Macrothink Institute™

Journal of Public Administration and Governance
ISSN 2161-7104
2019, Vol. 9, No. 1

Sustainable Fisheries Adaptation of *Terubok* Coastal Area in Sarawak, Malaysia

Nur Syahmina binti Abdul Ghanie (Corresponding Author)

Department of Economics, Faculty of Economics and Business, Universiti Malaysia Sarawak, 94300, Kota Samarahan, Sarawak, Malaysia

E-mail: inasyahmina@yahoo.com

Dayang Affizzah Awang Marikan

Department of Economics, Faculty of Economics and Business, Universiti Malaysia Sarawak, 94300, Kota Samarahan, Sarawak, Malaysia

E-mail: amdaffizah@unimas.my

Salbiah Edman

Department of Economics, Faculty of Economics and Business, Universiti Malaysia Sarawak, 94300, Kota Samarahan, Sarawak, Malaysia

E-mail: esalbiah@unimas.my

Amin Mahir Abdullah

Department of Agribusiness and Bioresource Economics, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor Darul Ehsan, Malaysia

E-mail: amahir@upm.edu.my

Received: Dec. 16, 2018 Accepted: Jan. 14, 2019 Online published: Jan. 22, 2019

doi:10.5296/jpag.v9i1.14055 URL: https://doi.org/10.5296/jpag.v9i1.14055

Abstract

Sustainable ways of fishing has been applied worldwide as the population of fish is decreasing due to heavy fishing and overexploitation. The famous fish in Sarawak, Tropical shad *Tenualosa* which locally known as *ikan terubok* (*Terubok* fish) is also experiencing a

major decline in its population. Therefore, the goal of this study is to investigate the most preferable ways to increase the number of *Terubok* population in Sarawak. This study reveals that, the regulation factor is the most preferable ways in increasing the number of *Terubok* population followed by conservation and economics factor. Besides, the willingness to accept (WTA) estimation by using Contingent Valuation Method (CVM) shows that the average amount of compensation that will be given to the *Terubok* fisherman in order to conserve the *Terubok* populations is RM 301.08.

Keywords: sustainable fishing, willingness to accept, contingent valuation method, tropical shad *Tenualosa* (*Terubok)*

1. Introduction

The tropical shad of the Clupidae family is an important estuarine fish for both cultural and commercial needs and these species are unique as they are protandrous hermaphrodite (Blaber *et al.*, 1996). In the Sarawak River, there are two types of *Tenualosa* or locally known as *ikan Terubok that* can be found which are *Tenualosa toli* and *Tenualosa macura.* As claimed by Rajali (1991), *Tenualosa toli* can be found at the river estuary of Batang Lupar, Batang Saribas, Batang Lassa and Batang Sadong whereas *Tenualosa macura* can be found at Sebuyau, Batang Sadong, Batang Saribas and Batang Lassa. Blaber, Milton, Chenery & Fry (2003) stated that both *toli* and *macura* have a great cultural significance in Sarawak and commercially fished for their eggs which can be sold at a very high price. However, the *Tenualosa* species is suffering from a major decline due to heavy fishing and overexploitation since 1980's (Rahim *et al.*, 2014). Therefore, the Enforcement and Licensing Unit (ELU) of Sarawak had come out with a program called Close Season Program (CSP) in 2007 until 2012. The main goal of this program is to ensure the *Terubok* population can be increased.

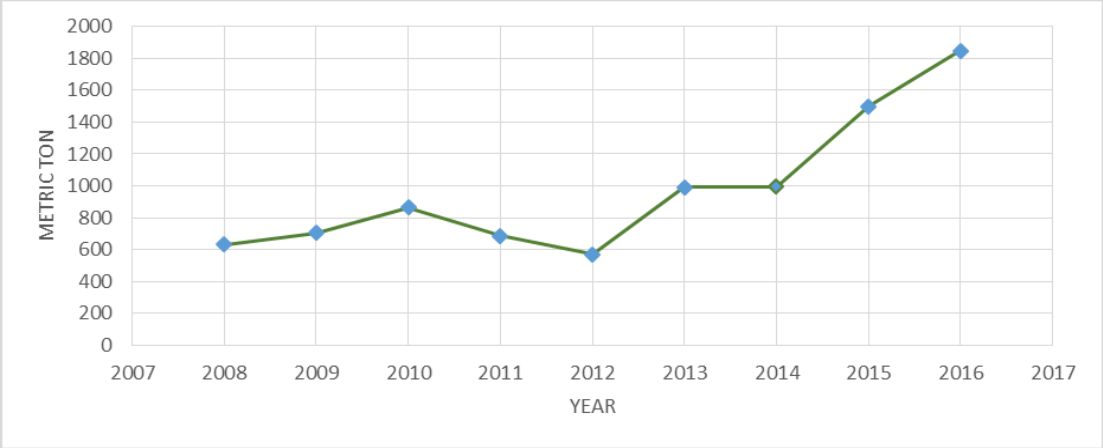

Figure 1. Total Landing of Tenualosa Macura and Tenualosa Toli

Source: Department of Fisheries Malaysia (2017)

As shown in Figure 1, the trend of *toli* and *macura's* total landing is stable during CSP as the population is well sustained and monitored by fisheries department. However, the total landing of toli and macura had increased drastically after the CSP ended in 2012. This indicates that the *Terubok* population is increasing during CSP and it shows that this program