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DESIGN OF SOIL AQUIFER TREATMENT FOR GROUND WATER RECHARGE

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ABSTRACT :
Due to industrialization and urbanization, groundwater levels around the world are decreasing day by day. On the other hand, as the population increases, the waste water production from household, industries also increasing. This waste water is treated by various methods. Even though the treated wastewater cannot be used as drinking water, it can be used for gardening, groundwater recharge, etc. This research paper involves the design of soil aquifer treatment (SAT) technology to treat wastewater and recharging of groundwater using treated wastewater. Soil Aquifer treatment is a method of purifying wastewater by infiltrating wastewater into laminar channels made up of layers of soil. After flowing through this layer, the infiltrated waste water is purified and recharges the underlying aquifer. The materials used for filter layers have in this Soil aquifer treatment has different properties, one of the main filter layer material is Bio char which has very high adsorbent surface that can trap organic pollutants and heavy metals which present in the sewage water. Bio char is a residue made of carbon and ashes from the pyrolysis of biomass .This soil aquifer treatment design increases the efficiency of treated water with good properties that can be used for horticulture and groundwater recharge.
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KEYWORDS: Soil Aquifer Treatment, Ground Water Recharge, Sewage Water, Bio char.

CATEGORY: Environmental Engineering.