



Navi Mumbai: An Eco City Project



About TERI

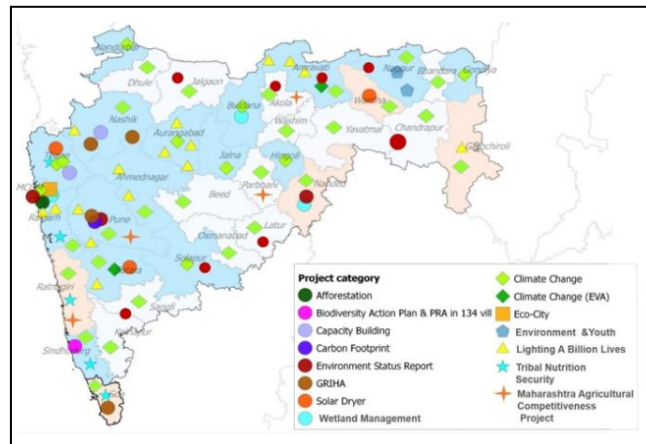
Headquartered in New Delhi, The Energy and Resources Institute (TERI; <https://www.teriin.org>) was established in 1974. Since then, it has emerged as a think tank and research institution in the fields of energy, environment, climate change and sustainability and has been at the forefront in providing expertise and professional services (research, policy, consultancy, and implementation) to national and international clients including government, bilateral and multilateral agencies.

The institute's national presence with regional offices in Mumbai, Goa, Bangalore and Guwahati, along with a diversity of professional staff belonging to diverse disciplines and highly specialized fields such as engineering, economics, natural and social science, biotechnology, architecture, public policy, and information science provides TERI with an added advantage of having a local presence and dedicated regional resources. This has helped TERI create a nationwide network, along with several collaborations with several State Governments, Government agencies and bilateral organizations.

About TERI – Western Regional Centre (WRC)

Since its inception in 2006, TERI's Western Regional Centre (WRC) in Mumbai has been dedicatedly working to provide pertinent, independent and objectively oriented research in the broad fields of nutrition, energy, climate change, environment, bio-prospecting, sustainable communities, and livelihood. The Nutrition Security Division based at WRC has also implemented several initiatives that directly and indirectly affect the nutritional security of households in both urban and rural communities such as water access, energy access, and livelihood security and so on.

The centre activities are based on action-oriented approaches to engage communities, along with capacity building, women empowerment and promotion of innovative activities such as nutrient fortification and food processing for income generation, along with providing support and market linkages to promote these products (<https://www.teriin.org/projects/nutrition-security/projects.php>).



TERI WRC presence in the state of Maharashtra

Navi Mumbai – An Eco City Project

Eco-city broadly means a human settlement modelled on the self-sustaining structure and functioning of natural ecosystems. This project aims broadly at conserving the resources and reducing the overall carbon emissions of the Navi Mumbai city by integrating concepts of sustainable development in urban planning, waste management, renewable energy applications, biodiversity conservation, natural resource conservation and so on. The project is supported by the Urban Development Department (UDD) of the Government of Maharashtra.

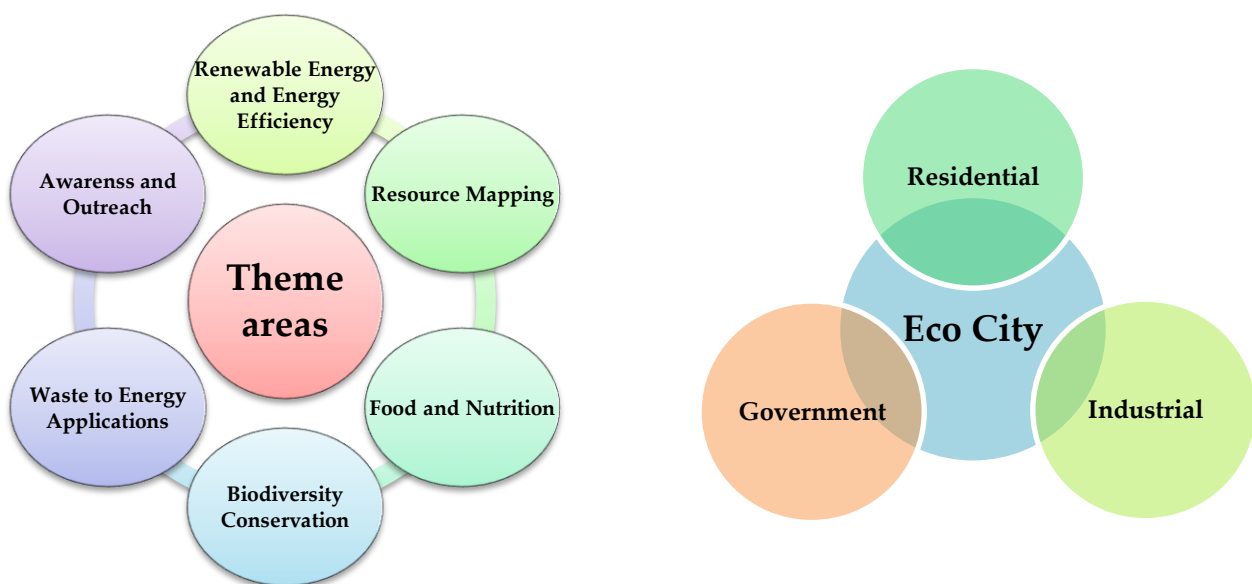
The uniqueness of the project is an implementable target-oriented program cutting across three major sectors--residential, industrial and government. The targets have been devised based on the baseline research, which includes a report on the carbon inventory of Navi Mumbai and the annual Environmental Status Report (ESR) for Navi Mumbai.

The implementation of the plan and its execution would be a simultaneous and integrative process. The overall Eco-City program would play a strong participatory role to achieve the project's objectives. Towards this, TERI has launched the Eco-City forum for the interaction between various stakeholders for various subject topics on the issues related to the environment and sustainable development.

How Eco City is different than Smart City

- Carbon footprint estimation is a base of each initiative being implemented under Eco City project which helps keeping track of its effectiveness while its assessment in subsequent years.
- Unlike smart city initiatives which give more emphasis on technological aspects, Eco City initiatives ensure maximum involvement of local stakeholders from all sectors for implementation along with the technological aspect.

Thematic areas and targeted sectors

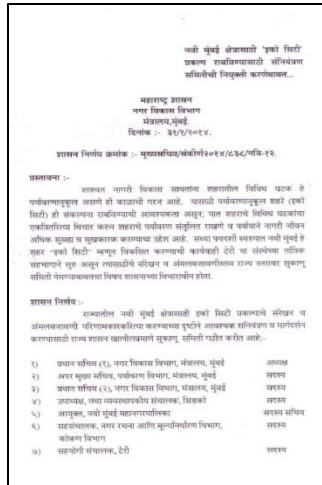


Thematic areas and targeted sectors – Navi Mumbai: an Eco City Project

Major Milestones



Launch of Miniature version of Biodiversity panel at the launch of Eco City Program (July 28th, 2012)



Eco city Government Resolution (GR) released by the Urban Development Dept, Government of Maharashtra (January 31st, 2014)



Eco City Cell launch at the hands of the Hon'ble Mayor at NMMC's headquarters (February, 2015)

Completed Projects

Since the inception of Eco city project, the centre has successfully implemented the following-

1. Carbon Inventory of Navi Mumbai

Implementation period: 2012-13

- NMMC is the 2nd ULB (Urban Local Body) in the country to have assessed its carbon emissions at the municipal level
- Report estimates emissions from Residential, Transport and Industrial sectors
- Emission sources include Petroleum products, Electricity, Solid Waste and sewage
- The report also suggests sector-specific strategies to reduce carbon emissions

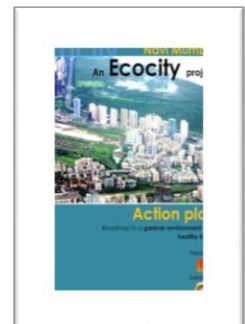
Report link:

https://www.teriin.org/sites/default/files/2018-02/2012MC03%20Carbon%20Inventory_Navi%20Mumbai.pdf

2. Comprehensive Action Plan for Navi Mumbai city

Implementation period: 2013-14

- It encompasses sector-specific initiatives related to the Sustainable development of the city. This report illustrates a total of 15 programs for which the primary and secondary sectors have been identified separately such as residential, industrial and government.



3. Installation of Biodiversity panels and lecterns at Nisarg Udyan, Koparkhairane, of Navi Mumbai

Implementation period: 2014



The installation of 15 biodiversity lecterns and 4 large boards at the *Nisarg Udyan*, Koparkhairane, Navi Mumbai has been completed successfully by TERI.

4. Installation of TERI's Enhanced Acidification and Methanation (TEAM) plant at NMMC Headquarters, Navi Mumbai

Implementation period: 2014-15

- Under this project, a 25 kg/day capacity TEAM plant was successfully installed and commissioned at NMMC's Headquarter, CBD Belapur, Navi Mumbai
- This plant converts food waste generated from NMMC canteen and converts it into Biogas which gets supplied back to the canteen for cooking purpose.

PowerPoint Presentation link: <https://3.imimg.com/data3/FV/MR/MY-2118640/bio-gas-plant.pdf>

5. Commissioning of 25kWe 2 stage biomass gasifier at Turbhe landfill site

Implementation period: 2017-19

- This plant converts its green waste (largely dry woody biomass) into energy. The project is also aimed at creating awareness through information dissemination and accelerating the diffusion of technology under Swachha Bharat Mission
- The technologically advanced two-stage biomass gasifier system for power generation has been developed by TERI in partnership with the Danish Technological University (DTU) and "Effin'art", a Swiss energy efficiency consulting firm.



6. Canteen for Teen (CfT)

Implementation period: 2014-15

- Malnourishment is prevalent in urban areas but ignored most of the times. The project presents data sets generated in cities like Navi Mumbai, Mumbai and Pune while working with Municipal and high-end private schools.

Link: https://www.teriin.org/projects/nutrition-security/files/Final_PROTEIN_cft.pdf

TERI Western Regional Centre Brochure: Navi Mumbai – Eco City Project

TERI also develops NMMC's Annual Environmental Status Reports since 2013-14 which highlights the status of Air quality, water resources, land, solid waste management and health within the city of Navi Mumbai along with its impact and mitigation measures.

Along with these projects, TERI-WRC has also conducted awareness and outreach sessions such as Training of Trainers workshops for the following themes

- Jaltarang (World Wetlands Day - WWD)
https://www.teriin.org/sites/default/files/files/Annexure_J1_%20TERI_WWD-2020_Report.pdf (WWD 2020 report)
- Water Conservation
- Urban Farming (Growing Vegetables in balcony, Hands-on Mushroom cultivation)
- Green buildings/Sustainable habitats

Ongoing Project

Currently, TERI-WRC is *developing a website dedicated to Navi Mumbai's Eco-City project*. This website would be a compilation of all activities undertaken by TERI WRC since project inception.

This website would benefit NMMC as it would create an ideal platform for

- Showcasing NMMC's efforts towards the environment and sustainable development (initiatives to be linked with Sustainable Development Goals (SDGs))
- Implementing NMMC's Information, Education and Communication (IEC) program
- Reaching to a wider group of stakeholders by connecting the website to NMMC's Public Relations Office (PRO) department, their social media handle and NMMC's official website
- Communicating between stakeholders and NMMC

Contact for Information

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