**DETERMINATION OF CONTAMINATION IN THE LANDFILL SURROUNDING SMALL HYDROPOWER: FEASIBLE LOCATION, POTENTIAL AND INSTALLATION IN ODISHA**

**ABSTRACT**

Odisha is undergoing a serious power crisis situation at present scenario. Although this power shortage can be satisfied by non-renewable energies, these have many environmental problems and are too costly to install and maintain. Hence this project is concentrated on small hydropower which is a renewable energy, have no environmental issues and relatively cheaper. In this project, RS and GIS techniques have been used to find the feasible locations for small hydropower plant (SHP) installations. The digital elevation model (DEM) and hydrologic data (discharge data) have been used to estimate the small hydropower potential of the state. In the present analysis around 40 feasible locations for SHP installation were found which constituted around a potential of 33MW. Due to this around 109489 tonnes of coal can be saved that were to be used in thermal power plants and a considerable amount of greenhouse gas emission can be restricted. A large number of rural population can be benefitted who were earlier being deprived of electricity.