



Urban Solid Waste Management in Tirupati City

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Tirupati City Profile

Tirupati is an heritage city often called **Vatican of India** located 13° 30'N to 13° 50'N , latitude and longitude 79° 20'E to 79° 35'E in the Chittoor district, Andhrapradesh in southern part of India

Annual Rainfall is about 800mm and Max temperature 40°C – Min 15°C

The city is about 16.70 sqkms with population of 2.27 lakhs (2001) census and with a decadal growth rate of 35% . It has an additional Urban Agglomeration of 54 sqkms with a population 3.27 lakhs under the governance of local panchyats and TUDA

The city is divided into 36 wards and has population density of 11678 /sqkm with highest ward density upto 55720 /Sqkm. 35% population living in slums.

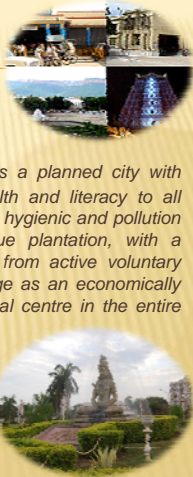
Main economy of the town thrives on tourism related services catering to the needs of the 60000 /day pilgrims and it has also many educational and religious institutions and knowledge centre in the southern part of the state.

It has strategically located to two major metropolis Bangalore(240 kms) and Chennai(140kms) and well connected by Air, Rail and Road.



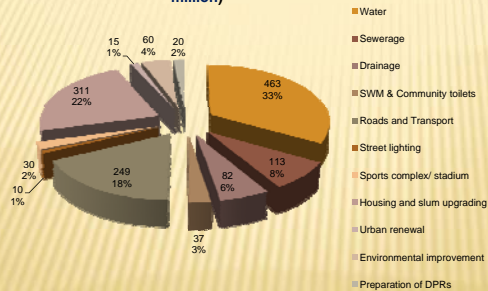
VISION

- ✱ "Tirupati, abode of Lord Venkateswara, will evolve as a planned city with poverty free and vibrant economy, ensuing total health and literacy to all citizens, having protected water supply and wide roads, hygienic and pollution free environment with landscaped parks and avenue plantation, with a responsive and transparent governance and support from active voluntary organisations and people's participation and will emerge as an economically self sufficient, richest, educational, cultural, theosophical centre in the entire Rayalaseema region



CDP-SECTOR WISE INVESTMENTS

PLANNED INVESTMENTS (1389 CRORES -1 crore :10 million)



VISION FOR SWM

- ❑ "to provide its citizens an environmentally friendly and sustainable waste management system with complete safe treatment & disposal facilities".

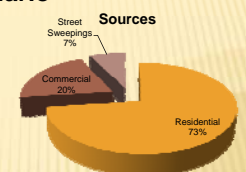
Goals and Service outcomes

- ❑ 100% Door to Door collection and source segregation through out the city
- ❑ Optimization of the human resources in SWM
- ❑ Efficient collection and safe transportation of wastes generated in the city
- ❑ 100% treatment and scientific disposal facility & cost recovery
- ❑ Better awareness among citizens and pilgrims visiting the city
- ❑ Strengthen the existing bye-laws for better regulation and user charges
- ❑ PPP in developing integrated SWM system

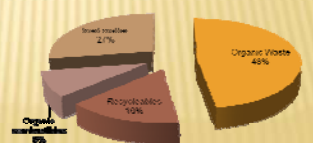


SWM scenario

Particulars	2010
Total waste generated (tons/day)	145 MT
Per capita waste generated (kg/day)	0.4 kg
Collection of waste (tons/day)	145 MT
Distance of disposal point (km)	18 km
Manpower (nos.)	719
Collection efficiency %	100%
Door to door collection %	8%
Source segregation %	8%
Treatment and disposal %	NIL



Waste Characteristics



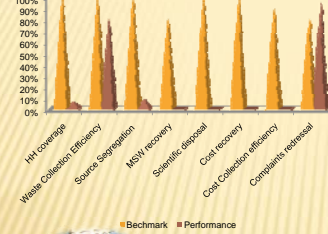
KEY ISSUES -SWM

- ❑ Absence of organized door to door system and segregation of waste
- ❑ Inadequate frequency in transporting bins resulting in overflowing
- ❑ biomedical waste disposed into solid waste bins
- ❑ Narrow lanes with no scope for placing dumper bins
- ❑ Lack of awareness among citizens and safety concerns among PH workers
- ❑ Dumping of waste in storm water drains in most parts of the city is prevalent
- ❑ Inadequate laws for enforcement and Non compliance to the MSW rules 2000
- ❑ Lack of proper SWM infrastructure for collection and transportation of waste
- ❑ Absence of treatment and scientific disposal facility.

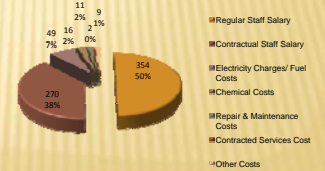


SWM SERVICE LEVELS & EXPENDITURE

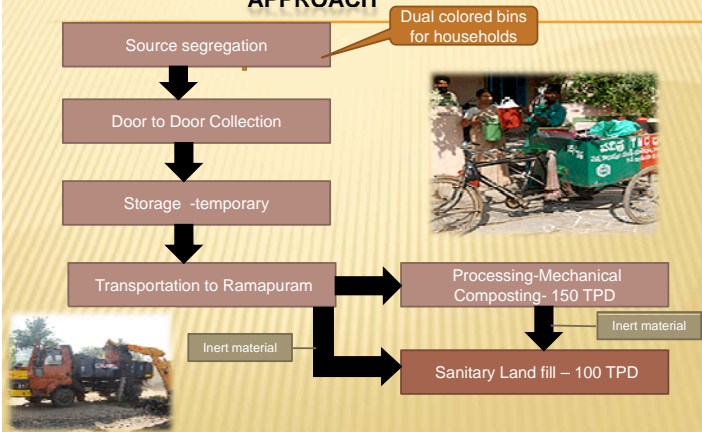
SWM service performance levels



Annual Operating Expenditure of SWM (in lakhs)



PROPOSED SOLID WASTE MANAGEMENT APPROACH



STRATEGIC ACTION PLAN-SWM

Component	Activity	Year-1	Year-2	Year-3	Year-4	Year-5
Service Improvements	Action plan Training & HRD Communication User charges PPP					
Primary Collection	Source segregation Door to Door collection					
Secondary Collection/Transportation	Fleet improvement Modernization					
Treatment & Disposal	Treatment & landfill					

KEY ENVIRONMENTAL INITIATIVES

- ❑ Strengthening of SWM Infrastructure and greater focus of sanitation in the tourist movement areas
- ❑ Implementation of the dry & paper waste collection program through Self help groups
- ❑ Implementation of the Eco profit and Eco business partnership program for the hotels and tourist establishments in the city in collaboration with MoEF, UNIDO and GIZ focusing and energy consumption, waste reduction and water conservation
- ❑ City Task Force has been constituted and City Sanitation Plan is underway
- ❑ Operational zing Service Level Benchmarking and preparation of Information improvement plans and performance improvement plans.
- ❑ Implementation of Energy conservation measures in street lighting
- ❑ Housing projects for the Urban poor
- ❑ DPR on SWM and SWD are prepared and submitted for funding



THANK YOU