



Environmental and Sustainable Development Through Forestry and Other Resources

Editors

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CHAPTER 8

Chlorine Status and Drinking Water Quality Monitoring Within a Public Distribution System of Kollam District

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ABSTRACT

Water is an essential commodity for human consumption, and it is one of the renewable resources which must be prevented from deterioration in quality. A reliable supply of clean and safe water is the first and most critical municipal service that people require. The urban and rural population faced a big problem of the scarcity of drinking water. In urban areas, the municipal supply of water is available only for a short time. Therefore, people are compelled to use pipeline water for their domestic purposes. The present study was carried out to assess the quality of public water supply distributed through a distribution network of various panchayats of Kollam district. The paper focuses on the Japan drinking water project, which has successfully installed in Kerala. The study was conducted at six stations which include four Panchayats with Japan drinking water household pipeline connection, the source (Kallada River) and treatment plant from January to June in 2016–2017. Water samples collected were analyzed for various physicochemical parameters following the standard methods, and it includes water temperature pH, conductivity, TDS, alkalinity, free carbon dioxide, hardness, free chlorine, nitrate, nitrite, inorganic phosphate, sulfate, and total coliforms (TC). Statistical analysis was done to find the correlation among the parameters using Pearson's Correlation matrix. The results revealed that the chlorine content and TC were present in significant number of water samples indicating microbial