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and Cooperation SDC



Coimbatore City  
Municipal Corporation

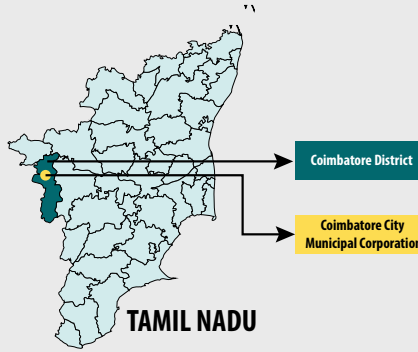


CapaCITIES  
LOW CARBON • CLIMATE RESILIENT • CITY DEVELOPMENT

# Coimbatore



INDIA

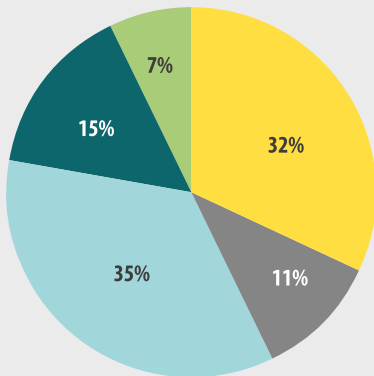


TAMIL NADU

 <b>Area</b> 250 sq.km	 <b>Population</b> 1.61 Million
 <b>Total Household</b> 431,547	 <b>Climatic Condition</b> Hot & Dry

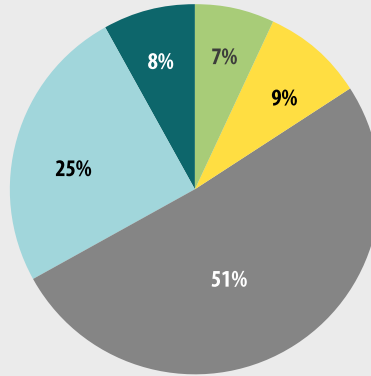
## GHG Emissions (2020-21)

### 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



2.30

Million Tonnes  
CO<sub>2</sub>e



1.46

Tonnes CO<sub>2</sub>e  
Per Capita

CapaCITIES

addressing

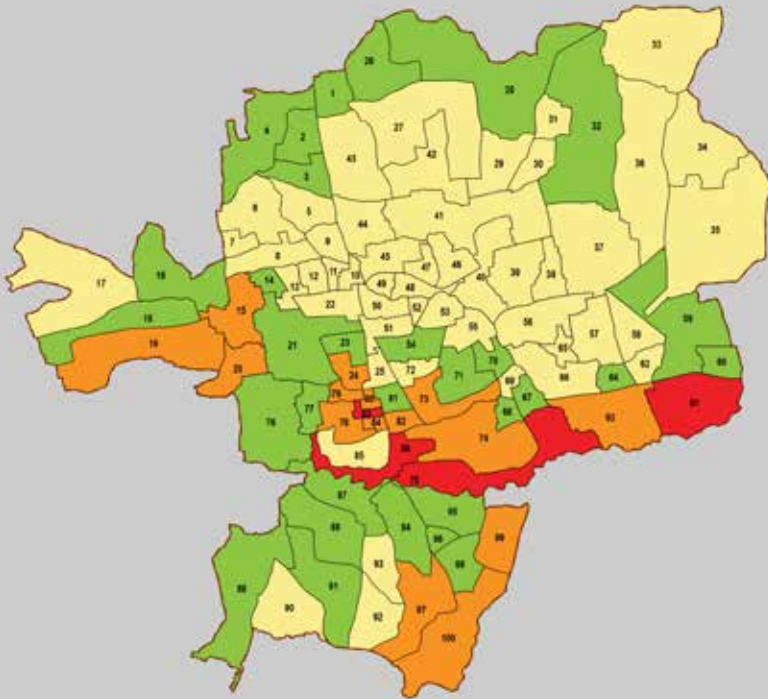
SUSTAINABLE  
DEVELOPMENT  
GOALS

<b>3</b> GOOD HEALTH AND WELL-BEING 	<b>6</b> CLEAN WATER AND SANITATION 	<b>7</b> AFFORDABLE AND CLEAN ENERGY 	<b>11</b> SUSTAINABLE CITIES AND COMMUNITIES 
<b>12</b> RESPONSIBLE CONSUMPTION AND PRODUCTION 	<b>13</b> CLIMATE ACTION 		



# Vulnerability Assessment

## Four Wards Highly Vulnerable



- Wards impacted by Four Fragile Urban Systems
- Wards impacted by Three Fragile Urban Systems
- Wards impacted by Two Fragile Urban Systems
- Wards impacted by One Fragile Urban Systems



## Critical Urban Systems



### Solid Waste Management

Lack of segregation and treatment of hazardous waste, e-waste, C&D waste



### Water Supply

NRW and limited supply



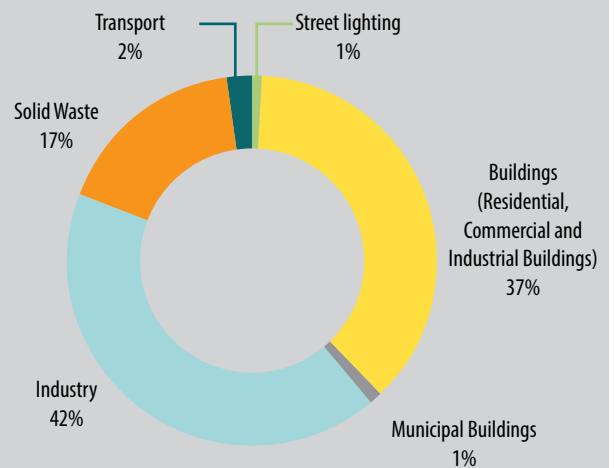
### Transport

Increased private vehicle usage and lack of public transport mechanisms




## Climate Action Plan Potential by Sectors (2018-19 to 2022-23)

Estimated annual mitigation potential of 1.37 million tCO<sub>2</sub>e over the 2015-16 baseline




### Sectorwise GHG Mitigation Potential

# Proposed Climate Actions (short term and medium term)




**Buildings (Residential, Commercial, Institutional)**

Solar Photovoltaic (PV) systems, energy efficient fixtures, green building designs




**Water Supply**

Non Revenue Water (NRW) reduction and installation of captive solar PV plants at water pumping stations




**Streetlights**

Replacement of existing street lighting with Light Emitting Diode (LED) installation using solar PV systems and solar lighting in the parks



**Transport**

Introduction of electric vehicles, public bicycle sharing system, replacement of diesel buses to electric buses and introduction of the public transport system



**Solid Waste Management**

Waste to energy plants – biomethanation plants and electricity from Refuse Derived Fuel (RDF)

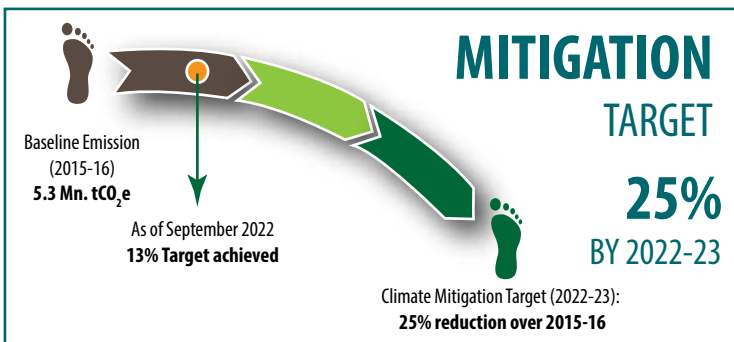



**CARBON FOOT PRINT**

**Target**

**25%**  
less by 2022-23

## Implementation Status of Climate Resilient City Action Plan (September 2022)




Baseline GHG emission 2015-16	5,316,666
CRCAP target (2022-23) (25% of 2015-16 baseline)	1,369,060
Emission reductions achieved until September 2022	175,526
% of target achieved as of September 2022	13%

## Implementation Status of Climate Resilient City Action Plan (September 2022)

**Energy Efficiency in Street lighting**

**Conversion of Conventional Street Lights to Energy Efficient LED Lights (58878 number of streetlights replaced)**



**GHG Mitigation per year**  
120,712 tCO<sub>2</sub>e




**Source of Funding**  
Smart City Mission


**Air Quality**

**Installed sensor based Ambient Air Quality Monitoring Systems at 4 locations**

**Replication by the city**  
Installation of sensor based Ambient Air Quality Monitoring Systems at 30 locations



**Source of Funding**  
Smart City Mission



**Adaptation Benefits**  
Precautionary measures for health safety due to increased level of air pollution

## Climate Friendly Solid Waste Management

### CapaCITIES supported projects:

- Implemented SUNYA approach towards zero waste management in 2 wards
- 1.5 TPD Bio-methanation plant in ward number 69
- Municipal Solid Waste Management Plan for Coimbatore - Vision, Strategy & Roadmap 2017-2035
- Master plan for consolidation and closure of Vellalore dump site

### Scale-Up by the city:

- 200 TPD Bio-CNG Plant on public private partnership (PPP) format with viability gap support from the Corporation (with technical assistance, financial feasibility and bankability assessment under CapaCITIES Phase II)

### Projects Implemented by the city:

- Legacy waste treatment through bio-remediation at Vellalore dump site
- 6.3 TPD Bio-methanation Plants at 5 Locations



### GHG Mitigation per year

169,176 tCO<sub>2</sub>e



### Source of Funding

Smart City Mission,  
Municipal Budget



### Adaptation Benefits

Reduced waste at dumpsites and related health hazards, replacing conventional fuel with Bio-CNG to reduce air pollution, increased adaptive capacity of the city for solid waste management

## Renewable Energy in Municipal Facilities

### CapaCITIES supported projects:

- Installation of 140 kWp Floating Solar PV at Periyakulam Lake (upcoming)
- Technical design, financial feasibility and bankability report for 10 MWp Floating Solar PV plant at Kumarasamy Lake
- Sustainable Energy Action Plan for Coimbatore thereby recommending maximum potential development of Renewable Energy (wind and solar) for municipal own use.

### Projects Implemented by the city:

- 5.6 MWp Solar PV plant for Municipal Services
- 625 kW Rooftop Solar PV for office buildings, hospital and bus station
- Source of Funding:: Smart Cities Mission, Municipal Budget



### GHG Mitigation per year

21,345 tCO<sub>2</sub>e



### Source of Funding

Smart Cities Mission,  
Municipal Budget

## CapaCITIES contribution 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'

## Building CapaCITIES Beyond Climate Actions

### National and Global Reporting:

- CSCAF 2.0
- Urban Outcome Framework (UOF)
- CDP- ICLEI Track
- Global Covenant of Mayors for Energy and Climate (GCOM)
- Various national challenges i.e., Cycles4Change, Street4People, Transport4All, EatSmart Cities Challenge

### CSCAF 2.0



**Mitigation Badge**  
Awarded as soon as one of the steps (i.e. Inventory, Target, or Plan) is accomplished



### Support for sustainable urban development like planning support for

- Atal Mission for Rejuvenation and Urban Transformation (AMRUT)
- Swachh Bharat Mission (SBM)
- Smart Cities Mission (SCM)

### Support during Covid pandemic

## Implementing partners



## Knowledge Partner



For more information, please contact

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