



INDIGENOUS MICROORGANISMS (IMO'S)- BASED TECHNOLOGY FOR BIOREMEDIATION OF PHOSPHOGYPSUM GENERATED FROM PHOSPHORIC ACID PLANTS IN INDIA

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Worldwide Phosphogypsum (PG) PG production is estimated to be around 100–280 million tons per year, while only 15% is reprocessed, and the remaining is dumped into stack area, leaving the surrounding ecosystems with substantial impact on human and environmental health. In contrast to different chemical and physical process, the biotechnological methods are a safe, economical and efficient alternative to detoxify and degrade such environmental contaminants, without generating toxic intermediates. This project aimed to characterize the microbial community and evaluate, for the first time, its scope for biostimulation based in situ bioremediation of phosphogypsum using Indigenous Microorganisms (IMO's)- based technology. Efforts will be made to elucidate the factors affecting the simultaneous conversion of sulfate from PG into sulfide and precipitation of heavy metals (present as co-contaminant in the PG) in laboratory-based microcosm study in order to optimize the metal recovery as well reuse of PG from stockpiled.