

Bio Composting- Puri Solid Waste Management

In 1998 under the Indo Norwegian Development Corporation support and with the active participation of the Govt. of Orissa, a Bio-compost plant was set up in the town. This initiative assumes importance since Puri is a popular tourist centre for national and international tourists. A private firm manages the plant. The project is an example of feasibility of Public Private Partnership in the development of infrastructure for the city

The Heritage City of Puri initiated an innovative approach to scientifically dispose off the municipal waste. This initiative was unique in nature due to the development of public private partnership model. Today through this initiative municipality not only able to safely dispose waste but also gains revenue form operators. This model is very unique in India.

PURI

Located on the East Coast of India overlooking Bay of Bengal, Puri is one of the fastest growing tourist destinations of India. The city covers an area of 16.84 sq Km with a population of 1, 57,776 (2001.Census). The city attracts over millions plus tourists into the city. The Civic Body Puri Municipality was established in 1864.

Situation before the Initiative

According to 2001 census, the town covers an area of 16.84 sq Km with a population of 1, 57,776. The town is divided into 30 wards. About 40% of city's population lives in Slums. The estimated floating population in the city is around 2 lakh. On an average Puri Municipality spends around Rs 15, 00,000 every year towards solid waste management.

unable to dispose off the waste. Being a religious town also hosts a number of festivals including thirteen big festivals such as car festival, which attracts a huge crowd. This floating population adds more waste into the stream.

Strategy Adopted

Puri is one of the major tourist destinations in India and is a part of the Golden Triangle of Orissa tourism. In nineties, State Govt. felt the need of



Problems

The location & importance of the city made waste management more challenging with limited resources and unsuitable for land filling. The situation was such that even after spending big lump sum amount the city civic authority was

improving the solid waste management system practice in the town, so that the town should remain clean and hygienic for the tourists and the local citizens.

Indian waste contains a significant amount of organic matter and hence bio-composting holds a

viable option in compare to any other options. The Project involves windrow dumping of the garbage which is biologically treated with Bacterial powder. This treated garbage after different levels of screening is converted into organic manure. The conversion ratio of garbage to manure is 20%. The key to this Project for any organisation is to sell the final product (Organic Manure).

Results

- Puri Municipality became the first city in Orissa to have arrangements for disposal of waste in scientific manner.
- Puri Municipality has been able to recover a portion of its expenditure incurred in solid waste management from the royalty that it gets on the sale of compost.
- As the city waste is now converted into compost, pressure on the landfill site is considerably decreased.



cost of Rs. 1.5 crore. Puri Municipality arranged Land for plant.

The project was funded by the Indo-Norwegian Development Corporation under Orissa Environment Project of Forest & Environment Department of Government of Orissa. The intake capacity of the compost plant is 100 tons of a day.

Sustainability

The plant is managed by a private agency that saves municipality's expenditure on operation and maintenance of the plant. The annual lease of Rs. 5 lakh and royalty (5%) on the amount of compost sold would recover the initial costs incurred on construction of the plant. There has been an increase in demand for Compost by urban residents and agricultural units particularly in Horticulture and Tea Gardens. Puri Municipality may take steps to institutionalize the door to door waste collection. This will move the city towards more sustainable in SWM process.

Lessons Learned

In 1998, Puri Municipality set up a compost plant for processing of solid waste. This project not only focuses on compost plant but also gives an idea of using waste as a resource.

Details of Garbage Collection, Compost Production & Revenue Generation of Puri Municipality

Year	Collection	Production	Leased Value	Royalty
	in MT			
2007-08	6252	1130	650000	92667
2006-07	6582	1038	650000	104109
2005-06	6309	1399	650000	11238-
2004-05	8111	752	650000	67250

The present level of supply of waste to the compost plant is 40 tons per day. The compost plant is running successfully since 1998. Erection of the bio-compost plant involved a construction

Transferability

These types of plants are initial capital investment based. However, with proper partnership civic bodies can develop plants. The funds can be raised through Public Private Partnership or the Urban Local Body itself can invest on raising the infrastructure.

Innovation

Many options were tried in the country to dispose wastes but only bio-composting of waste emerges as a viable option in context of India. These types of Projects do provide revenue to the municipal bodies. It will inspire other cities to think Municipal Wastes as a revenue generator. This project is success due to key partnership.

