IV.B.4. Waste Management and Sustainable Use of Industrial Byproduct

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Among the national priorities for providing a better quality of life are sustainable development through industrial and agricultural expansion without destructive impact on health and environment and effective management of resources. The benefits of production and use of a multitude of man made chemicals and energy are irriedicate and immense but the risk involve in the form of adverse effects on man, his resources and his ecological partners are not so obvious.

Rajasthan has abundant mineral resources, principal minerals produced in the state lead, zinc, copper, silver and Iron ore among the metallic group and chinaclay, garnet, gypsum, limestone, mica, silica sand, soapstone and marble in the non-metallic group. Based on such mineral activity there are large number of mineral processing and manufacturing units. Mineral processing waste and manufacturing process waste are produced in large quantity. These wastes are in form of solid, liquid, gaseous and particulate matter. According to the official records, there are about one thousand million tonnes of good deposits of high quality marbles present in the districts of Rajasthan. State produced more than 90% marble in India. The mined marble blocks are cut in to slabs by the ‘‘Gang Saw” units. During the process of slabbing and tilling the “SAW” powder is generated waste. In order to avoid excess heating during the process water is continuously fed into the Gangsaw and the powder of fine mash is converted in the form of slurry. This slurry is a big environmental hazard. Today, marble slurry is one of the most hazardous waste in Rajasthan in a huge quantity. However, the possible negative effects to the health of human beings directly exposed to waste accumulation. A Delhi based NGO (Indian Environmental Society) started a project on recycling of marble slurry, the society has started a demonstration project on recycling of marble slurry for manufacturing of bricks. Marble slurry cement bricks are a better alternative for building construction. The recycling unit established at Udaipur in Rajasthan. Where the marble trade and processing units in large scale.

The purpose of this case study is so identify the known, credible, and quantifiable health effect of waste re-use, particularly for the developing countries. The recommendation of specific remedial measures suitable to the developing countries is the main goal of this study. The study also discussed the ecological significance of the mineral wastes and also examine their role as future resources. At one hand these waste are hazardous product of mineral based activity. The dust affulements and leaches as mineral waste behave as pollutant and cause degradation of the fragile - eco-system of the state. On the other hand if could be re-used, recycled and with the technological innovation, it could become source for future supply of various metal. The formulation can also provide necessary future feed back for the new industries which may be setup to the development of Rajasthan in particular and country in general.