

## Valuing Nature's Treasure: An integrated conservation valuation of the Muthurajawela Wetland, Sri Lanka

H. Dahanayake<sup>1</sup>, D. D. G. L. Dahanayaka<sup>2</sup>, P. Hudson<sup>3</sup>, D. Wickramasinghe<sup>1</sup>

<sup>1</sup>*Department of Zoology and Environment Sciences, Faculty of Science,  
University of Colombo, Sri Lanka*

<sup>2</sup>*Department of Zoology, Faculty of Natural Sciences, The Open University of Sri Lanka*

<sup>3</sup>*Department of Environment and Geography, University of York, York, United Kingdom*

Muthurajawela Wetland (MW) is a key coastal ecosystem in Sri Lanka that provides many ecosystem services. However, increasing development is putting it at risk. This study aims to estimate the economic and social value of its ecosystem services to help guide sustainable management and protect its long-term benefits. To assess community perceptions and value of ecosystem conservation, data was collected through questionnaire surveys administered to 407 participants, consisting of female (72%) and male (28%) residents from nearby villages. The survey explored local views on the drivers of Land Use Land Cover (LULC) change, key ecological threats, and the effectiveness of current conservation policies. For the valuation component, a contingent valuation method was employed. Respondents were asked to indicate their willingness to pay (WTP) for conservation through five monthly payment options: Rs. 1,500, Rs. 3,000, Rs. 6,000, Rs. 9,000, or 'none of the above'. In parallel, willingness to contribute time (WTC) was also assessed using four voluntary time commitment levels: 10, 15, 25, and 30 hours per month. According to the results, 74.9% strongly agreed that their well-being is closely linked to the environmental condition of the MW, additional 22.4% expressed above-average agreement. Furthermore, observed changes include LULC changes (92.4%), landfilling (94.1%), vegetation clearing (92.6%), tree cutting (92.1%), construction activities (86.5%), and the establishment of agricultural or coconut farms (47.4%) and animal farms (10.3%). In terms of conservation support, 38.6% were willing to pay Rs. 3,000 per month, 36.4% to pay Rs. 6,000, 22% to pay Rs. 1,500 for and 3% to pay Rs. 9000. Additionally, 69.8% were willing to volunteer 25 hours per month, 15.3% to 15 hours per month and others offered 25 to 30 hours per month. The findings further suggested that women and those in low-income groups prefer volunteering time contributions. The results highlight a high level of awareness, willingness to engage, and community-driven commitment to wetland conservation efforts.

**Keywords:** *Muthurajawela Wetland, Conservation valuation, Willingness to pay, Willingness to time*