Tirupati Recognized for Waste Management Leadership

Why in News?

Recently, the Ministry of Housing & Urban Affairs highlighted **Tirupati Municipal Corporation (MC), Andhra Pradesh** for its outstanding achievements in waste management and sanitation.

What are the Achievements of Tirupati in Waste Management and Sanitation?

- Swachh Survekshan 2023 Ranking:
    - Tirupati Municipal Corporation secured the 8th spot among cleanest cities with a population of over 1 lakh, demonstrating its commitment to cleanliness.
- **Garbage Free City (GFC) and Water Plus Rating:**
    - Achieved a 5-star Garbage Free City (GFC) and Water Plus(+) rating.

Note:

- **Swachh Bharat Mission (Urban)** tests cities on cleanliness parameters using categories **Open Defecation Free (ODF)+,** ODF++, and Water+.
    - **ODF+:**
        - Focuses on toilets with water, hygiene, and maintenance. ODF+ cities ensure the **sustainability of the ODF status to maintain proper toilet facilities.**
    - **ODF++:**
        - Focuses on **toilets with sludge and septage management.** ODF++ cities ensure the safe collection, conveyance, treatment, and disposal of all faecal sludge and sewage.
    - **Water+:**
        - Water+ certification protocol evaluates, inter-alia, that **no untreated used water or faecal sludge** is discharged into the **environment/water bodies** and all used water (sewage & faecal sludge) is safely contained, transported, and treated, along with maximum reuse of treated used water.

How Does Tirupati Handle Waste Management and Sanitation?

- **Waste Generation Statistics:**
    - Tirupati (largest **Urban Local Body (ULB)** in Andhra Pradesh's Chittoor district) a city generating approximately 115 tonnes per day (TPD) of Wet Waste, 15 TPD of Food Waste, 61 TPD of Dry Waste & Recyclables, 1 TPD of Domestic Hazardous Waste, and 2 TPD of Plastic Waste, along with an additional 25 Tons per day of Construction and Demolition waste, has prioritised robust waste management.
    - All waste collected gets scientifically processed at the respective waste processing and management facilities.
- **Robust Waste Collection Infrastructure:**

- Tirupati achieves **100% door-to-door waste collection,** covering every gate in the city.
  - Tirupati MC provides essential infrastructure such as Ghanta Gaddis and auto tippers, equipped with compartments for segregating different types of waste.
- **Technology Integration for Efficiency:**
  - Tirupati utilizes an **Online Waste Management System (OWMS) with Radio Frequency Identification (RFID) technology** for real-time tracking of door-to-door waste collection, ensuring accountability and efficiency.
- **Waste Processing and Management Facilities:**
  - Tirupati focuses on **decentralized waste processing**, easing the burden on centralized plants and reducing transportation costs.
  - The city identifies and classifies bulk waste generators, streamlining waste management efforts.
- **Plastic Waste Management Initiatives:**
  - Tirupati manages its plastic waste at a dedicated Plastic Waste Management Facility, equipped to **handle low-grade plastic efficiently.**
    - The introduction of a Washing Plant and Agglomerator Machine enables Tirupati to **recycle plastic waste effectively, contributing to sustainable waste management practices.**
- **Organic Waste Management:**
  - Tirupati operates a **Bio-methanation Plant** that converts **organic waste into bio-methane gas and quality compost,** promoting sustainable agricultural practices and energy production.
    - The generated bio-gas is utilised for various applications such as cooking, energy, and vehicle fuel, contributing to the city's energy sustainability goals.
- **Construction and Demolition(C&D) Waste Management:**
  - Partnering with Pro Enviro Solutions, Tirupati establishes a facility to manage 20-25 TPD of C&D waste, **promoting circular economy principles.**
  - Processed materials from C&D waste are utilised for manufacturing and developmental works, fostering sustainability.

Read more: Swachh Survekshan Awards 2023

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Prelims:

Q 1. As per the Solid Waste Management Rules, 2016 in India, which one of the following statements is correct? **(2019)**

(a) Waste generator has to segregate waste into five categories.

(b) The Rules are applicable to notified urban local bodies, notified towns and all industrial townships only.

(c) The Rules provide for exact and elaborate criteria for the identification of sites for landfills and waste processing facilities.

(d) It is mandatory on the part of the waste generator that the waste generated in one district cannot be moved to another district.

Ans: (c)

Mains:

Q.1 What are the impediments in disposing of the huge quantities of discarded solid waste which are continuously being generated? How do we safely remove the toxic wastes that have been accumulating in our habitable environment? **(2018)**

Q.2 "To ensure effective implementation of policies addressing the water, sanitation and hygiene needs

the identification of the beneficiary segments is to be synchronized with anticipated outcomes." Examine the statement in the context of the WASH scheme. **(2017)**

PDF Refernece URL: