



A Global Benchmark for Carbon



Okhla Composting, India

The project's mission is solid waste management of Municipal solids through controlled aerobic decomposition and the promotion of the use of compost.

Location



The Okhla compost plant is located near the Sewage Treatment Plant of Delhi in Okhla. Two sides of the compost plant have been provided with green belt status. The Agra Canal and Yamuna River are about 3 km from the compost plant. The Okhla compost plant is spread over an area of 3.27 Ha and is located opposite to the closed New Delhi Municipal Corporation Compost plant.

Project



The plant converts approximately 73,000 tonnes of municipal solid waste into compost every year. This is equivalent to 200 tonnes of municipal solid waste per day. The compost is utilised as organic fertiliser for agricultural purposes.

Composting is hardly a new idea. In fact, it has been the method of choice in India for centuries. Modern times have seen many composting facilities fail due to lack of maintenance and product demand. That project has found a stable and growing market for its organic compost, higher priced than standard fertilizers.



The technology used in this project activity is open windrow aerobic composting, which is a simple technology and already known in India. Waste is placed in rows, sprayed with microbial liquid and left in 70°-80° C temperature for a week. The waste is then turned by heavy machines and shifted to the inner circle. The procedure is repeated five times. After five weeks of anaerobic decomposition, the waste is sifted through a filter. A 40 mm screen removes plastic, iron and glass, which is sent to the landfill. The refined waste is then screened to get the final compost. This is packed in sacks and kept in temperature between 15° C and 20° C before being handed over to the distributor. Windrows composting works well when large quantities of waste have to be handled.

About 2,200 tonnes of MSW from Civil Lines, Karol Bagh, Rohini and Najafgarh is dumped here every day. The plant has the capacity to produce 500 tonnes of compost per day. A small amount, 5-7% of the waste, is sent nearby to the landfill.



Project achievements



Socio-economic impact:

- The plant created jobs for local people. The project provides the employment to the community directly on the composting facility and indirectly through waste collection, transportation of compost to the end user.
- Process of recycling of resources, better management of solid waste, recycling of humus and plant nutrients back into the soil to provide positive inputs for agriculture and horticulture.
- Organic compost are offered at an reasonable price to customers, compared to chemical fertilisers.
- Maintaining fertility of the soil is critical to the agrarian economy of India and food safety, necessary to feed a billion people.
- This project suitably assist in providing compost supply for urban agriculture, horticulture, floriculture, vegetable production in and around Delhi and crop farming in the neighbouring states.
- Since the price of the compost will be subsidised using revenue from carbon credit, marketing of compost will be easier thus ensuring the sustainability of the project.
- Training and information days on composting methods are organised for local agricultural groups and farmers.

Environmental impact:

- Organic fertilizer from composting helps to address some of the biggest environmental problems in the region, such as lack of fertile land, soil degradation, and pollution of rivers and groundwater from an excessive use of chemical fertilizers.
- Regular use of compost makes crops more disease resistant (leading to less need for chemical pesticides).
- Local air quality has improved thanks to the project activity (because aerobic composting does not produce foul-smelling methane).
- Use of compost can increase the water-holding capacity of the soil by up to 70% (particularly important in dry climate).
- Composting is an attractive option for resource recovery and environmental improvement.
- Compost allows the soil to retain more plant nutrients over a longer period by supplying part of the 16 essential elements needed by the plants. and helping reducing the adverse effects of excessive alkalinity, acidity, or the excessive use of chemical fertilizer.
- Compost makes soil easier to cultivate and aids in preventing soil erosion by keeping the soil covered.

Checklist Project



✓ Additionality and permanence:	according to the rules of the VCS
✓ 3 rd party verified:	by TÜV Nord
✓ Transparency:	provided by the UNFCCC Registry
✓ Annual CO ₂ reduction:	9000 tCO ₂ e
✓ Social and environmental benefits:	as documented in our database
✓ Marketing material:	high resolution pictures available