

Socio economic factors of spring water pollution in the highland: A case study at Meepilimana Grama Niladhari Division in Nuwara-Eliya District

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Abstract

Springs occur wherever groundwater flows out from the earth's surface. Springs typically occur along hillsides, low-lying areas, or at the base of slopes. This can occur at a distinct point or over a large seepage area. Natural springs are vital to the community wellbeing, and also these are the main water sources that feed the stream, which in turn enrich the river flow. Meepilimana GN division is one of the areas, which create natural springs in the central highlands, where people use this water source for agriculture, drinking and other needs. Many springs are threatened by human activities taking place in the upper catchment area. Spring water is found in the hill area, which is the upper catchment of many river basins. This study mainly aims to examine the socio economic impact on spring water pollution with special reference to Meepilimana GN division in the Central Highland. Field observations and focus group discussions were used for primary data collection and secondary data were collected using relevant publications. These data were analyzed by using MS Excel and GIS tools. According to the results people use water for agriculture than for other purposes. Accordingly, 53% of these fountain (springs) water is used for agriculture, 13% for drinking and bathing. Vegetable cultivation has reduced the water quality due to application of agrochemicals in the upper part of spring catchments. Some of the catchment lands are being encroached by people for cultivation and settlements. People do not realize that the resource degradation will affect themselves in turn. The dry season water is more polluted than that of wet season. This occurs when water bodies dry up to be followed by dumping of waste especially, washing vegetables and clutter of rotten vegetables. Sewages are turned into water dump waste in rainy days. Not only cutting trees but also gem mining in the Haggala forest are also main reasons. Most of the rural communities depend on springs water, therefore protection and conservation of springs may be beneficial for the wellbeing of people. Springs are valuable gifts and should be protected.

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