

ABSTRACT

The Inshore Fishery of Trinidad.

A Description and Management Strategy.

The Case of the Carite (*S. brasiliensis*) fishery.

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The fishing industry of Trinidad and Tobago, more so Trinidad is facing a crisis of major proportions. There are disturbing reports emanating from within the industry which indicate that the fisheries are severely over-fished. Recent reports indicate that the inshore demersal fishery of the Gulf of Paria is over-fished, and an incipient threat exists to the inshore pelagics.

This thesis aims to develop a management structure which addresses this over-fishing and resulting depletion of the fisheries with specific reference to the inshore pelagic fisheries.

To develop the management structure, a bio-economic model was developed which utilises a modified version of the exponential surplus yield model. This model, called Clarke, Yoshimoto and Pooley Model is applied

to the carite (*S. brasiliensis*) fishery. The relevant parameters are estimated for the biological sub-model and are then used to determine the optima for the economic sub-model. The rent derived from this fishery under optimal conditions were then compared to those obtained under the present management system. Data for the model was collected via a survey questionnaire and from other secondary and tertiary sources.

The results of the study indicated that the fishery was over-exploited. The maximum sustainable yield (MSY) for the fishery was 1,172 mt at an effort level of 75,000 trips/annum. The maximum economic yield (MEY) was 980 mt at an effort level of 37,600 trips/annum. The study showed that if the fishery were operated at the economic optimum, greater rents would be obtained i.e. TT\$3.9 million (without subsidy) or TT\$4.8 million (with subsidy). These rents were superior to that obtained under the present system by approximately TT\$1.6 million. Several recommendations were made, amongst them being the complete removal of all concessions to the fishery and also the institution of mechanisms to appropriate some or all the rent from the fishery.