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An Economic Valuation of the Recreational Resources at the Caroni Swamp Bird Sanctuary.

This study was conducted to estimate the domestic access value of the recreational resources at the Caroni Swamp Bird Sanctuary. Decisions with respect to protecting species, communities and ecosystems often come down to monetary arguments: How much will this initiative cost and how much is it worth? Environmental economics looks at the interaction between ecological and economic systems in order to create methods to value biodiversity and create sustainability.

At the Caroni Swamp Bird Sanctuary the major economic activity is recreation which occurs in the form of guided boat tours. An Individual Travel Cost Model (ITCM) was used to estimate the domestic access value of this direct use of the Swamp. The underlying concept of the TCM is to use data on the amount of time and money that individuals use in getting to a recreational site in order to estimate the willingness to pay for the recreational facilities at the site. The single-site ITCM model functions like a downward sloping demand curve where "quantity demanded" is the number of trips taken and the "price" is the trip cost. The consumer surplus, represented by the area under the demand curve, is a measure of the value of the site for recreational uses.

As such the objectives of this study are:

- estimate the recreational value (or access value) of annual visits to the Caroni Swamp Bird Sanctuary using a single-site ITCM model,

- to compare these estimates with previous studies,

- to demonstrate the usefulness of TCMs in environmental valuation,

- to discuss the limitations of TCMs, and

- suggest alternative valuation models.

The table below summarizes the methodology used:

Table 1 showing the steps used in method development.

STEP NUMBER	SUMMARY OF DESCRIPTION
1	Defined the studied site.
2	Defined the recreational uses and the season during which the study was conducted.
3	Developed the sampling strategy.
4	Involved the specification of the model that was used.
5	The survey was designed and implemented.
6	Trip costs were measured.
7	The model was estimated.
8	The site's access value was calculated.

Questionnaires were designed, and implemented over a over a six month period to elicit the necessary data from recreational users of the Bird Sanctuary. Microsoft Excel and SPSS 14 software were used to analyze the data collected. Maximum Likelihood Estimation was the statistical procedure used to obtain the parameters necessary to calculate the access value.