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Economics of urban amenities: A contingent valuation approach for Bolgoda lake

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Bolgoda Lake is known as the largest fresh water body in Colombo Urban Area (CUA) and situated in the Southern boundary of CUA. It covers 1,245 hectares. There are 14 Divisional secretariat (DS) divisions and 105 Grama Niladary (GN) divisions. Bolgoda Lake lies along the highly popularized townships and it provides a variety of environmental services such as natural environment for fisheries production and estuary function; ground water recharge, potable water supply; recreation/ tourism; and natural biotic habitat. In CUA, there are very few lakes like Bolgoda, which provides aesthetic values for the urban environment. Environment of the Bolgoda Lake is threatened by the disposal of liquid and solid waste, agricultural run-off, sedimentation and congestion due to recreational uses. However, there will be an increasing demand for the environmental services produced by the Bolgoda Lake in the future.

Objectives of the present study are to identify the environmental benefits of the Lake and estimate economic value of selected environmental benefits. A pilot survey was carried out and five major user groups were identified; fishermen, hotel owners, boat owners, recreational users (for swimming and hotel visiting) and indirect users. Selected study area for the present study belongs to five GN divisions from Moratuwa and Panadura DS divisions. Contingent valuation method was applied to estimate the economic value of the Bolgoda Lake. Users' willingness to pay (WTP) was elicited on a pre-tested hypothetical market.

Depending on the WTP values, the 5 user groups were regrouped into two categories, namely User I (heavy dependency) and User II (less dependency). WTP values per household per year for the User I and User II are Rs.18, 600 and 514.3 respectively. Estimated economic value of the Bolgoda Lake for the study area is Rs. 84,192.7 (US\$ 809.55) per hectare per year. Regression analysis was carried out to identify the socio economic characteristics of the users that affect the WTP value of the users. The results were consistent with the theory. However, the values of the study area have not been extrapolated to the whole lake, due to the high variability of the sample mean from place to place.

It was clear that the Bolgoda Lake is a valuable aesthetic asset in the CUA and it should be judiciously managed for sustain the provision of environmental services. However, the ultimate decision over the usefulness of the lake has to be based on weighing the estimated value of the environmental services of the Lake against the value of the use of lake as a sink for domestic and industrial waste.

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Shoreline protection value and social dimensions of mangrove ecosystems in coastal villages affected by the 2004 tsunami in Sri Lanka

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Sri Lanka is an island bordered by 1,562 km of coastline. The country encompasses a high diversity of coastal vegetation, specifically mangroves. These ecosystems have provided a wide array of goods and services, ranging from fishery, forest products and tourism to shoreline protection. The protective function of mangroves at the event of natural disasters, however, is hardly recognized. The need to assess the economic value of this function became more eminent to assist decision-makers and funding agencies in integrating environmental rehabilitation in the tsunami reconstruction process.

The districts of Hambantota and Tangalle are two of the largest coastal districts in southern Sri Lanka that experienced severe damage caused by the Indian Ocean tsunami. The disaster demonstrated the natural protection afforded by coastal ecosystems. This study estimates the value of mangrove ecosystems as shoreline buffer at the event of extreme disasters. The availability of household damage