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Exploring visitors' willingness to pay to generate revenues for managing the National Elephant Conservation Center in Malaysia



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ABSTRACT

Financial sustainability of protected areas is one of the main challenges of management. Financial self-sufficiency is an important element in improving conservation effort in these areas. This study seeks to review best practices in recreational fee systems in different countries and to find a relevant entry fee for a wildlife sanctuary in Malaysia. The revenue of the National Elephant Conservation Center (NECC) in Kuala Gandah, Malaysia, comes from several sources, including the national government, but all these budgetary sources are strained by tighter public budgets and greater demands. The present study investigates the introduction of visitor entrance fees to supplement an otherwise inadequate budget for supporting the operational costs of the sanctuary. Factor analysis and a double-bounded contingent valuation method were combined to estimate tourists' willingness to pay (WTP) the proposed entrance fee. Factor analysis showed that respondents' motivation to support the NECC with user fees is conditioned by their direct experiences with elephants, their satisfaction with NECC's educational programs and services, and other experiences it gives to users. The WTP model considered respondents' four motivation factors with their sociodemographic characteristics. Since NECC visitors arrive from both within and outside the country, this study suggests to center managers a two-tier fee structure (residents vs. nonresidents of Malaysia), based upon mean WTP estimates. This study further suggests that revenue from such an entrance fee for NECC could support the Center's management and development costs.

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1. Introduction

The mission of most wildlife refuges, or sanctuaries, is to create a safe haven for particular species, to keep them as wild as they are. However, due to the IUCN definition, preservation of natural areas is important not only because of their rich biodiversity, but also because of their contribution to local people's livelihood (Fien and Tilbury, 2002; Dudley et al. 2010). Therefore, the conservation of ecosystem services, genetic material, and cultural value for purposes of tourism and consequently for poverty reduction has become an additional motive for the creation of protected areas.

While nature-based tourism is considered to be one of the fastest growing industries (UNESCO, United Nations Educational, Scientific and Cultural Organization, 2012; Bhandari and Heshmati, 2010) in developing nations, managers of ecotourism destinations are increasingly

challenged to find adequate revenue to improve their protection, maintenance, and upgrades of those natural attractions (Mansourian and Dudley, 2008). A "paper parks" phenomenon occurs when protected areas resources are so insufficient that they fail to fulfill their mission. To avoid this phenomenon, managers of natural areas seek other source of funds not from central government budgets. Donors and visitors' entry fees are the most well known alternative revenue sources for protected areas (Shahabuddin, 2009; Baral and Dhungana, 2014). However, donor financing is seldom sustainable and certain over long periods of time (Thur, 2010; Shahabuddin, 2009). Therefore, imposing an entrance fee is currently thought to be the most sustainable self-financing approach for many tourist areas (Reynisdottir et al., 2008). This extra tourist revenue then can be allocated to improve management, maintenance, and monitoring activities (Riley et al., 2006).

A 2009 FAO report concludes that a well defined entry fee can significantly help to fund protected areas. However, the entry fee amount must be evidence-based and match WTP for both domestic and foreign visitors (Shahabuddin, 2009). Earlier studies have concluded that most visitors are ready to pay to enter to frequently visited natural areas (e.g., Abala, 1987; Depondt and Green, 2006; Baral et al., 2008; Svensson et al., 2008; Reynisdottir et al., 2008; Uyarra et al., 2010;

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Peters and Hawkins, 2009; Thur, 2010; Gupta and Mythili, 2011; Chung et al., 2011; Dhakal et al., 2012). Many studies, however, showed that visitors WTP in several cases are higher than the existing fee (such as Riley et al., 2006; Thur, 2010; Asafu-Adjaye and Tapsuwan 2008; Peters and Hawkins, 2009; Szell and Hallett IV 2013; Tyrväinen et al., 2014; Baral and Dhungana, 2014; Vincent et al., 2014). Experiences from developing countries, such as Costa Rica or India, showed that very low entrance fees are charged for some natural areas and that any small increase from that amount could substantially contribute to management revenue and well-being of the local residents (Shahabuddin, 2009). Setting pricing policy without determining consumers' WTP might forego significant revenue (UNDP, United Nations Development Programme, 2012). A willingness to pay estimate, therefore, is crucially import when instituting a user fee. By doing so, the range of imposed fees should be based upon visitors' opinions and their willingness and ability to pay rather than solely on the managers' notions of relevant fees.

In 2009, total revenue from entry fee collection from 88,401 international visitors to Malaysian natural areas was only USD 136,876 (UNDP, United Nations Development Programme, 2012), about \$1.55 each. Malaysia is a developing country with a limited budget for managing its protected areas, and entry fee collection systems could help generate revenue and improve welfare of its local peoples.

The purpose of this study is to help develop best practices in recreational fee systems across different countries and, by researching visitors' WTP, to determine a fair and appropriate entry fee for an elephant sanctuary in Malaysia. This study, therefore, measures both the level of visitors' support for conservation finance through the proposed entrance fees, and calculates potential effects on sanctuary revenues of imposing such an evidence-based fee.

2. Protected areas fee

The visitor fee is a broad and yet very case-specific term. The history of collecting entrance fees dates back to as early as 1908 in Mount Rainier in the USA (McDowel and Moore, 2014). Today, several national parks and protected areas around the globe charge visitors an entrance fee (Buckley, 2003). In many developing countries such as Chile, Kenya, Tanzania, Thailand, Belize, and Indonesia there are two-tiered fee systems where international visitors pay considerably higher fees than domestic visitors (UNDP, United Nations Development Programme, 2012). In other countries such as Nepal, only international visitors are charged an entry fee. Also, policies within a country may require an entrance fee for some protected areas and not charge an entry fee to others (e.g. only 4 out of 7 designated Malaysian national parks have an entry fee). Park managers might charge visitors for entering the park and for camping and other specific activities. Different actual fees may be charged visitors depending on how many visitors enter together, as in a single car or with a commercial tour. Fee revenues most often support park programs and services (protection, resource management, and recreation or information). How fee-based revenue is allocated in the budgets varies widely, also. Sometimes fees are program-specific, and sometimes they merely support general operating expenses.

The idea of charging visitors an entrance fee to visit natural attractions might seem to contradict the definition of "public good", but the large number of visitors and uncontrolled tourists result in congestion problems detrimentally impacting the environment by damaging natural resources and increasing conservation costs. The "entry fee" is sometimes called a "barrier" because those management strategies reduce visitor congestion with a fee, which presumably discourages those who value the attraction less (Lindberg, 2001; Reynisdottir et al., 2008; Ahmad, 2009; Chung et al., 2011; Watson, 2013). According to Reynisdottir et al. (2008), in the absence of visitors' fees, nonusers actually "subsidize" the users who visit attractions as "free riders". As an alternative, the notion of charging a user fee suggests that the cost burden of natural resources should be taken on by those individuals who use the resources and the services provided (Chung et al., 2011).

Another argument against imposing an entrance fee might be made when users who have already paid taxes under the national taxation system object to being "double charged" for a national treasure (Bhandari and Heshmati, 2010). However, the financial need for some supplementary system which requires that park "users pay" can be demonstrated first by observing or pointing out that establishing and enforcing an entrance fee is required wherever the revenue budgeted from public taxation is lower than that required to achieve, sustainably - over a projected period of time - the recreation and conservation goals of the park (Lindberg 2001; Mansourian and Dudley, 2008). Hence, in light of an inadequate budget that does not correspond with increased demand for public natural areas, either taxes must be increased or other non-fee tools should be implemented (Van Sickle and Eagles, 1998).

Government and park managers could collect entry fees to fully or partially recover operating costs for tourism, to generate 'reserve' revenue beyond current costs (for planning and development), to create local business or educational opportunities, or to reduce user congestion (McDowel and Moore, 2014). In many cases, combinations of objectives already exist, for example consider the case of developing countries such as Malaysia or Thailand, where, they have two-tier charging system (fee structure) for local users (minimal fees) and international visitors (premium fees) (Lindberg, 2001). In such countries, either cost recovery or profit generation may be primary goals for 'toll gating' of international visitors and educational purpose (such as student groups) for local users (Lindberg and Halpenny, 2001). In developed countries, such as Canada, Germany, or the USA, where entrance fees are the same for locals or internationals, the aim of collecting entrance fees is to partially cover operation costs, and in general being financially more self-sufficient (Lindberg and Halpenny, 2001; UNDP, United Nations Development Programme, 2012).

The amount and structure of entrance fees, and how they affect land managers, visitors, and tour operators is determined by political, social, and economic relationships between the operation and the background economy (Lindberg et al., 1998). In countries with strong central governments, authorities, and enforcement, designated fees can be collected by park agencies without considering social acceptability or economic efficiency (Buckley, 2003). In the USA, for instance, The National Park Service (NPS) Recreation Fee Program manages the collection, deposit, tracking, and spending of fees that visitors pay when they enter a national park, use park facilities and campgrounds, or participate in various park activities (McDowel and Moore, 2014). Australian National Parks are all managed independently by each state authority and therefore, maximizing profits from fee collection is each state's aim (Buckley, 2003; National Parks and Wild life Service, 2014; New South Wales National Parks and Wildlife Service, NSW, 2014). In Canada, setting user fees is consistent with the requirements of the User Fees Act and under the authority of the Parks Canada Agency Act. In 2013, Parks Canada charged more than 3,300 different user fees for various services, including entry, camping, and business licensing, such as vendors and concessions (Parks Canada, 2014).

Some nations, such as Bulgaria, Romania, and the Czech Republic, have not charged entrance fees (UNDP, United Nations Development Programme, 2012). Unfortunately, entry fees and other self-generated revenues generally fail to realize their income potential. Based on a 2012 UNDP report, in 19 countries, 60% of protected areas funding comes from the central government and only 11% come from site-based revenues including entry fees (UNDP, United Nations Development Programme, 2012).

Many countries already supplement entrance fees collected at protected areas, but airport departure taxes are collected by Belize in Central America, The Republic of Palau in the Pacific Ocean, and Macedonia in the Mediterranean. Since 1996, Belize has charged foreign visitors a "Conservation Fee" when they depart the country. The fee amount of \$3.75 per person has not changed since it was initiated 18 years ago (UNDP, United Nations Development Programme, 2012). Since 2009, the island nation of Palau has collected a \$15 "Green Fee" in

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