



Community perspectives of governance for effective management of marine protected areas in Malaysia



Gazi Md Nurul Islam^{a,*}, Shzee Yew Tai^b, Mohd Noh Kusairi^c, Shuib Ahmad^c, Farhana Mohd Noh Aswani^c, Muhamad Khair Afham Muhamad Senan^b, Ali Ahmad^d

^a Tun Abdul Razak School of Government (TARSOG), Universiti Tun Abdul Razak, Jalan Tangsi, 50480, Kuala Lumpur, Malaysia

^b Faculty of Economics and Management, Universiti Putra Malaysia, 43400 UPM, Serdang, Selangor, Malaysia

^c Institute of Agricultural and Food Policy Studies, Universiti Putra Malaysia, Putra Infoport, 43400 UPM, Serdang, Selangor, Malaysia

^d SEAFDEC, Kuala Terengganu, Terengganu, Malaysia

ARTICLE INFO

Article history:

Received 7 June 2016

Received in revised form

31 October 2016

Accepted 1 November 2016

Available online 8 November 2016

Keywords:

Marine protected areas

Coral reefs

Governance

Participation

Management capacity

Peninsular Malaysia

ABSTRACT

Marine Protected Areas (MPAs) are useful tool for conserving biodiversity and managing fisheries. The government of Malaysia has established several Marine Protected Areas (MPAs) to enable overexploited marine resources to recover and to conserve coral reef ecosystems.

The paper investigates the effect of governance approach on the effective management of two MPAs, *Perhentian* and *Kapas* marine parks in Terengganu State of Peninsular Malaysia. The data for this study was obtained from face-to-face interviews with local people from two MPAs using a structured questionnaire. The results of the analysis show that local participation in MPA management and fisheries regulations are significant factors for the effective MPA management in the study areas. The regression results show that users' participation has contributed significantly to the MPA governance, which indicate that local peoples' participation play an important role for effective management of MPAs in Malaysia. The MPA management activities should be coordinated with other relevant agencies and local users to achieve successful management of MPAs in Malaysia. There is a need to give priority to encourage local fishers' participation in decision making for MPAs management in the future marine resource conservation policy in Malaysia.

© 2016 Elsevier Ltd. All rights reserved.

1. Introduction

Marine Protected Areas (MPAs) have been suggested as useful tools to conserve marine habitat and biodiversity particularly fisheries and coral reefs (Len et al., 2013; Mora et al., 2006; Halpern, 2003). Malaysia is rich in marine resources with approximately 3600 km² of coral reef areas.

Marine protected area (MPA) was first initiated by the Department of Fisheries Malaysia (DoFM) in 1980s. Subsequently, most coral reef islands were gazetted as a Marine Park by 1994 under the Fisheries Act 1985 which was amended as Marine Parks and Marine Reserve Order 1994 (Kaur and Basiron, 2010). The government has established and gazetted 42 MPAs in offshore islands in Peninsular Malaysia since the 1980s (Cheung et al., 2002; Islam et al., 2013).

The MPAs in Malaysia are protected area of sea with a one or two

nautical miles no-take zone from the shore at lowest tide where fishing is prohibited. The main objective of the MPAs was to protect and recover the overexploited fisheries resources and to conserve coral reef ecosystems. The management of MPAs under the Department of Fisheries (DOF) was less effective due to encroachment by trawl net. In curbing with the problems of encroachment and overexploitation of fisheries, the Malaysian government created the Marine Park Department Malaysia (MPDM) in 2004 under the Ministry of Natural Resources and Environment (MNRE), administrative and management responsibilities of MPAs was transferred from DOF to the MPDM (Marine Park Department Malaysia, 2011). The main goal of creating MPDM was to improve management of MPAs through effective enforcement of MPA regulations.

The Marine Park Department is the main agency responsible for MPA management under the Federal government jurisdiction while the Department of Fisheries, the Department of Environment and Enforcement agencies have also responsibilities for MPA

* Corresponding author.

E-mail address: gazinurul236@gmail.com (G.M.N. Islam).

management. The Department of Land, under the State government is responsible for land based infrastructure and other tourism development activities in the marine parks. It has been acknowledged that the jurisdiction between federal and state governments in Malaysia is overlapping and complex. The poor coordination between the government agencies has been highlighted as the main constraint for successful marine resource management in Malaysia (Gopinath and Puvanesuri, 2006). The lack of jurisdictional coordination and integration among the agencies are the major challenges to MPA governance. Similar problems have been faced in the centralised MPA management in the Great Barrier Reef Marine Park, the US National Marine Sanctuary System, and the California Marine Life Protection Act (Jones et al., 2011). The most successful MPAs have been governed through local people's involvement in management. The MPAs in Malaysia have been established by the government where local fishers were not actively involved and participate in the management.

Marine parks in the offshore islands in the east coast of Malaysia are very rich in fisheries and coral reefs. Fishing is the only source of income and food for most households living on the islands and other villages surrounding the marine parks. However, the MPAs vary by size, location, resource abundance and the number of users. The Department of Marine Park has imposed a set of rules and regulations to protect and conserve marine biodiversity especially the fisheries and coral reefs. However, the fishing restrictions in the no take zone has created a serious problem for the livelihoods of fishing households.

The government has promoted tourism development in marine parks over the last two decades and substantial revenue has been generated through various tourism activities. Local people have been employed in the tourism sector (Islam et al., 2013). However, hotels and diving shops are mostly owned and managed by the foreigners. The local fishers in these tourism based marine parks are no longer involved in fishing as their main source of income. While in some marine parks, a large number of fishers from surrounding areas of mainland are involved in fishing for their livelihoods, hence tourism sector is relatively less developed. In these marine parks, fishers renew their licenses to continue with fishing outside the MPA area.

In Malaysia, the main reasons for coral degradation are due to the large number of tourists visiting the marine parks, construction of land based tourism infrastructures, fishing, and pollution through waste disposal and littering (Islam et al., 2013; Reef Check Malaysia, 2011). Wattage et al. (2011) found that the major threat to coral reefs come from human activity which has not been addressed in the management of MPA. Studies are not available to understand whether top down centralised management approach can manage the MPAs effectively and benefit local people in MPA areas in Malaysia. The main research questions in this study are whether local fishers have got incentives to protect fisheries and coral reefs in the MPA, and how the MPA regulations are enforced. The study investigates the effect of governance approach on the management of two MPAs, *Perhentian* and *Kapas* marine parks in Peninsular Malaysia. The main problem in *Perhentian* is pollution in the MPA water due to excessive tourism activities and establishment of hotels and other land based infrastructures. Studies found that coral reefs habitat have been under stress in the MPA areas due to excessive tourism activities (Islam et al., 2013). In *Kapas*, coral reefs are not well protected due to excess fishing activities surrounding the MPA areas.

The main objectives of the study are (i) to investigate whether the coral reefs and fisheries are protected through the existing top down governance approach, and (ii) to examine the important factors that may influence on successful and effective management of MPAs. This study will provide important insights and direction to

improve the management effectiveness of MPAs in Malaysia as well as in other countries. This paper is organized as follows: First, we provide an overview of the marine protected areas and governance framework. Second, the methodology and data sources are presented; third, we present the results of the study; fourth, we present discussions and conclusion.

1.1. MPA management in Malaysia

The establishment of the Tunku Abdul Rahman Park in Sabah was the first MPA in Malaysia in 1974 and the largest marine park in Malaysia covers an area of 50 sq kilometres comprising with five islands. Malaysia has established 53 coral reef MPAs and they include 42 coral reef MPAs in Peninsular Malaysia by the Department of Marine Park Malaysia (DMPM). In East Malaysia, eight coral reef MPAs established in Sabah by the Sabah Wildlife Department and three in Sarawak by the Forest Department of Sarawak (Marine Park Department Malaysia, 2011).

In Peninsular Malaysia, the main regulatory method implemented in managing the fisheries resources is limited entry license through zoning.¹ The Department of Fisheries initiated fisheries conservation and introduced the Fisheries Prohibited Area Regulations 1983 under the Fisheries Act 1985. In Malaysia, the regulations governing the Marine Parks are still provided under the Malaysia Fisheries Act 1985. The MPA has been declared as protected area of sea where a variety of uses are permitted - snorkeling, diving, boating, beach use but fishing is prohibited within the MPA (Wilkinson, 2004).

The Department of Fisheries governs all activities related to fisheries beyond the MPA water area and the Department of Marine Park governs all the activities related to coral reefs and tourism activities. The Department of Marine Park has established a set of rules and regulations to protect and conserve marine biodiversity especially the fisheries and coral reefs in the MPA areas. The no-take fishing in the MPA areas has created problems in the islands especially where many households rely on fishing for their livelihoods. The rules for MPA management are difficult to enforce as the poor fishers have no alternative source of income and the rules set without adequate consideration for the fishers' livelihoods.

The Department of Marine Park works under the jurisdictions of Federal government in Peninsular Malaysia, while in East Malaysia, Sabah Wildlife Department works under the State government. MPA rules are difficult to enforce without effective coordination between the Department of Marine Park and the Department of Fisheries and other related agencies such as land, environment, and forest department. The challenge of planning and managing the marine park islands of Malaysia continues to be the federal-state separation of legislative powers for land and sea resources.

1.2. Governance framework of marine protected area

The role of governance and management of Marine Protected Areas (MPAs) has been widely discussed in recent years. Several authors have defined governance as power, sharing responsibility, set of relationships, transparent and accountability (Abrams et al., 2003; Kooiman and Chuenpagdee, 2005). Governance also refers to the structures, institutions, and processes that determine decision making and implement environmental management (Lockwood, 2010; Bennett and Dearden, 2014b). The management

¹ Fishing grounds are divided into three fishing zones, A, B and C based on the distances from the coastline. The area less than five nautical miles from shore (zone A) has been reserved for artisanal fishers. The larger boats (boat zone B and C) use trawl and purse seine beyond five nautical miles.

Download English Version:

<https://daneshyari.com/en/article/5473829>

Download Persian Version:

<https://daneshyari.com/article/5473829>

[Daneshyari.com](https://daneshyari.com)