

Increased Groundwater Consumption and Challenges Raised In Nanatan Regional Secretariat Division Areas of Sri Lanka

Anthony Stany

Correspondence: antonystanygeo@gmail.com

Abstract

Water is currently recognized as the most valuable and significant resource that is necessary for the world's sustainability and the one that is experiencing the biggest problem on a worldwide scale. Surface water and Ground water are the two categories of water. Like surface water, Ground water resources are becoming more and more in demand. Significant amounts of groundwater are used for a variety of purposes, including industry, agriculture, and drinking water. The objective of the paper is to describe the current and potential effects of the Nanatan region's growing freshwater resource usage. Groundwater what is it? What elements have an impact on groundwater resources? What does ground water get used for? What factors caused to the current surge in groundwater resource consumption? Questions are discussed here, among other things. Nanatan area is a location with rich subterranean water resources as is included in the Miocene limestone bedrock zone, which is based on the coastal zone of Sri Lanka starting from Puttalm to Mullaithivu in the lithological system of Sri Lanka. Apart from this, the location of Kattukaraikullam in the irrigated area is another factor for water success in this area. Every home in this area has tube wells and an agricultural well. During the summer or rainy season, irrigation is carried out for agriculture on one of the most field lands or more tube wells. These wells are often up to 120 feet deep, and water is raised through pies that are four inches in diameter. Using subsurface water resources, rice is grown in a one-way fashion during the summer. The region's groundwater resource has suffered significant harm because of farmers cultivating on their own property or under lease without any form of water management initiatives or guidelines. The demand for groundwater resources has increased because of the region's exceptionally dry summers during the southwest monsoon season, which runs from May to September. Agricultural (open) wells see a decrease in water level as a result, and some wells dry out during the months of August and September. In the most of the villages there scarcity of drinking water and the intrusion of seawater is increasing the salinity. In addition, there is a risk of calcium deposition in the soil during irrigation with calcium rich water. When it is used as drinking water, people are exposed to varies diseases ,ignorance of farmers, proper management practices related to irrigation non-following of instructions, lack of roots during summer, lack of inclination to engage in other business ventures, indifference of officials etc. Have been identified as the reasons.

Keywords: Ground water, fossiliferous zone, Southeast Moon Period, bedrock, Tube well, challenges