.1) Preparation and adoption of OSR improvement action plan by designated/special officer in GCC.		1,500,000.00	(9.1) to be achieved by March 31, 2022.
Year 2	(9.2) Year-on-year percentage increase in OSR over baseline		13,500,000.00	(9.2) \$300,000 for every percent increase in OSR over the baseline (up to an aggregate amount of \$13,500,000)
Year 3	same as previous year.		0.00	same as previous year.
Year 4	same as previous year.		0.00	same as previous year.
Year 5	same as previous year.		0.00	same as previous year.
DLI 10				
Improved financial sustainability of WSS services				
Type of DLI	Scalability	Unit of Measure	Total Allocated Amount (USD)	As % of Total Financing Amount
Output	Yes	Percentage	15,000,000.00	10.00
Period	Value		Allocated Amount (USD)	Formula



Baseline	46.00		
Year 1	0.00	0.00	-
Year 2	0.00	15,000,000.00	\$375,000 for every percent increase over the baseline of 50% up to an aggregate amount of \$15,000,000.
Year 3	0.00	0.00	same as previous year.
Year 4	0.00	0.00	same as previous year.
Year 5	0.00	0.00	same as previous year.



Verification Protocol Table: Disbursement Linked Indicators

DLI 1	Reduction in vacancy rates of Group A&B cadre of GCC to enhance professional capability
Description	The objective of this DLI is provide incentives to GCC to strengthen institutional capacity of GCC by reducing vacancies from the current level of about 23% in Group A and B cadres that comprise the key professionals related to engineering, medical, finance, etc. This is a scalable DLI. DLRs (1.1), (1.2) in Y1 are nonscalable; and DLR (1.3) in Y2 to Y5 is scalable.
Data source/ Agency	GCC
Verification Entity	IVA
Procedure	IVA will verify based on: (i) GoTN's order approving the updated recruitment policy for GCC with modality of recruitment through TNPSC for Group A &B; (ii) GoTN's order approving revised staffing positions / pattern for the Group A & B; (iii) GCC's annual report / other reports highlighting the existing staffing in Group A and B cadre and reduction achieved. IVA will review the reports and verify the HR records of GCC as required.
DLI 2	Operationalization of CUMTA with enhanced capacity and control over sector budget allocation to oversee urban mobility in the metropolitan areas
Description	CUMTA approves the CMP after due consultation; puts in place its staffing in phases (Stage 2 by year 2 and Stage 3 by year 4) and is given authority to approve overall sector funding by year 4. This DLI and all its five DLRs are non-scalable and non-timebound.
Data source/ Agency	CUMTA annual report
Verification Entity	IVA
Procedure	The IVA will review the consultation process and confirm its alignment with the terms of reference for the CMP update based on information and documents provided by CUMTA including consultations conducted, the comments received and responses given as part of the consultation, the list of adjustments made to the CMP and the Decision by CUMTA to approve the CMP. CUMTA will also provide evidence that other relevant agencies and departments were informed of the CMP. The IVA will review the list of filled positions compared to the Operational Manual requirements and ensure that at least the minimum number of positions filled through hiring or deputation. Approval of overall sector funding pertains to all large projects (above US\$10 million) , all multimodal projects (above US\$1



	million), and contracted services for which CUMTA will provide oversight. CUMTA will approve the allocation for urban mobility based on an annual proposal by its Secretariat, compiled from requests from the different agencies engaged in mobility and reviewed against the CMP vision and objectives. The list of approved activities will be passed on to the Finance and Budget department for processing. The IVA will confirm that such process is followed.
DLI 3	Strengthened institutions for coordinated water management and security
Description	The GoTN will prepare the legislation for management of surface and groundwater resources in consultation with stakeholders and establish a Water Regulatory Authority (WRA). Once established WRA will prepare a long-term integrated Water Security Plan. WRD will prepare and submit to the GoTN a cascade reservoir decision support system. This DLI and all its four DLRs are non-scalable and non-timebound.
Data source/ Agency	TN WRD
Verification Entity	IVA
Procedure	<p>The GoTN will provide the legislation and other documents proving that WRA, DSS, and WSP are completed. The IVA will review and confirm all deliverables are prepared in accordance with the following steps:</p> <p><u>WRA</u>: WRA is established including a Chair, full-time members in relevant disciplines and adequate staffing based on the legislation issued. It is co-located with the IWS and provided with adequate resources, with a mandate to provide strategic and regulatory leadership on integrated water resources management. WRA has prepared an annual work plan and a results framework. The legislation for WRA also describes the coordination mechanism to be used for managing water resources. WRA establishment is part of the Draft Water act submitted to the Cabinet.</p> <p><u>Cascade Decision Support System (DSS)</u>: The Cascade DSS is prepared by integrating the Dynamic model developed for Water Accounting / Auditing along with the Real Time Data Acquisition (RTDAS), Real Time Decision Support System (RTDSS), and Supervisory Control and Data Acquisition (SCADA). A Technical Committee for the Cascade DSS is established. The operation/monitoring nodes for Reservoirs Operation, Monitoring and control are established involving the different stakeholder agencies. DSS is established and made operational through a GO.</p> <p><u>Water Security Plan (WSP)</u>: The TOR for the preparation of the Water Security Plan is prepared and agreed using the Coordination Mechanism as described in the legislation for water resources management. Consultants who would prepare the WSP are recruited by the WRD. Once established, WRA will oversee finalization of WSP, including consultation with all relevant departments. WSP needs to be adopted through a GO.</p>



DLI 4	Enhance efficiency and transparency of public procurement in GCC and CMWSSB
Description	The indicator refers to the percentage of e-procurements undertaken by GCC and CMWSSB in line with targets identified in the DLIs. Each entity will adopt an e-procurement roadmap in year 1. This DLI timebound and scalable. DLRs 4.1, 4.2, 4.3, and 4.6 are non-scalable and timebound – 4.1, 4.2, and 4.3 have to be achieved by Y1; and 4.6 has to be achieved by Y5. DLRs 4.4 and 4.5 are scalable and timebound - have to be measured annually and only rewarding the incremental increase of annual performance over the previous year.
Data source/ Agency	GCC/CMWSSB
Verification Entity	IVA
Procedure	<u>Year 1</u> : IVA will verify that E-procurement roadmap detailing the actions to achieve the targets for year 1-5, has been adopted through the formal notification issued by MAWS department after internal approvals of GCC and CMWSSB. The targets for e-procurement and its phasing shall be confirmed and validated by CMWSSB and GoTN. IVA will verify that SBDs are disclosed on websites of the agencies and a training report, prepared by respective agencies. <u>Year 2-5</u> : IVA will verify that GCC and CMWSSB use the e-Procurement system as indicated in targets assigned for these years. In addition, IVA will verify that a Citizen Charter has been prepared by Year 4 and disclosed on websites of the agencies, with a target to have at least 75% of the contracts awarded (by value) to be disclosed by Year 5. IVA will mostly rely on data generated by e-procurement system and the manual procurement (without using e-procurement system) data to verify the ratios achieved by the agencies. Accordingly it is important to carefully maintain data for manual procurement also right from year 1.
DLI 5	GCC's health system strengthened through improved access to services and quality of care
Description	The DLI indicator will track measures of primary health care service delivery and quality of care. This will include: 1. Improved quality of care through the development, adoption and implementation of a comprehensive quality of care strategy for GCC; 2. Expanded provision of a comprehensive package of primary health care services (CPHC) at UPHCs (at least 7 out of 12 CPCH service packages as defined by GOI). 3. Improved disease surveillance through increased reporting of p-forms in public and private sector health facilities to track case incidence. 4. Improved quality of care through certification of GCC's UPHCs and UCHCs by National Quality Assurance Standards (NQAS). This is a scalable DLI. However, DLR (5.1) in Y1 is non-scalable and timebound. DLRs (5.2, 5.3, 5.4) are scalable and non-timebound.
Data source/ Agency	GCC Health Department, TN Department of Health and Family Welfare



Verification Entity	IVA
Procedure	<p>IVA will verify as follows:</p> <ol style="list-style-type: none"> 1. <u>GCC Quality of Care Strategy</u>: Government Order for GCC QoC Strategy adoption; GCC QoC Strategy content review, including complementarity with GoTN QoC Strategy and detailed quality improvement initiatives by GCC; and GCC QoC Strategy Operational Plan content, 2. <u>Expanded provision of CPHC</u>: Review of HMIS and facility register to ensure that at least 7 out of 12 CPHC service packages are provided for at least 6 months of each year in each UPHC, 3. <u>P-form reporting</u>: review of administrative data to verify that facilities are providing weekly reports for at least 80% of weeks in a given year (42 out of 52 weeks); denominator includes all GCC-managed facilities (UPHCs, UCHCs, maternity hospital, ID hospital) and private sector facilities of 20+ beds, 4. <u>NQAS full certification of health facilities</u>: Copies of NQAS certificates for UPHCs and UCHCs submitted to the IVA.
DLI 6	Performance-based contracts for bus service delivery to enhance quantity and quality of bus services
Description	This measures the Contracted performance-based Contracts for bus services between DoT and MTC. This DLI and all its DLRs (6.1, 6.2, 6.3) are scalable and non-timebound.
Data source/ Agency	MTC, DoT
Verification Entity	IVA
Procedure	<p>DOT will establish a contract for existing MTC Services starting from 2022 including KPIs, incentives and penalties to reflect the quality of delivery. The MTC services will be gradually covered under such approach (10% in 2022, 30% in 2023, 70% in 2024 and 100% in 2025), with 2022 being the reference year for the verification. The contract will have a minimum duration of five years.</p> <p>MTC will award competitively Gross Cost Contract for new bus services starting from 2022. The contracts will include KPIs, incentives and penalties to reflect the quality of delivery by private bus service providers. The IVA will confirm the award of such contracts, the reporting mechanism between MTC and DOT to confirm effective implementation of this contract, the preparedness of MTC to monitor and oversee the implementation of such contracts. The unit of counter will be number of buses provided under such contracts and the allocated amount will be scaled to this number and the timing of the contract award.</p> <p>The viability gap funding from DOT will include the resources needed to cover the gap between the cost of efficient service delivery (existing MTC services and new bus services) and passenger revenues in line with the business plan of MTC to be</p>



	approved by December 2021.
DLI 7	Improved operational efficiency in water supply
Description	The objective of the DLI is to measure the extent of improvement in the operational parameters by CMWSSB over the program period. This DLI is scalable but DLRs (7.1, 7.2, 7.3, and 7.4) are non-scalable while DLRs 7.5 and 7.6 are scalable. DLR 7.1 is timebound.
Data source/ Agency	CMWSSB
Verification Entity	IVA
Procedure	<p><u>Establishing the NRW baseline:</u> CMWSSB will undertake a detailed study to establish: (i) a baseline for NRW / Unaccounted for Water; (ii) roadmap for improvement; and (iii) approach for estimating NRW in future years. CMWSSB will prepare a detailed master file of consumers covering both metered and unmetered consumers. It will report the NRW/ Unaccounted for water at the end of each year.</p> <p><u>Metering:</u> IVA will validate the level of metering based on the data shared by CMWSSB. IVA will supplement the data review with verification of select consumer bills to check the meter reading and application of volumetric tariffs.</p> <p><u>NRW:</u> For NRW verification, IVA will note the NRW reported by CMWSSB and check whether the NRW estimation process is aligned with the methodology/ approach recommended under the baseline study. IVA will confirm the extent of NRW improvement and associated DLI disbursement each year.</p> <p><u>Performance Contract:</u> CMWSSB will conduct a competitive procurement to induct a private operator to take over operations in zones X and XIII through a performance-based contract including service delivery parameters, metering, NRW reduction, tariffs, etc. IVA will verify whether the contractual provisions reflect the objective to achieve improvements in delivery of water services, reduction of NRW, and transitioning to fully-metered continuous 24x7 water supply.</p>
DLI 8	Improved access to water supply services
Description	The objective of the DLI is to strengthen the quality and accountability of the service delivery improvements. The key activities envisaged under this DLI are: <ul style="list-style-type: none"> • Performance agreement on service delivery performance between GoTN (MAWS) and CMWSSB will establish the SLB indicators and an annual roadmap for service delivery improvement, greater transparency in CMWSSB operations including incorporation of independent directors on CMWSSB Board, and roll out of customer report cards • Phased increase in the number of Households connected to the piped water supply network and also receiving at least an assured one hour of water supply daily, while maintaining the HHs already receiving an assured



	one hour of water supply daily. This DLI is scalable with DLR 8.3 scalable, and DLRs 8.1 and 8.2 non-scalable and timebound.
Data source/ Agency	CMWSSB
Verification Entity	IVA
Procedure	<p>The responsibility for data collection and reporting of the DLI is with CMWSSB.</p> <p>In Year 1, the GoTN will implement the agreement with MAWS and CMWSSB. The agreement shall stipulate that the GoTN’s grant support to CMWSSB will be subject to the adherence of the terms laid out under the said agreement. IVA shall verify the terms of the agreement and ensure that it covers the areas stipulated in the DLI description and is in line with the objectives of strengthening the quality and accountability of the service delivery improvements.</p> <p><u>New water connections:</u> the CMWSSB will keep a log of all the new water connections provided during the year, including the connection deposits, if any, collected towards the same. The IVA will verify the number of water connections and may also conduct a sample Household verification to ensure authenticity of the data submitted.</p> <p><u>Hours of water supply:</u> the CMWSSB will prepare a daily log of hours of service and pressure using data loggers installed at the pre-determined points in the distribution network. It will also monitor the quality of water supplied at these points based on a daily sample testing process. The data will be consolidated and submitted as a report to the IVA on an annual basis (with all the relevant backup information/ links). The IVA will check the logs for the improvement in hours of water supply in the pre-determined points vis-à-vis the previous year. Based on the extent of increase in hours of water supply reported, the IVA will confirm the amount of disbursement to CMWSSB. The IVA will also review the quality testing reports and ensure that it is aligned with norms prescribed by Gol.</p>
DLI 9	Percentage increase in GCC annual own source revenues (OSR)
Description	The objective of this DLI is to improve GCC’s financial capacity. It incentivizes GCC to improve OSR from various sources including property taxes, user charges, municipal properties, etc. over the baseline year of FY 2017-18. This DLI is scalable with DLR 9.1 non-scalable and timebound, and DLR 9.2 scalable and non-timebound.
Data source/ Agency	GCC
Verification Entity	IVA
Procedure	This will be verified by the IVA based on review of action plan produced by GCC; and review of audited financial statements of GCC every year.



DLI 10	Improved financial sustainability of WSS services
Description	This DLI will measure the extent of cost recovery through user charges for water supply and sewerage services, calculated as follows: $\text{Cost recovery} = \text{User charge for WSS} / \text{Operating costs}$, with O&M costs for desalination plants excluded from the denominator (since these are expected to be met through Government grants). The user charge will be as reported in the annual financial statement of CMWSSB. This DLI is scalable.
Data source/ Agency	CMWSSB
Verification Entity	IVA
Procedure	Responsibility for data collection and reporting of the DLI lies with CMWSSB. The finance section of CMWSSB will prepare the annual financial statements reflecting the user charge revenue from WSS and the operating costs. Since the detailed audit of accounts takes more than a year, the CMWSSB will submit an undertaking confirming the figures, and these would be reconfirmed when DLIs are verified for the following year. The submissions on user charge and operating costs will also be audited and confirmed by an external auditor. CMWSSB will provide disaggregated information on the operating costs towards desalination plants and these will be excluded from estimation of denominator for cost recovery. IVA will review and validate the submissions of CMWSSB on the cost recovery from WSS and check whether the allocation of costs towards desalination and others is clear and transparent.



ANNEX 4. TECHNICAL ASSESSMENT (SUMMARY)

Program Strategic Relevance and Technical Soundness

- 1. The Program has high relevance because it tackles a set of difficult service delivery problems that are adversely affecting Chennai’s livability, sustainability, and future growth trajectory.** The Program has identified a critical set of urban services in Chennai including water supply, sewerage, SWM, urban mobility and public health, which will be supported for comprehensive improvements in city’s service performance while also tackling the emerging climate change, resilience and sustainability related challenges that Chennai is facing in the context of rapid urban expansion. The selection of the urban services is well-aligned with the long-term priorities of the city as well as critical need to address the immediate challenges it is facing. Therefore, the focus of the Program is not only to improve the service levels in identified sectors but also enhance the efficiency and sustainability of the systems that need to address the rapidly increasing service demands of the city. Accordingly, the Program focuses on climate mitigation activities critical for fostering low-carbon growth in the city by investing in green transport systems and expanding the use of NMT. In addition, resilience, climate adaptation and mitigation actions are found to be critical for solving Chennai’s flood-drought problem. The mitigation actions in water supply services also enhances the resource efficiency and avoids high cost coping strategy that has been adopted by Chennai in the past few years. The Program objective is also aligned with the GoTN’s Vision 2023 which aims to establish Chennai as a world class city through greening its growth, enhancing resilience to disasters and climate change, and improving economic competitiveness.
- 2. The Program is strategic because it adopts a common framework for identifying issues across sectors and starts by addressing foundational issues that are constraining service delivery in each of the selected sectors and agencies in CMA.** It focuses on cross-cutting systems improvements and a transition away from input-based development and service delivery models toward performance-based, citizen-responsive approaches. The Program objective of strengthening the fundamental institutional capacity for improved and sustainable urban service delivery also aligns with the Bank’s FY18-22 Country Partnership Strategy, which emphasizes the need for resource efficient growth approaches to managing India’s urban areas.
- 3. The Program helps build institutions both by supporting institutional strengthening of key service agencies and by creation of supra-agency mechanisms to reduce fragmentation across agencies and jurisdictions.** Three agencies—MTC, CMWSSB, and GCC—will benefit from direct support for systems and capabilities that enhance their service delivery orientation and outcomes. Support for operationalization of the CUMTA and the proposed Water Regulatory Authority will strengthen coordination—of planning, investments, and service delivery—among agencies.
- 4. The Program builds on strong government ownership, is technically sound and the activities reflect lessons from international best practices in each respective sector area.** Activities complement or deepen existing government policy and investment interventions in water, SWM, health and urban mobility sectors, and have strong support and buy in from the implementing entities, state line departments and Finance department. The Program’s approach, proposed activities and expenditures are in line with the targeted results areas and are informed by the Bank’s experience on local government/urban service improvement PforRs in Pakistan, Morocco, Gaza and the West Bank, Ethiopia, and Vietnam, among others. It is also informed by sector specific PforRs (for example, health PforRs in Tamil Nadu and several ECA countries).The overall Program design and



rationale draws from previous Bank experience with multi-sector metro “platform” engagements in Karachi, Dhaka, Colombo, Addis Ababa and Lagos.

5. **The technical soundness of the Program is also reflected in the sector-specific results that it prioritizes.**

The selected sectors—water, public transport, public health and SWM—have metro-wide economies of scale and spillover effects across administrative boundaries. Public sector providers are uniquely positioned to deliver these services, but they will require improvements to their technical capacities, strategic planning abilities and operational modalities (including citizen interface) to ensure longer term sustainability. The main sectoral assessments are summarized below, with additional detail provided in the separate Technical Assessment report.

- **Urban mobility.** The Program correctly identifies and tackles three high-priority issues. First, to address institutional fragmentation in the transport sector, GoTN needs to operationalize the CUMTA, an agency that was created under the CUMTA Act of 2010, to coordinate planning and investments across transport modes such as public bus, rail, roads, and streets. Key steps are to adequately staff the CUMTA, build its capacity, and enhance its integrative planning powers by giving it oversight over the finalization and implementation of the Comprehensive Mobility Plan for the Metropolitan area, including the ability to allocate a significant share of the sector budget.

Second, the Program aims to improve bus service delivery, given its significant (but declining) share of both total trips and trips by public transport as well as strengthen MTC as a company. The bus system has seen flat or declining ridership due to factors such as the bus fleet quality, poor intermodal linkages, a fragmented fare system, and poor rider engagement. MTC is a well-performing public bus company relative to its counterparts in other Indian cities, but it is functioning well below the frontier established by world-class bus companies. MTC is also financially strained. Over the past five years, its operating revenues from passengers represented 73 percent of its operating expenses, including support for subsidized passengers (16 percent), while other non-operating revenues represented 2.6 percent, with the losses accruing to GoTN as shareholder. It is largely reliant on irregular government budgetary allocations or loans for new capital expenditure and, thereby, surviving on implicit and adhoc (rather than predictable) government support. The Program supports MTC in moving up a ladder of capability and, simultaneously, improving service delivery. The Program supports the following key changes. It embeds a performance orientation through a service contract (PTSC) between GoTN and MTC—one that provides reliable budgets based on performance. It also augments the size and quality of the fleet by contracting private operators via Gross Cost Contracts where they are paid based on service delivery outcomes and performance benchmarks. These contracts are expected to augment the fleet by about 1000 buses (29 percent), deliver an operational efficiency of 95 percent (relative to 70 percent currently) and result in the delivery of an additional 200 million bus-km of service over 2022–2025 that is also of better quality. MTC will also prepare and implement a 5-year business plan that outlines a roadmap for steady improvements in overall service performance, increased corporatization, and improved financial viability.

Third, in recognition of the fact that NMT (walking and cycling) are critical pieces of urban mobility, the program supports a mega-streets program that focuses on developing streets and public spaces that are safe as well as pedestrian- and cycling-friendly.



The design of the Program activities and DLIs in this sector are informed by a suite of diagnostics and technical assistance²⁸ provided to the agencies (CUMTA, MTC, GCC) to assess and advise on sector governance, service delivery models and planning.

- **WRM.** Technical analyses of the flood and drought cycle in Chennai reveal that the water stress felt in Chennai is attributable to inadequate management of water, rather than unavailability of water. Accordingly, the Program prioritizes the following issues. First, the Program prioritizes improvement in mechanisms for planning and management of various water sources and for addressing water allocation across users. For this, the Program supports preparation of a State Water Act to address, among others, two key gaps – absence of a water regulatory authority and ground water legislation.²⁹ Second, the Program supports preparation and adoption of a water security options study and plan that will inform the prioritization of investments across agencies in Chennai to enhance water security. Finally, the Program supports implementation of an integrated cascade reservoir management system to help address the fact that the various reservoirs serving Chennai are owned by different agencies and operated without adequate coordination with each other.
- **WSS services.** CMWSSB's ability to provide good quality water supply services is partly hindered by variation in water allocated by WRD, especially during dry seasons when allocation falls well below demand. In response, CMWSSB has invested in desalination plants. The assessment finds, however, this is not sufficient to ensure water supply that is both reliable and affordable. To reduce vulnerability to and variation in water availability, CMWSSB not only needs to coordinate closely with WRD to secure reliable water supply but also needs to aggressively improve operational efficiency and ramp up efforts on demand-side management. Strengthening CMWSSB's capability, service performance, and finances are necessary to achieve a water supply system that can keep up with the growth of the city and eventually deliver high-quality and reliable (24x7) service for all residents. To steadily move CMWSSB move up the ladder of improved service performance, increased corporatization, and improved financial sustainability the Program will support the following actions. As a step towards improving operational efficiency and service delivery, CMWSSB will enter into performance-based contracts with private operators for selected high-density zones/areas, such as the core city. At the same time, it will embark upon bulk metering of entire system and commence a phased approach to metering residential and commercial connections. To enhance service-orientation, GoTN and CMWSSB will enter into a performance-based contract where budgets will be provided based on achievement of agreed—and increasingly higher targets for—service delivery benchmarks, pertaining to connections, coverage, hours of service, and quality of water. Finally, as a key step towards improving financial sustainability, CMWSSB will steadily improve its cost recovery through user charges (from a base of about 50 percent to 100 percent). The proposed activities and DLIs are based on a

²⁸These include (i) an institutional diagnostic for reform and establishment of CUMTA as an integrated public transport authority based on other case examples (London, Singapore, Paris) and is informed by an international framework on urban transport models developed by the Bank; (ii) Reimbursable Advisory Service (RAS) activity with the Ministry of Road Transport and Highways for urban bus service improvement; (iii) A study on finance and funding models for urban transport in Chennai; and (iv) completion of studies and technical reports for improving approaches of urban design, streetscapes and gender in public spaces.

²⁹A Tamil Nadu Groundwater Act has been prepared but has been pending legislative approval for a long time.



series of diagnostic and technical studies that examined the institutional and financial capacity of CMWSSB and the performance of the WSS system as a whole.³⁰

- **Public health and SWM.** GCC is a relatively well-performing municipal corporation as compared to other cities in India, but it faces some key constraints. The Assessment confirmed that, to meet world-class standards of livability, GCC needs to upgrade its capacity, system, finances, and service delivery outcomes. The Program will support GCC in the following areas. In terms of HR capacity, a key priority for GCC is to increase the ratio of professional staff to unskilled staff, especially to enhance its capacity to manage numerous service delivery contracts with private entities, improve service delivery in key areas, and handle increasingly sophisticated data and technology systems. Hence the Program will support strengthening of Group A and B cadre professional staff through revised staffing structure, reduction of vacancies through an expanded recruitment modality. In terms of finances, given that GCC is behind its peer cities in terms of revenue mobilization on a per capita basis and unable to finance expansion to meet growing demand for services, the Program will incentivize GCC to increase own-source revenues. In SWM, GCC has correctly emphasized dry waste reduction/recycling and the Program will support enhancement of dry waste recycling/recovery in selected zones of 4, 5, 6 and 8 as well as institutional strengthening through SWM Master Plan and systems development for contract management and performance monitoring of various aspects of SWM value chain including that of private operators involved in waste management services. With GCC serving as the frontline agency tackling the COVID19 pandemic in Chennai, the strengths and weaknesses of its health service delivery system became acutely evident. With growing needs (for example, NCDs account for more 50 percent of the disease burden but service delivery is geared toward maternal and child health), emerging challenges (for example, COVID-19), and increasing expectations from citizens (for example, quality of care and expanded package of services), GCC needs to reform its urban health system through (i) an emphasis on outputs and outcomes rather than inputs, (ii) an expansion of service delivery and addressing existing systemic weaknesses, (iii) a focus on building a high-quality, people-centred health system leveraging innovations and empowering local bodies to collectively address the increasingly complex health challenges; and (iv) better coordination with the state Department of Health and Family Welfare, the private health sector, and other non-health departments for a multi-sectoral approach to improving health outcomes. The Program will support two priorities: access to and quality of comprehensive primary health care services & strengthened disease surveillance and public health. The Program interventions will enable access to more comprehensive primary care services that include NCD services, improved referral linkages, improved quality of primary care services, and stronger disease surveillance across the public and private sectors in Chennai. It will do so by addressing systemic bottlenecks, working across sectors and focusing on service delivery outputs and outcomes. The selected activities have been

³⁰An institutional and financial analysis was undertaken for CMWSSB to identify gaps in HR, IT systems, tariffs, subsidies, costs, and revenue management. The design of metering, NRW and network extension solutions is based on surveys and studies of the current network capacity and performance. The Bank also undertook a gap analysis of WRD to identify legal, institutional and data constraints to effective and coordinated long-term strategic planning in the Chennai region. The analysis for each built on long-standing Bank engagement in the WSS and WRM sector in Tamil Nadu, drawing from operational and analytical experience from the TN Sustainable Development Project, Irrigated Agriculture Modernization and Water Bodies Restoration and Management (IAMWARM) program, and the National Hydrology Project.



informed by global evidence, research and best practices³¹ as well as ongoing technical assistance³² on staffing, operations and finance. In addition, design of the health sector Program has been informed by an earlier technical assessment prepared for the Tamil Nadu Health System Reform Program (P166373), other health sector PforRs focused on NCDs and quality of care in several ECA countries previous analytics on urban health in India.³³

Program Expenditure Framework

6. The Program’s expenditure framework will include GoTN and partner investments in urban mobility, WRM and resilience, municipal services, and finance as well as program management. Table 1 below summarizes the Program expenditure items. The identified expenditure items are fully aligned with the government priorities as set out in the Chennai 2030 program. The proposed expenditure items are targeted towards providing financing to the participating agencies for undertaking investment, reform and institutional development activities that are critical to improve the service levels and performance in CMA.

Table 3.1. Program Expenditure Framework (US\$, millions)

S. No.	Sector-wise Allocation (Projections for Next 5 Years)	Total (US\$, millions)
1	Mobility (MTC and CUMTA)	158.0
2	WRM (WRD)	42.5
3	WSS (CMWSSB)	153.0
4	Municipal services (GCC ^a)	340.5
5	Program management and IVA	7.0
	Total	701.0

Note: a. This includes SWM, public health, Mega-streets, and Nirbhaya funds.

7. The Program budget structure is clear in terms of sources of funding, budgetary vehicles, and categories of expenditures. The Program budget will be entirely funded by each participating agency’s own budgetary sources, either via state government allocations/transfers and/or its own revenues. For instance, Program expenditures related to municipal service provision will be financed through GCC’s municipal budget and these are mapped to specific budget heads from GCC’s accounts/budgets. Likewise, MTC and CMWSSB will finance the expenditures through the budget allocations provided by GoTN. Since WRD is a part of the state government itself, the expenditures for WRM interventions will be financed out of the state government budget itself, through the allocations made to PWD. All expenses will be programmed and incurred by the agencies between 2021 and 2026.

³¹Kruk, M. E., Gage, A. D., Arsenaault, C., Jordan, K., Leslie, H. H., Roder-DeWan, S., ... & English, M. 2018. “High-quality health systems in the Sustainable Development Goals era: time for a revolution.” *The Lancet Global Health* Vol 6, No. 11, E1196-E1252.

³²A diagnostic on staffing and business needs was completed to assess the gap in human resource needs. SWM sector diagnostic was conducted to detail out a roadmap toward improving efficiency and financial sustainability based on international best practices for waste minimization and recycling. A financial and budget analysis of GCC was conducted to identify potential gaps in revenues for GCC operations from various sources, including improvements in property tax administration systems and other fees / tariffs that can contribute to increased own source revenues.

³³ Mullen et al 2016. “Urban Health Advantages and Penalties in India: Overview and Case Studies” World Bank: Washington DC; Das Gupta et al. 2017. “Flies without borders- Lessons from Chennai on improving India’s municipal public health services” Policy Research Working Paper 8197, World Bank.



Table 3.2. Program Expenditure Framework – Annual Projections (US\$, millions)

S. No.	Sector-wise allocation (Projections for next 5 years)	Year 1	Year 2	Year 3	Year 4	Year 5
1	Mobility (MTC and CUMTA)	4.0	21.0	23.5	51.0	58.5
2	WRM (WRD)	16.0	23.8	1.45	0.70	0.55
3	WSS (CMWSSB)	11.0	40.0	50.0	25.0	27.0
4	Municipal Services (GCC ^a)	47.4	77.3	82.2	64.4	69.2
5	Program management and IVA	1.5	1.5	1.5	1.5	1
	Total	79.9	163.7	158.6	142.6	156.3

Note: a. This includes SWM, public health, Mega-streets, and Nirbhaya funds.

8. Funding sustainability and predictability is ensured by the high level of ownership of the government program and the Program – with Finance Department of GoTN directly leading and investing in this initiative to transform Chennai. GoTN has a robust track record of delivering agreed fiscal resources to the service delivery agencies in a timely manner. Importantly, the Program supports participating agencies in improving own-source revenues and receiving transfers/budget in a more predictable manner from GoTN. This will enhance the financial sustainability of the agencies and expand their access to resources for undertaking necessary capital and operational expenditures.

9. Fiscal analysis of the participating agencies and the indicative allocations under the Program, as presented in the table below, reflects that three agencies—GCC, CMWSSB, and WRD—will be receiving substantial incentives annually, in the range of 10–30 percent of their average capital budgets for last three FYs. Given the recent COVID-19-induced fiscal stress in many of these agencies over the last year, the external financing would provide even higher incentives and would be critical in supporting fiscal recovery. For MTC the incentive is exceptionally large, given that it will receive the equivalent of 87 percent of its average capital budget for the past three years from external financing. These incentives are assessed to be sufficient to help catalyze the envisaged shift in the way services are delivered and help improve service outcomes.

Table 3.3. Agency-level Budget Analysis (US\$, millions)

	CMWSSB	GCC	MTC	CUMTA	WRD
Average Annual CAPEX (FY 20xx-yy)	59	212	16	0	28
Average ⁶ annual OPEX	124	284	268	0	8
Average ⁶ annual TOTAL	183	496	284	0	36
PforR- Total External financing -World Bank + AIB (5 yrs)	90	100	72	8	30
PforR - Average Annual External financing	18	20	14	2	6
Annual External Financing/Annual average CAPEX budget (%)	31	10	87.5	n.a.	21

Program’s Governance Structure and Institutional Arrangements

10. **The implementation of the program will be undertaken by existing government institutions.** A Program Steering Committee (PSC) will be established to oversee general Program implementation and ensure proactive and sustained engagement and coordination of the entities involved. The PSC will meet quarterly and be chaired by the Chief Secretary, GoTN and include officials from key state-level departments and service delivery agencies. This would include the Secretaries of Finance, MAWS (overseeing GCC and CMWSSB), Transport (overseeing



MTC), Public Works (overseeing WRD), Health (coordinating with GCC) and, potentially, Housing and Urban Development.

11. The Tamil Nadu Infrastructure Investment Board, under the aegis of GoTN's Finance Department will be the primary implementation agency. A dedicated Program Management Unit (PMU) will be established for Program management, coordination, and monitoring under the leadership of the Program Director, who will be an ex-officio member of the PSC. TNIDB is in the process of procuring an IVA that will undertake the verification of results, achieved by the sector agencies and support TNIDB in monitoring the progress of reforms implementation and achievement of annual targets under various DLIs. CUMTA's establishment and operationalization will be supported by the project, including the necessary staffing and capacity building to allow it to finalize the preparation and begin implementation of master plan activities in the sector.

12. All the key sector agencies (MTC, CMWSSB, GCC, CUMTA and WRD) will be responsible for implementing the respective sector focused Program activities including key reforms and investments, and for achieving the results/annual targets to access the funding available under this Program. Each agency will have a Nodal Officer and will recruit, as and when needed, consultants with adequate technical expertise required to support implementation of Program activities and key reforms.

Program Results Framework and M&E (including DLIs)

13. **The Program will be monitored using Government systems.** The results framework (annex 1) provides the basis on which the IAs will measure and report on the progress of program implementation. TNDIDB will prepare an APR, which will include evidence of progress on all results indicators included in the Results Framework, results related to DLIs and DLRs and evidence of compliance with requirements under the PAP. The APR will build on the M&E systems of the different implementing entities as further to be detailed in the Program Operation Manual. The APM will be submitted to the World Bank no later than 90 days after the end of each calendar year.

14. **The selected DLIs reflect critical elements of performance required to achieve the PDO.** All DLIs are indicators in the Results Framework. The DLIs were selected to ensure that they i) are fully aligned with GoTN priorities for Chennai's development, ii) reflect foundational 'first step' actions for each IA, iii) are measurable and independently verifiable and iv) incentivize needed action or reforms during Program implementation. The DLIs are designed to be transversally supportive and compatible across sectors and serve to reinforce the overall Program objective. Results Areas and DLIs are further detailed in annex 1.

Economic Justification

15. **The Program is expected to provide significant economic benefits through policy and institutional reforms and improvements in delivery of critical services:** Enhancements in quality of basic urban services such as health, water supply and sanitation, SWM and public transport are fundamental for improving the quality of life and economic performance of cities. Improvements to contracting methods and performance-based operations in transport, health, water, and solid waste will improve efficiency and responsiveness of public sector service agencies and expand the potential for private sector involvement in service delivery. Public transportation improvements will contribute to improved mobility, improved pedestrian safety and reduction in GHG emissions and air pollution as well as increased property values from improved streets and public spaces. Health care, WSS and SWM interventions will reduce the incidence of communicable and chronic diseases which will reduce



absence from school or work due to illness. Improvement in WSS coverage and services will also result in benefits for households in the form of time savings (for example from reduction of time spent waiting at standpipes) and reduced coping costs (such as expenditures on storage tanks, pumping, and/or purchase of water from tankers). GCC, CUMTA, WRD and CMWSSB will also benefit from improved strategic planning for investments and service provision, data and monitoring systems which will improve efficiency in targeting and responsiveness to consumer demand. Improvements in e-procurement, tariff and tax collection will further strengthen the financial performance of agencies standing and sustainability of operations. Given that several of these benefits are hard to quantify, only a subset of the benefits has been included in calculation of the Economic Rate of Return (ERR) for the Program.

16. **Using only a subset of quantifiable benefits but full costs, the Program has an ERR of 20.7 percent.** The cost-benefit analysis includes the following benefits by sector and/or intervention. Benefits associated with improvement in *bus services* arise from the proportion of trips that shift to buses and away from higher-cost and more carbon-intensive modes such as personal vehicles (cars and two-wheelers) and auto rickshaws. The benefits include: (i) savings to users of new bus services, given its lower cost relative to alternatives; (ii) reduction in GHG emissions which lowers CO₂ abatement costs; (iii) reduction in accidents due to reduced congestion. The primary benefit arising from improved *public health services* is a reduction in Disability Adjusted Life Years (DALYs). In Chennai, NCDs are estimated to account for 65 percent of the disease burden, and the service improvements are assumed to lead to 1.0 percent reduction in DALYs among the population likely to use the municipal UPHCs. The benefits arising from improvement in *WSS services* are: (i) reduction in coping costs for newly connected households, including reduction in time saved in collecting water; (ii) reduction in coping costs for connected households, arising from improved quality and reliability of services; and (iii) reduction in DALYs due to reduction in incidence of water-borne diseases. For improved *WRM and flood mitigation*, the primary (quantified) benefit is reduction in losses from flooding. For improved *SWM*, the benefits are: (i) value of waste recovered; and (ii) reduction GHG emissions (in CO₂ equivalents) due to reduced generation and treatment of waste.

17. The sensitivity analysis indicates that a 10 percent decrease or increase in benefits, will result in ERRs of 18percent and 23percent. As noted above, the ERR is a conservative estimate since benefits that are more difficult to quantify have not been included, for example, benefits from strengthening service agencies, improved efficiency and costs of procurement, reduction in water losses, increase in property value due investment such as mega streets, customer accountability and grievance redressal mechanism, and so on. The analysis covers a period of 15 years. It includes capital expenditure for the period FY21 to FY26 and benefit accounting stops in 2035, even though the life of and benefits from several assets (for example, WSS investments) is likely to be 30 years.

18. **Summary of economic analysis and key assumptions.** Table 3.4 summarizes the findings from the Economic Analysis, by sector. It shows that, overall, Program has an internal rate of return (IRR) of about 20.7percent. Each sector was also assessed separately, with only key interventions and their costs and benefits included in the analysis. This sectoral analysis shows higher **economic** returns (that the Program as a whole) because on partial costs are considered. The quantifiable economic benefits and key assumptions used in the analysis are summarized in Table 3.5.

Table 3.4. Economic Analysis

S. No.	Key sectoral intervention	Benefit (US\$, millions)	IRR and Sensitivity		
			IRR	+10%	-10%
1	Expansion of bus fleet and services	779	55.25%	76.50%	33.26%
2	Improved access and quality of health	176	18.74%	21.24%	16.16%



S. No.	Key sectoral intervention	Benefit (US\$, millions)	IRR and Sensitivity		
			IRR	+10%	-10%
	services				
3	Improved WSS coverage, quality, and reliability	229	11.68%	13.44%	9.90%
4	Improved WRM and flood management	282	47.27%	50.67%	43.68%
5	Improved SWM, resource recovery, and waste reduction	141	39.60%	43.75%	35.42%
	Full project (all activities; full costs but partial benefits)	1607	20.71%	23.31%	18.01%

Table 3. 5.Economic Benefits and Assumptions: By sector (selected Investments only)

1	Sector: Mobility
1.1	Vehicle Operating Cost Savings: Net savings to bus users when shifting from higher-cost modes (2022-2035). Additional bus trips calculated at 886 pax /day for new fleet of 1000 buses, introduced progressively: fleet utilization of 80%, and asset life of 10 yrs.
1.2	GHG reduction cuts abatement costs: Net reduction in GHG emissions due to reduction of vehicles on road due to modal shift to buses estimated at 235,000 tons of CO ₂ till 2035. All other pollutant emissions converted to cost equivalents, based on treatment costs. Appraisal guidelines for Metro projects, MoHUA, Gol, 2017 estimates cost of treatment at INR 500 per ton of CO ₂ and INR 100,000 per ton of other gases
1.3	Benefits due to potential reduction of accidents. With modal shift and fewer vehicles on road, about 5% of road accidents averted (or about 1360 fatalities and 7200 injuries). Economic loss of life and injury valued at about \$16800 and \$3863 per injury (2021 price levels). ³⁴
2	Sector: Public Health
2.1	DALY's averted reduce economic losses: 20% of the total DALYs are assumed to be due to NCDs. Benefit is assumed: a) to be limited to population accessing UPHCs in Chennai (assumed at 47% of GCC population which is at 4.07 million currently); b) at reduction of just 1.0% of DALYs, working out to about 100 trillion DALYs till 2035. A DALY is valued at 50% of GDP per capita for Tamil Nadu
3	Sector: Water Supply
3.1	Benefits due to reduction of coping costs for households with new connections. New connections estimated to be 0.15 million, based on addition of 5% per year on base of 0.74 million connections for 5 years. Coping costs are estimated at INR 437/month for unconnected HHS, excluding time spent, by a recent study; ³⁵ coping costs assumed to reduce by 25% once HHS are connected. Time savings for newly connected HH estimated at about 16 mins/day/HH or 1 day/month/HH and valued at Chennai's unskilled wage rate of INR 221 per day.
3.2	Benefits due to reduction of coping costs for HHs with existing connections. Coping costs for connected HH are estimated at INR 553/month by recent study (Amit and Sasidharan, 2019). Improved service quality and reliability is assumed to lower coping costs by 25%, for 20% of connected HHs.
3.3	Benefits due to reduction in DALYs. Research suggests that waterborne diseases account for about 3% of total DALYs. Of these, incremental 1.25% DALYs are assumed to be reduced owing to improved water supply services resulting in about 51.3 billion DALYs averted till 2035. A DALY is valued at 50% of GDP per capita for Tamil Nadu.
4	Sector: WRM
4.1	Averting economic losses on account of better flood mitigation. Swiss Re estimated a loss of US\$2.2 billion on account of Chennai Floods 2015. Chennai witnesses above average rainfall once in 3 years and abnormally high rainfall once in 10 years (trends since 1996). Due to absence of data, an economic loss of just 4% of US\$2.2 billion is assumed to be saved once in 3 years where above normal rainfall is witnessed; no savings assumed in

³⁴The estimated values will be updated during appraisal based on Traffic Crash Injuries and Disabilities: The Burden on Indian Society.

³⁵Amit, R.K. and S. Sasidharan. 2019. "Measuring affordability of access to clean water: A coping cost approach." *Resources, Conservation and Recycling* 141.



	other years
5	Sector: SWM
5.1	Revenue from incremental waste recovery: Incremental waste recovery targeted at 15% over 5 years and sustaining further, yields a potential 1972 tons of waste recovery till 2035. Chennai generates about 950 TPD of dry waste assumed to increase at about 1.5% per year
5.2	Reduced GHG emissions on account of waste recovered: Report by CRISIL on resource recovery in 4 Zones of GCC suggests savings of about 2.02 tons of CO ₂ for every ton of waste recycled. This is about 1.45 million tons of CO ₂ till 2035. Cost of treatment at INR 500 (US\$7) per ton of CO ₂ .



ANNEX 5. FIDUCIARY SYSTEMS ASSESSMENT (SUMMARY)

- 1. An IFSA of the key IAs has been carried out in accordance with Bank Policy and Directive for PforR financing.** The IFSA concludes that present fiduciary systems of the IAs together with proposed mitigation measures provide reasonable assurance that the financing proceeds would be used for the intended purposes, with due attention to the principles of economy, efficiency, effectiveness, transparency and accountability. The IFSA identified key fiduciary risks that may affect the Program's development outcomes, and recommended system improvement and capacity strengthening mitigation measures that will be implemented during the life of the Program. The scope of IFSA is limited to the boundaries of the proposed Program Expenditure Framework and was conducted through virtual meetings and discussions with the officials of GoTN. This annex provides summary of findings and should be read along with the stand alone 'Integrated Fiduciary System Assessment (IFSA)' report which presents a much-detailed analysis of existing FM and Procurement systems, contract performance towards ensuring proper utilization of Program funds.
- 2. This is a multi-sector and multi-agency program to be implemented by five parastatals and one department.** Based on the IFSA and given the inherent nature of the operation, associated with variations in fiduciary capacity of each agency, compliance to agreed FM and procurement processes the combined fiduciary residual risk is "**Substantial**". To mitigate fiduciary risk and strengthen the existing systems, various action items are recommended to be completed during implementation as part of DLI and PAP.
- 3. Institutional arrangements for Program activities rely on the use of country systems.** The participating Program IAs are legal entities governed by their own board and are legally separate from the GoTN. They are covered by their own Act and Rules including financial rules. These parastatals are outside the accounting and reporting framework of the state. Only TNWRD as a state department is a part of the GoTN. All these agencies except CUMTA have systems which will provide the required Program fiduciary reports and shall fulfill the procurement requirements. CUMTA is a new entity whose systems will be setup during the program and will be assessed as and when it is operationalized and before payment of DLIs. A suitable legal covenant would be added for this purpose.
- 4. The GoTN has a procurement and FM framework which all IAs follow.** GoTN follows the Tamil Nadu Transparency in tenders Act, 1998 (TNTTA); the Tamil Nadu Transparency in tenders Rules, 2000 and the Tamil Nadu Transparency in tenders (PPP procurement) Rules 2012 that broadly meet the core procurement principles. FM arrangements in the state are guided by The Tamil Nadu Finance Code Volume I and II, The Tamil Nadu Accounts Code Volume I and II, The Tamil Nadu Treasury Code Volume I and II, The Tamil Nadu Budget Manual Volume I and II, Tamil Nadu PWD Code and time to time government orders, are reasonably well established and followed. The existing governance and accountability arrangements include audits by the Comptroller and Auditor General (C&AG) of India, review of audit reports by Public Accounts Committee, Right to Information (RTI) Act 2005, and CVC Act 2003. The State departments and government agencies have clearly defined delegation of authority. Parastatals also have clear delegation of powers, financial rules and regulations which are followed.
- 5. A Government order (GO) has been issued by GOTN to operationalize the Program.** The GO covers the entire program, the implementation arrangements, budget, and fund flow arrangements and covering all the key aspects of the Program. The GO highlights the roles and responsibilities of all parties. It also includes



implementation arrangements and the results and DLIs to be achieved. A Program Management Unit (PMU) will be established within TNIDB while each IA will have dedicated nodal officers at their level. IAs will have FM and Procurement experts either deputed internally or hired from the market for program execution.

Program Expenditure Framework (Refer to table in detailed IFSA for list of activities included)

6. **Program expenditure and procurement profile:** Program expenditures will be a combination of capital and operating expenditure activities to be carried out by different sectors and selected agencies. Program will finance procurement of goods, consultancy services, works, and operational and administrative costs associated with the implementation units. Operational and administrative expenditure will include remuneration and salaries of staff deputed/assigned to the Program, building rentals, annual maintenance, recurring administrative and general expenses. It will include Procurement of hardware and IT system. Investments can be in civil works, resilient watersheds including re-profiling of drainage channels, groundwater recharge, rejuvenation of reservoirs, lake restoration, and water quality improvements; Procurement of new metered connections; Wastewater system including establishing SCADA; Water Meters to commercial properties; Increase water and sewerage network coverage in added areas; Establish a reservoir operation system including software system; Increase in PHCs ;mega street pilot and other capital investment; contractual payment to consulting firms; transport service contracts including VGF; and non-procurement activities like training, workshops and Operational cost. All contractual payments made to contractors, suppliers and consulting firms and individual consultants would be tracked for the program. In case of salaries the expenditure will be culled out of the existing accounts head. In MTC, the program expenditure is expected to be for running of contractual buses through private operators. The program expenditure will be payments to the contractors for the service rendered which will be tracked and accounted separately. WRD main activities are consultancy services and civil works. These payments would be accounted under the program budget head and respective object head.

Summary of Procurement Processes of Key IAs

7. **Procurement by all the agencies are carried out following the Tamil Nadu Transparency in Tenders Act 1998 and Tamil Nadu Transparency in Tenders Rules 2000 as amended from time to time.** Each agency has clearly defined delegation of authorities. GeM portal of central government can be used by all implementing entities. The procuring agencies may engage with private sector companies following selection process as per Tamil Nadu transparency in tenders (PPP) rules 2012 and enter a contract with a clear ToR. Each agency uses standard bid documents based on the specific project requirement. Procurement methods are chosen based on the market condition and market assessment. For CMWSSB, MTC bid document based on certain thresholds are made available online but evaluation and receiving of documents and award is done manually. GCC invites bids through eprocurement system but carried out evaluations and received documents manually. There is a GO but eprocurement system has not been fully adopted. While there is no restriction to open competition, yet overall participation is found to be limited to 1-3 bids. No contracts went into litigations/court cases in last 3 years but there is no specific fiduciary complaint redressal mechanism. GCC has the provision for arbitration other than judicial avenues but there is no track record of implementing an alternative dispute resolution procedure For all the agencies there are regular internal and external audits done by local Fund Audit and CAG and includes physical inspection and compliance checks but no specific procurement reviews are being carried out. The agency has preference policy for certain government agencies or for a MSME/Made in India, and so on as per the TINT act or as identified by GoTN but has no policy of exclusion based on class, category, or country.



8. **GCC includes PHD, Special project department, Municipal Services and SWM.** Head of Department is Tender inviting authority. Procurement is carried out by engineering staff at various levels. As part of procurement planning administrative and technical sanctions are obtained from appropriate authority. Agency uses its own bid documents and contract formats. Schedule of Rates published by PWD and Highways Department of GoTN for Constructions are the basis for arriving at the estimates. Total value of contracts award for FY18/19 was INR 1214.55 crore and for FY19/20 was INR 541.66 crore Average size of contract is INR 146 lakh during 2019–20. Average bids received were between 1-9 and in the year FY20, 67 percent Contracts had 1-2 bids. Transparency is maintained by advertising bidding opportunities in National and local media; by carrying out public bid opening. The rates for works contracts are based on Schedule of Rates which are revised annually. GCC has a quality control department which carries out periodical checks regarding various projects and activities.

9. **TNWRD is one of the technical wings of the Public Works Department, which is headed by the Engineer-in-Chief, Water Resources Department (WRD).** The Engineer-in-Chief, WRD monitors and co-ordinates the functions of all the Chief Engineers and acts as the technical head of the WRD. Procurement is carried out by engineering staff at various levels (EE, AEE, AE). Majority of activities are related to civil works. In addition to TT Act it also refers to Tamil Nadu Building Practice Code, Tamil Nadu Public Works Department Code and Tamil Nadu Public Works Accounts Code & Madras Financial Code are used for various civil works activities. The primary activities of the WRD are water regulation; Flood control and management; Creation of water resources; Rehabilitation and proper upkeep of irrigation infrastructure; Coastal protection works; Artificial ground water recharge; Inter-linking of rivers within the State. All the procurement is carried out manually and no e-procurement system is used. Transparency is maintained by advertising bidding opportunities in National and local media; by carrying out public bid opening. The rates for works contracts are based on Schedule of Rates which are required to be revised annually. The WRD have a formal system known to the bidding community to review and resolve complaints from bidders at different stages of the procurement cycle up to contract award.

10. **CMWSSB has a separate procurement department headed by a Superintending Engineer(C&M) with a team of Engineers.** All procurement is done manually, and no contract is awarded through e-procurement mode. Total contracts award increased from 121 during FY18/19 to 190 during FY19/20 and the value of contracts were INR 50,544 lakh and to INR 350,665 lakhs, respectively during the same period. Average size of contract increased from INR 183 lakh during FY17/18 to INR 1,846 lakh during 2019–20. As per the Government Order, the bids/proposals are advertised / published in the national/local Newspaper based on the estimated value of the contract. On an average 61 percent of procurements are awarded within bid validity period during the past three years. In FY19/20 number of bidders in 89 percent cases were 2 or below, and 90 percent of the bidders were found to be technically qualified. FY17/18 have been below (20–80 percent) the estimated cost of the contract while the bid quotes during FY19/20 have been mixed where quotes for some contracts have been in the range of +10 percent to -10 percent of the estimated cost. However, the actual costs for completing some contracts have been higher than the quoted price by the contractor even after considering the additional scope. All supplies required for the works are subjected to Third Party Inspection at the cost of the employer. Any alteration/variation in quantities in the contracts are only upon approval from the Competent authority. Presently there is no integrated contract performance management system within CMWSSB. As per the data furnished by CMWSSB for FY17/18, contracts with estimated completion period of more than six months has taken more than the estimated time.

11. **MTC is a GoTN Undertaking registered under Companies Act, 1956.** It is governed by the Board of Directors appointed by the GoTN. Major procurement activities are carried out by STU's nominated nodal agency



Institute of Road Transport (IRT), Taramani. IRT procure chassis & Body building material, Lubricants, Tyre & Tube Materials and Bus Tickets on behalf of MTC. There is an annual work plan that is prepared based on project justifiable quantity market price, time of delivery and is prior approved by appropriate authorities. The SSR are revised by PWD annually and are the basis for arriving at the estimates Agency has model Bid document that is used for inviting bids. There is no specific system of disclosure of awarded contracts. Average bids received are more than three. As part of due diligence inspection is carried out for goods regarding quality, quantity, timeliness, rate, GST as per the specification of Purchase Order. Goods are delivered to the concerned depots through Computerized gate pass. About 25 percent contracts undergo quantity amendment or Extension of time which is in accordance with Tamil Nadu Tender Transparency. Annual audits include physical inspection and compliance checks but there is no independent procurement review carried out. There are no outstanding claims or unsettled disputes.

Procurement Exclusions

12. **The program is not expected to procure any large contracts valued at or above thresholds (US\$75 million for works, US\$50 million for goods and non-consulting services, and US\$20 million for consultant services), which are based on a “Substantial” risk rating.** The IAs shall report to the World Bank if any large contracts appear throughout program implementation. In addition, the Bank will review the audit, the Program budget execution, and contract management reports to identify any large-value contracts to ensure conformity with the Bank’s policy on PFR.

Public Financial Management Systems

Planning and Budgeting

Adequacy of Budget at State Level and Absorptive Capacity of Agencies

13. **The state budget has been increasing on a year-to-year basis.** For FY18/19 the actual expenditure was US\$29,535 million. As per FY20/21 budget the total expenditure is expected to be US\$36,981 million. In comparison to the overall state budget the PFR Program is funding less than one percent. The state has been facing revenue deficit over the years and this trend is expected to continue. However, the state fiscal deficit is within the norms of the state FRBM and is expected to be less than 3 percent.

14. **Absorptive capacity of GCC, MTC, CMWSSB and TNWRD is much higher than the envisaged program expenditures.** These agencies would be able to handle the additional funds. The issue in case of MTC is not about absorptive capacity of the MTC but about MTC’s ongoing stressed financial position and would require continued budget support from government. In case of TNWRD, while the budget provided by the state is on the higher side, utilization by the department has been on the lower side traditionally due to less time for carrying out works. However, this will not affect the Program as most of the expenditure is envisaged on consultancy, capacity building, and some civil works.

15. **Absorptive capacity of TNIDB is on the lower side while for CUMTA is not available.** TNIDB role is of PMU and it is expected that they would spend US\$7 million (which is less than one percent of the overall Program) over five years for program management. TNIDB will need to hire staff or consultants to ensure that program expenditure is carried out on timely basis. In case of CUMTA, the overall program expenditure is expected to the tune of \$8 million over five years which is less than one percent of the overall Program. CUMTA will be



operationalized during the program with adequate staff and it is expected that they will be able to spend the allocated funds as most of the expenditure is for staff salaries and consultancies.

Planning and Budget Preparation

16. **Each IA should prepare an annual work plan and annual budget requirements.** The GoTN has an established budget preparation process guided by Budget Manual. The budget requirements of the program should be intimated to the administrative department as per the state budget schedule so that the requirements can be incorporated in the state budget. For all parastatals, the budget would be provided through their respective administrative department. For GCC, MTC, CMWSSB, and TNIDB the budgets are prepared and approved by the respective council and board. They have well established budget preparation process. For TNWRD the budget is prepared by the department and approved by the legislature as part of the state budget. Program budget head would be opened, and fund would be allocated as required by negotiations.

17. **The state would provide budget every year based on the annual work plan at the start of the year to the IAs.** The IAs would achieve the DLIs during the year which would be reimbursed by the Bank to the state based on verification reports. The state would receive the DLI amount and transfer the DLI amount net of the earlier budget transfers to the IAs within three months from receipt of the DLI amount.

18. **Currently, GCC, MTC, and CMWSSB are funded from own source revenues and support from GoTN is limited.** In case of GCC, MTC, and CMWSSB, most the investments and salaries are over and above the existing budget, and they manage these expenditures with their own funds. This being a state program, GOTN would provide budgetary support to these entities for the incremental costs to execute the program. In case of TNWRD the amount would be passed through the state budget and hence they would not have any issue. In case of TNIDB and CUMTA the program cost would be provided by the GoTN. The state should provide budget for the entire program in their annual budget based on the annual work plan. The state will prefund the program and receive reimbursements from the Bank on completion of DLI.

Procurement Planning

19. **All procuring entities based on approved annual work plan are required to develop a procurement plan and consider IRT the procurement packages based on market conditions, put in place appropriate method of procurement based on the estimated value and provide realistic time for completion.** While making a decision on contract type, entities are required to consider following aspects: (a) Nature and complexity of the works; (b) the size and duration of the contract; (c) prevailing market conditions and the element of risk/uncertainty; (d) the status of design (preliminary or final); (e) the technical capability, design and supervisory resources of the Employer; (f) financial resources available and/or budget constraints; (g) previous experience of the Employer in a particular type of contract and so on. IA wise arrangements are detailed in the individual IA section of the detailed IFSA.

Budget Execution

Fund Flow

20. **GCC, MTC, CWSSB, TNIDB, and CUMTA handles all funds through bank accounts while for WRD all payments would be done through the treasury which is computerized.** GCC, MTC and CMWSSB generate



revenues which are collected through dedicated bank accounts. Funds from state government are received and operated through bank accounts. Funds for projects are received and operated through project specific bank accounts. All above entities maintain project/ scheme bank accounts separately through which funds received and expended are recorded. For this program also a separate bank account would be maintained to manage the receipts and expenditure. Program bank accounts would be operationalized by the agencies by negotiations. For WRD, once the budget is sanctioned, allocated expenditure can be carried out by the department through the state treasury.

Accounting Systems and Financial Reporting

21. **GCC follows double entry accrual-based accounting system.** Project accounts are maintained separately. Accounts have been completed till FY19/20. GCC has implemented e-government software in which accounting books and records are maintained. All accounts and payments are centralized at head office. Salary payments are centralized and are processed through computerized module. All payments to employees are done through electronic transfers.

22. **MTC and CMWSSB follows ICAI accounting standards, double entry accrual-based accounting system and maintains accounts as per the Companies Act 2013.** Project accounting is being followed by both the entities. In case of MTC, all expenditures, payments, and accounting are centralized in the HO. Accounts have been completed till FY19/20. Currently accounts are maintained manually. Computerization of accounts is one area of improvement which MTC is looking to achieve within two years. For CMWSSB all project and capital expenditures are centralized, all major payments and accounting is done at HO. CMWSSB had implemented Oracle Financials software for financial accounting. Revenue billing and collection is also computerized. While accounts have been prepared up to FY19'20, since the finalization of old accounts and completion of audit is pending from FY18/19, current year accounts are yet to be finalized. The backlog will be completed within 18 months of effectiveness. TNIDB follows cash basis of accounting and maintains manual books of account. The accounts for FY19/20 have been completed.

23. **WRD follows government's centralized computerized treasury system across all offices and all payments and accounting are maintained in the system.** Monthly payment statement Form 62 B can be generated from the system which would provide budget code wise monthly expenditure and cumulative expenditure. Apart from the computerized system, the department maintains cash book, cheque issue register, and other basic records as prescribed by the state.

Contract Performance and Administration

24. **Based on review of information on activities tendered, contracted, and completed during last three years, gaps in terms of reduced or no competition, delayed contract completion have been observed.** Overall enhanced monitoring and timely corrective action for timely delivery is required.

25. **From the national legal framework point of view, the main acts which govern the contracting are Indian Contract Act 1872, Sale of Goods Act 1929, Arbitration and Conciliation Act 1996 (Revised 2015 & 2019).** Contracts are administered in line with the contractual provisions listed in the Standard Procurement Documents. To ensure effective oversight, all procurements under proposed Program shall be monitored through a set of Key Performance Indicators This information would be useful to focus attention on underperforming activities and agree on timely implementation of remedial measures.



Internal Controls and Internal Audit

26. **The internal control framework is embodied in the financial rules supplemented by defined delegation of financial powers.** These are detailed in the State financial and procurement rules, and treasury code. Oversight regarding compliance with internal controls are vested with the head of the Administrative Department and FD, and these are reviewed by the C&AG during annual audits. The internal controls for GCC, MTC, CMWSSB, TNIDB and CUMTA are defined in the Act, byelaws, rules, and regulations under which these are formed. The Board of Directors / Governing Body and Committees provide oversight on the functioning of the Organization. Clear delegation of powers exists and is followed in the entities which are reviewed during audits. All these entities have pre-audit function before payments are made.

27. **In case of MTC, all areas of operations are covered by internal audit conducted by CA firms.** Internal audit is practiced in a limited way in GCC, CMWSSB, and TNWRD. Pre-audit of payments is done for all bills in all these agencies while a risk based internal audit commensurate to the business is not practiced. This is a reform area which is beyond the Program and could be pursued by the entities.

External Audit

28. **Currently IA are audited by different auditors.** GCC is audited by Local Fund Audit Department (LFAD) and audit has been completed for FY18/19, but the audit report is yet to be issued. MTC is audited by CA firm appointed by the Board of Directors and report for 2019-20 has been approved by the Board. CMWSSB is audited by CA firm appointed by the Board of Directors. The accounts and audit reports are submitted to the Board for approval and then placed before the legislature. There is a delay in completion of audit due to legacy issues and audit report for FY17/18 has been completed recently while backlog reports are expected to be finalized before September 2021. TNIDB is also audited by a CA firm appointed by the Board of Directors and the report for FY18/19 has been completed while FY19/20 audit is expected to be completed shortly.

29. **The audit of the WRD is carried out by the state office of CAG of India.** The audit for FY18/19 is completed while the audit for FY19/20 has commenced. There are no separate audit reports for the department. To ensure timely audit reports, AG can be requested to provide the report for selected program related budget heads. The audit will be entrusted to the AG within three months of effectiveness.

30. **For Program, a CA firm would be hired as per agreed TOR to conduct the audit of all parastatals (GCC, MTC, CMWSSB, TNIDB, and CUMTA) and issue a consolidated report.** The audit will also cover all aspects of procurement undertaken in the Program by parastatals and WRD. The auditor would be hired within six months of effectiveness of the Program. The program audit report needs to be submitted within nine months from end of the financial year for entities. The report will be displayed in the PMU and agencies website.

Program Governance and Anticorruption Guideline

31. **Under the larger governance framework of India, all government departments and agencies are covered under the Right to Information (RTI) Act 2005.** The C&AG also carries out compliance and performance audits annually. Prevention of Corruption Act 1988 is the governing law which defines legal framework to prevent corruption in the country. Central /State Vigilance units have jurisdiction and power to undertake an enquiry and there is Civil Services (conduct) Rules. This being a PFR operation the World Bank "Guidelines on Preventing and Combating Fraud and Corruption in Program for Results Financing" dated February 1, 2012 and revised on July



10, 2015, shall apply to all activities within the Program Boundary. As there is no distinction between World Bank financed activities and Government financed activities within the Program boundary, these guidelines shall be applied in an unrestricted manner on all activities within the Program boundary. Requirements under these guidelines include but are not limited to (a) borrower's obligation on informing the World Bank about all fraud- and corruption-related allegations and investigations, (b) the World Bank right to conduct administrative enquiries, and (c) ineligibility of debarred firms for contract awards. In order to operationalize implementation of the various areas covered in the ACGs, TNIDB, the nodal agency shall maintain and compile a bi annual report on all fraud- and corruption-related allegations and investigations that are related to the Program and share it with the Bank in the prescribed format agreed with Bank; take timely and appropriate action, satisfactory to the World Bank, to remedy or otherwise address the situation and prevent its recurrence.

32. IAs shall implement its respective activities under the Program, in compliance with the Anti-Corruption Guidelines for the Program and ensure following actions:

- Ensure each of the procurement entity shall ensure incorporation of the Bank's debarment list in the filter used by implementing entities when they conduct due diligence. This list may be found in the following website: <https://www.worldbank.org/en/projects-operations/procurement/debarred-firms>
- For every bidding opportunity under the Program, each participating bidder shall submit (as part of the bidding process) a self-declaration to be included in SBD that the firm is not subject to ineligibility or has not been sanctioned under the World Bank system of debarment and cross-debarment.
- TNDIB/IA's shall add to scope of Auditor to validate that, under Program Expenditure Framework, no contract is awarded to World Bank debarred firms.
- TNIDB would set-up a centralized procurement complaint redressal system to receive complaints and clearly defined rules and authorities to resolve/process the complaint/suggestions.

33. Additionally, scope in Auditor's TOR shall include requirement to validate that under Program Expenditure Framework (i) none of the contracts are awarded to World Bank debarred firms and (ii) no High Value Contract (above OPRC threshold) is present.

Procurement and Financial Management Capacity – Staffing

34. **Each of the agencies have engineers who are engaged in carrying out procurement and are well versed with the TNT act but there is need for assigning staff specifically for the program who will also undergo trainings in Contract management and eprocurement aspects.** CUMTA can hire an expert from the market. TNIDB shall depute a procurement consultant who will be responsible for overall coordination, dissemination of audit findings, provide oversight, be repository for all complaints and ensure applicability of Anti-Corruption Guidelines under the Program. In case of FM, staff are available in all the entities except TNIDB and CUMTA. TNIDB and CUMTA needs to hire a FM staff to support the program. Other IAs should nominate a staff who will be responsible for program accounting. FM staff will need training on accounting for program expenditure, DLI disbursements, and other FM requirements. Program can also hire staff from market on contractual basis as required and the cost can be charged to the program.



Transparency and Publishing of Financial Statements

35. **GCC, MTC, CMWSSB, TNIDB, and WRD have their own websites but with minimal or no financial details shared.** All parastatals should publish an annual report along with the audit report and financial statements on their respective website within 9 months from end of the FY. The financial statement should be displayed in a manner easy for the users.

Key Fiduciary Risks and Mitigation Measures

36. **The key fiduciary risks have been discussed above and the proposed mitigation measures are as under:**

- (a) **Enhance transparency and competitiveness by implementing e-Procurement (DLI).** For the independent procuring parastatal agencies like CMWSSB and GCC a DLI has been proposed which will support and enable these agencies to progressively move from manual to e-procurement system (including online evaluation, contract award and use of modules like payment and contract management) which will help improve the efficiency, competitiveness and transparency. For MTC procurement is done through IRT and WRD, Chennai section is a part of larger state department, that is, PWD. As the Program is covering only city-level activities, it is not possible to introduce state-level reforms through current program which includes agencies that are not part of the program but are encouraged to adopt e-procurement.
- (b) **Strengthen staffing and fiduciary capacity of the IAs POM.** Fiduciary staffing and capacity of PMU and all PIU's need to be strengthened through appropriate and timely appointments and regular fiduciary training regarding procurement, contract management, e-procurement, audits, program accounting, and submitting of DLI claims.
- (c) **Ensure consistency and compliance by adopting standard bid and contract documents (POM).** Currently each IA uses bid document based on the project /program but there is no standardization regarding bid or contract documents. To ensure that the provisions of TNTTA are being consistently applied across board and that there is no ambiguity, standard procurement documents need to be developed and adopted for Goods, works and consultancy services. The documents so developed will also specify applicability of the Bank Anticorruption Guideline provisions.
- (d) **Augment transparency by enhanced public disclosure of procurement information (PAP).** Contract awards under the program are duly published in the IA and other relevant website.
- (e) **Strengthen internal controls thru robust fiduciary complaint handling mechanism (POM):** A centralized fiduciary complaint redressal mechanism preferably with a web interface with clearly defined rules, roles and responsibilities, authorities, and definite timelines to resolve/process the complaints/queries is to be developed to receive and address fiduciary complaints.
- (f) **Ensure bidding and contract management (Procurement) MIS (PAP).** For day-to-day monitoring of procurement and contract management aspects and timely corrective actions an MIS to be developed and implemented.



- (g) **Computerize MTC accounts within two years (POM).** MTC is one of the key agencies whose accounts are maintained on manual basis. Even though their accounts are up to date, implementing a computerized accounting system would be a long-term reform for this company.
- (h) **Update accounts and complete audit of backlog years in CMWSSB within 18 months (PAP).** Accounts and audit in CMWSSB are delayed by two years due to legacy issues. CMWSSB is required to update the accounts and ensure audit is completed within 18 months. Program accounts will be kept separately and reported separately.
- (i) **Publish Annual reports and audited financial statements within 9 months from end of the fiscal year (PAP)** Parastatals should prepare and publish annual performance report along with financial statements and audit reports within nine months from end of the fiscal year in the website which will improve transparency and provide data to the citizens.
- (j) **Public disclosure of Program Audit report (POM).** Program audit report should be disclosed by the PMU and the IAs in their respective website as per the Bank policy on disclosure of audit reports.
- (k) **Appoint external auditor within six months of effectiveness (Legal).** Auditors are required to be appointed for review of FM and procurement aspects as per agreed terms of reference within six months of effectiveness.

37. **Implementation support.** The Bank will carry out regular implementation mission to support the IAs to achieve results, and for monitoring changes in fiduciary risks to the Program and, as relevant, compliance with the fiduciary provisions of legal covenants. The Bank would review key documents generated by IAs under the Program such as procurement progress, contract management, complaints, and adherence to Anti-Corruption Guidelines. The progress on agreed PAPs (annex 6) will be reviewed and any changes to the action plan will be made during the implementation phase.

38. The team will also monitor the following performance indicators as shown in table 4.1.

Table 4.1. Performance Metrics

Indicator	Measure	Timeline
Adequate monitoring of the procurement activities	<ul style="list-style-type: none"> • Percentage of contracts awarded and completed within the original contract period. • Number of Complaints received and upheld. • Average number of quotation/ bids received. • No contract exceeds the threshold for high value contracts 	Annually
Adequate monitoring of FM activities	<ul style="list-style-type: none"> • Budget allocation as per annual work plan • Release of funds on timely basis • Payments done on timely basis • Accounting system operational and Program reports are generated on timely basis • Audits completed on timely basis and reports submitted to the Bank on timely basis 	Every mission Annually



ANNEX 6. PROGRAM ACTION PLAN

Action Description	Source	DLI#	Responsibility	Timing		Completion Measurement
1. CUMTA Board shall establish a Secretariat for Phase 1 and approve the CUMTA Operational Manual	Technical	DLI 2	CUMTA	Other	3 months after effectiveness	Establishment of Secretariat with the appointment of at least 5 technical staff and formal approval of Operational Manual by CUMTA Board.
2. MTC shall complete its Business Plan Update. Transport Department to define service obligations and secure viability gap funding.	Technical	DLI 6	MTC, DoT	Other	6 months after effectiveness	Business plan approved by MTC Board and Transport Department. Adopted Government Order establishing the process to define service obligations and viability gap funding methodology.
3. Nirbhaya Apex Committee to establish Gender Lab	Technical		GCC	Other	3 months after effectiveness	Establishment of Gender Lab with core staff recruited.
4. Establish service baseline, disaggregated by gender and socially vulnerable groups, and system for reporting services levels and access periodically.	Technical	DLI 8	CMWSSB, MTC, GCC	Other	within 9 months of project effectiveness	Baseline complete and system operational for periodic reporting on access and performance
5. Establish systems for conducting and acting on customer and citizen feedback.	Technical		MTC, CMWSSB, GCC	Other	within 9 months of project effectiveness	Systems for citizen feedback established and operational.
6. Formulation of detailed action plan for filling vacancies through promotion/recruitment as per revised staffing pattern	Technical	DLI 1	GCC	Other	within 6 months of project effectiveness	Action Plan finalized and approved within GCC with detailed processes and timelines for selection of candidates, interviews, appointments, etc.



7. Regular disclosure of procurement information related to bidding and contract award on the agencies/ nodal agency's website and other public dissemination avenues.	Fiduciary Systems		All relevant agencies, TNIDB	Recurrent	Continuous	Regular disclosure of relevant data on nodal agency website
8. Reducing backlog of accounts and audit bringing them up to date.	Fiduciary Systems		CMWSSB	Other	within 18 months of project effectiveness	Backlog of accounts and audits completed and accounts are online with the current financial year.
9. Prepare and publish annual performance report along with financial statements and audit reports within nine months from end of the FY in the website.	Fiduciary Systems		TNIDB, CMWSSB, MTC, and GCC	Other	within first year of project effectiveness	APRs, financial statements and audit reports regularly published on website.
10. IA's to establish a bidding and contract management (procurement) MIS system	Fiduciary Systems		PMU and IAs	Other	within first year of project effectiveness	Procurement MIS system operational, with information on annual planned procurement, bidding stage, contract award, implementation progress till contract completion by each implementing agency.
11. Strengthen systems for sub-project screening as well as preparation, implementation, monitoring and documentation of environmental management plans	Environmental and Social Systems		MTC, CMWSSB, GCC, WRD	Other	within 9 months of project effectiveness	Environment staff designated for Program complete required trainings; screening, monitoring protocols are in place.
12. Strengthen institutional capacities and reporting on social risk management	Environmental and Social Systems		MTC, CMWSSB, GCC, WRD	Other	Within 9 months of project effectiveness	Skilled social staff designated for program; training to manage social risks implemented; monitoring and reporting systems to track social outputs and outcomes are adopted.



13. Include all provisions to operationalize and implement ACG in POM and provide consolidated quarterly report	Other		PMU and IAs	Recurrent	Continuous	Reports on ACG implementation to be shared with the Bank as part of the regular implementation support reviews.
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ANNEX 7. SUMMARY ENVIRONMENTAL AND SOCIAL SYSTEMS ASSESSMENT

1. **Objectives, scope, World Bank requirements.** The assessment focused on the social and environmental risks, benefits, impacts and opportunities of the PforR program. It covers social and environmental checks and balances that exist in the policy and guidelines; and maps corresponding risks and gaps. It offers suggestions on possibilities for implementation strengthening through institutional mechanisms for planning and monitoring, opportunities to enhance resilience, inclusion, access, participation, accountability, transparency; reinforcing a robust grievance redressal mechanism; improving gender indicators and environmental performance.

2. **ESSA methodology.** ESSA was prepared during the COVID-19 pandemic that limited the opportunity to collect primary data. The report draws upon secondary literature, virtual meetings and telephonic Key Informant Interviews and stakeholder consultations. Most interventions are aimed at policy and system strengthening which is supported with infrastructure investments. The ESSA focused on institutional assessment and systems to manage environmental and social risks. Desk review covered analysis of existing policy, operational procedures, institutional capacity, and implementation effectiveness relevant to the activities under the Program. Further, legal, and regulatory requirements including those on environmental conservation, pollution control, occupational health and public safety, labor welfare and rights, social inclusion, gender, and citizen engagement were analyzed. Existing project documents, aide memoires, ongoing or past projects from Tamil Nadu/Chennai, assessments conducted by technical agencies, documents and reports received from government counterparts, data, websites and other reports by research institutes, academics, and NGOs were relied upon.

3. **Stakeholder engagement, consultations, and disclosure: Stakeholder mapping:** During the preparation, stakeholder mapping, covering those who will get directly or indirectly impacted by the program and those who will directly and indirectly impact the program was prepared.

(a) **Stakeholder consultations** were undertaken with government officials, Residential Welfare Associations, opinion leaders, NGOs, CSOs, and other relevant stakeholders from October 2020 to March 2021. It included team meetings, Key Informant Interviews, and sector-level consultations. Detailed checklists were prepared to guide the same.

(i) Consultation to share draft ESSA (virtual) and seek feedback: Sector level consultations were held in the month of February and March 2021 to share the findings, seek clarifications, and agree on the recommendations.

(ii) The final draft of ESSA report was shared in a virtual city level workshop on March 24, 2021, to seek comments and suggestions and finalize the report.

(iii) Roadmap for future consultations: With limitations on organizing consultations with the direct beneficiaries a road map is detailed out in ESSA and in the POM to complete the consultations by the IAs within 6 months of ease on travel. Each sectoral ESSA provides a roadmap for future consultations. In view of the current pandemic consultations would be conducted taking into consideration national COVID-19 protocols as well as WHO guidelines.

(b) **Disclosure.** The draft ESSA was disclosed online on the respective IA's websites and Bank's external website on March 16, 2021. It will be updated to include consolidated feedback received via



different sources during the city level workshop held on March 24, 2021 and re-disclosed online on respective IA websites and World Bank external website.

Social Assessment

4. The Social Assessment reviewed the social policies, legal framework and capacity of government institutions and systems to deliver quality services to achieve the social development outcomes. Assessment of legal policy framework comprised review of social and environmental policies both at the national and Tamil Nadu state level including legislations on land, citizen engagement, livelihoods, inclusion, gender, SEA/SH, and labor welfare. Sector specific policies and laws such as Chennai Metropolitan Water Supply and Sewerage Act, 1978, Chennai City Municipal Corporation Act of 1919, Chennai Unified Metropolitan Transport Authority Act, 2010, Solid Waste Management Rules, 2016; Tamil Nadu Municipal Public Health Service Regulations, 1970 (and Discipline and Appeal Regulations, 1973) among others, were also examined. Overall, it may be concluded that the policy and legal framework is conducive and adequate for the required social management processes. The challenges were largely noted in terms of ensuring the operationalization and enforcement of these regulations as well as bridging the gap in institutional systems and capacity for evidence-based reporting on social development outcomes, thus resulting in social risk rating as Substantial. The key social risks and impacts under the program are-(i) construction induced impacts that may lead to temporary loss of livelihood; (ii) inequitable distribution of benefits and exclusion of women and other marginalized groups; (iii) inaccessibility of facilities and services by the persons with disability and old and infirm; (iv) weak consultations and stakeholder engagement; (v) weak systems for effective and accessible grievance redressal mechanisms and addressing the feedback received from the stakeholders; (vi) lack of systems on reporting of implementation of welfare measures for workers and occupational health and safety measures; (vii) weak processes to address gender based violence at workplace including public places and civil work sites with increased influx of labor; and (viii) weak M&E or management of risks.

5. **Social Assessment against the PforR Core principles.** Assessment against the PforR Core principles reveals that women and vulnerable may not be able to access the benefits, however, disproportionate adverse impacts are not foreseeable. The systems for management of welfare of workers and grievances of temporary staff and workers seem to remain ad-hoc specially for WSS, WRD and health services. The investments will not lead to land acquisition from private landowners, but there may be some permanent and temporary impacts on non-titleholders (squatters and encroachers). It is recommended to exclude certain activities which exacerbate risks and are excluded from the program following the application of the Screening Criteria to select projects. The Institutional capacity across all the agencies requires to be substantially strengthened to ensure that the risks are addressed adequately.

Institutional Assessment for Social Management

- (a) **CMWSSB.** A professional organization with all government employees. It has a comprehensive Citizens charter and socially inclusive policies like subsidies in connections and tariffs for economically vulnerable. However, there are gaps in resource allocation to implement and report on Citizen charter, to ensure effective and accessible GRM, reporting on social inclusion, gender, and land requirement.
- (b) **WRD.** It has adequate institutional resources – staff, budgets, awareness, and competence – to manage the technical issues related of the program. It however lacks capabilities (skilled resources,



budgets, mandate, guidelines, and so on) for management of social risks related to the schemes and programs that the department is mandated to plan and implement. The department currently has a functional GRM. However, grievances received through the GRM are addressed and closed through departmental actions and the complainant's feedback regarding her/his/their complaints are neither sought nor recorded. Overall, social development capacities and reporting are weak.

- (c) **Gender Lab.** This is not yet operational. The lab will rely on existing grievance redressal system of GCC. Its structure is endorsed by the Transport Department, has delineated a robust monitoring system at the operations and program level. As a new entity, it has yet to develop standardized approach for preparing, implementing and managing investments for activities. The guidelines/notifications for IAs, committees' responsibilities and processes for carrying out their functions must be developed or issued.
- (d) **CUMTA.** It is not yet operational. For inclusive planning, the rules provide for co-opting additional members from registered associations representing public transportation, passengers, cyclists, pedestrians, and similar groups. Further, a consultancy firm has been brought on board to organize stakeholder consultation for citizens' feedback on the draft Comprehensive Mobility Plan. The grievance redressal system for CUMTA is yet to be developed. The staffing plan for CUMTA includes hiring of a social specialist.
- (e) **MTC.** MTC has a robust grievance redressal system for both the commuters and its permanent employees. But the mechanism does not extend to contracted workers. PR Wing of MTC currently manages public relations and media outreach, but has limited capacity in (a) designing and executing participatory approach (b) undertaking safety and accessibility audits of MTC's assets and (c) conducting trainings for staff on citizen engagement, gender mainstreaming, social inclusion.
- (f) **Special Projects Department, GCC (Mega-street Program).** The Department is being supported by the social, environmental and communications experts under CSCL. GCC has a robust grievance redressal system. The Design Consultants for all 6 packages have assessed social impacts and conducted stakeholder consultations during the preparation of the DPR. Assistance from Revenue Department, GCC will be sought to relocate the street-vendors. However, Department and CSCL do not have standardized mechanism/system to monitor compliance of labor laws during the construction phase.
- (g) **GCC (Municipal Services).** It has a robust GRM with dedicated team to respond, manage, report, and monitor for SWM services. It also has mechanisms for seeking citizen feedback and service ratings. Citizen interface activities are implemented which is ad-hoc. There are provisions to reach the vulnerable communities for services. However, the challenge is to systematically plan, implement and report on the achievements. Documentary evidence is missing to review the performance.

Environmental Assessment

6. Environmental management system that requires strengthening exists in most of the IAs the assessment revealed a few gaps that are relevant to the Bank's Program. These gaps are summarized by IAs in the following paragraphs.



- (a) **CMWSSB/water supply and sanitation.** There is a need to strengthen CMWSSB to establish and maintain documented procedure for environmental management across all WSS investments.
- (b) **WRD/water resource and resilience.** Documentation of environmental systems and procedures do not exist. Establish environmental procedures and documentation may help to increase the efficiency of WRD in environmental management.
- (c) **CUMTA/urban mobility.** CUMTA is a new organization with no environmental capacity, which is clearly an environmental systems gap. Having such capacity will go a long way in realizing and enhancing the environmental benefits that integrated urban transport is bound to deliver.
- (d) **MTC/urban mobility.** MTC is carrying out its environmental management activities. But there is no mechanism for continual improvement. A regular system of environmental audits will strengthen its institutionalization.
- (e) **GCC/municipal services -public health.** GCC is carrying out its responsibility pertaining to Biomedical Waste (BMW). There are gaps in liquid BMW management. Performance audits should offer areas of improvement to strengthen the environmental systems.
- (f) **GCC/municipal services –SWM.** GCC will be entering into upstream dry waste recycling as a new initiative. The plans do not yet specify how environmental concerns will be addressed. The implementation arrangements should necessarily include building environmental management capacity.

7. **Assessment against the PforR Core principles.** The environmental assessment focused on borrower’s environmental management systems – both regulatory and organizational – (Core Principle 1) and public and worker safety (Core Principle 3). The assessment confirmed consistency with the environmental Core Principles, and the exclusion of activities ineligible for PforR financing. Gaps identified for strengthening environmental management capacity are included in the PAP. The environmental risk is rated as Moderate pertaining to (i) sufficient regulatory systems and organizational capacity to deal with the environmental impacts associated with the Program.

8. **Program exclusion.** It is recommended to exclude certain activities which exacerbate social risks and are outside the ambit the scope of the program. ESSA provides an Exclusion Checklist to map high risk activities related to land acquisition; labor influx; loss of livelihood; negative impact on indigenous people and vulnerable, cultural heritage, community health and safety; eviction of informal settlers, permanent restrictions on access to resources and any activity not consistent with the Legal/Regulatory Framework and not consistent with the agreed project description.

Recommendations

Improving Social Systems

9. The assessment shows that most agencies are well equipped with IT based monitoring systems but do not track performance on social management. The system for data collection and monitoring on social management across all institutions are fragmented and, in some cases, non-existent. The PAP is to: “Strengthen



institutional capacities and reporting on social risk management.”³⁶This will include skills and capacities on social management in all the IAs, a training calendar and its implementation to continue strengthening capacities and reporting systems to track social outputs and outcomes. The agency-wise actions are listed in table 5.1:

Table 5.1. Agency-wise Actions

Sector	Agency	Description	TimeLine
Water Supply and Sanitation	CMWSSB	Prepare and Review Detailed Project Reports (DPRs) in line with the requirements of exclusion screening criteria	Ongoing
		Develop, Implement Social Audit tools and disclose reports tracking the vulnerable accessing services and benefits	TOR: Q2 Y1; Onboarding Social Audit agency: Q4 Y2; Social Audit reports: every year starting Y2
		Strengthen GRM system to redress 80% of Grievances within 30 days of registration and close them after complainant's satisfaction.	Every six months starting Q3 Y1
Water Resource and Resilience	WRD	Prepare and Review Detailed Project Reports (DPRs) in line with the requirements of exclusion screening criteria	On-going
		Strengthen GRM system to redress 80% of Grievances within 30 days of registration and close them after complainant's satisfaction.	Every six months starting Q3 Y1
Urban Mobility	MTC	Conduct Audit of MTC's assets for accessibility in compliance with the Persons with Disabilities Act, 1995 and Tamil Nadu Rules, 2018 for all new buses	On purchase of the buses
		Adopt Women Safety Audit to track safe mobility of women in bus routes, bus stops and terminals to improve planning and implementation for enhanced safety.	Once in two years starting Y2
		Strengthen GRM system to redress 80% of Grievances within 30 days of registration and close them after complainant's satisfaction.	Every six months starting Q3 Y1
	Mega Street	Adopt procedures to comply with <i>Tamil Nadu Street Vendors (Protection of Livelihood and Regulation of Street Vending) Rules, 2015</i>	Q3 Y1
Municipal Services - Public Health	GCC	Disclose citizen feedback Report (SWM) and patient experience Reports (Health) which include tracking the vulnerable accessing services and benefits	Annual Report available on GCC website starting from Y2.
		Strengthen GRM system to redress 80% of Grievances within 30 days of registration and close them after complainant's satisfaction.	System adoption by Q3 Y1 GRM reports available from Q4 Y1
		Increased employment of women in Group A & B cadres	Annual progress starting Y1

³⁶The national state legal and regulatory framework are adequate for effective management of social risks and equitable distribution of benefits supported by the program.



Improving Environmental Systems

10. Detailed recommendations related to improving environmental systems are presented in table 5.2 by each sector and by agency:

Table 5.2. Recommendations Related to Improving Environmental Systems

Sector	Agency	Description	Timeline
Water Supply & Sanitation	CMWSSB	Establish and maintain documented procedures for environmental management	End of Year 1
		Review and strengthen all the contract provisions (in the proposed performance-based contracts) pertaining to Environmental and Health and Safety (EHS) for proposed civil works under the water supply distribution network and sewerage network	Prior to contracting/bidding whenever undertaken
		Review and use Information and Education Campaign (IEC) with a focus on worker and community safety	End of Year 1 and subsequently
Water Resource and Resilience	WRD	Establish and maintain documented environmental systems and procedures (for the entire project cycle including monitoring) for the Environmental Cell	End of Year 1
		Review Detailed Project Reports (DPRs) in line with the requirements with National Green Tribunal (NGT) orders passed on other water bodies, if any, and include EHS good practices in the bidding documents	Prior to contracting/bidding whenever undertaken
Urban Mobility	MTC	Conduct a performance review of the various MTC Divisions / Sections (Depots used for maintenance and disposal) that have environmental functions to determine areas for improvement, if any.	End of Year 1
Municipal Services - Public Health	GCC	Develop and establish the use of documented procedures for UPHCs and UCHCs on BWM management and infection control	End of Year 1
		Monitor and record progress reports on BMW management and infection control from the health care facilities	Half-yearly from the end of Year 1
Municipal Services - SWM	GCC	Conduct a preliminary environmental review / assessment for the dry waste resource recycling interventions at the time of design / planning, and proper management measures (incl. safety protocol) should be included as part of the construction and implementation phase.	End of Year 1
All sectors	All IAs	Monitor and record progress reports of EHS performance	Half-yearly starting from the end of Year 1



ANNEX 8. IMPLEMENTATION SUPPORT PLAN

1. The objectives of the Implementation Support Plan (ISP) are: (i) to monitor implementation progress of the Program (including its PAP) and the implementation of the risk mitigation measures defined in the technical, fiduciary, environmental and social assessments, and (ii) to provide the counterpart with the technical advice necessary to facilitate the achievement of the PDO and contribute to the quality of the capacity building of stakeholders by providing best practices, benchmarks and training.

2. The Bank will provide regular implementation support to the Program as appropriate, including for the implementation of the PAP. Formal implementation support missions and field visits will be carried out semi-annually. The focus of the implementation support, task team skill mix requirements and the role of partners are summarized below:

Table 7.1. Main Focus of Implementation Support

Time	Focus	Skills Needed	Resources Estimate (US\$)
First twelve months	Technical support and capacity building for the TNIDB in management and coordination of the transformation agenda	Institutional development experts with knowledge of city governance and systems to support International experts to provide technical assistance on global best practices on sustainable urban services and performance-based approach	300,000
	Implementation support to TNIDB-PMU for timely and efficient execution of the Program by all IAs including M&E	International and local experts on specific technical areas to support implementation progress including urban development, governance, water, transport, and health Monitoring and evaluation experts to support results monitoring and reporting	
	Capacity Building in environmental and social management, of the technical staff of IAs and other stakeholders involved in the Program implementation	Social and environmental experts	
	Fiduciary support and monitoring	Procurement and FM experts	
12–48 months	Technical and capacity support	Technical experts in program areas and operational experts	800,000
	Fiduciary and capacity support	Procurement and FM experts	
	Social management and capacity support	Social development experts	
	Environmental management and capacity support	Environmental experts	
	Overall M&E	M&E experts	
Other	Potential (temporary) local hands-on support	Institutional development or operations expert	350,000

**Table 7.2. Task Team Skills Mix Requirements for Implementation Support (Annual)**

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Task team leaders	10	3	1 TTL based in HQ, 1 TTL based in India CO
Urban development specialists	12	3	1 based in HQ, 1 based in India CO
Transport specialists	8	2	1 based in Singapore Office, 1 based in India CO
Health specialist	6	2	Based in India CO
WRM specialist	5	2	Based in HQ
Water supply and sanitation specialist	8	2	Based in India CO
Procurement specialist	3	2	Based in India CO
FM specialist	3	2	Based in India CO
Environmental specialist	4	2	Based in India CO
Social specialist	4	2	Based in India CO
Institutional development/operations specialist	20	0	Temporarily based in Chennai
Short-term consultants (technical)	10	0	Based in India and Chennai

Table 7.3. Role of Partners in Program Implementation

Name	Institution/Country	Role
AIB	IFI / China	Joint co-financing for the PforR