

Wildlife Tourism as a Form of Ecotourism: The case of the Sacred Monkey Forest Sanctuary of Ubud, Bali

By Dominique Bragg and Cynthia S. Deale

Introduction

Walking into Mandala Suci Wenara Wana, the Sacred Monkey Forest Sanctuary (Monkey Forest Ubud) in Padangtegal, Ubud, Bali, Indonesia around 7:30 a.m., the forest is just coming to life. The village, the traffic, and the hustle and bustle of the streets all fall away. Due to the forest, the sculptures, and the temples, entering Monkey Forest Ubud is like stepping back in time. Rays of sunlight peek through the trees and monkeys (in this case the monkeys are called macaques) are starting to come down from their sleeping sites in the treetops. As the guards prepare the monkeys' morning meal of cut and washed sweet potatoes, the monkeys' excitement and energy increase. During feeding, it is not uncommon for raucous scuffles to break out or to see a higher ranking adult macaque chase off a lower ranked adult or juvenile.

The Monkey Forest Ubud may be seen as an ecotourism destination and an interesting example of wildlife tourism. Although the definition of ecotourism is still contested, most researchers agree on and use the definition of ecotourism put forth by The International Ecotourism Society (TIES). TIES defines ecotourism as "responsible travel to natural areas that conserves the environment and improves the well-being of local people," (TIES, 1990; Koens, Dieperink, & Miranda, 2009). Ecotourism is promoted as responsible travel that demonstrates an appreciation for the environment and local culture, involves a non-consumptive use of nature (scenery, plants, and animals), and creates economic opportunities for the local community (Blamey, 2001). Whereas, wildlife tourism focuses on human interactions with non-domesticated (non-human) animals and intersects with other types of tourism, specifically nature-based tourism, special interest tourism, and ecotourism. Wildlife tourism can be seen as a type of ecotourism when it takes place within the framework of nature-based activities that offer environmental interpretation and embrace environmentally responsible practices (Higginbottom, 2004).

Background

Sustainable Tourism and Ecotourism in Theory and Practice. Ecotourism, nature tourism, wildlife tourism, and cultural tourism all fall under the larger umbrella of sustainable tourism. The United Nations World Tourism Organization (2017) defines the sustainable develop-

ment of tourism as "Tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities." Whereas a working definition of sustainable tourism is that, "Sustainable tourism contributes to a balanced and healthy economy by generating tourism-related jobs, revenues, and taxes while protecting and enhancing the destination's social, cultural, historical, natural, and built resources for the enjoyment and well-being of both residents and visitors" (East Carolina University, 2012). Common definitions of ecotourism emphasize responsible travel to natural areas that work to conserve the environment and improve the lives of the local population (Fuentes, Shaw, & Cortes, 2006). Conceptually, ecotourism implies that the conservation of natural resources, including wildlife, is compatible with socio-cultural contexts and economic development (Cater, 2004; Ross & Wall, 1999; Weaver, 2008; Weaver, 2002). Additionally, ecotourism is typically perceived as encompassing active engagement, inclusivity, education, and small-scale development (Cater, 2004). In general, wildlife tourism includes a wide range of activities from spotting animals from a bus, multiple-day hikes, hunting, fishing, seeing wildlife in captive situations such as zoos and wildlife sanctuaries, or visiting free-ranging wildlife attractions (Green & Higginbottom, 2000). In developing countries, with the rise of ecotourism, wildlife tourism has been encouraged as a way of balancing wildlife conservation and grassroots economic development (Campbell, 2002; Jones, 2005; Kontogeorgopoulos, 2005).

Sustainable tourism, ecotourism, and wildlife tourism can be comprehended from a variety of perspectives including actor-network theory (e.g. Rodgers, Moore, & Newsome, 2009), the concept of social capital (e.g. Jones, 2005), and the stakeholder approach (Freeman, 1984) and theory (e.g. Byrd, 2007; Freeman, 1994; Freeman, Wicks, & Parmar, 2004; Hurrell & Kingsberg, 1992; Reed, 1997; Vigor & Healy, 2002). Through the actor-network theory, the interests of all actors, human and non-human, are viewed and assessed equally for analysis (e.g. Rodger, Moore, & Newsome, 2009), while through the lens of social capital, the social networks formed in a community are the focus and via the interactions among those networks shared norms, trust, and reciprocity can be developed and then encourage cooperation toward achieving common goals (Ecclestone & Field, 2003; Harpham, Grant, & Thomas, 2002; Jones, 2005). The essence of the stakeholder approach and theory, which originated in the business arena with regard to the management of companies, is that the

Dominique Bragg and Cynthia S. Deale are both affiliated with East Carolina University.

interests of all parties involved need to be considered in the management of resources (Freeman, 1984). With respect to sustainable tourism, those parties can include the present visitors, future visitors, present host community, and future host community (Byrd, 2007), and within those four broad categories can be found tourists and such groups as “investors, legislators, government agencies, environmentalists, the media, the scientific community, competitors, special interest groups, the general public, and local communities” (Manwa, 2003, p. 46). To effectively manage, maintain, and enhance sustainable tourism efforts, including those related to wildlife tourism in a particular area, all stakeholders need to work together in a cooperative manner; however, frequently the interests of the parties involved compete with each other and therefore, additional issues may arise due to the varied concerns and priorities of the parties involved (Lawrence, Wickins, & Phillips, 1997).

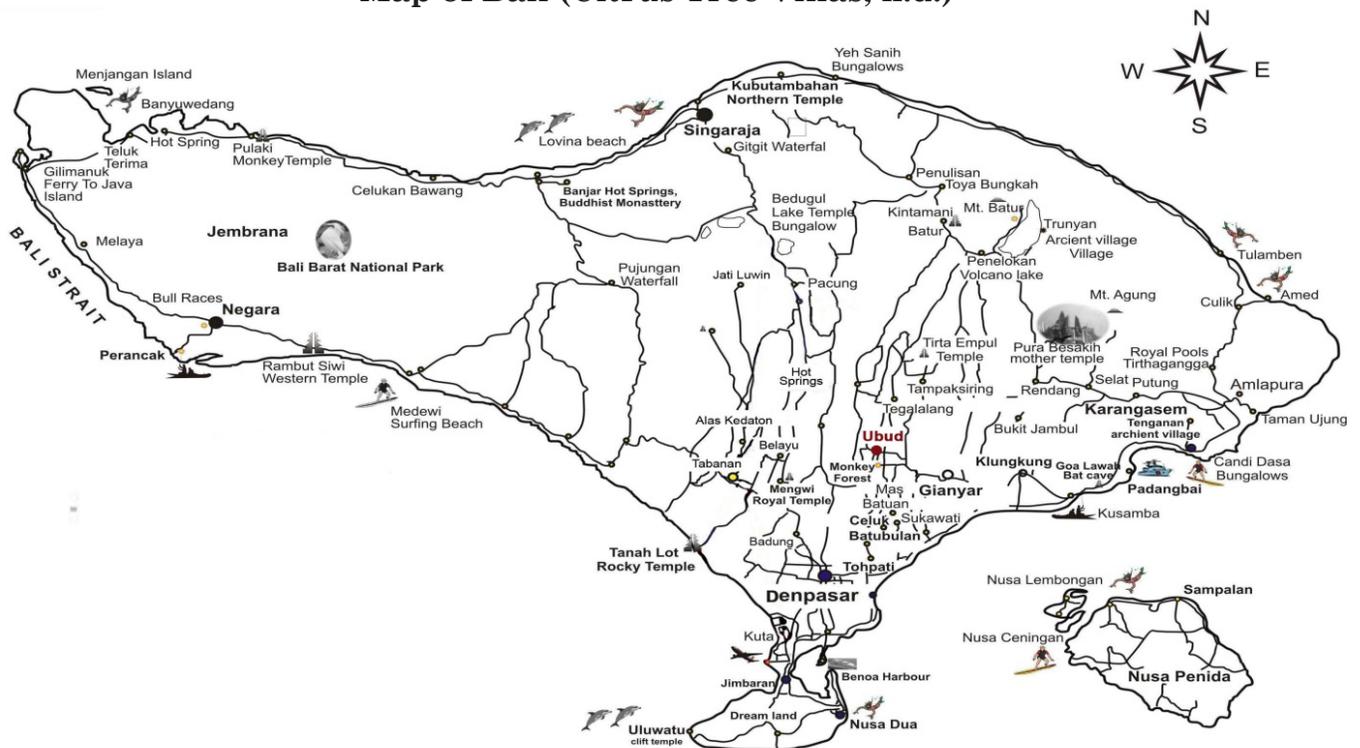
The Archipelago of Indonesia. The country of Indonesia is the largest archipelago in the world, composed of more than 17,000 islands. Indonesia is situated between the Pacific Ocean and Indian Ocean (Wheatley, 1999). The population of Indonesia was 258,316,051, as of a 2016 estimate (CIA, 2017). It is the largest Islamic country in the world with 87.2 % of the population Muslim, 7% Protestant Christian, 2.9% Roman Catholic Christian, 1.7% Hindu, 0.9% other (includes Buddhist and Confucian), and 0.4% unspecified (CIA, 2017). Indonesia is the fifth most populated country in the world with more than 250 ethnic groups,

the fourteenth largest oil producer, and the most forested Asian country with 51.7% of the land covered in forests (CIA, 2017; Wheatley, 1999).

Bali: The Isle of Light. The island of Bali is one of the 17,000 islands that make up the country of Indonesia; it is only 90 miles long and 50 miles wide, and yet it has over four million residents (The Bali Today, 2014). Bali is home to the majority of Indonesia’s Hindu minority. Roughly, 93% of Bali’s residents practice Balinese Hinduism. Bali has diverse terrain with volcanic mountains, lakes, rainforests, rice paddies, and beaches; the arc of active volcanoes is in the central eastern section of the island. Bali is divided into nine districts and has a rich cultural and artistic heritage with influences from India. Evidence of trade between India and Bali goes back to the first century B.C.E. Additional influences of India on Bali include Hinduism and its caste system, writing, the introduction of many Sanskrit words, and the arts. Balinese art forms with Indian influences encompass dance, palace and temple architecture, stone and wood carving, drawing, painting, and batik textiles (Wheatley, 1999). Each town or village typically specializes in a particular art form; all of Bali is filled with artistic mastery (Luchman, Kim, & Hong, 2009; Lansing, 1995; Vickers, 2012). See the map of Bali in Figure 1.

Ubud: Bali’s Cultural Center. The town of Ubud is located in the southeastern part of central Bali in the uplands, between the volcanic mountains and the sea. Ubud is in the district of Gianyar, one of the most fertile, best cultivated, and most densely populated districts in all of Bali.

Figure 1
Map of Bali (Citrus Tree Villas, n.d.)



It is also Bali's cultural center. The town of Ubud is both the cultural center of the district of Gianyar, and for all of Bali. Ubud is alive and thriving with culture and the arts. The Ubud Art Market, the shops, the nightly dances at the palaces, the restaurants, and the Sacred Monkey Forest Sanctuary are all parts of a greater whole that make Ubud a cultural center. Ubud's role as the cultural center creates a unique tourism product (MacRae, 2016).

Mandala Suci Wenara Wana (Sacred Monkey Forest Sanctuary).

The Sacred Monkey Forest Sanctuary, commonly referred to as Monkey Forest Ubud is in Padangtegal, a village in Ubud, Bali, Indonesia. The monkey forest is comprised of approximately 12.5 hectares (30.8 acres). There are three temples within Monkey Forest Ubud; the Main Temple (Pura Dalem Agung), the Cremation or Death Temple (Pura Prajapati), and the Holy Spring Temple (Pura Beji). Archeological analysis shows that the temples were built in the middle of the fourteenth century. The guiding principle of the Sacred Monkey Forest Sanctuary is the concept of Tri Hita Karana, a philosophy in Hinduism that centers on three means to attain spiritual and physical well-being (Monkey Forest Ubud, 2017). The principle of Tri Hita Karana illustrates the importance of maintaining three levels of harmonious relationships for the Balinese. The three levels of relationships include harmonious relationships between humans and the Supreme God, humans and humans, and humans and the environment. Through Tri Hita Karana, Monkey Forest Ubud conserves the natural environment by providing a protected sanctuary for Ubud's resident monkey population of macaques (Bali Around, 2017).

The Balinese Long-Tailed Macaque. In general, the Balinese long-tailed macaque (*Macaca fascicularis*) is one of the more successful primate species in terms of its ability to live among human populations (Liedigk, et al., 2015). Commensalism or coexistence between humans and other wildlife is becoming the norm rather than the exception. As human populations continue to grow and spread out into previously untouched and uninhabited regions, humans will increasingly come into contact and conflict with other animals at varying degrees of intensity (Bonadio, 2000; Woodroffe, Thirgood, & Rabinowitz, 2005).

Monkey Forest Ubud is home to roughly 600 Balinese long-tailed macaques. They are split into six groups with overlapping territories within the forest and are one of the most widely distributed primates other than humans. The Balinese and the macaques have shared the island for a long time and as a result have a dynamic relationship. Monkeys feature prominently in the Ramayana, an Indian epic poem. One of the main characters from the epic poem is Hanuman, the monkey commander of the monkey army. Conservation efforts are a vital component of Monkey Forest Ubud. The principle of Tri Hita Karana and Balinese cosmology create a foundation for the conservation of the macaques and the forest (Monkey Forest Ubud, 2017).

Management Structure of the Sacred Monkey Forest Sanctuary.

The village of Padangtegal owns and has complete oversight over all decisions related to the Sacred Monkey Forest Sanctuary. The manage-

ment structure for Monkey Forest Ubud has three levels. The upper level includes an advisory board and auditing board composed of individuals from the community and the "bendesa" or village leader who is elected by the community for a term of five years of service. The village leader is the direct supervisor of the general manager of Monkey Forest Ubud. The general manager oversees the finance, marketing, human resources, general affairs, and conservation divisions. Each division is responsible for a certain set of duties. The finance division deals with accounting, purchasing, and ticketing. The marketing department handles data, information, and publication; public relations; sales; and information and technology. Human resources and compensation and benefits fall under the purview of the human resources division. The general affairs department deals with a variety of entities including the first aid clinic, public area, cleaning service, security, parking, and maintenance. The conservation division focuses on the animals, plants, environment, and animal clinic (General Manager, (GM), personal communication, 2016).

Tourism at Monkey Forest Ubud. Since Monkey Forest Ubud is owned and operated by the village of Padangtegal, all income generated from tourism to the monkey forest stays in the village and the monkey forest. According to the general manager of the monkey forest, in 2015, Monkey Forest Ubud had 2,828 visitors to the forest daily and 1,049,723 visitors total for the year (GM, personal communication, 2016). The forest's gross income was \$29 billion IDR (\$2,220,848.27 USD). The operating cost and government tax was \$8 billion IDR (\$612,650.56 USD). Overall, the village earned \$21 billion IDR (\$1,608,207.72 USD) in 2015 (GM, personal communication, 2016). The peak months for visitors to the monkey forest are January, July, August, and December. Most visitors are from Australia, China, Korea, France, and Russia (GM, personal communication, 2016). The Sacred Monkey Forest Sanctuary provides a combination of ecotourism, wildlife tourism, and cultural tourism within the larger context of its location in Ubud, Bali.

The specific type of wildlife tourism offered at the Monkey Forest Ubud is in the form of macaque tourism, which focuses on viewing and interacting with macaques in a free-ranging habitat and does not always fit all contexts of ecotourism. However, in the case of the Sacred Monkey Forest Sanctuary, macaque tourism to the site conserves both the natural environment and the wildlife within, provides economic benefit to the local community, and brings cultural awareness to visitors regarding the larger context of Balinese culture (Luchman, Kim, & Hong, 2009). Despite these benefits, there is also a potential for conflict along with the commensalism of humans and macaques at the monkey forest. Zhao (2005) defines commensalism as "a positive interaction between humans and macaques, with mutual benefits," while conflict is defined as "a relationship that can be physically injurious to both humans and the macaques" (Zhao, 2005).

The Dilemma

Possible negative impacts at macaque tourism sites involve disease transmission, altering macaque physiology, behavioral conflicts, and economic conflicts. Macaques at Monkey Forest Ubud are provisioned by the staff of the monkey forest. However, visitors have the ability to buy bananas within Monkey Forest Ubud to feed to the macaques, providing them with an extra food source. Some visitors also bring in snack foods for themselves and either intentionally feed the macaques or the macaques steal the food. These snack foods, although a delicious treat for the macaques, are unhealthy and should not be consumed by the monkeys. This creates a potential problem as these treats can influence the body composition, health, and birth rates of the macaques. Prior to the implementation of the current feeding regimen, macaques were often overweight. The joint efforts of the monkey forest staff and field researchers to develop the current feeding regimen for the macaques has significantly improved the body composition and health of the resident macaque population. Behavioral conflicts and competition can arise as a result of the high degree of overlap between humans and macaques. The high level of interaction and physical contact between humans and macaques creates increased risk potential of macaques transmitting a pathogen to humans and vice versa. In addition, instances of aggression are common when food is involved. Acts of aggression, specifically biting, pose increased risk of disease transmission (e.g. Engel & Jones-Engel, 2011; Leung, Baird, Druce, & Anstey, 2015). Furthermore, economic outcomes from macaque tourism can generate conflict within the local community and between neighboring communities that may be losing income (Fuentes, 2010).

Monkey Forest Ubud also faces two additional dilemmas involving carrying capacity. Carrying capacity is the ability of a destination to effectively and efficiently manage the largest number of individuals within the boundaries of a particular area and limits of the management. When too many people visit a location and the space cannot accommodate the higher traffic flow, the carrying capacity of the destination is compromised, and the natural environment, local community, and economy are negatively impacted (O'Reilly, 1986). There are two separate issues related to carrying capacity at Monkey Forest Ubud. One issue involves the carrying capacity of the macaques while the other relates to the carrying capacity of the visitors to the monkey forest. In 2003, the macaque population was 220 individuals split into three multi-male/multi-female groups. As of May 2016, there were approximately 600 macaques living in six groups. Although the management team of the monkey forest recently purchased some additional land, making their total area approximately 14 hectares, the forest has maximized its growth potential. There is only so much land for the macaques to use within the boundaries of the forest. The forest is bounded by two towns, rice fields, a road, and two rivers (Fuentes & Gamerl, 2005). Additionally, under normal wild free-ranging circum-

stances, male macaques leave their natal groups at sexual maturity. At Monkey Forest Ubud, male macaques do not have that opportunity.

Several problems have developed because the macaque population is exceeding the carrying capacity of the forest environment. One problem is that additional stress is placed on the macaques that can lead to increased incidents of aggression toward other macaques, staff members, and visitors. Another problem is that the macaques venture farther and farther outside the boundaries of the monkey forest. It is not uncommon to see macaques directly across the street from the monkey forest or even further up Monkey Forest Road. Macaques will even make their way into nearby hotels, restaurants, and businesses.

The other carrying capacity issue at the Monkey Forest Ubud relates to the increasing number of tourists to the monkey forest and its surrounding vicinity. The management of the monkey forest has acquired additional land to expand the forest and has plans to build a new welcome center and facility offering art, culture, and sport. This expansion will most likely help to increase the number of visitors to the monkey forest. Increasing tourist numbers creates potential problems. Possible problems from increased visitors include increased pollution, theft, cultural conflict, and environmental damage.

Analysis

Macaques exceeding the carrying capacity of their environment in the monkey forest can potentially lead to increased aggression of macaques toward other macaques, staff members, and tourists. Fuentes and Gamerl (2005) rated aggression on a scale of 1 to 4. Aggression 1 (AG1) acts were defined as simple threats, AG2 included lunging at or chasing with no contact, AG3 acts included physical displacement, and AG4 acts involved physical contact including bites (Fuentes & Gamerl, 2005). Bites are most likely to occur when food is present. The majority of biting incidents with visitors happen when the visitor is feeding a monkey or withholding food from a monkey. Banana carts within the forest are prime locations for the occurrence of acts of aggression. The frenzy and chaos that occur around the banana carts when tourists buy bananas to feed to the macaques are probably exciting and stressful for macaques and humans. Tourists often scream, yell, and jump when macaques climb up their bodies or leap onto them. Some even try to withhold bananas from larger adults to feed juveniles and infants. Attempting to withhold food is the easiest and quickest way to see aggression from a macaque. In most scenarios, tourists blame the macaque for the aggressive behavior they just received, even though in the majority of those scenarios the tourists are not correct.

Additionally, this increased potential for acts of aggression, specifically biting, that occur around feeding leads to increased risk of disease transmission. Several diseases are transmissible from monkeys to humans and vice versa (Engel & Jones-Engel, 2011; Leung, Baird, Druce, & Anstey, 2015). Receiving any form of aggression, especially a bite, is

going to leave a visitor with a negative outlook on the macaques and his or her experience at Monkey Forest Ubud. Visitors who have negative experiences are more likely to leave negative reviews and encourage their friends and family not to visit, in turn negatively effecting tourism to the monkey forest (e.g. Nerd Nomad, 2016). Macaques surpassing the carrying capacity of the forest can also cause the animals to venture out beyond the boundaries of the forest. This movement of macaques outside of the forest boundaries can create problems for local businesses and also leave tourists with negative feelings about their experiences in Ubud. It is one thing to view and interact with the macaques within the monkey forest, which is the purpose of the monkey forest and why tourists add it to their itineraries; it is quite another to have to deal with macaques while walking down the street, eating lunch or dinner, shopping in a local shop, or seeing them in the hotel swimming pool.

The expansion and additions to the Sacred Monkey Forest Sanctuary will have some negative environmental and social impacts due to the increasing number of visitors. Possible negative environmental impacts include increases in pollution (from increased automobile and motorcycle traffic), solid waste, and energy and water expenditures. The potential social impacts to arise from the expansion and additions to the monkey forest involve potential conflicts with Padangtegal's neighboring village. The recently purchased land actually extends into this neighboring village. However, the residents of the village nearby do not have a say in any of the management decisions regarding the monkey forest nor will they reap the benefits of increased tourism to the forest.

The Future of the Monkey Forest Sanctuary

The future of the Monkey Forest Sanctuary relies on cooperation between the forest management staff members, primatologists and ethnoprimateologists, ecologists, tourism specialists, tourists, and community members. Note that ethnoprimateologists can play an important role, for they frequently work in teams, and as Fuentes (2010, p. 601) notes, employ "a revised primatological practice—an inclusive view that places humans and all primates in an integrated, shared, ecological, and social space: a space that opens biological anthropology to input from other types of anthropology." Coordinated efforts of the aforementioned stakeholders are needed to help Monkey Forest Ubud continue to survive and thrive as a competitive tourist destination.

Discussion Points and Questions

- What do you think are the major issues involved with wildlife tourism at the Monkey Forest Ubud and with wildlife tourism in general?
- Who are the stakeholders, public and private, that need to be included in the future plans for managing the Monkey Forest Ubud and what sorts of concerns might each group have and why?
- How can the staff members at the Monkey Forest Ubud deal with the increasing number of macaques?

- What are some positive impacts of the Monkey Forest Ubud expansion? How can the management team of the Monkey Forest Ubud maximize these positive changes?
- What are some negative impacts of the Monkey Forest Ubud expansion? How can these negative changes be minimized by the monkey forest management team?
- How can the management team ensure the forest expansion is done in a sustainable manner? What issues must be considered?
- What types of conflict between humans and macaques occur at the Sacred Monkey Forest Sanctuary? What other types of conflict occur between humans and wildlife around the world?
- What are some of the benefits of the current management structure of Monkey Forest Ubud?
- What are potential drawbacks to tourism in general?
- What suggestions do you have for the stakeholders to help the Monkey Forest Ubud have a successful future as a wildlife sanctuary and a sustainable tourism attraction?
- What experiences have you had or heard about with regard to wildlife tourism that involved both rewards and challenges and how do you think that this type of tourism can be sustainable?

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