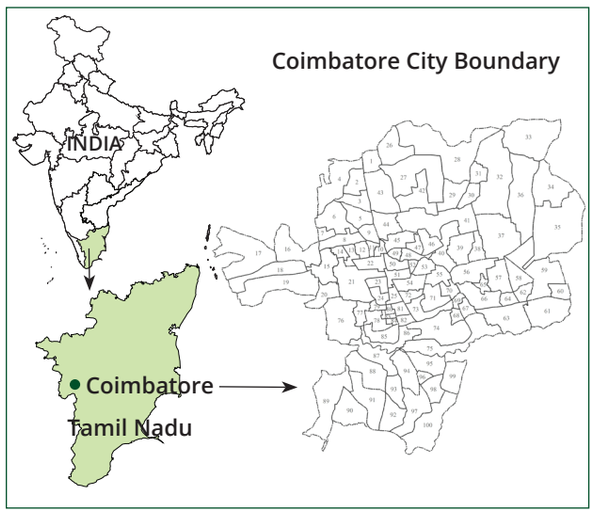
City Climate Profile - Coimbatore

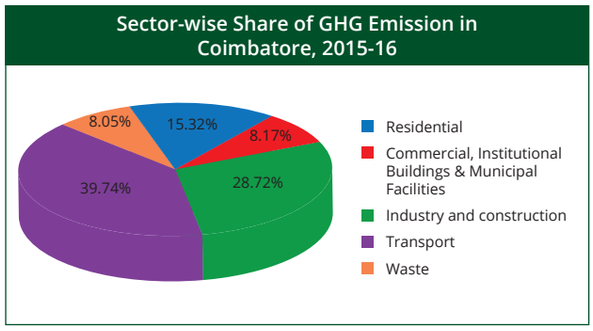
Coimbatore is the second largest city in Tamil Nadu, situated on the banks of the river Noyyal surrounded by the Western Ghats. Often referred to as the Manchester of South India, it is one of the fastest growing cities in India and is a major hub for textiles, industries, commerce, education, information technology, healthcare, and manufacturing.

Population:	1,050,721 (2011 Census of India)
Area:	257 sq. km.
No of Wards:	100 wards
Gender Ratio:	997/1000 males
Literacy rate:	91%



Greenhouse Gas Emissions Inventory

The total GHG emission (2015-16) for Coimbatore city was 4.89 million tonnes of carbon dioxide equivalent (CO_2e). This translates to an average per capita GHG emission of 3.03 tonnes of CO_2e, which is almost double of India's per capita GHG emission 1.56 tCO_2e (2010).



Climate Risk / Vulnerability Assessment

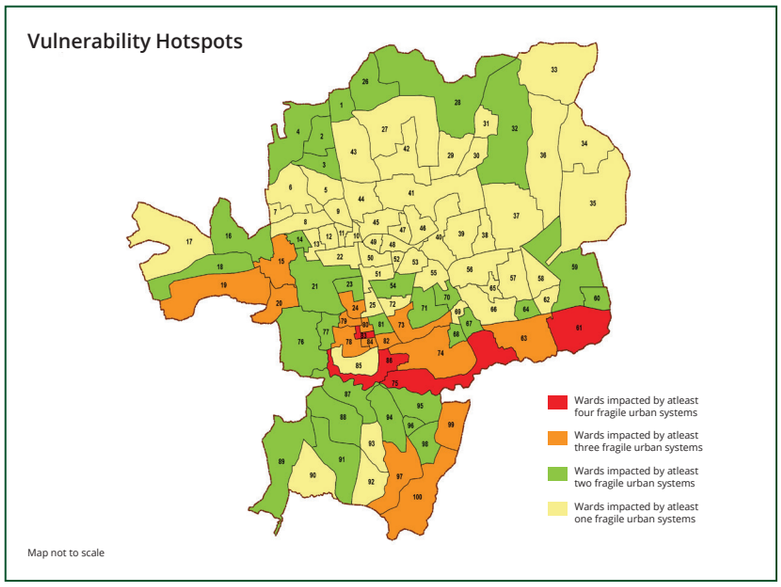
A climate risk assessment and vulnerability assessment of the fragile urban systems of the city was conducted in the city with the help of the Shared Learning Dialogues (SLDs). Coimbatore will see an increase in average maximum temperature by 3.3ºC; increase in average minimum temperature by 3.4ºC by the end of the century and increase in rainfall upto 0.5% by 2050, with increasing frequency of short duration high intensity rainfall.

Fragile Urban Systems	Climate Risks	Climate Fragility Statements	Risk*
(Water)		• There will be increase in demand of water. This will lead to more ground water extraction lowering ground water table • GDP, economy (industry and agriculture) and health will be impacted	Extreme
(Land-use)		• Change in green-blue cover in the city will change the micro-climate • Increased heat island effects will lead to impacts on health, food and cattle feed production	High
(Sewerage)		• Overflow of sewage lines and dilution of waste water will impact efficient of waste water treatment	Extreme
(Solid Waste)		• Decomposition rates in treatment facilities will be affected impacting ecosystems, increasing GHG emissions, odour, sanitation and health issues	High
(Transport)		• Private vehicular volume will increase, increasing the temperature and emissions	High

*** Risk Score (likelihood x consequence) –** Low: 1-4; Medium: 5-10; High: 11-20; Extreme: 20-25

temperature increase; rainfall increase





Low Carbon and Climate Resilient Solutions

Based on the climate risks and vulnerability assessment, the following initiatives have been undertaken through the CapaCITIES project. Some are implementation projects to showcase change (Quick-wins) while others are detailed studies that will lead to financially viable projects (Bankable).

Quick-win Projects

Solid Waste Management

- *Decentralised Solid Waste Management System for Zero Waste Wards 22 and 24 (SUNYA)* using source segregation of waste and installing a decentralized biodegradable waste management plant, thereby reducing 1500 tonnes of CO_2e per annum GHG emissions from the 1.5 tonne biomethanation plant. (Project cost: CHF 118'500)

Urban Planning

- *Installation of Four Ambient Air Quality Monitoring Stations*, providing critical information for transport planning, health impacts and awareness and urban planning. (Project cost: CHF 47'500)

Bankable Projects

Sewerage and Drainage

- *Strategic Action Plan for Waste Water Management and Treatment* has been developed by assessing the existing and proposed sewerage infrastructure to practically reduce emissions. (Project cost: CHF 21'000)
- *Assessment of Catchment Area of Singanallur Lake* through a survey of the household waste water connections and lake water quality to determine relevant technology for treating the water before it enters the lakes to reduce pollution. (Project cost: CHF 30'000)

Solid Waste Management

- *Development of a Long-term SWM Strategy for the City* as a holistic internal planning and monitoring document for the Coimbatore City Municipal Corporation to reduce GHG emissions from this sector through better treatment and disposal. (Project cost: CHF 18'500)
- *Engineering Plan for Movement of Waste from Multiple Dumps in Vellalore* to the old dumpsite was developed, allowing for its scientific closure, thereby reducing GHG emissions. The city has submitted this plan to the National Green Tribunal. (Project cost: CHF 18'500)
- *Technical Advice for Overall Planning of the Dumpsite at Vellalore* including dewatering system and leachate treatment plant, landfill gas management, environmental control and monitoring system shall be provided to the City Corporation. (Project cost: CHF 28'000)
- *Technical Assistance for Review of a Detailed Project Report for SWM Incineration in Vellalore* will be provided as a support to the Corporation to create a bankable project. (Project cost: CHF 9'000)

For more information, please contact:

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