



IUCN SSC PRIMATES
SECTION ON
HUMAN-PRIMATE
INTERACTIONS



Responsible Primate-Watching for Primate Tourism Professionals

SIÂN WATERS, MALENE F. HANSEN et al.

Version 1.0



The Section on Human-Primate Interactions of the IUCN SSC Primate Specialist Group

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IUCN SSC PRIMATES
**SECTION ON
HUMAN-PRIMATE
INTERACTIONS**

The Section on Human-Primate Interactions of the IUCN SSC Primate Specialist Group

The Section on Human-Primate Interactions is an interdisciplinary group that aims to understand the complex nature of human-primate interactions. We provide conservation practitioners with tools to manage interactions to minimise negative exchanges and promote coexistence in landscapes of increasingly rapid change.



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Foreword

by

Dr Russell A. Mittermeier, Chair, IUCN SSC
Primate Specialist Group



A publication of The IUCN SSC Primate Specialist Group Section on Human-Primate Interactions

With the online publication of *Responsible Primate-Watching for Tourists*, we would like to continue to promote the hobby/sport of *primate-watching*, and its associated activity, *primate life-listing*. The idea for this derives from birdwatching—one of the most popular hobbies in North America, Europe, and Australia, and increasingly elsewhere across the world. Birdwatching has been with us for a long time, and its popularity is growing. It has benefited by an ever-increasing number of guidebooks that cover the entire planet and, in the past 15 years, by the availability of new sophisticated equipment such as phone apps for bird identification using visual and sound information. The most striking example is the phone app Merlin (<https://merlin.allaboutbirds.org>), released for free by the Cornell Laboratory of Ornithology, that has an average of 700,000 active users per month, and counting. Huge progress has resulted from more websites connecting birders around the world, and from global bird databases such as eBird (<https://ebird.org>), housed by the Cornell Laboratory of Ornithology at Cornell University (USA), or regional or national databases, such as the Euro Bird Portal (<https://eurobirdportal.org>) where birders report their observations. All of this has been good for conservation, stimulating awareness of and love for birds, and providing many ecotourism-based economic opportunities for communities living in or near bird habitats. The passion for birds has become a multibillion-dollar industry, with at least some of the benefits accruing to the bird-rich countries of the tropics.

If we consider tropical countries with very high bird diversity, such as Brazil, Colombia, Peru, Ecuador, Indonesia, Kenya, Tanzania, and many others, the economic opportunity is also very significant. The National Audubon Society estimated that 150,000 bird-watchers will visit Colombia from the United States over the decade 2017–2027, generating US\$47 million annually and sustaining 7,500 new jobs (Ocampo-Peñuela and Winton, 2017). These authors indicated, however, that the numbers could be an underestimate if Colombia can emulate the recent surge in birdwatching tourism in neighbouring Peru, where the number of birdwatching tourists doubled from 2012 to 2013, yielding an annual gross income of US\$89 million (Lacouture, 2017). Demand for bird-watching tourism appears to be sustainable, as the global market is already very large, with 46 million bird-watchers.

Inspired by the success and impact of birdwatching and bird life-listing, we decided more than 25 years ago to launch *primate-watching* and *primate life-listing* as a formally recognised activity (e.g., Coniff, 2007). There are in fact quite a few of us primate-watchers around already, and some of us have been active for as long as five decades. By comparison with what exists for birds, we have very little in the way of good, published material to identify primates, such as country or regional field guides and other visual and auditory aids.

Fortunately, this is changing. We tried to stimulate primate-watching in 1994 with the first edition of a book on lemurs, and we have since published three more editions of this field guide and a number of other titles on primates, and still more are in preparation. In addition, a number of other authors have produced very useful primate guides, including ones for Central Africa, Asia, Brazil, Colombia, French Guiana, Indonesia, India, and Vietnam, and primate information of variable quality can also be found in a number of other regional or national guidebooks on mammals.

Mittermeier and Rylands also launched a series of Pocket Identification Guides in 2004, first with Conservation International and now with Re:wild. These are small convenient folding guides to identify animals from a particular region. Twenty-four have now been published, 19 of them on primates, including four on lemurs. We have also prepared an App for lemur-watching, which we continue to work on bringing to launch.

Why should we bother? Well, first of all, because primate-watching and primate life-listing are fun. Those of us who are as passionate about these animals as the birders are about their species, really enjoy seeing monkeys, apes, lemurs, lorises, galagos, pottos and tarsiers in their natural environments, and we want more of you to get excited about these animals as well. But it is really about more than just entertainment. First and foremost, we want to stimulate awareness of primates through such activity. Second, primates are found mainly in tropical rain forests and are the most visible mammals in these forests. As such, they have been, and continue to be, excellent flagships for these dwindling habitats and have contributed greatly to tropical rain forest conservation over the past 40 to 50 years. Furthermore, we need more primate-based ecotourism to provide economic alternatives to the communities living in close proximity to the habitats in which primates live. These communities need to benefit economically from the presence of primate populations if we expect them to take a major role in conserving them. To ensure that this happens, we need to go and see these creatures in their natural environments, interact with the communities upon whose survival they ultimately depend, share our excitement and enthusiasm, and, after all is said and done, make a contribution to the local economy. In many places, this may be the only effective tool at our disposal to ensure the survival of Critically Endangered and Endangered primates, and it needs to happen now.

To be sure, some primate ecotourism already exists. In Central Africa, mountain gorilla tourism has been in place for more than 40 years and is an excellent model. What is more, many new primate sites are being developed every year, including other gorilla

species and subspecies in Central Africa, chimpanzee tourism in several countries, and orangutan tourism in parts of Sumatra and Borneo. China has developed several sites for seeing the golden monkey and other snub-nosed monkey species. Many macaque and langur species are easily seen at sacred sites and even in many urban areas in China, India, Bangladesh, Nepal, and Southeast Asia, and increasingly in natural forests as well. More monkeys can be seen in a wide variety of parks and reserves in Mexico, Central and South America. And of course, the wonderful lemurs of Madagascar can now be seen in a growing number of sites throughout this unique country.



Fig. 1: A selection of Pocket Identification Guides produced by the IUCN SSC Primate Specialist Group and partner organisations.

Unfortunately, primate ecotourism has not always been done as well or as carefully as we might like, and we need to improve it wherever the quality is poor or even detrimental to primate survival. However, we need to recognise that it is here to stay, and we simply have to get it done in the most appropriate manner possible to promote the conservation of tropical forests, the well-being of local communities, the economies of the countries where primates occur, and of course, the survival of the primates themselves. What is more our IUCN SSC Primate Specialist Group has already published several best practice guidelines for appropriate primate ecotourism, especially for great apes (e.g., [Macfie and Williamson, 2010](#); [Waters *et al.*, 2021](#); [Waters and Hansen *et al.*, 2023](#)), and a number of others are in the works. In any case, we have only started to scratch the surface of the potential that exists for primate-watching, and to demonstrate at a much higher level the economic benefits that it can provide.

Further reading

Conniff, R. 2007. Primate watching is the new birding. *Audubon Magazine*. Available online: <https://www.audubon.org/magazine/july-august-2007/primate-watching-new-birding>.

Lacouture, M. 2017. Colombia: Destino mundial de avistamiento de aves (Colombia: world-class bird-watching destination). *Ministerio de Comercio, Industria y Turismo*. Available online: <http://www.mincit.gov.co>.

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Mittermeier R. A. 2023. Foreword. In: Waters, S., Hansen, M. F., *et al.* *Responsible Primate-Watching for Primate Tourism Professionals*. IUCN SSC Primate Specialist Group Section on Human-Primate Interactions.



Introduction

A publication of The IUCN SSC Primate Specialist Group Section on Human-Primate Interactions



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Wildlife tourism can produce revenue that is used for conservation and community development as well as promoting public awareness of conservation issues (Wallis 2018). However, wildlife tourism can have negative impacts on individuals and species due to human-to-wildlife disease transmission, stress and behaviour changes in response to disturbance by tourists. Because of these negative impacts, the IUCN SSC Primate Specialist Group Section on Great Apes produced *Best Practice Guidelines for Great Ape Tourism* (Macfie and Williamson 2010). These guidelines do not include other primate species, which tourists will often encounter in diverse locations, including national parks and other protected areas, non-protected areas, cities, temples, animal sanctuaries and zoos. Primate tourism, the watching of primates in the wild, or in anthropogenic landscapes, is thus much broader than nature tourism, or ecotourism, which is defined by its promotion of biodiversity conservation, low environmental footprint, low impacts on the wildlife being watched, and the active involvement of local peoples (Ceballos-Lascurain 1996). Five forms of primate tourism have been defined: targeted, primate tourism as part of wildlife tourism, incidental, sanctuary and opportunistic primate tourism (see Wallis 2018 for detailed definitions).

Wallis (2018) highlights the highly variable nature of primate tourism experiences and notes that they each require different management and regulatory strategies. Regulations and their enforcement often aim to control unwanted behaviours in visitors or primates (such as direct contact and provisioning). Management authorities and enforcement agencies vary from location to location and can be the responsibility of the state, communities or individuals. Most large ape tourism is highly regulated, but this is rarely the case with tourism focusing on other primates such as lemurs, monkeys and gibbons, and nocturnal primates. There is a need to provide recommendations for people providing diverse primate tourism experiences in various situations and locations.

Our audience here includes (but is not restricted to) researchers, managers, government officials, tour operators and site managers. The aim of this document is to assist those involved to minimise the negative effects and increase the benefits of primate tourism. Responsible tourism means depicting wildlife in a respectful, scientifically accurate way. We have also written *Responsible Primate-Watching for Tourists*. (Waters and Hansen *et al.*) These are specific to various tourism contexts, geographical regions and genera. They include recommendations for primate-watching in zoos and sanctuaries, and in geographical areas such as Madagascar, Central and South America, and the Caribbean. Other chapters discuss specific taxa, such as gibbons, and African and Asian monkeys and there are recommendations for watching nocturnal primates. We urge all those involved in primate tourism to refer to the recommendations in *Responsible Primate-Watching for Tourists* which are relevant to their situation, region, and the species they focus on, in addition to these general recommendations.

The 7m distance rule

Many of the above guidelines recommend a minimum distance of 7m between tourists and primates. This distance was first recommended for tourist viewing of gorillas to avoid the transmission of respiratory diseases (Macfie and Williamson 2010) as particles from a human sneeze can travel up to 6m in still conditions (Baker 1995 in Sandbrook and Semple 2006). Since the COVID-19 pandemic, the distance has been extended to 10m in the mountain gorilla range states with mask-wearing now compulsory for tourists (Gilardi *et al.* 2021; Kalema-Zikusoka *et al.* 2021).

Mountain gorilla tourism is tightly controlled but this is not always the case in other places where tourists can view primates. In many locations, tourists and primates can and do interact freely with some primates coming very close to people. Tourism professionals reviewing this document rightly pointed this out. While we understand the difficulties involved, we still recommend the 7m distance rule because of the risks of transmission of airborne infections between primates and people.

Keeping our distance when in vehicles also has benefits for primates in terms of reducing their stress from being viewed. For example, proboscis monkey groups (*Nasalis larvatus*) viewed from boats on the Kinabatangan River in Borneo showed fewer behavioural signs of stress if a boat approached slowly and kept a distance of 60m away (Davila-Ross *et al.* 2022).

We hope all interested parties will refer to and use both this publication and *Responsible Primate-Watching for Tourists* and that they stimulate the creation of advice specific to individual sites. We encourage everyone to follow the recommendations and share them widely. We will strive to make them available in as many languages as possible. They are easy to access and download via our website (<https://human-primate-interactions.org/>) and will, in future, be accessible via a mobile phone app.

In the following sections, we provide information on the benefits of primate tourism, costs of primate tourism, and habituation of primates for tourism. We then provide recommendations for primate tourism professionals. Several case studies illustrating practitioners' and researchers' experiences of primate tourism globally can be found [here](#).

Useful links

[Primate pocket guides](#)

[Mammal Watching – Primate-watching and life-listing](#)

[Responsible Primate-Watching for Tourists.](#)

[Best Practice Guidelines for Responsible Images of Non-Human Primates.](#)

[Best Practice Guidelines for Great Ape Tourism](#)

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Benefits of Primate Tourism

A publication of The IUCN SSC Primate Specialist Group Section on Human-Primate Interactions



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Ever since the 1950s, when primate tourism emerged as a way for people to view non-human primates in their natural environment, primate tourism has played a crucial and beneficial role in the economy of local communities and in wild-primate conservation (Russon and Wallis 2014). There are three major benefits associated with primate tourism, namely: (1) the protection of primate populations and their habitat; (2) the increase in income generation and involvement of local communities, and (3) the recreational and educational benefits for tourists. This section briefly reviews these three benefits.

Protection of primate populations and their habitat

Primates are currently facing an extinction crisis: recent estimates suggest that about 60% of primate species are threatened with extinction and about 70% of primate populations are in decline (Estrada *et al.* 2017). Habitat loss appears to be the main driver of primate population decline, with 76% of primate species threatened by the expansion of agriculture and 60% of primate species affected by habitat loss due to logging and wood harvesting (Estrada *et al.* 2017). In this context, primate tourism can play a key role in the conservation of primate populations by promoting the creation of protected areas, by funding the protection of wild primate populations, by helping to guard the area and/or by changing people's attitudes towards wildlife (Russon and Wallis 2014). Because protected areas protect primate habitats and populations from human activities such as poaching and deforestation, they are one of the most effective strategies to mitigate primate habitat loss and conserve primate populations (Bruner *et al.* 2001; Estrada *et al.* 2017). Accordingly, several studies have shown that the rate of habitat loss is lower and primate populations are more abundant inside than outside protected areas (Tafoya *et al.* 2020; Rovero *et al.* 2015). Furthermore, primate groups that are habituated and commonly visited by tourists receive more protection than those groups that are not habituated. For example, the increase in mountain gorilla (*Gorilla beringei beringei*) population size that occurred from the late 1970s has been largely driven by the gorilla groups that are commonly visited by tourists (Robbins *et al.* 2011).

These groups, which receive veterinary care and additional protection measures against poachers compared to the unhabituated groups, have shown a steady increase of roughly 4% of the population per year from 1967 to 2008 while the unhabituated groups have suffered a decline of 0.7% of the population per year during the same period (Robbins *et al.* 2011).

In many tourist sites, primates are provisioned by members of staff (e.g., monkey parks in Japan or orangutan rehabilitation centres in South-East Asia; Kurita 2014; Russon and Susilo 2014) or tourists (e.g., religious temples in many Asian countries). Anthropogenic food may offer physiological benefits to the animals, because it is generally richer in energy and more easily digestible than wild food (Riley *et al.* 2013; McLennan and Ganzhorn 2017). Among Japanese macaques (*Macaca fuscata*), for example, the introduction of provisioning to attract monkeys and allow tourists to observe them at a close range has led to rapid population growth, with decreased mortality and increased birth rates (Kurita 2014). Furthermore, primate populations that regularly forage on anthropogenic food might be able to spend less time feeding and more time resting and socialising, as shown in vervet monkeys (*Chlorocebus pygerythrus*; Saj *et al.* 1999), Barbary macaques (*M. sylvanus*; El Alami *et al.* 2012), Rhesus macaques (*M. mulatta*; Jaman and Huffman 2013), Assamese macaques (*M. assamensis*; Koirala *et al.* 2017) and long-tailed macaques (*M. fascicularis*; Ilham *et al.* 2018). However, there are numerous costs associated with provisioning and the costs of provisioning often outweigh its benefits which are detailed in the chapter on costs of primate tourism.

Finally, primate tourism in captive settings can also play a prominent role in primate conservation. For example, zoos can promote the protection of free-ranging primates in four major ways: 1) through captive breeding programmes that maintain a genetically diverse primate population that can be potentially reintroduced in the wild; 2) by funding and managing *in situ* conservation programmes; 3) by supporting captive and wild research that provides new insights into the biology and management of a primate species; and 4) by educating the public on topics related to primate conservation and environment protection, and promoting social action (Tribe and Booth 2003). The Golden Lion Tamarin Conservation Programme, for instance, provided a coordinated research programme aimed at enhancing the understanding of the biology and captive management of golden lion tamarins (*Leontopithecus rosalia*) leading to, first, an increase of the captive tamarin population from fewer than 80 individuals in 1971 to approximately 370 by the end of 1983 (Kleiman *et al.* 1986), and, then, to the reintroduction of the captive populations in the wild, which drove a 20% increase of the size of the known wild tamarin population in the first 10 years of the programme (Beck *et al.* 1994). However, cases of successful reintroductions are rare, because of the numerous challenges associated with reintroducing captive animals to the wild (Catibog-Sinha 2008). Zoos' major contribution to primate conservation, therefore, lies in their financial support of *in situ* wildlife conservation programmes.

The Association of Zoos and Aquariums (AZA), for instance, spent more than US \$208 million on field conservation projects in 2020, covering more than 900 species and subspecies (AZA 2020), and the British and Irish Association of Zoos and Aquariums (BIAZA) supports more than 600 projects every year.

Income generation and involvement of local communities

The primate-tourism industry provides a significant revenue that can be used for primate conservation programmes. For example, prior to the outbreak of the COVID-19 pandemic, the Uganda Wildlife Authority reported that primate tourism generated approximately USD 16 million annually (Ofungi 2019), and the revenue from gorilla tourism alone accounts for over 70% of Uganda's total tourism revenue (Uganda Wildlife Authority 2020). This money can be used to either directly fund programmes aimed at conserving wild primate populations or to provide financial benefits to local communities, which might indirectly benefit primate conservation. In Rwanda, although the local communities' share of gorilla tourism revenue is relatively small compared to the national and international share, communities run various projects and enterprises that complement the revenue received through the Tourism Revenue Sharing scheme. The revenues generated from these activities are very significant for the development of the areas inhabited by primates. Even if some of this income leaves these destinations as profit to non-local businesses and purchase of external goods and services, the contribution remains significant (Sandbrook 2010). Moreover, local communities can also earn income indirectly by offering services such as accommodation, entertainment, food, and souvenirs to tourists. However, there are major challenges such as corruption and favouritism in the distribution of these funds to the local communities (Tumusime and Vedeld 2012; Ahebwa *et al.* 2012). It is important that the managers of primate habitats ensure that the income from primate tourism is distributed equitably to encourage continued conservation of primates by the local people, among other actors. In some conservation contexts, there is a risk of losing control of the venture when third-party operators and landowners conduct the activities just to maximise profit. A carefully thought-out social pact should be in place and an exit strategy defined from the beginning with input from all stakeholders (Ruiz-Miranda *et al.* 2020; Tojeiro 2011).

Evidence suggests that primate conservation programmes are more likely to be successful when local communities are involved. For instance, Current Conservation (2017) presents the successful case of the Kinabatangan Orangutan Conservation Project (KOCP) where an NGO partnered with the Sabah Wildlife department to involve local communities in orangutan conservation. In this case, communities were involved in activities ranging from participating in field studies, and tourism programmes, to being employed as wardens. This programme has created 26,000 ha of protected forests in the area. Similarly, international conservation NGOs (e.g., World Wide Fund for Nature, African Wildlife Foundation, and Fauna and Flora International) partnered with the governments of Uganda, Rwanda, and the Democratic Republic of Congo to initiate the International Gorilla Conservation Programme (IGCP), with the goal, among other things, of enlisting communities into primate conservation via a community volunteer scheme called the Human Gorilla conflict resolution teams (HUGO) (IGCP 2021).

The scheme involves recruiting local community members who volunteer to persuade gorillas back to the forest when they are on people's land.

National legislation is another avenue for encouraging community involvement in primate conservation. For instance, the national governments of Madagascar, Namibia and Nepal have laws that generally encourage community involvement in conservation, thereby incidentally participating in primate conservation (Horwich 2017). Similarly, the Indonesian government encourages community involvement in the conservation of orangutans and their habitats through social forestry programmes (Rahman 2020). These activities enable local communities to directly manage and use village forests inhabited by orangutans (*Pongo pygmaeus*) through their local governance institutions. As a result of these deliberate legislative measures, the Simpang Hilir Subdistrict, Kayong Utara Regency established seven village/customary forests between 2015 and 2020, contributing to the conservation of the primates that live in those forests (Rahman 2020). In Madagascar, a number of local guide associations are actively engaged in creating new community reserves, often in close proximity to government protected areas (R. A. Mittermeier, pers. comm., 2022).

Recreation and education

The possibility of visiting sites where primates live offer tourists a wide range of recreational activities, ranging from the opportunity to conduct safari-like expeditions to watch primates in their natural environment (e.g., great ape tourism in Africa and Asia; Russon and Wallis 2014) to the possibility of interacting with them in more anthropogenic environments (e.g., monkey parks in Japan; Kurita 2014; Sengupta *et al.* 2021). Zoos and monkey parks in non-primate habitats also offer visitors the chance to see animals that they might not otherwise be able to see in their natural environment.

In addition to providing visitors with recreational opportunities, many primate tourist sites offer educational programmes that aim to increase visitors' knowledge about the primate species visited and their habitat. These programmes also encourage tourists to engage in more responsible behaviours towards wildlife and to support primate conservation. These educational programmes can take different forms, from guided tours to the distribution of information leaflets or setting up educational boards. Unfortunately, many sites still offer limited or no information about the local primate species and their habitats. This is particularly the case in areas characterised by incidental primate tourism (e.g., religious temples; Matheson 2016). Perhaps more worryingly, many parks and tour guides do not enforce regulations, such as minimum distance rules (Nakamura and Nishida 2009; Leason and MacGregor 2014; Weber *et al.* 2020), which can give visitors the wrong impression that these rules are not important.

With more than 700 million visitors annually (Kirk-Cohen 2017), zoos can offer an important contribution to public education. Across the globe, in addition to providing visitors with educational boards and leaflets that offer information on the biology, behaviour and conservation status of the animal species housed in the facility, zoos commonly offer

structured educational programmes for organised groups, schools and universities that involve guided tours, and talks (Tribe and Booth 2003). Zoos also contribute significant funding to primate conservation *in situ*.

Conclusions

In conclusion, primate tourism can provide a wide range of benefits both for primate populations and for local communities. In addition to promoting the establishment of protected areas, primate tourism can provide important revenues that can be invested both in primate conservation programmes and in local communities. Furthermore, primate tourism can educate tourists and the general public on the importance of primate conservation. However, not all forms of primate tourism succeed in these intentions and there are numerous costs associated with primate tourism (see below) that will need to be minimised if we want the benefits to have a meaningful impact.

Ampumuza, C., Kaburu, S. S. K. 2023. Benefits of Primate Tourism. In: Waters, S., Hansen, M. F., *et al.* *Responsible Primate-Watching for Primate Tourism Professionals*. IUCN SSC Primate Specialist Group Section on Human-Primate Interactions.



Costs of Primate Tourism

A publication of The IUCN SSC Primate Specialist Group Section on Human-Primate Interactions



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Although primate tourism presents several benefits (see above), there are also serious risks associated with such activity, including infectious disease and provisioning-associated risks, which might be reduced if appropriate measures are followed. Here, we provide information on how to reduce the costs of primate tourism.

Infectious disease risks

An infectious disease is caused by a pathogen (including microbes, such as viruses, bacteria, or parasites) which is transmitted from one organism to another (Nunn and Gillespie 2016). Travel increases stress levels in humans, reducing the body's ability to fight an infection, and increasing susceptibility to infectious disease. Travel also brings tourists into contact with more people and places and therefore more diseases, sometimes resulting in the introduction of new pathogens for which non-human primates (hereafter primates), and local people do not have immunity (Muehlenbein and Wallis, 2014). Proximity to tourists might increase stress levels in primates (Shutt *et al.* 2014; Maréchal *et al.* 2016), reducing their immunity and increasing their susceptibility to infectious diseases. Humans and primates are so genetically similar that they can easily be infected by the same diseases, with pathogens passing from humans to primates, or primates to humans (Ramon *et al.* 2023). Pathogen transmission from humans to primates can occur by direct contact (i.e., by touching a primate), or through airborne transmission when people are close to primates. Some pathogens can also be transmitted indirectly by people and primates touching the same surfaces in their environment, such as foods, plants, rocks, or waste. Moreover, many primates are sociable and live in tight-knit groups, meaning that infectious diseases, once introduced, can spread very quickly between group members. Infectious disease risks can, therefore, have dramatic consequences for the survival of primate populations, which are often already on the brink of extinction (65% of primate species are threatened with extinction, IUCN Red List 2020).

Other measures to prevent the spread of disease in tourism contexts include being fully vaccinated, reporting symptoms to a health professional/tourist operator, maintaining a safe distance from primates, not provisioning primates, wearing masks, and following hygiene measures (e.g., avoiding spitting and having designated locations for human waste outside primate habitat). However, these measures are often not followed (Hanes *et al.* 2018; Muehlenbein *et al.* 2008). Maintaining a distance of greater than 7m (23 feet) and wearing a mask can reduce the potential spread of airborne diseases (Macfie and Williamson 2010).

Provisioning

We strongly advise against provisioning primates for tourism activities. However, tourists or staff working at some tourist sites do provide food directly to primates, either throwing or handing food to the animals to lure them closer. This is called intentional provisioning. People at such sites scatter food or build specific feeding platforms, and may provision primates with or without guidance. Provisioning may also occur indirectly through discarded food or waste.

Primates are often attracted to human food, but many foods offered are highly caloric (i.e., junk food) and difficult to digest. Such foods can negatively affect primate health and behaviour (Maréchal *et al.* 2016; Ilham *et al.* 2018). In high quantities they can contribute to obesity, heart attacks and diabetes in primates (Kemnitz *et al.* 2002; Sapolsky 2014). These foods can also increase parasite diversity in the stomach and intestines (Borg *et al.* 2014; Lee *et al.* 2019). This is particularly concerning, as polyparasitism can compromise a host's immunity and, so, disease outcomes (Bordes and Morand 2011).

Provisioning also increases disease transmission risk from human to primate, and primate to human, by bringing humans and primates closer and via food exchange (Muehlenbein and Wallis 2014, Carne *et al.* 2017). When tourists feed them, primates may fight to gain access to the food, increasing group stress and risking potential injury to humans and primates in the process (Sabbatini *et al.* 2006; Hsu *et al.* 2009; Maréchal *et al.*, 2011). Such injuries can result in serious infection, which can have fatal consequences for the animals. Provisioning can also disrupt social relationships, reducing positive social interactions such as grooming (Morrow *et al.* 2019; Kaburu *et al.* 2019).

Food provisioning for tourism can also contribute to an increase in crop-foraging. Crop foraging occurs when wildlife enters agricultural fields to feed on cultivated crops. For example, rhesus macaques (*Macaca mulatta*) have been provisioned with food for more than 47 years at the Nanwan peninsula in Lingshui county, Hainan, China. Around 500 visitors come to the park every day and feed the monkeys. The groups have doubled in size and this increase has led to competition for provisioned food and promoted crop foraging (Cui *et al.* 2021).

Provisioning can also alter primate movement within their habitat (Waterman *et al.* 2019), including reducing the size of their home range (Hansen *et al.* 2020). It can also increase proximity to roads, which increases the risk of vehicle collisions causing death and serious injuries to primates and also to the people feeding them (Campbell *et al.* 2016; Ilham 2023). Overall, the serious concerns around the costs of provisioning for primate health and behaviour highlight the need to avoid or intensively regulate such practice.

Many incidental primate tourism sites have a long history of provisioning due to cultural practices or religious beliefs. It may therefore be impractical and disrespectful to attempt to fully eliminate provisioning at such sites. An understanding that provisioning can be discouraged but culturally acceptable at some sites while prohibited by law at others is crucial for navigating the diverse spectrum of provisioning practices at incidental tourism sites.

Plastic pollution

The ubiquitous use of plastic bags and plastic bottles worldwide means plastic pollution may occur in and around primate habitats and directly violating rules of proper ecotourism. These objects are particularly dangerous when it comes to primates (Krief *et al.* 2020; 2022). Primates face both accidental and deliberate exposure to harm around plastics. In addition to the potential toxic content of plastic, any pathogens on bags or bottles disposed of by humans can be directly passed to primates whose intelligence and manual dexterity can result in their twisting off bottle caps, pulling apart bags, and otherwise manipulating plastic to eat food inside (Meng *et al.* 2021). Therefore, just as we avoid sharing a water bottle with another person when we have a transmissible disease, we should also avoid the potential of that same bottle being accessed by our closest non-human relatives who are equally susceptible to our pathogens.



Barbary macaque (*Macaca sylvanus*).
Photo credits Ahmed El Harrad.

Maréchal, L., Hockings, K. J., Hanson, K. T., Ilham, K., Wallis, J. 2023. Costs of Primate Tourism. In: Waters, S., Hansen, M. F., *et al.* *Responsible Primate-Watching for Primate Tourism Professionals*. IUCN SSC Primate Specialist Group Section on Human-Primate Interactions.



Habituation of Primates for Tourism

A publication of The IUCN SSC Primate Specialist Group Section on Human-Primate Interactions



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Introduction

Wild primates are generally elusive, and flee from humans, and although some populations that are not hunted by humans may approach humans voluntarily, observations of primates are often difficult and fleeting. A popular solution is to reduce the flight distance and the fleeing response through habituation of primates to human presence. Habituation is the reduction of flight distance (and presumably fear) and resumption of normal activities (Williamson and Feistner, 2003) in tolerating human presence as a function of distance, group size and behaviour. Habituation may be desirable for tourism to the extent that it allows longer and more predictable periods of observation of natural behaviours at a safe distance for both the human observer and the animals. However, because habituation poses risks to primates and people (Woodford *et al.*, 2002), the costs must be weighed against any possible gains, and the decision-making process should be guided by the precautionary principle. Gazagne *et al.* (2020) defined five stages of habituation: early, minimal, partial, advanced, and full, and we urge practitioners to only habituate primates to the extent needed for the proposed activities, and ensure that they do not over-habituate primates (Price, 1984; Knight, 2009; Uchida *et al.*, 2021).

Over-habituation occurs when primates seek interaction with or are attracted to people. Habituation and over-habituation can be seen as a continuum of the response of wild primates to human presence. Both are the result of human intervention, whether planned or not. Over-habituation is not recommended because, in addition to changing the primate's general flight response, it may lead to unwanted interactions, including aggression. We appreciate that reaching exactly the wanted level of habituation may be difficult and therefore recommend monitoring habituated primate populations continuously throughout the tourism endeavour and for as long as the groups are habituated. This includes assessing the degree of habituation and of possible behavioural disruption by monitoring the behaviour of primates toward people, foraging activities, movement and activity patterns, during and without tourism encounters to enable comparisons.

Methods of habituation

There are different ways to habituate primates and here we present a few. Trail-encounter observations are repeated encounters of people and primates on trails (or any area within primate home ranges) that eventually leads to the habituation of some individual primates. Initial habituation is best done by experienced professionals. However, many primates may already be minimally habituated due to trail encounters with local people and this may be sufficient for tourism activities.

Bait stations or predictable location tourism involves creating feeding stations and baiting them to increase the probability of seeing animals. The feeding schedule can be managed to attract the animals only when the visits are planned. Tourists can stand at an appropriate distance, or even hide in blinds or observation towers. Feeding stations have various disadvantages, in addition to the costs of provisioning (Cox and Gaston, 2018). First, if used too often they can change the ranging behaviour of groups (Rasmussen, 1991; Hansen *et al.*, 2020) and attract large groups of individuals that may compete for food. Even when used sporadically, a feeding station increases the risk of predation by making the primates' location more predictable, and risk of injury by attracting multiple incompatible species and is not encouraged (Ruiz Miranda *et al.*, 2006).

Playbacks of vocalisations reproduced by a sound speaker to attract individuals are common in birdwatching, and may be a useful tool for some primate species, especially those that have loud calls in their repertoire. Playbacks could be combined with trail or vehicle observations. Emitting a playback modifies the current behaviour of the animals and if done often from the sample locations, it could modify ranging behaviour. Primates also habituate to playbacks and stop responding, and this may be a problem for research or conservation if the method is also used for surveys or behavioural studies. That being said, interactive playbacks may be a viable option under certain conditions to showcase some natural behaviour of the species if only used sporadically and preferably with groups that are the subject of tourism and not research (R. A. Mittermeier, pers. comm. 2022).

Risks of habituation

Entering primate habitat and conducting habituation for tourism poses several risks to people and primates and should only be undertaken with extreme caution. Risks of habituation begin during the habituation process. For example, the people conducting the habituation are at risk of contact aggression (Williamson and Feistner, 2003). Bidirectional disease transmission is also a major concern for primate habituation and tourism (see Chapter on the costs of primate tourism) and can be detrimental to wild populations (Wallis and Lee, 1999).

Habituation may also change primate behaviour, for example, increasing their time spent travelling, especially at the start of the process as they attempt to flee (Williamson and Feistner, 2003). The presence of people can also reduce primates' natural vigilance towards predators (Nowak *et al.*, 2014; LaBarge *et al.*, 2020), which is a particular concern

if the tourism activity ends and human presence ceases.

We recommend that the decision to habituate or not should follow the decision tree methods of Gruen *et al.* (2013) and Hansen and Kalan *et al.* (2022). We also recommend consulting the *Best Practice Guidelines for Great Ape Tourism* by Macfie and Williamson (2010). Furthermore, there is a need to continuously evaluate the habituation and tourism processes, taking into account the normal context of human-primate interactions for the species and population. Some primate species are synanthropic with people, meaning that they can utilise human resources and cohabit urban areas, whereas others are hunted or do not normally interact at all. It is crucial that tourism activities do not change the natural behaviours of primates as this can have detrimental effects on their survival. As mentioned above continuous long-term species-specific and group-specific monitoring can help mitigate the risks of habituation if practitioners are flexible and willing to change their approach when necessary.

Miranda, C. R. R., Hansen, M. F. 2023. Habituation of Primates for Tourism. In: Waters, S., Hansen, M. F., *et al.* *Responsible Primate-Watching for Primate Tourism Professionals*. IUCN SSC Primate Specialist Group Section on Human-Primate Interactions.



Recommendations for Responsible Primate-Watching for Tourism Professionals

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General recommendations

- To provide primate tourists with a meaningful experience, engage an experienced primatologist to train guides in the diversity of primates, the cultural significance of primates to local people, etc.
- Ensure guides are paid a fair wage.
- Ensure guides are familiar with [Responsible Primate-Watching for Tourists](#).
- Train guides to understand the behaviour of the primates so they can encourage tourists to maintain a distance of >7m (23 feet) and to speak softly and only when necessary.
- Training tour guides at sites of organised and incidental primate tourism can reduce harmful tourist behaviour.
- Collect and provide information about the potential of disease transmission and how to minimise this risk for you, tourists and primates.
- Encourage the use of binoculars and scopes as much as possible as they allow for greater observations at an increased distance.
- Point laser pointers slightly below the animal if you use them. Some primates find the light from a laser pointer alarming if shone on their bodies.

- To provide primate tourists with a meaningful experience, engage an experienced primatologist to train guides in the diversity of primates, the cultural significance of primates to local people, etc.
- Discourage harassment of primates, including branch shaking and vocalising, to elicit a response from them.
- Limit tour group size and interaction time to reduce disturbance when possible. A smaller group will disturb primates less and allow more opportunity to see more primates and other wildlife.
- If a primate group or individual moves away from an encounter site, do not attempt to follow them.
- When sighting primates from boats, approach at a speed of <4km/hr and keep at least 60m away.
- When sighting primates from boats, turn off boat engines as soon as it is safe to do so.
- Never entice primates onto boats.
- If you are a tour operator, refrain from posting photos of primates close to people on your website. Explain to tourists why sharing photos of themselves on social media in contact with or close to a primate can encourage the idea that primates make suitable pets. See the [Best Practice Guidelines for Responsible Images of Non-Human Primates](#) for more information.

Recommendations for primate tourism site management

- Promote the wellbeing of humans and other primates at both organised and incidental sites where tourists encounter primates by augmenting educational material (e.g., signage, tour guide messaging) offered at the site. At a minimum, this material should convey the presence of primates at the site and detail appropriate behaviour for the visitor.
- To defray costs of supplemental educational material, consider charging or raising admission fees on a sliding scale for nationals and foreign visitors.
- Maintain tourist trails and monitor vegetation in habitats and restore if it has been damaged.
- Discourage tourists and guides from leaving behind any trash (plastic or otherwise) in the primates' habitat.
- Include the local community in the management of primate tourism activities, ensuring they receive revenue from the experience.

- Encourage and support farmers on the borders of primate tourism sites to plant crops which are not palatable to primates to discourage primates from entering crop fields.

Provisioning primates for tourism is very strongly discouraged, but if primates are already provisioned:

- Monitor the provisioned primate population for population increase, which can cause crop-foraging in farms surrounding tourist sites.
- Monitor the provisioned primates' home range and movement patterns. Provisioned primate groups can move from a tourist site into agricultural areas, especially during periods of low tourist visitation. In this case, tour guides should inform farmers if they see the primates moving toward crop fields and, in the long term, assist farmers in implementing strategies to reduce losses.
- Signage should discourage or prohibit provisioning and also describe its harmful effects so that visitors understand why provisioning is discouraged.
- It is imperative that provisioning is not ended abruptly. During the COVID-19 pandemic, this resulted in increased foraging on agricultural crops by hungry primates.
- Additional signage could address the various motivations people have for engaging in provisioning of primates, for instance, religious affinities, similarities to other sites that provision, historical provisioning of primates at the site, primates appearing 'hungry'. This would provide necessary context for sites that have long histories of provisioning primates, where eliminating or prohibiting provisioning may not be feasible or culturally appropriate.

Recommendations for the development of new primate tourism initiatives*

- A social pact should be in place to include commitments from operators and beneficiaries to ensure the health and livelihood of the focal primates. A description of the social pact should be included in a tour operator's information materials.
- Pay attention to economic expectations of the people who will benefit from the tourism activities. Estimate the economic benefit realistically. Inappropriate expectations may lead to over-exploitation.
- An exit strategy should define, among other things, when the social pact commitments are not being met and how to end the tourism activities with minimal negative outcomes for primates and the people involved.
- Habituating primates for tourism should only take place if all safety protocols are in place.

- Provisioning is strongly discouraged as mentioned above.
- Only experienced people should conduct the process to reach the habituation level needed for the planned activity.
- Only habituate primates in locations where they are safe from human hunting or other human activities that pose danger (roads, dogs, electric cables, etc.).
- When habituating for tourism, habituate as few animals as possible, leaving most areas or groups unhabituated.
- Avoid over-habituation. Primates should never approach people looking for food or close interaction. If a group of primates is becoming over-habituated, cease tourism in that area to allow the group to resume its daily activities uninterrupted. Primates can and do become less habituated.

*We recommend that you also refer to the [Best Practice Guidelines for Great Ape Tourism](#) for information on the development of new primate tourism initiatives.

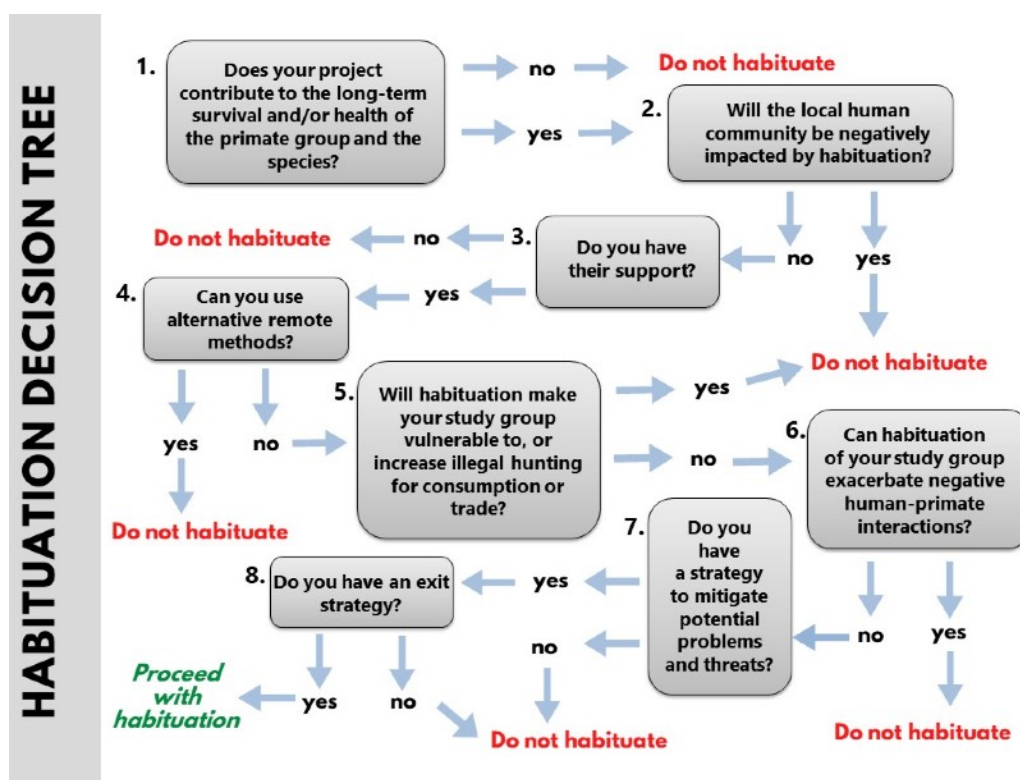


Figure 1: Habituation decision tree (modified from Hansen and Kalan *et al.*, 2022)

Waters, S., Hansen, M. F., Miranda, C. R. R., Ilham, K., Hanson, K. T., Setchell, J. M., Wallis, J. 2023. Recommendations for Responsible Primate-Watching for Tourism Professionals. In: Waters, S., Hansen, M. F., *et al.* *Responsible Primate-Watching for Primate Tourism Professionals*. IUCN SSC Primate Specialist Group Section on Human-Primate Interactions.

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