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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

cost information allowed the use of a comparative damage cost assessment approach to estimate the value of ecosystem conservation and wise management in mitigating natural disasters such as tsunamis. The methodology assessed the socioeconomic impacts of the tsunami disaster on 151 coastal households at two sites—Kapuhewala and Waduruppa. The first site is characterized with well managed and functioning coastal ecosystems; and the latter exhibits a disturbed and degraded ecosystem. The assessment estimated a higher incidence of damage costs in areas with degraded mangrove vegetation. Results indicate that costs of damages to livelihood and property in Waduruppa (US\$ 1,377,975) are approximately ten times the costs of damages in Kapuhewala (US\$ 173,555). The damage costs avoided appraisal suggests that threatened mangroves reduce the protection afforded to inland properties, community infrastructures and livelihood by US\$ 2,109/household. The estimate shows that areas with intact mangrove ecosystem generate greater economic benefits. The findings also indicate the economic rationale of including mangrove rehabilitation efforts in the post-tsunami reconstruction and rebuilding programs.

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An empirical investigation on the demographic characteristics of specialized visitors and their preferences to use up-country tea plantations as nature tourism sites

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Up country tea plantations have been emerging as sites for nature tourism for both local and foreign tourists who were earlier used to visit traditional tourism sites (e.g. Anuradhapura, Pollonnaruwa and Seegiriya) predominantly. In light of this, evaluation of what characteristics associated with these visitors, and to which extent, have an impact on a selection of nature tourism sites available in these plantations as their “first choice” has become important, since that information can be used to formulate a market-friendly environmental policies to promote it.

Those “specialized visitors” (*i.e.* those who visit an Up Country tea plantation for the first time based on the information they received from an external source and those who repeated) were selected as the cases for data collection ($n = 120$). A semi-structured questionnaire was used in this respect at seven purposely-selected entry points to the plantations located in the Nuwara-Eliya district.

Both qualitative and quantitative data analysis techniques were used. The results indicate that, in general, young people (*i.e.* 56% of sample within 20–29 years); those who married (59%); and with average house hold size of three to four members (84%); with high income level (*i.e.* 43% of sample above the Rs. 50,000 per month), and possess a degree or equivalent (60%) decided to enjoy these sites. Majority of them were employed at private sector enterprises as middle to top-level managers. In terms of reasons for their visit, about 63 percent of visitors indicated aesthetics/scenic beauty followed by bird watching (52%), forest trekking (46%), mountain climbing (44%), hiking (42%) and safari (30%). Regarding the existing facilities at these sites, about 60 and 91 percent of local and foreign visitors, respectively, were satisfied. Several visitors (45%) proposed that the existing infrastructure facilities to be improved. With respect to entry fee, 65 percent of the visitors preferred to make the payment as a whole and rest as a small entrance fee with an additional fee for each activity. The results highlight that government agencies should cooperate with plantation companies to promote nature tourism as a viable non-crop diversification mechanism.