

Analysis of trade – offs in public preferences for environmental health management: a discrete choice modeling exercise

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Environmental Health management has become a key issue in Sri Lanka, especially in controlling dengue fever. Though many programmes have been implemented, a satisfactory progress has not been recorded mainly due to lack of public support. This has been resulted by not taking into account the income, awareness, leisure time of people and type of the facilities provided by the urban authority in designing and implementing these programmes. Further, there is no information available on how people value trade-offs among different environment management strategies. Thus, a discrete choice experiment was conducted in this study to analyze the trade-offs among various dengue management strategies as perceived by the public and estimating the value people put on possible improvements in those strategies.

For the choice experiment, using four environmental management strategies (Improved cleaning, Infrastructure provision, Motivation and Willingness to pay) each with three attribute levels, in a fractional factorial design, a series of alternative profiles of environmental management were prepared. A survey was carried out in the Kandy Municipality covering 64 households and the respondents were asked to select the most preferred alternative. All attribute levels were included in the analysis using effect codes, and a multinomial logit model was estimated.

Most of the levels of the attributes are statistically significant at $p = 0.05$. The respondents consider "Improved cleaning in residential areas by the neighbours", Provision of an efficient water supply and Motivating the public to manage the environment are effective strategies to control dengue in the Kandy district. Marginal willingness to pay for improved cleaning in residential areas by the neighbours is high. Among motivation strategies, the public prefers having spot fines charged against those who do not manage the environment properly. These findings should be taken into account in developing policies and programmes to control dengue as it enables getting public support more.

Key words: Choice experiment, Dengue fever, Environment management, Public choice, Willingness to pay

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