

IMPACT OF INDUSTRIALIZATION ON SOIL RESOURCES, A STUDY ON KANJIKODE INDUSTRIAL REGION, PALAKKAD

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ABSTRACT

Soil is linked to everything around us and performs many important roles in sustaining life on Earth. Soil plays seven key roles such as, Providing the basis for food and biomass production, Controlling and regulating environmental interactions- regulating water flow and quality, Storing carbon and maintaining the balance of gases in the air, Providing valued habitats and sustaining biodiversity, Providing a platform for buildings and roads, Providing raw material and Preserving cultural and archaeological heritage. Soil quality is a measure of how well the soil does what we want it to do. And what do we want it to do? Support plant and animal productivity, maintain or enhance water and air quality, and support human health and habitation. The quality of a soil is an assessment of how it performs all of its functions now and how those functions are being preserved for future use. Soil quality is important for two reasons.

First, using a soil improperly can damage it and the ecosystem; therefore we need to match our use and management of the land to the soil's capability. Second, we need to establish a baseline understanding about soil quality so that we can recognize changes as they develop. By using baselines to determine if soil quality is deteriorating, stable, or improving, we have a good indicator of the health of an ecosystem. The ultimate purpose of researching and assessing soil quality is to protect and improve long-term agricultural productivity, water quality, and habitats of all organisms including people.

The present soil quality study is carried out in Kanjikode Industrial region, Palakkad District. 20 samples from the Industrial region have been collected with the help of GPS Survey and 7 Parameters of each sample has been analyzed. The Analyzed parameters are pH, DO (Dissolved Oxygen), TDS (Total dissolved salt), EC (Electric Conductivity), Potassium, Nitrogen and Phosphorous. The analyzed quality of the collected samples is plotted on the map with the help of GIS. The statistical analyzes like correlation analysis are made to study the results.

The result proves that the most polluted soil samples are located near to the industrial region and comparatively good quality soils are collected from house hold areas and from the reserved forest areas (Walayar Reserve Forest) located very close to the study area. And the study indicates the effect of environmental degradation causing by the Processes like Industrialization and Urbanization. The polluted or contaminated soil become poisonous through the process of leaching it reaches our drinking water and directly affects the human beings. And the agriculture practise can't be possible in such areas without the help of chemical pesticides and fertilizers, this also cause to the degradation of soil fertility.

KEYWORDS: GIS; GPS; Soil Quality; Urbanization