Households' Willingness to Pay for the Sewerage System in Jaffna Municipal Area, Sri Lanka

K. Linoja*, K. Sooriyakumar and S. Sivashankar

Department of Agricultural Economics, Faculty of Agriculture, University of Jaffna, Sri Lanka
*kanagasabalino@gmail.com

Groundwater is the only source for drinking water in Jaffna municipal area. There is no sewerage system in this congested municipal area. Each household's toilet pits in this area have been constructed closer to their own drinking water source (wells). Due to the fecal contamination, ground water became unsuitable for drinking purpose. Therefore, there is an urgent need for piped sewerage system in Jaffna Municipal area. This study investigates the household's willingness to pay for the improved piped sewerage system in Jaffna Municipal area of Sri Lanka. For this study, 177 households were randomly selected from Jaffna Municipal Area and data were collected through interviews using structure questionnaire. Choice modeling was employed and conditional logit models were developed. The result of this study shows that, on average, a household residing in Jaffna Municipal area is willing to pay LKR 2582 per month for the piped sewerage system. Therefore, total willingness to pay for improved piped sewerage system per month by all households in Jaffna Municipal area is LKR 58.78 million. Household's preference order on the benefit attributes of sewerage system is as follows: increase in the space availability, reduction in maintenance cost, improvement in the environmental quality and reduction in the ground water contamination. Male household head is willing to pay less for the increase in space availability than female household head. Households living in less populated area are willing to pay less for the reduction in maintenance cost and improvement in environmental quality attributes than households living in densely populated area. Households with lower income are willing to pay more for the increase in space availability than the households with higher income. Households with less land extent are willing to pay more for the increase in space availability than the households with more land extent. This study suggests that there is a huge demand for improved piped sewerage system and households are willing to pay for the establishment of sewerage system. This study would assist various planners and authorities in formulating a suitable sewerage system and tariff for sewage services in the Jaffna Municipal area.

Keywords: choice Modeling, Sewerage system, Willingness to pay