

A Study of Industrial Symbiosis and Implementation of Indigenous Circular Economy Technique on an Indian Industrial Area

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Abstract : Industrial waste is often categorized as commercial and non-commercial waste by market value. In many Indian industries and other industrialized countries, the commercial value waste is capitalized and non-commercial waste is dumped to landfill. A lack of adequate research on industrial waste leads to the failure of effective resource management and the non-commercial waste are being considered as commercially non-viable residues. The term Industrial symbiosis refers to the direct inter-firm reuse or exchange of material and energy resource. The resource efficiency of commercial waste is mainly followed by an informal symbiosis in our research area. Some Industrial residues are reused within the facility where they are generated, others are reused directly nearby industrial facilities and some are recycled via the formal and informal market. The act of using industrial waste as a resource for another product faces challenges in India. This research study has observed a major negligence of trust and communication among several bodies to implement effective circular economy in India. This study applies interviewing process across researchers, government bodies, industrialist and designers to understand the challenges of circular economy in India. The study area encompasses an industrial estate in Ahmedabad in the state of Gujarat which comprises of 1200 industries. The research study primarily focuses on making industrial waste as commercial ready resource and implementing Indigenous sustainable practice in modern context to improve resource efficiency. This study attempted to initiate waste exchange platform among several industrialist and used varied methodologies from mail questionnaire to telephone survey. This study makes key suggestions to policy change and sustainable finance to improve circular economy in India.

Keywords : effective resource management, environmental policy, indigenous technique, industrial symbiosis, sustainable finance

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