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Comparison of social-value cognition based on different groups: The case of Pulau Payar in Malaysia and Gili Matra in Indonesia

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ABSTRACT

The paper analyzes problems in Marine Park management and put forward suggestions for improvement based on differences of social value about Marine Park ecosystem services between Pulau Payar Marine Park (PPMP) in Malaysia and Gili Matra Marine Park (GMMP) in Indonesia. The purpose is to construct the connectivity of ecology, social economy, culture and system, and to study the management of marine protected areas (MPAs) from a broader perspective. The survey method used in this study is similar to that of 'SolVES' method, which aims to assess relative importance of social value for Marine Park and discuss people's attitudes towards the future development of Marine Park and management of Marine Park. We selected purposive sampling survey according to the occupation category, and obtained 109 and 102 valid questionnaires in PPMP and GMMP respectively. In this study, four sets of questions, including familiarity with Marine Park, attitude toward use of Marine Park, understanding of social-value of Marine Park and personal profile, were designed to analyze differences between PPMP in Malaysia and GMMP in Indonesia. For both Marine Parks Biological Diversity Value (B) was scored the highest among all ten social-values. The participation rate of marine education in both Marine Parks are relatively low; both of them are no more than 35%. Compared with locals, tourists value biodiversity more, and while comparison among different occupations, civil servants value biodiversity more than other occupations. Through on-the-spot investigation and sorting out the management problems of marine parks reflected by respondents, we found that: (a) the weakness of basic education and lack of popular science publicity and education activities have caused the level of public's awareness of environmental protection to be not high enough; (b) the relative insufficiency of tourism infrastructure and increase in number of tourists in recent years, might have caused many problems such as destroying coral reef resources and littering. Some suggestions were put forward to solve the problem: (a) promote public awareness of environmental protection through popular science publicity and education; (b) for PPMP, the restriction on the number of tourists will benefit the protection of coral, while improving infrastructure, such as garbage collection, will help improve environmental pollution; (c) for GMMP, strengthening the synergy between local and central governments will help to deal with the relationship between land use and environmental protection and highlight environmental protection functions.

1. Introduction

Marine Protected Areas (MPAs), as one of the common processes of environmental conservation (Takehisa et al., 2017), are of growing interest globally (Patrick, 2004). The marine region from East Asia to Southeast Asia (E–SE Asia) is well known as a hot spot for biodiversity (Derek et al., 2010). In recent years, the number of MPAs in Southeast Asia region has increased (Catherine et al., 2002), and plays an important role in solving the issue of marine ecological environment protection. Moreover, MPAs allow tourism activities in order to enhance economic benefits while enabling recovery of overexploited marine resources (Kelleher et al., 1995; Lauck et al., 1998; Guénette

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