

(237)

**Urban Household's Preferences for Sustainable Air Quality Management Practices:
A Choice Experiment Approach****Sivashankar, S.* , Mathula, S., Sooriyakumar, K., Sarujan, S.***Department of Agricultural Economics, Faculty of Agriculture, University of Jaffna,
Jaffna, Sri Lanka***ssivashankar@univ.jfn.ac.lk***Abstract**

Sri Lanka is currently experiencing air pollution due to increased vehicle use, improper waste disposal, and industrial and construction activities, which severely affect air quality parameters, particularly in urban areas. However, there is a lack of evidence on individuals' preferences for improving air quality. Therefore, this study aims to understand the preferences of urban households for various air quality interventions and to estimate their willingness to pay for such improvements in the urban areas of the Jaffna District. The study employed a choice experiment with attributes including vehicle emission reductions (10%,25%,50% and no reduction), expansion of urban green space (25%,50% increases and no change), plastic and rubber waste management practices (ban on open burning, separation at source, and current management), and an annual household contribution (local tax) of LKR 0,750,1,500, and 4,000. Data were collected from 302 households and analysed using a random parameter logit model. The results indicate that households significantly value higher levels of emission reduction and green space improvement. Moreover, households are willing to pay higher amounts for greater emission reductions, with LKR 1,079.50 for a 25% reduction and LKR 1,097.95 for a 50% reduction, and for increased green space, with LKR 703.14 for a 25% increase and LKR 1,300.66 for a 50% increase. Among waste management strategies, banning open burning was highly preferred, whereas separation and collection of waste showed no significant effect. Households are willing to pay LKR 725.48 to ban the open burning of plastic and rubber. We further employed a mixed logit model with interaction effects to examine heterogeneity in preferences. Results revealed that household age and income significantly influence their preferences for green space improvement and the separation and collection of rubber and plastic waste in the urban areas. The findings of this study will guide policymakers and local authorities in designing cost-effective interventions to improve urban air quality and environmental sustainability.

Keywords: *Air quality, Choice experiment, Green space, Rubber and plastic waste, Vehicle emission, Willingness to pay*