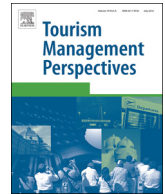




ELSEVIER

Contents lists available at ScienceDirect

Tourism Management Perspectives

journal homepage: www.elsevier.com/locate/tmp

Integrating multiple attributes for sustainable development in a national park

Supasit Sriarkarin^{a,b}, Chun-Hung Lee^{a,*}^a College of Environmental Studies, National Dong Hwa University, Hualien, 97401, Taiwan, ROC^b Center for Advanced Studies in Tropical Natural Resources, NRU-KU, Kasetsart University, Chatuchak, Bangkok 10900, Thailand

ARTICLE INFO

Keywords:

Heterogeneity
Effective development
Policy scenario
Choice experiment
Management strategy

JEL classification:

Q26
Z32

ABSTRACT

Balancing the sustainable development goals of nature conservation and recreational service provision is a big challenge for national park management today. We estimate tourist preferences on different attributes associated with reduction of tourism effects and development of tourism facilities in Khao Yai National Park, Thailand. The results indicate that integrated the wildlife conservation program, moderating control of tourist numbers, undertaking to provide good lodging services, and initiating a public transport system are effective development factors. Characteristics that affect the differentiation of preferences vis-a-vis the visitor influx control in the national park are: 1) tourists' awareness of the impacts of overcrowding, 2) nationality, and 3) monthly income. These results could be used to tailor a unique policy and management strategy in the near future that corresponds to the current issues and the needs of tourists.

1. Introduction

National parks have multiple functions, protecting natural areas and ecosystem dynamics while providing recreation and nature education to tourists (Badman & Bomhard, 2008). Tourism in nature-based attractions has become a rapidly growing segment of the tourism sector (Balmford et al., 2009; Haegeli & Pröbstl-Haider, 2016). In terms of management, striking a balance between development that will satisfy tourists while minimizing any possible conflicts with conservation areas poses a big challenge for national park policy making nowadays (Juutinen, Mitani, Mäntymaa, Shoji, Siikamaki, & Svento, 2011; Lertwannawit & Anuwichanont, 2011). For the sustainable development of a national park (hereinafter, SDNP), Arsić, Nikolić, & Živković (2017) mentioned the importance of balancing environmental protection and economic development while focusing on control of tourist numbers and provision of higher quality facilities to meet tourists' needs. At the same time, national parks also fulfill multiple functions for nature and ecotourism (Fennel & Nowaczek, 2010). Ecotourism has emerged as a main foundational element for sustainable tourism operations and can be used as a vehicle for striking the aforementioned balance in the management of national parks and for raising the awareness of tourists and locals alike about nature conservation (Tran, Nomura & Yabe, 2015). However, successful ecotourism in a developing country is difficult to bring about, due to the prevalence of poorly

thought-out environmental policies with little concern for the damages and attendant costs of tourism when it is characterized by mass tourist influxes, overcrowding of areas with vehicle traffic, and excessive development of tourism infrastructure (Gössling, 1999). To sum up, if the goals of SDNP are to come to fruition, it is necessary to focus on tourism in the context of the environment, conservation, and sustainable tourism development (Xu & Fox, 2014). It has also been suggested that tourists' opinions and preferences can be taken into account and integrated into management strategies in combination with careful consideration of the above factors (Reihanian, Mahmood, Kahrom, & Hin, 2012).

Thailand has great potential for nature-based tourism due to its rich variety of landscapes, ranging from mountains to jungle to seashore. To protect these important areas, the Thai government has instituted a conservation system made up of 127 national parks, 58 wildlife sanctuaries and other types of protected areas, such as forest parks and non-hunting areas (Department of National Parks, 2016a). These protected areas cover about 20.46 percent of the country's total area and are administered by the Department of National Parks, Wildlife, and Plant Conservation (hereinafter DNP) (DNP, 2016a). Thailand has used ecotourism to encourage sustainable tourism development since the early 2000s (Mahdayani, 2011). In the same period, the government also launched a campaign promoting domestic tourism in national parks. As a result, some national parks have had to confront insufficient

* Corresponding author at: College of Environmental Studies, National Dong Hwa University, No. 1, Sec. 2, Da Hsueh Rd. Shoufeng, Hualien, 97401, Taiwan, ROC
E-mail address: chlee@gms.ndhu.edu.tw (C.-H. Lee).

development budgets, limitations on staff services, and management issues such as overcrowding and waste problems (Gössling, 1999; Mahdayani, 2011).

The DNP has attempted to control the increasing number of tourists visiting national parks by creating an online accommodation reservation system (Mahdayani, 2011) and has been studying tourism carrying capacity in so-called pilot national parks, however, the successful promotion of tourism and the resulting challenges stemming from the corresponding growth in the number of visitors to national parks represent a paradoxical situation. For example, tourist congestion is a critical issue in popular national parks, including Khao Yai National Park (KYNP), the first national park designated in Thailand (Phumsathan, 2013). Allowing mass numbers of tourists into protected areas can cause many deleterious effects on the environment (Phumsathan, 2013) such as soil compaction, water pollution, and disturbance to wildlife habitats. Moreover, the deterioration of these resources can greatly affect the quality of tourists' experience (Deng, Qiang, Walker & Zhang, 2003). Modes of operation that recognize the value of both nature and services is therefore needed for the sustainable and effective management of protected areas (Juutinen et al., 2011). Thus, there is a requirement to understand tourists' preferences and behavioral tradeoffs when planning the development of national parks, as such understanding will help the responsible authorities to design and implement suitable strategies while simultaneously promoting environmental conservation and mitigating tourism impacts.

Turning to issues related specifically to ecotourism and management for national parks, past related studies have focused on topics such as wildlife conservation and human impacts (Höffken, 2010; Orams, 2002; Panusittikorn & Prato, 2001), controlling tourist numbers and carrying capacity (León, de León, Araña, & González, 2015; Newman, Manning, Dennis & McKonly, 2005; Sunlu, 2003; Saminpanya, Wisarttavisit, & Chumnankid, 2009; Whittaker, Shelby, Meldrum, DeGroot & Bacon, 2012), information provision via interpretation boards and tourist centers (Gössling, 1999; Juutinen et al., 2011; Phumsathan, 2013), lodging services and accommodation conditions (Gössling, 1999; Mahdayani, 2011; Zong, Cheng, Lee, & Hsu, 2017), environmental quality and public transportation design (Deng et al., 2003; Lee & Wang, 2017; Mahdayani, 2011; White, 2007), and charging entrance fees to provide financial support for sustainable development in protected areas (Gössling, 1999; Hearne & Santos, 2005; Laengcharoen, 2014; Lee & Wang, 2017; Juutinen et al., 2011). Based on a review of the literature, this study found a paucity of extant research employing a framework comprising multiple attributes related to sustainable development in the national park field, and more specifically, one aimed at estimating tourists' preferences on multiple attributes related to a national park.

Based on the above review and summarization, it is clearly important to establish an effective management mechanism for sustainable development in national parks, which, at the same time, reflects tourists' preferences among a number of potential sustainable development programs. Furthermore, there is a need to understand any significant differences in preferences between local and foreign tourists when it comes to specific identified attributes of sustainable development, to evaluate whether or not the level of heterogeneity in terms of tourists' preference is linked to their social background and their behavior during the trip under, and to incorporate the values they attach to different scenarios into future national park management approaches. By doing so, we could develop an effective management strategy for the national park in question which captures tourists' various preferences for multiple attributes (ecological, recreational, and institutional) of sustainable development. This would also help park managers to establish effective management programs to meet the goal of sustainability and build up an adaptive budget allocation model in the national park.

Therefore, the objectives of this paper are, firstly, to assess the set of management and development attributes regarding tourism services in

the national park by gathering evidence via what is known as the economic valuation technique, namely a choice experiment, for estimating the preferences of visitors. Secondly, to investigate the heterogeneity of these preferences across the population of visitors, which can be useful for targeting specific groups of visitors in accordance with their specific characteristics, and for the design of policy measures. Our study adopts a similar approach to that of Juutinen et al. (2011) and León et al. (2015) for resolving tourism issues in protected areas by using a choice experiment (CE) with complex management. However, our study differs from the previous studies by improving the recreational services component, by proposing the initiation of a public transportation system inside the national park. This research can also be an example of an empirical study carried out with the CE technique in the field of protected area management. We separate this paper into five sections. In Section 2, we provide an overview of the study site, discuss CE in protected area management, describe our experimental design for the development of ecotourism and facilities in a national park, and set out models and hypothetical scenarios for future management. In Section 3, the results of tourists' preferences and social welfare are analyzed, and the heterogeneity of tourist demographics is also presented and discussed. Section 4 would summarize the main research results and conclusion. The final section provides the management strategy and suggestions for policy implementation.

2. Research area and method

2.1. Study site

KYNP, established in 1962, is one of the best-known national parks in Thailand (Saminpanya et al., 2009), covering an area of 216,800 hectares spanning four provinces in the northeast of the country: Nakhon Nayok, Prachinburi, Saraburi, and Nakhon Ratchasima (See Fig. 1). The park has two main access roads; one from the north (Sarn Chao Por Gate) and one from the south (Nern Hom Gate), both leading to the central area. These entrance gates are at least a three hour (about 200 kilometers) drive from Bangkok and are easily accessible from other major cities nearby (Mahdayani, 2011). KYNP has a variety of landscapes and forest types including grassland, deciduous forest, and evergreen forest (Panusittikorn & Prato, 2001). These natural conditions provide a rich biodiversity to KYNP, and the park contains many globally and locally important wildlife species such as tigers, pileated gibbons, Asian elephants, dholes, and great hornbills (Royal Thai Government, 2004). Owing to the uniqueness and importance of its natural resources, KYNP was declared a part of a UNESCO Natural World Heritage Site in 2005 and named the Dong Phrayayen-KhaoYai Forest Complex (World Heritage Committee, 2005). Popular recreational activities include adventure and outdoor activities such as hiking, trekking, wildlife watching, and waterfall sightseeing (Panusittikorn & Prato, 2001), while bicycling and night safari are also increasing in popularity (Mahdayani, 2011). KYNP can provide daily lodging for up to 450 people in four zones and camping for up to 1,400 people in two campgrounds, based on availability figures from the online reservation system in 2016. Additionally, temporary campgrounds are reserved for 1,000–1,500 people during the peak-season in December to January (Mahdayani, 2011). Nevertheless, the annual and maximum daily influx of tourists reached over 1.23 million and 20,000, respectively, in 2015 (DNP, 2016b). To sum up, KYNP fulfills a variety of functions for natural conservation, recreational experience, and environmental education; however, the park is also facing the issues of wildlife conservation, carrying capacity, and diminishing recreational quality. Thus, this study chose KYNP as a research locus to analyze the selected aspects of sustainable development in a national park.

2.2. Choice experiments in the field of protected area management

In the past few decades, economic tools have been applied to inform

Download English Version:

<https://daneshyari.com/en/article/9953115>

Download Persian Version:

<https://daneshyari.com/article/9953115>

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