


Chapter 6

Environmental Impact Assessment Applied With SMS Technology for Wastewater Treatment

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ABSTRACT

The pollution is increasing very fast in all sense like soil, air, water. The water pollution increases day by day due to incrementing urbanization, industrialization, population magnification etc. and it affects the ecosystem. The degradation of environment results in unpropitious effect on living organisms and agriculture. The goal of the study is to remediate the wastewater by used mushrooms substrates by checking its physio-chemical parameters before and after the treatment. Mushroom has been utilized as a product for consumption since a long time due to their richness in protein. Mushrooms are withal kened as Mycoremediation implement because of their utilization in remediation of variants of pollutants. Microfiltration is the process of utilizing fungal mycelium as an active biological filter for abstracting pollutants from wastewater. Mushroom cultivation process, management & industrial setup is quite essential aspect to reduce impact on environment and access the situation of cultivation in various conditions leads to sustainable and productive solutions in this field.

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1. INTRODUCTION

The SMS (Spent Mushroom Substrates) are using as a filter media for wastewater treatment from several decades we are utilizing the slow sand filter and then turned to rapid sand filter, of course for drinking portable water. In this chapter the discussion on filtration method by using SMS only for wastewater. The wastewater samples were collected from different industries and domestic as well. The main focus is to reduce the loading of waste on environment. For this we are already using 3R and 4R methods to control waste and wastewater. The study is concentrated on one of these factors of reusing and recycling of waste if such things will be done then the effect on environment will get mitigate. By means of all factors we can prepare the EIA reports. As the work is partially completed the some of factors can be calculated and designed as per further aim of research. The urban areas are producing the agricultural waste in abundance form, we are producing mushroom with the help of this waste produced at the field and then substrates used as media of wastewater filtration.

The large-scale application of synthetic compounds in industrial and agricultural sectors has contaminated the natural environment that further led to exacerbating the pollution-related problems in the ecosystem and human health. The rapid industrialization and anthropogenic activities of the present era have further increased environmental contamination with various organic chemicals and inorganic metals, including compounds like pesticides, industrial dyes, petroleum hydrocarbons, dairy products, pharmaceutical waste and heavy metals. Hence, an effective strategy needs to be developed in order to eliminate pollutants from the environment. Slow sand filtration is a technology that has been used for potable water filtration for loads of years. Its miles a technique nicely-perfect for small, rural groups since it does not require a high degree of operator talent or attention. As its name implies, slow sand filtration is used to filter water at very slow prices. The standard filtration price is at the least fifty instances slower than for rapid price filtration. Because of this gradual fee of filtration, a big land area is required for the filtration basins. No chemical addition is required for correct filtration operation. Particle elimination is finished mainly via biological tactics that provide treatment. So, by means of SMS (Spent Mushroom Substrate) we can go for filtration of wastewater as well as we can utilize the manure of mushroom as a filter media.

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