



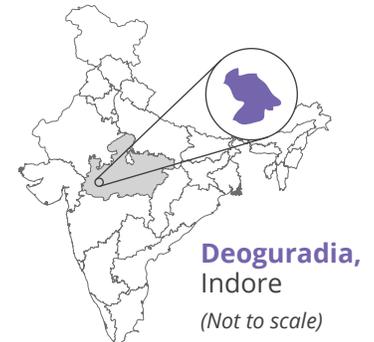
## BIOREMEDIATION/ BIO MINING OF LEGACY WASTE: DEOGURADIA

### Project Highlights

- 100 % legacy waste Bio-remediated
- 100 acres land worth Rs.300 cr. Reclaimed
- Green Belt developed on Bio-remediated Land

### Background

India has been battling the war against waste, be it through sound recycling practices or efficient disposal of garbage. Indore had taken considerable steps to tackle waste management in new and innovative ways. Indore's Devguradiya, a 100-acre dumpsite proved to be an eyesore. Despite the city being dubbed the cleanest in India in 2017 in Swachh Survekshan survey, the dumping yard, saddled by heaps and heaps of smelly garbage for decades together, remained a concern for officials and citizens alike.



### Project Objectives

- I. Compliance of The Solid Waste Management Rules of 2016 directed urban local bodies
  - To clear legacy waste dumps as well as existing operational dumpsite
  - To Reclaim 100 Acre land of worth Rs.300 Cr.

### Approach

The project adopted an integrated approach to strategize the activities being undertaken under the initiative as indicated below:

- Quantity of the waste to be Bio-remedied was determined on the basis of contouring of area to be treated
- Bioremediation treatment was done by dividing the site into suitable blocks
- Raking of garbage layer through long spike harrow operating in cross directions was done regularly to pull out rags, plastic, rubber, textiles etc.
- Coarse material and garbage was screened through rotary/ horizontal screens. The recovered earth was spread in the dedicated area. No extra charge was paid to the contractor for load or lift of the material
- The stone, bricks, ceramics which were removed while screening and raking was sent for land filing or for filling up of low-lying area, while the recyclables like plastic, glass, metal, rugs cloth recovered from the waste was bundled and sold
- The soil recovered was used for refilling the ground on the same site where greenery is developed
- The recovered construction and demolition waste was recovered and sent to C&D processing facility to produce building materials and the left-over of the waste was sent to a secured landfill
- Valuable land has been recovered by bio-remediation process of legacy waste
- The project deployed 10 Trommels, 15 Horizontal Screens, more than 50 excavators, back hoe loaders with 200 plus workers to execute the work
- Daily monitoring of the progress of work was done by a team headed by ED-Indore Smart city

## Achievements



The development and inception of the waste to energy plant has resulted in the following benefits and co-benefits:

- Foul odor had disappeared completely to benefit the citizen living nearby
- Considerable decline in diseases arising out of the trenching ground
- 100 acres of land had been reclaimed
- Due to adoption of scientific bio remediation process the area inside the processing and disposal site is transformed into beautiful Green-Belt and has uplifted the environment of the whole site
- Elimination of dump fires and leachate generation
- Reduction in Green House Gas Emissions, soil pollution and Ground water contamination
- Increase in nearby Real state value
- At present, IMC is collecting, transporting and processing 100 % of the waste generated on daily basis by various means
- Plantation of 60000 saplings with their geo-tagging making it a popular destination within the city



## Success Factors

- Technical innovations for effective management of solid waste including IT based innovations

### Limitations

The key challenge faced for the successful implementation of the WTE plant was outsourcing of the manpower on a contract basis leading to slowing down of the pace of the project

## Long Term Impacts

- Bio-Mining/Bio-remediation Project of Indore Smart City is a unique project to deal with huge quantities of legacy waste and can be replicated in other cities of India
- Presently more than 20 ULBs have started Bio-Mining/Bio-remediation Projects
- Based on Quantity of Legacy Waste dumped in the city, the scalability of project is possible so as to complete the project in short span of time

Source: Case received from the city

For more Information

<https://www.thebetterindia.com/169584/ias-hero-indore-garbage-management-recycling/>

<https://swachhindia.ndtv.com/indore-does-away-with-waste-15-lakh-mt-on-landfill-this-is-how-empty-space-used-30367/>