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COMMUNITY APPROACH TOWARDS MODERN WATER TREATMENT TECHNOLOGY; STUDY IN ASAMODHAGAMYAYA

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Abstract: Groundwater is the main source of drinking water for the majority of the people in Sri Lanka. The prevalence of Chronic Kidney Disease of Unknown etiology (CKDu) and its hypothesized link to groundwater consumption have set a barrier to its use. This has led to significant changes in the water consumption behaviour of the society. The recent identification of CKDu patients in Central provinces highlighted the need to install water treatment units in the endemic area. Consequently, five nanofiltration (NF) plants were installed within the Minipe area to provide safe water. Among these, Asomodhagamyaya Grama Niladhari Division (GND) was selected to study the community engagement in adapting to treated water, particularly NF-treated water, and its impact on water consumption behaviour. It was identified that the awareness of CKDu is low within the community, and consumption of NF-treated water is less compared to the other areas with high CKDu prevalence, notably North Central Province. However, the identification of CKDu patients in the community has significantly influenced water consumption behavior with more people now willing to check the quality of their groundwater. Many prefer to continue using groundwater that meets drinking water standards over NF-treated water or water treated by other systems. The reduced number of NF system beneficiaries is attributed to community structure, internal disagreements, and misconceptions about the quality of NF-treated water. Educating and advising the villagers about the risks of CKDu and the importance of safe water consumption and the proven quality of the NF-treated water will likely increase the number of beneficiaries using NF system-treated water.

Keywords: CKDu; Groundwater; Water Treatment; Drinking Water Quality; Nanofiltration; Community Engagement