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Title: Economic Valuation of Wetlands of West Bengal: A Case Study of Kachan and East Kolkata Wetland.

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Wetlands provide a range of goods and services and possess a variety of attributes of value to society (Barbier 1993). These offer provisioning, regulating, cultural, and supporting services (Millennium Ecosystem Assessment 2005) that generate economic value from their direct, indirect, or potential use. Despite increasing recognition of the need to conserve wetlands, losses have continued. Among others one of main reasons for this loss is that wetlands throughout the world are considered by many to be of little or no value, or even at times are negatively valued (Turner, et.al., 2000).

Economic valuation is an effective tool to aid wise use and management of global wetland resources by providing a means for measuring and comparing the various benefits of wetlands (Barbier et al., 1997). Despite this valuation of wetlands in the developing countries has not received the desired attention of researchers and policy makers. In order arrest the growing loss of wetlands there need for undertaking economic valuation of wetlands. It is against this backdrop that the present study attempted to estimate the willingness to pay for the conservation and protection of two selected wetlands (Kachan and East Kolkata) of West Bengal. The comparative analysis of the two selected wetlands was undertaken to capture and explain differences and similarities in wetland values on different socio-economic and locational grounds. The main objectives of the study were to:

- Examine dependence of local people (dwellers in and around the wetland;) on Kachan(Rural) and East Kolkata(Urban) wetland;

- Calculate Willingness to Pay of the dwellers for a hypothetical protection and conservation of the Kachan and East Kolkata wetland;

- Determine impact of socio-economic and other determinants of households on their WTP for the proposed conservation scheme for Kachan and East Kolkata wetland;

- Compare the Willingness to Pay of the dwellers of the Kachan and East Kolkata wetland;

- Suggest policy measures.

The objectives of the study were realized by using Contingent Valuation Method (CVM). CVM is a survey based or stated preference technique, where a hypothetical market situation is created to elicit the households maximum willingness to pay (WTP) for the improvement of Kachan and East Kolkata Wetland by using the Open-ended question format.

We choose a 'binary logistic regression model' for the analysis of the CVM variables for eliciting people's WTP. The probability that a respondent would say 'yes' (WTP) to the maximum amount (in Rs.) for the conservation that would improve the wetland condition is specified as:

WTP = f (Age, Sex, Monthly Income, Education, Family Size, Earning from Wetland, Willing to Shift from Wetland)

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Major Findings:

- East Kolkata wetland is the oldest integrated resource recovery practice based on a combination of agriculture and aquaculture and provide livelihood support to a large, economically underprivileged population of around 27,000 families which depend upon the various wetland products, primarily fish and vegetables for sustenance;

- Kachan wetland supports the food needs of a large number of people through natural resource use. Multifunctional wetland ecosystem comprises fisheries, small agricultural plots and vegetable farms;

- Majority of respondents (84%) were not satisfied with present situation of the wetland in case of Kachan whereas (95%) for EKW. According to them, main reasons for its degradation are drains, outlets around its periphery, excessive fishing and tourist garbage;

- People's Willingness to Pay (WTP) for improvement of Kachan/ EKW depended on socio-economic and behavioral characteristics of the respondents';

- Expected relationship between significant variables with the WTP was in line with the economic theory. Coefficient of household monthly income (TMI), Education (Edu), Age variables turned out to be positive and significant at various levels which show the likelihood of WTP for wetland improvement.

- Coefficient of Earning from Wetland and willingness to shift and resettle to some other places variables turned out to be negative and significant at various levels which show lesser willingness to pay for its improvement;

- About 55% of the sampled respondents were very much concerned about the biodiversity of Kachan wetland whereas 60.5% were very much concerned about the biodiversity of East Kolkata wetland;

- Many households were willing to resettle outside the periphery of wetland and cited different and multiple reasons for it. However few people still have multiple reasons for living in the wetland even though they face number of problems;

- Mean WTP per household for the improvement of overall environment of Kachan wetland was found as Rs. 286 and Rs. 410 was found for EKW;

- Economic valuation studies should be undertaken for all the smaller and rural wetlands and wetland based resources like biodiversity to estimate their economic, ecological and other socio-cultural values;

- There is need to identify not only nationally or internationally important wetlands but also locally important wetlands which provide critical inputs to thousands of people for their sustenance and livelihoods. Appropriate steps should be initiated for their better management and wise-use.