



Schweizerische Eidgenossenschaft
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Swiss Agency for Development
and Cooperation SDC



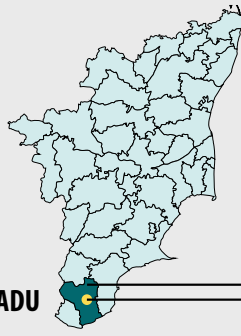
CapacITIES
LOW CARBON • CLIMATE RESILIENT • CITY DEVELOPMENT

Tirunelveli



INDIA

TAMIL NADU



Tirunelveli District
Tirunelveli
Municipal Corporation



Area
108.5 Sq.km



Population
0.55 Million



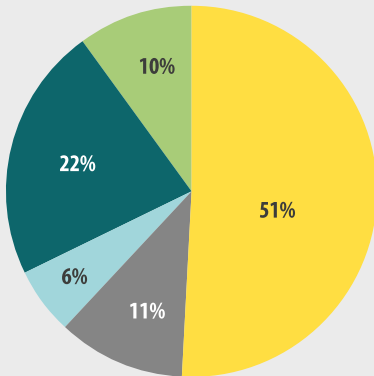
Total Household
140,584



Climatic Condition
Warm & Humid

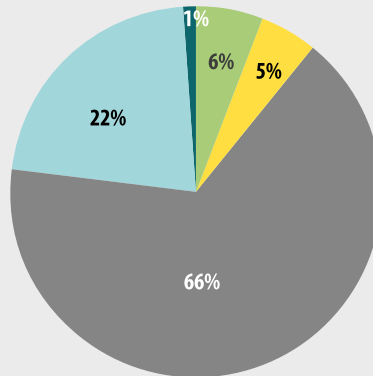
GHG Emissions (2020-21)

Community-wide Sectors



- Waste
- Transport
- Agriculture, forestry and fishing activities (i.e. mainly agriculture)
- Manufacturing Industry and Construction (i.e. Industrial sector)
- Commercial and Institutional Buildings/Facilities
- Residential Buildings

Municipal Facilities



- Transport
- Street Lighting
- Water Sector
- Waste water treatment
- Buildings

tCO₂e

0.66

Million Tonnes
CO₂e



1.20

Tonnes CO₂e
Per Capita

CapacITIES

addressing

SUSTAINABLE
DEVELOPMENT
GOALS

3 GOOD HEALTH AND WELL-BEING



6 CLEAN WATER AND SANITATION



7 AFFORDABLE AND CLEAN ENERGY



11 SUSTAINABLE CITIES AND COMMUNITIES



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION



15 LIFE ON LAND



Simplified Climate Resilient City Action Plan

Urban System Challenges



Water

Dependency on only Tamirabarani River and Ground Water



Transport

Narrow Roads in old city areas, lack of adequate public transport facilities



Biodiversity

Haphazard development, decreasing green cover



Storm Water

Lack of covered pucca drains, water stagnation & urban flooding



Sewage

Choked old sewerage network, Open Sewerage Drains

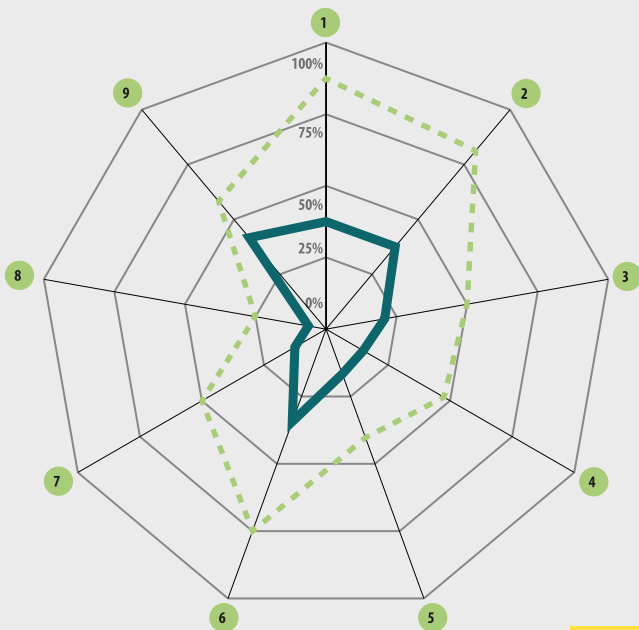


Energy

Lack of RE for Municipal Services and lack of EE appliances and systems



Performance Assessment



- 1) Procurement & Finance
- 2) City Planning
- 3) Cooperation & Communication
- 4) Buildings
- 5) Mobility
- 6) Waste
- 7) Water & Sewage
- 8) Biodiversity
- 9) Energy / Energy Infrastructure

— Baseline
- - - Target

AREA	BASELINE		TARGET		
	GRADE	RESULT	GRADE	TARGET	
1	Procurement and Finance	1.50	38%	3.50	88%
2	City Planning	1.50	38%	3.25	81%
3	Cooperation and Communication	0.83	21%	2.00	50%
4	Buildings	0.60	15%	1.90	48%
5	Mobility	0.67	17%	1.61	40%
6	Waste	1.38	34%	3.00	75%
7	Water and Sewage	0.50	13%	2.00	50%
8	Biodiversity	0.25	6%	1.00	25%
9	Energy / Energy-Infrastructure	1.67	42%	2.33	58%
Overall		0.91	23%	2.29	57%

Example of Implemented Climate Actions (2019-2022)

Renewable Energy and Energy Efficiency in Municipal Services

5 MWp Solar PV for Captive Consumption



**GHG Mitigation
per year**
6,846 tCO₂e



**Mode of
Implementation**
Smart City Mission

260 kWp Rooftop Solar PV on 36 Municipal Buildings



**GHG Mitigation
per year**
356 tCO₂e



**Mode of
Implementation**
Smart City Mission

Conversion of streetlights to LED



GHG Mitigation per year
4,734 tCO₂e



Mode of Implementation
Smart City Mission

Climate Friendly Solid Waste Management

Micro-Compost Centers for Treatment of Wet Waste



**GHG Mitigation
per year**
5,736 tCO₂e



**Mode of
Implementation**
AMRUT and Smart City
Mission

Bio-mining of legacy waste



**GHG Mitigation
per year**
120,167 tCO₂e



**Mode of
Implementation**
Smart City Mission

Green Cover & Biodiversity

Development of Miyawaki Urban Forest at scientific closure site of compost yard



Adaptation Benefits

Acts as carbon sink and improves micro-climatic condition in the dumpsite



Mode of Implementation

CSR Funded

Water Supply

SCADA System for Water Supply and Distribution



Adaptation Benefits

Improves efficiency in water supply and distribution given limitations in water supply



Mode of Implementation

Smart City Mission

Wastewater Management

Under Ground Sewerage System Phase II



Adaptation Benefits

Open Sewage drains are being replaced with underground sewerage network improving waste water collection



Mode of Implementation

Tamil Nadu Urban Flagship Investment Program (TNUFIP)

Support Under CapaCITIES Phase II



Climate Action Planning & Net Zero Targets

- Preparation of Comprehensive Climate Resilient City Action Plan



Quick win/ Co-Financing Projects

- Watershed Assessment, Management and financing Plan to enhance disaster resilience
- Early Warning System for Urban Flooding



Technical Assistance Projects

- Preparation of Solid Waste Management Action Plan
- Identification of sites for developing green spaces



Other Support

- CSCAF by MoHUA
- Urban Outcome Framework by MoHUA
- DPR for developing Web-based GIS mapping of Tirunelveli

Actions proposed in Simplified Climate Action Plan contribute to India's Nationally Determined Contribution (NDC) by

enabling a 'Lifestyle for Environment', ensuring a climate friendly and cleaner path, contributing to a reduction in emissions intensity of GDP, enhancing renewable energy capacity, enhancing investments in key vulnerable sectors such as water resources, mobilizing domestic and international funds for climate action and building capacities and frameworks for quick diffusion of cutting edge climate technology in India.



Implementing partners



Knowledge Partner



For more information, please contact

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