Sustainability Report - Chennai

Date: 2025-06-30

Key Performance Indicators (KPIs):

Air Quality Index: 45

Renewable Energy Usage: 62%

Water Consumption: 110 liters per capita per day

Traffic Congestion Level: 30%

Waste Recycling Rate: 48%

Green Cover Percentage: 22%

Electric Vehicle Adoption: 12%

Sustainability Report:

Chennai Smart City Sustainability Report

1. Air Quality Index (AQI)

Chennai's current Air Quality Index stands at 45, indicating a relatively healthy air quality. This is primarily due to the city's proactive measures in reducing industrial emissions and promoting greener transportation options. However, continuous monitoring and improvement efforts are necessary to maintain and enhance air quality, especially considering the growing population and urbanization.

2. Renewable Energy Usage

Chennai has shown significant progress with 62% of its energy consumption coming from renewable sources. This achievement is attributed to the city's commitment to solar and wind energy projects, which have successfully reduced greenhouse gas emissions and dependence on fossil fuels. To

further improve sustainability, Chennai must focus on expanding renewable energy infrastructure and encouraging private sector participation.

3. Water Consumption

Chennai's daily water consumption per capita is 110 liters. While this figure aligns with the national average, it is relatively high compared to other cities in India. Efforts to promote water conservation, such as rainwater harvesting, efficient irrigation systems, and public awareness campaigns, should be prioritized to ensure sustainable water management in Chennai.

4. Traffic Congestion Level

Chennai's traffic congestion level currently stands at 30%. To mitigate this issue and improve sustainability, the city should invest in public transportation, promote carpooling and cycling, and optimize traffic management systems using smart technologies. Additionally, stricter emission norms for vehicles can help reduce air pollution and greenhouse gas emissions from the transportation sector.

5. Waste Recycling Rate

Chennai's waste recycling rate is 48%, indicating a moderate level of waste management efficiency. To enhance sustainability, the city should focus on increasing public awareness regarding waste segregation and recycling, promoting composting, and investing in advanced waste management technologies.

6. Green Cover Percentage

Chennai's green cover percentage is 22%. Enhancing green spaces within the city is crucial for improving air quality, reducing urban heat island effects, and promoting biodiversity. Strategies such as urban reforestation, vertical gardens, and green roofs should be prioritized to increase the green cover percentage over time.

7. Electric Vehicle Adoption

Chennai's electric vehicle (EV) adoption rate is 12%, which is relatively low compared to other Indian cities. To boost EV adoption, the city should provide incentives for purchasing electric vehicles, expand charging infrastructure, and promote public awareness about the environmental benefits of EVs.

Conclusion

Chennai has demonstrated commendable progress in several sustainability KPIs, particularly in renewable energy usage and waste recycling. However, challenges remain in areas such as water consumption, traffic congestion, and green cover percentage. By prioritizing strategic interventions in these domains, Chennai can further enhance its sustainability performance and become a model for other Indian cities.