

Environmental Protection and Energy Efficiency



Hazardous Waste Management Karnataka (HAWA)

Cooperation partners	Karnataka State Pollution Control Board, 4 SPCBs
Start of operation	June 2001
Target groups	Population of Karnataka (approx. 45 million) most affected by uncontrolled disposal of hazardous and industrial waste.
Goal	Setting up of the Hazardous Waste Management System and Waste Minimisation as well as side components like public involvement and economic instruments.



Based on the Indian Hazardous Waste Handling and Management Rules (1989, amended 2000), the Karnataka State Pollution Control Board (KSPCB) is in the process of implementing a Hazardous Waste Management System. A Treatment, Storage and Disposal Facility (TSDF) which will be in the centre of such a system is being planned. Moreover, focus will be laid on waste minimisation and abatement efforts in the generating industries as well as recycling and reuse of waste.

The TSDF will consist of technical facilities for treatment of waste (detoxification, neutralisation, etc.) and permanent storage in an engineered and secure landfill. All these components will be developed and installed according to international standards and security precautions. Possible emissions such as discharge of effluents, odour or other nuisance will be avoided by applying state-of-the-art technology.

Simultaneously the industries will be encouraged and enabled to implement hazardous waste minimisation strategies; seminars and workshops will be held and process changes or new technologies explained.

The increasing settlement of manufacturing industries and the rapid development of the economy

in Karnataka are leading to state courts and the Supreme Court taking actions concerning the consequences of uncontrolled disposal of industrial waste.

The Federal Ministry of Environment and Forest (MOEF) together with the Karnataka State Government are to solve these problems through the intervention of KSPCB. Industries are complaining that there is no proper, regulated hazardous waste disposal site in Karnataka (as it is the case in the majority of the Indian States). However, according to the Hazardous Waste Rules they are forced to segregate hazardous waste and dispose of properly without harm to human health and environment and in a way which meets comparable international standards.

There are already solutions for recycling and reuse of few special liquid hazardous waste such as waste oil and organic solvents or lead acid batteries, but conditioning of these wastes will need improvement. Most small and medium sized enterprises lack know-how and incentives for in-company waste minimisation strategies, which in many cases lead to cost savings in the manufacturing process, and to an improvement of the image as an environment friendly company, which will attract customers.

The project makes a contribution to the overall goal "The environmental conditions in India have improved".

Recently KSPCB selected a site for the future TSDF. As one of the next steps, an Environmental Impact and Risk Assessment Study will be carried out and in this relation a Public Hearing has to be organised.

Since there is no disposal infrastructure existing yet, large industries are forced to store their hazardous waste on their land for years, but presumably most of the smaller industries' waste is disposed of via the sewage system or by uncontrolled dumping.

So far the hazardous waste generated by the industries in the State of Karnataka has not been surveyed statistically. KSPCB only has estimated figures. HAWA will make a state wide survey and collect data on quantities and qualities of hazardous and industrial waste. This will lead to a better knowledge of the waste streams in the whole state and form the basis of an industrial waste cadastre which enables the authorities and the private sector to better plan future activities and react on changes.

The volume of hazardous waste generated is relatively slight by comparison with other states. But in view of the uncontrolled disposal it represents a high hazard potential for human health and the environment. Contamination via water, soil and the

atmosphere leads to destruction of the ecological balance. Moreover, it is above all the poor population groups who live in the vicinity of hazardous waste producing industries or along sewer lines, or who enter into contact with hazardous wastes as a result of illegal waste disposal sites, which are most severely affected. In addition, pollution of water resources leads to diseases, particularly among the poorer population groups who are unable to afford hygienically safe drinking water. Such diseases can also be triggered by accumulation of pollutants in the food chain.

The TSDF will be operated by a private company that must care for collection, transport, intermediate storage, treatment, and final disposal. Some waste needs chemical or physical treatment before it will be disposed of in the landfill. The companies have to pay the cost of transport, treatment and disposal in form of a gate fee according to the quantities of waste delivered. KSPCB will be the monitoring and enforcing authority to control the whole Hazardous Waste Management System.

HAWA serves directly and indirectly to protect the environment and conserve natural resources, as one of the essential development-policy fields in both India and Germany. The need for sustainable development on an ecological basis has been called for at political levels too to a growing extent in India in recent years.

HAWA is seeking close cooperation with local NGOs active in the field of environment. A central aspect is involvement of industry and discussion and agreement on the formation of conditions, as well as regulation of the amount of hazardous waste generated by means of economic incentives.



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