

Factsheet

Country: India

Project: Hazardous Waste Management System Karnataka (HAWA), Part of the Indo-German Environment Programme „Advisory Services in Environmental Management“ (ASEM)

Term: 2002– 2008

German contribution: € 3,733,000



Hazardous Waste Management Karnataka

Scenario

The State of Karnataka is supported in the improvement of its hazardous waste (HW) management system. Proper HW management consists of component segregation and collection in companies, transport to a treatment, storage and disposal facility (TSDF), pre-treatment and, subsequently, final disposal in a scientifically secured and fully engineered landfill. Most of the hazardous waste generated is solid in nature and may require pre-treatment prior to disposal. Thermal pre-treatment of organic/liquid HW is to be done in special rotary kiln in-cinerators or in the form of co-processing with conventional fuel in cement kilns, after proper blending in specialised plants; thereafter the residual ashes and slag will finally be disposed of in the landfill.

Except a few inappropriate small incinerators, no TSDF or other system for environmentally friendly and safe disposal of HW is available in Karnataka yet. Therefore wild dumping is observed across the state, because companies mainly from the small- and medium size enterprises (SME) sector do not have the space

to store the waste at their own premises, as requested by the authorities as an intermediate solution. Large-scale industries mostly follow this requirement.

Project

The HAWA Project in close cooperation with the Karnataka Government and relevant institutions successfully planned the complete system for collection, transport, treatment, storage and disposal of hazardous solid waste, including co-processing options and financial implications. Know-how and technology options were transferred for the identification, minimisation, segregation and transportation of HW, the pre-treatment of it, the construction of a state of the art disposal facility. Most importantly, the institutional set-up has been supported, including the roles to be played by each actor on the authorities' side and by the industries.

Further very important issues of proper HW management are efficient minimisation strategies in industries

and activities for the implementation of the project at the selected site for the TSDF. This includes socio-economic stakeholder consultation, public relations, communication and training regarding environmental



Improper landfill management allows waste pickers to work directly on the dumpsite. Waste segregation (picking valuable material from hazardous waste like metal residues) should take place at company level or during pre-treatment and not at the end of the chain



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Impact

awareness. The project also supports the development of an inventory and assessment of contaminated sites. Concepts for rehabilitation will be developed and implemented for selected sites.

Substantial results have already been achieved, such as a comprehensive inventory of HW generated, including prospects for the future, TSDF site selection close to Bangalore, geo-technical and hydro-geological investigation of the site, environmental impact assessment and risk analyses.

Additional attention was given to cooperation with the private sector. Close collaboration was developed with the manufacturing industrial sector and the associations, mainly in the field of waste minimisation and proper handling and intermediate storage.

As a new development, the private sector is now involved in the industrial waste management system of Karnataka through the successful development of an effective operator model. This model entrusts the construction and operation of the future TSDF including the collection and

transport of HW to a private company. The model is characterised as a (D)BOOT agreement between the state government and the private investor. This means that the selected operator will design, build, own, operate and finally transfer the TSDF back to the state government. The contractor will construct the facilities according to the comprehensive planning documents prepared by the project, and set up the collection system. The TSDF is designed for 20 years of operation. After this period the landfill will be closed, secured and brought to a post closure period of tight monitoring during the following 30 years.

So far the project has made significant contributions to the implementation of a HW management system, complying with the law and supported by the private sector. The very successful cooperation between the various actors from the private sector, the government authorities on several levels and NGOs is characterised by the acceptance of the technical advice and guidance delivered by the project. HAWA is also active in hospital and electronic waste management.

Environmental pollution and public health risks due to improper handling, storage and illegal disposal of HW will be reduced substantially once adequate facilities and procedures for hazardous waste management will be in place. Especially children, women and poor parts of the population are negatively affected by improper disposal and handling of HW, in particular by small- and medium size companies. Most of the urban poor live in the vicinity of polluted drainage canals, contaminated sites and pollution creating companies. With regard to large enterprises, the improper storage and disposal of hazardous materials and sludge will be avoided. This contributes to better working conditions for employees and a cleaner environment for the population in the vicinity of industrial areas. Waste minimisation, reuse and recycling efforts of industries contribute to the cleaner production processes and save natural resources.



Imprint



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