

**COMPUTER BASED FISHERIES MANAGEMENT
TOOL TO SUSTAIN CONSUMPTION OF MARINE
FOOD FISH SPECIES IN SRI LANKA**

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by

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ABSTRACT

Diverse fish stocks in the Indian Ocean consider as overfished, resulting in large-scale fishery termination will appear in the near future. Prior to taking purchasing decisions, identification of the fish species is significant to take the decision correctly. Hence the aim of this study is to provide a tool for identification of fish and make attitudinal changes of the consumers to take right purchasing decisions for those overfished marine fish species. A questionnaire survey was carried out to collect fish consumption data in Sri Lanka using a random population. Questionnaire survey further investigated the best method to inform the consumer with above information. Selected fish stock status was recorded with the available colour code from Indian Ocean Tuna Commission database. Conservation status was recorded from the International Union for Conservation of Nature database and ranked according to a colour code. Combining stock status and conservation status colour codes, a different scale with five colour sustainable rating was generated. A traffic light method that displays consumer advice to avoid (red), suit (green) or think (yellow) was developed using above sustainable rating. Morphological identification keys for each species under four dominant fisheries impacted marine food fish groups were developed. "Lanka fish" website was developed to update the consumer using single page application module. Out of 22 selected fish species, three species were to avoid, five species for suit and 14 species need to think prior to purchase. All selected 22 species were clearly separated and identified with distinct characters from generated keys. According to the survey, maximum respondents have selected website (38%) as an effective method to aware the consumers while the minimum was selected radio (4%). The developed website can be used in the actual purchasing moment and it clearly demonstrates the consumer advice for each species in a user-friendly manner. Fisheries resources are highly diverse and depended on responsible management decisions and practices for their sustainable development. Many fish stocks are in a stage of serious decline with overfishing. Hence the future of fish stocks unable to judge by any authority. It should be done by reducing the demand for those unsustainable fish stocks. Practically the developed website, "Lanka fish" will act as the foremost fisheries management tool in Sri Lanka to aware local and international consumers. Further, it will play an important role in securing future of the selected fish sustainably in the Indian Ocean.

Keywords: Sustainability, Fishery, Indian Ocean, Lanka fish, Consumer