



CHAPTER 2



Understanding and Responding to Cultural Drivers of the Ape Trade

Introduction

This chapter explores how cultural beliefs and practices drive the trade in apes—as meat, body parts and live animals. The reasons that lead people to become involved in the trade are not always economic, indicating that addressing them requires an understanding of the behavioral nuances of specific groups of actors within and across locations. This chapter considers the trade within its localized human context, placing specific emphasis on knowledge, attitudes, beliefs and practices of individuals and their communities. It looks at the challenges in assessing impacts of the trade, especially given the dearth of research on aspects such as the use of ape parts in traditional medicine and variations in “cultural” attitudes to

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nature. What is known is that apes represent various resources to different people, including a product for sale, an object of entertainment, a status symbol or the focus of certain kinds of activity, such as hunting.

The chapter provides examples of both negative and positive impacts of cultural practices on ape populations; while some communities use body parts in rituals, for instance, others view apes as totem species that are not to be hunted. The chapter discusses how such practices change or vanish as rural societies in and around ape habitats undergo rapid modernization, younger generations come of age or formerly closed societies open their doors to newcomers from elsewhere.

Four case studies illustrate the need for conservationists to be sensitive to the social as well as the environmental impacts of their work. Two focus on communities in Africa, examining the demand for ape parts in Cameroon (Case Study 2.1) and how shifts in cultural practices that previously protected apes in Uganda are increasingly putting them at risk (Case Study 2.4). The other two case studies focus on Indonesian Borneo, presenting the cultural drivers of hunting in Kalimantan (Case Study 2.2) and the need for multidisciplinary analyses and interventions that situate these drivers more clearly in their anthropological and socioeconomic context (Case Study 2.3). All these studies indicate that conservation planning is most likely to be effective when it factors in the cultural practices of communities that interact with apes and their habitats.

The key findings include:

- Far from a static concept, “culture” has context-specific meaning and value to local communities and varies across and within locations. As a result, the cultural drivers of the ape trade differ widely across communities.

- Reconciling sensitivity to cultural practices with the conservation of threatened species may require trade-offs; in turn, these trade-offs may enhance relations between conservationists and local communities as well as human–wildlife coexistence. In contrast to a single approach—such as law enforcement or the provision of alternative livelihoods for all communities—site-specific methods can help build long-term relationships on more equal terms.
- Ethnographic and other social science research techniques can provide insights that complement traditional conservation programming.
- While conservationists can supplement their ecological understanding through the use of social science approaches, some may need to reevaluate certain assumptions about local communities and reassess the use of widely employed Western concepts and terminology.

The Cultural Context of Human Perceptions of Apes

Today’s conservation movement espouses Western principles that call for restrictive control, which is often implemented with the help of international non-governmental organizations (NGOs) (Bakels *et al.*, 2016; Dowie, 2009; Pyhälä, Osuna Orozco and Counsell, 2016). Over the past decade or so, however, this traditional approach to protecting territory and species via the exclusion of certain types of outsider or activity has raised concerns and elicited proposals of more equitable alternatives (Berkes, 2004; Brockington, 2002; Pyhälä, Osuna Orozco and Counsell, 2016). In disciplines as wide-ranging as ecology, anthropology and philosophy, practitioners and researchers are

expressing a growing interest in posing normative questions about human–wildlife interaction; specifically, they are asking how a given society or community should behave towards the species with whom they share their environment (Corbey and Lanjouw, 2013; McKenna and Light, 2004). In that context, it is useful—yet challenging—to define the term “culture.” Typically presented as a synonym for “tradition,” culture is commonly used to refer to the characteristics, knowledge and patterns of behavior acquired by a particular group of people and transmitted by symbols, artifacts and values (Kroeber and Kluckhohn, 1952). This chapter situates these multiple meanings in the context of ape conservation and the ape trade.

Despite the fact that human development has relied on the exploitation of various species, human relations with animals are not exclusively utilitarian; connections also exist on a much broader symbolic level, depending on geography, history and faith. Culture and conservation may be imagined on spectra of beliefs and behavior that include economic and spiritual attitudes to the environment, along with types of use and consumption that are specific to a given place and time. Awareness—and integration—of these nuances can be key to conservation programming that is more equitable and sustainable than the traditional “fines and fences” approach. As discussed in this chapter, programming that reflects local knowledge and behavior related to the use of resources can further both social and environmental goals (Igoe, 2006; Pyhälä, Osuna Orozco and Counsell, 2016).

In general terms, people’s connections to their environment can be grouped into four loose categories, some of which may overlap:

- People may attach **spiritual and religious values** to the environment. These may be derived from specific places, features, species and practices, and may

be expressed in the selection of sites for rituals and ceremonies, shrines, cemeteries and sacred forests, rules and taboos, totems and symbols, and links to ancestors, gods or spirit worlds.

- **Cultural heritage, a sense of place and identity** may be linked to historically important landscapes, species or other valued goods. They may connect people to ancestors, practices and beliefs and evoke memories. People may derive a sense of belonging to place and time from features in the environment, which can contribute to the human need for individual and collective identity.
- The environment influences and is often the setting for **social and community relations**. It provides places for groups and institutions to gather and opportunities for communal activities, such as harvesting of food or hunting. These activities contribute to the cohesion, identity and collective well-being of a society.
- The environment contributes resources that promote **mental and physical health**. Like plant-based medicines, certain species may be seen as having specific properties related to a host of benefits that their users associate them with (Drani and Infield, 2014).

As this chapter shows, cultural practices across ape range states are diverse and multifaceted. In view of this diversity, an evolving context, and a dominant conservation ethos that has traditionally privileged science and Western doctrine over indigenous knowledge and practices, engaging with local cultural norms has emerged as a central, yet complex consideration for conservationists (Pyhälä, Osuna Orozco and Counsell, 2016). While much of this recent research supports the view that communities already conserve, it also finds that they *use* resources;

“In contrast to a single approach—such as law enforcement or the provision of alternative livelihoods for all communities—site-specific methods can help build long-term relationships on more equal terms.”

Photo: Ape bones and body parts are used as preventive medicine or as fetishes, implying a belief in their magical rather than physiological or psychological properties. Konyak Naga head trophy basket decorated with western hoolock gibbon (*Hoolock hoolock*) and capped langur (*Trachypithecus pileatus*) skulls. North East India. © Pete Oxford/naturepl.com

if those resources include apes or ape parts, local practices may be placing additional pressure on already threatened populations. For those in great ape and gibbon conservation, the question then becomes how to build or retain links between people and the environment if a population's connection or attachment to it has a negative impact on the species.

Apes in Belief and Practice

Myths, legends and beliefs suggest that people feel a connection to primates that can have both positive and negative impacts

on the species themselves. Recent literature from range states reveals that communities variously see apes as protectors, reincarnated ancestors, totems or holy animals (CCFU, 2018; see Boxes 2.1 and 2.2); such beliefs are also illustrated in tales of love, magic, the protection of forest secrets and reincarnated humans (Etiendem, Hens and Pereboom, 2011). These belief systems have given rise to taboos against hunting or eating apes that may help to protect them; conversely, the use of body parts in traditional medicine and rituals can represent a significant threat to their survival (Etiendem, Hens and Pereboom, 2011; Infield, 2011).



The Use of Apes in Traditional Medicine and Rituals

Throughout human history communities around the globe have made wide use of traditional medicines derived from plant and animal sources. In areas where such practices remain strong, they are often linked to spiritual beliefs and associated cultural identities (Etiendem, Hens and Pereboom, 2011). Ape habitats tend to be remote and thus have limited access to modern pharmaceutical medicine; in these areas, people look to traditional medicine for explanations for illness and death, as well as remedies and cures for common illnesses.

While few studies examine the use of apes in traditional medicine, they demonstrate that their bones and body parts are widely used across the landscapes where these species occur—and that people who use them believe they have direct curative effects (Etiendem, Hens and Pereboom, 2011). In Lao People’s Democratic Republic (PDR), for example, “primate” bones—which almost certainly include those of native gibbon species—are used to cure fevers and gonorrhea, and they may be applied as more general palliatives or tonics (Duckworth, 2008). Similarly, in Viet Nam and China, some people treat breaks or fractures with “black monkey balm,” which may contain gibbon parts (J. Kempinski, personal communication, 2018). Ape bones and body parts are also used as preventive medicine or as fetishes, implying a belief in their magical rather than physiological or psychological properties. Among the Bakonjo of Uganda, for instance, there is a belief that the bones of a chimpanzee have healing power and that when placed next to the broken bone of a human, they can heal the break (CCFU, 2018; see Box 2.3). Such beliefs and practices vary widely across and within range states; Case Study 2.1 focuses on those of a particular region in Cameroon.

Data on the practices and markets within range states are scant, yet information on international demand for ape products outside those countries is even more limited. While the nature of these markets is poorly understood, recent research does suggest that demand is growing in China, Europe and ► p. 58

BOX 2.1

Gibbons in Myth and Folklore

One Indonesian legend holds that the female gibbon call is that of a mythical woman who roams the forest in search of her lost lover, who was killed after she betrayed him. The mournful song that rises in the morning is her song of remorse (Drani and Infield, 2014).

Another story from Indonesia tells of a young woman who was forced into an arranged marriage with a much older man. The marriage was far from happy, and the young woman would escape each day by going into the forest to collect fruits and vegetables. One day, while gathering food, she encountered a young hunter from another tribe and the two became friends. The young woman began to spend more and more time in the forest and eventually fell in love with the hunter. Her husband noticed that his meals were delayed and that his wife was often absent, so he contrived to follow her and found her with the young man. The following day, the husband gathered a large group of men from the village and followed his wife into the forest to teach the hunter a lesson. When the young lovers realized the mob was after them, they fled deeper into the forest but became separated. The great forest spirit took pity on them, lifted them up into the canopy, away from the mob, and transformed them into gibbons. So that they might always find each other in the dense forest, the great forest spirit gave them loud songs, one for the young woman and one for the young hunter, and today gibbons still sing these songs (Drani and Infield, 2014).

In Thailand, there is a story about a woman who was turned into a gibbon because she betrayed her husband. She spent the rest of her existence swinging from branch to branch, calling *pua, pua, pua*, which means husband in Thai. Some Thais tell this story to explain the meaning of the gibbon call (Drani and Infield, 2014).

More than 2,000 years ago, the Chinese singled out gibbons as the aristocrat among apes and monkeys. They are one of only two primates (the other being the macaques) to have been granted a special niche in Chinese culture. The gibbon is the traditional Chinese symbol of unworldly, metaphysical ideas that initiate humanity into the sciences and magic; the gibbon’s call is what deepens the exalted mood of poets, painters and philosophers on misty mornings and moonlit nights (Van Gulik, 1967).

Farther south, among some ethnic minorities in Lao People’s Democratic Republic, prohibitions against hunting gibbons were linked to the belief that they were reincarnated ancestors (Duckworth, 2008). These stories demonstrate a belief in familial relationships between people and apes, which may reinforce attitudes based on resemblance rather than otherness.

CASE STUDY 2.1

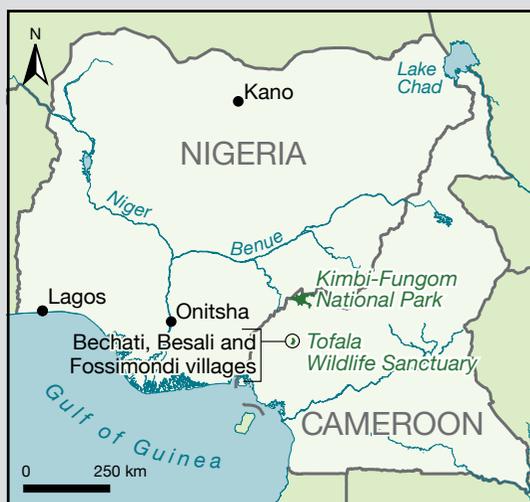
Cultural Drivers of the Demand for Ape Parts in Africa

Recent ethnographic studies conducted in Cameroon highlight the role that cultural beliefs and practices can play in influencing behavior around hunting and trade (Chuo and Angwafo, 2017a, 2017b). One study, which was carried out in and around Kimbi-Fungom National Park in northwestern Cameroon (see Figure 2.1), concludes that the demand for ape body parts is mainly driven by a belief that the bones and tissues have medicinal, ritualistic and even mystical properties and powers. It notes that some practitioners replace human skulls with those of apes during traditional ancestor worship (Chuo, 2018). Another study documents similar practices in southwestern Cameroon, where great ape parts are used to heal fractures and other bone dysfunctions (Bobo, Aghomo and Ntumwel, 2015).

Kimbi-Fungom National Park covers a total area of 989.8 km² (98,980 hectares) and its northern sector runs along the Cameroon–Nigeria border (Protected Planet, n.d.-a, n.d.-c). The park is home to the Nigeria–Cameroon chimpanzee (*Pan troglodytes ellioti*), the most endangered of the four subspecies of chimpanzee. During the past decade, this subspecies experienced a significant population reduction as a result of high levels of hunting, loss of habitat and habitat degradation due to human pressure; only about 6,000 individuals exist across their range today (Sesink Clee *et al.*, 2015).

In the study on Kimbi-Fungom National Park, focal villages were selected based on their proximity to the park. The majority of

FIGURE 2.1
Cameroon and Nigeria



Sources: Protected Planet (n.d.-a, n.d.-c), UNEP-WCMC (2019a, 2019c)

TABLE 2.1

Selected Conditions and the Chimpanzee Parts Used to Treat Them in Northwestern Cameroon

Ailment	Ape parts used in treatment
Bone fractures or sprains	Bones, skull
Calcium deficiency	Bone marrow, meat
Diarrhea or dysentery	Bones, skull, head, burned fur
Heart disease	Internal organs, heart, liver, chest bones
Joint pain	Bones, skull
Poisoning	Bones, gallbladder, liver, skin, fur, nails
Rheumatism, spleen trouble	Bones, fat, limbs
Stomach ache	Ground and burned bone mixed with other substances
Swollen limbs or parts	Cooked bone broth
Toothache	Ground bones
Weakness	Bones, skull

Source: Chuo (2018)

respondents reported that chimpanzee body parts and meat were used for their medicinal value, as well as in rituals and as food on special occasions. They named about 25 diseases and conditions that they said could be treated with ape body parts or meat, although they did not provide specifics on preparation, amounts or other ingredients (Chuo, 2018; see Table 2.1).

During the interviews, the researcher observed and recorded 78 chimpanzee skulls, 37 chimpanzee bones, and several bags of medicine containing ape skin and other, unidentifiable body parts. Based on the respondents' statements, the body of an adult chimpanzee typically costs CFA 75,000–250,000 (US\$130–435) and skulls are the most expensive body parts, ranging from CFA 50,000 to CFA 200,000 (US\$87–346), depending on age. Skin can be purchased for CFA 3,000–50,000 (US\$5–85), depending on the size of the piece for sale; hands and feet cost CFA 2,000–25,000 (US\$4–45). Other body parts, such as bones, testes, meat and other organs, can fetch between CFA 500 and CFA 15,000 (US\$1–25), depending on the quantity and quality of the product (Chuo, 2018).

The research indicates that in northwestern Cameroon the demand for traditional medicine was particularly high, as was the use of body parts in rituals and ceremonies, such as male child circumcision, the coronation of a new chief, the burial of the dead, the transmission of power of a totem's owner, traditional title acquisition and annual feast days. Interviews suggest that the prowess of traditional doctors and healers, who reportedly heal diseases that are believed to be incurable in hospitals, is a significant factor driving the demand for meat and parts in this and other areas of the country (Chuo and Angwafo, 2017a).

A related finding is that villages and towns in northwestern Cameroon experienced a widespread influx of new beliefs and practices that utilize ape parts, both from within Cameroon and from neighboring Nigeria (Chuo and Angwafo, 2017a). This finding supports previous field research indicating that many of the individuals involved in the illegal hunting of and trade in chimpanzees in Kimbi-Fungom National Park had come across the border from neighboring Nigeria (Ekinde, Ashu and Sunderland-Groves, 2005). As Case Study 2.4 also shows, the integration of new beliefs and attitudes can increase or curb such hunting and trade. The people of Bechati, Besali and Fossimondi in southern Cameroon, for example, traditionally avoided hunting and eating gorilla due to cultural taboos and totemic beliefs (see Figure 2.1); more recently, however, they started to consume them and use their body parts for traditional medicine (Etiendem, Hens and Pereboom, 2011).

This research is mirrored in broader assessments of the ape trade in Cameroon, whose ape trafficking operations are likened to those of the ivory trade in that both are international networks that finance hunters and even provide them with motorbikes and sophisticated weapons (LAGA, 2015; Nforngwa, 2017). Ape habitat in this country continues to be fragmented by infrastructure development such as new roads, which facilitate movement and trafficking, as does the porousness of the borders. While it is not always clear whether poachers supply ape parts for use in cultural practices, law enforcement activities do provide evidence that the hunting networks are widespread. Indeed, “during a four-month period in 2015, anti-poaching and anti-trafficking squads in Cameroon arrested 22 dealers and seized 16 great ape limbs, 24 gorilla heads and 34 chimpanzee skulls in separate operations around the country” (Nforngwa, 2017). Investigators claim that whereas hunters may previously have kept meat but discarded ape limbs and heads in the forest, they now stockpile body parts in view of growing market demand (LAGA, 2015; Nforngwa, 2017). Despite the existence of adequate laws and ongoing interventions by conservation organizations, the ape trade seems to be thriving in Cameroon (Chuo, 2018; see Chapter 6).

A recent report suggests that a lucrative trade also exists in Nigeria, where it is similarly fueled by traditional beliefs and practices. It highlights that subsistence hunting has expanded into a much broader, more commercialized trade that sup-

plies markets driven by cultural practices, such as ones that involve ancestral lore or the control of malignant spirits. Interviewees described a well-coordinated commodity chain linking local hunters to distributors and consumers in Nigeria and beyond. Due to their relative abundance, chimpanzees are commonly used in rituals; the most requested part is the left hand, which can sell for as much as US\$100. Markets in the cities of Kano, Lagos and Onitsha were identified as centers of the national trade, and Nigeria appears to act as a central hub through which body parts from Central and West African countries are smuggled on to other parts of the world. Law enforcement operations may be able to disrupt supply chains and economic alternatives could help hunters to secure legal employment, yet a more nuanced approach is needed to address deep-seated traditions that fuel the trade (Sunday, 2019).

Cultural attitudes are not static, nor is the dilution of such attitudes. World-views and beliefs held by earlier generations are continually being transformed by new knowledge and information. Improving economic opportunities, formal education and access to a growing variety of capital—including natural, human and social capital—may affect and influence youths more than the practices of older generations, with both positive and negative implications for conservation (Pretty and Smith, 2004). Rapid change in the economic activities of communities can draw forest-dwellers away from the forest, diminishing their knowledge of the many values of biodiversity, and narrowing perceptions of the environment to that of an economic rather than a cultural resource. Under such circumstances, people may begin to hunt species that were not previously targeted—such as bonobos in the DRC—for wild meat and income, particularly if other species have become scarcer or access to firearms easier (Tashiro *et al.*, 2007).

Positive counter-examples exist. In Gabon, habituating gorillas as part of research and tourism ventures has had a striking impact on communities that generally perceived these animals negatively. Those who work with gorillas increasingly see them in a more positive light. There has been a trickle-down effect to other community members, whose disapproval has also dissipated. In Rwanda, government authorities consciously contributed to such changes in attitude by linking traditional naming ceremonies to the birth of gorillas (Drani and Infield, 2014).

Ongoing and, in some cases, increasing migration across borders, as well as marriage across traditional ethnic boundaries, can result in the spreading and sharing of knowledge and values. In that sense, the identification of, association with and responsibility to protect totem animals and plants might be introduced to a growing network of people. However, cultural diffusion may also disrupt traditional knowledge. Some people, especially among the younger generations, may not know their totems and thus lack a connection to them. Case Study 2.4 returns to this issue—and how it might be rectified in a way that minimizes the trade.

BOX 2.2

Totems

Across Africa, some individuals and social groups feel a type of mystical kinship with specific totems, be they animals, trees or places. Ape totems have been documented among clans in Cameroon, Central African Republic, the Democratic Republic of Congo (DRC), Gabon, Liberia, Nigeria, Tanzania and Uganda (Drani and Infield, 2014). Taboos forbidding the consumption or other uses of animals with totemic status are part of the totemic system; such taboos can apply to wild as well as domestic animals.

Broadly speaking, research conducted in northwestern Cameroon paints a picture of unsustainable hunting of chimpanzees for body parts and meat. At the same time, it provides evidence that traditional taboos and totemic beliefs are falling by the wayside as migrants from Nigeria arrive in the area with their own belief systems—all within a context characterized by high poverty levels, a lack of access to modern medicine, and limited knowledge of and adherence to protective laws (Chuo, 2018). These conditions are common to many ape range states, where traditional belief systems and cultural norms often support day-to-day practices that affect habitat and biodiversity. Informal regulations over access and use of land can help to protect habitat. In Uganda, for example, some communities recognize specific plants as markers of places that have religious or spiritual importance, so that these may be avoided. Such regulations can protect the habitat of many species, including apes, even if they do not do so by design (Drani and Infield, 2014).

CASE STUDY 2.2

Indonesian Borneo: Dayak Tradition, the Killing of Apes and Conservation

Indigenous or traditional knowledge is an important form of ecological understanding and practice. It can be of special relevance among communities that depend on the sustainable use of natural resources for their livelihoods, such as the Dayak of Indonesian Borneo (Gadgil, Berkes and Folke, 1993). The term Dayak refers to Kalimantan's native people and comprises different ethnic groups, subgroups and indigenous communities, each with its own dialect, customs, laws and territory, although all of them share a common and identifiable culture (Rousseau, 1990). The Dayak were traditionally forest dwellers with rich indigenous knowledge of biodiversity and natural resources management; their communities are still regulated by *adat*, a customary framework of social and cultural norms, laws, ceremonies and rituals (Joshi *et al.*, 2004; Thomson, 2000). *Adat* is critically important in shaping the life and culture of Dayak communities and plays a key role in conservation and forest protection, avoiding the over-exploitation of forest products and ensuring the sustainable use of natural resources (Joshi *et al.*, 2004; Mulyoutami, Rismawan and Joshi, 2009; Wadley and Colfer, 2004).

Examples of how these cultural norms have shaped conservation among Dayak communities include sacred forest sites and the use of taboos to protect forests and animals (Wadley and Colfer, 2004; Wadley, Colfer and Hood, 1997). In the Dayak traditional belief system, sacred sites are inhabited by non-human spirits, have religious meaning and are important in the preservation of natural resources (Wadley and Colfer, 2004). Taboos (*pantang*) are unwritten rules or prohibitions governing community behavior that are related to events experienced by their ancestors (Omar and Rathakrishnan, 2016); they are based on the belief that certain behaviors or objects are connected to the invisible realm (Thomson, 2000). As is the case with totems in Cameroon, Uganda and other areas of Africa, perceived connections to species and places can lead local communities in Kalimantan to show greater consideration for habitats that they share with apes.

► Orangutans and Traditional Hunting

The Dayak economy is based on subsistence agriculture in the form of swidden rice cultivation and forest management, and, to a lesser extent, on hunting, which serves as an important source of protein (Eilenberg, 2012; Wadley and Colfer, 2004). While hunters target mostly larger game, such as deer and wild pigs, hunting can be opportunistic and may include other mammals or birds (Wadley and Colfer, 2004). Previously, hunters used blowguns, spears and hunting dogs, but these traditional means of hunting have since been replaced by the use of air guns, firearms and traps (Wadley and Colfer, 2004; Wadley, Colfer and Hood, 1997). Hunters usually consume animals themselves or share them with families and neighbors. Primate meat is not considered of value and is thus not sold; if trade in ape meat does take place, it occurs within close-knit cultural relations (Wadley, Colfer and Hood, 1997).

Research suggests that hunting played an important role in historic orangutan extirpations in specific areas across Borneo. While orangutan densities have undergone significant decline over the past 150 years, local extirpations have largely taken place in the past 20–50 years, particularly between 1999 and 2015, when 100,000 Bornean orangutans lost their lives due to habitat degradation and loss, as well as direct killings (Meijaard *et al.*, 2010; Voigt *et al.*, 2018). Arriving at an accurate estimate of the number of apes killed is difficult, but figures of orangutans received at rescue centers can provide a sense of scale. Between 2001 and 2013, nearly 1,500 orangutans arrived at only three of the seven rescue centers in Indonesia. More than half of these individuals were babies or infants, whose capture is often an unintended consequence of hunting adults, suggesting that the number of adult apes killed deserves serious consideration by conservationists (Sánchez, 2015; see Chapter 1).

Few of the studies that examine orangutan killings also explore the sociocultural factors that influence hunting behaviors or the way humans relate to orangutans (Marshall *et al.*, 2006; Meijaard *et al.*, 2010, 2011; Voigt *et al.*, 2018). Such research may help to explain what processes have undermined previously common taboos that formerly protected orangutans from being hunted. It may also shed light on recent extirpations in areas where orangutans were not known to be hunted—until they disappeared.

Some Dayak communities still consider killing apes a taboo. Such protective taboos are typically based on legends according to which orangutans or gibbons either originated from humans or helped to save people's ancestors (A.I. Krisma, personal communication, 2018). Among Iban Dayak communities in West Kalimantan, similar taboos used to protect orangutans and gibbons, as people held that “a noteworthy ancestor had been helped in battle by orangutans or gibbons, and that he had been transformed into one or the other upon death” (Wadley, Colfer and Hood, 1997, p. 257).

Just as such taboos have faded away with older religious and social beliefs, so too have the protections they afforded (Wadley, Colfer and Hood, 1997). The disappearance of taboos may thus have influenced hunting practices among contemporary Dayak ethnic groups, with potentially detrimental

effects for species such as orangutans or gibbons. Taboos do not vanish simply because the belief in a legend is lost; rather, they lose their meaning through the breakdown of everyday cultural practices that are based on perceived connections to the environment.

People who decide to hunt and trade in orangutans may do so for a variety of socioeconomic and cultural reasons, just as they may be influenced by social, emotional and psychological factors (see Chapter 4). The circumstances driving a subsistence hunter will differ from those that lead an individual to kill an orangutan in an oil palm plantation, opportunistically capture her baby as a pet and eventually sell the orphan into the ape trade. An awareness of these varied and complex dynamics can help conservationists tailor their interventions to communities in ways that are sensitive to their realities.

Evolving Cultural Trends as a Threat to Apes

Dayak cultural and creative rituals follow *adat* norms, and all forms of art have a precise cultural meaning. According to one mid-19th-century account, orangutan skulls replaced human ones as trophies after head-hunting practices were abolished in certain areas of Borneo, which may have exacerbated hunting pressure on apes (Meijaard *et al.*, 2010). In more recent times, orangutan skulls have commonly been used as trophies at cultural events and festivals. Participants flaunt orangutan skulls as ornaments and as part of their attire, even though such elements were not previously known to be part of broader Dayak tradition or culture (A.I. Krisma, personal communication, 2018). Youths in particular have quickly adopted these trends and post pictures of such displays on social media, which may represent another threat to orangutans (see Chapter 4).

Over time, many of the traditions of Dayak people have been lost. Their animistic beliefs have been widely replaced by modern religions, such as Christianity (Thomson, 2000; Wadley and Colfer, 2004). These cultural changes, coupled with modernization, are having an impact on the conservation of natural resources in Kalimantan (Wadley and Colfer, 2004). As discussed above, the erosion of traditions and cultural practices can also bring about the loss of protective taboos, stimulate the hunting and killing of apes to supply the illegal animal trade, popularize the use of ape parts in “cultural” events, and spur interest in fad-based “tribal” art.

The trade in skulls is also associated with a rise in tourism to Indonesia. An investigation into the trade shows that wildlife products from all over the archipelago are sold in Bali. To supply the market, hunters kill apes for their skulls, which are then carved with “tribal” patterns to command higher prices. Many are fire-darkened and decorated in order to trick prospective buyers into believing that they are antiques. The study found that in one high-end antique shop in Gianyar that was offering the skulls of gibbons and orangutans, the skull of an adult female orangutan had a price tag of US\$5,000. While people who kill primates for food typically break open the skull and remove the brain to eat, most primate skulls on sale in Bali are intact, indicating that these animals were not killed for food (Tenaza, 2012).



- ▶ the United States (LAGA, 2015; Nforngwa, 2017). The demand for wild meat outside range states, which is somewhat better documented than the demand for other ape products, appears to be related to cultural factors (Wood *et al.*, 2014). A study of a Liberian community living in the US state of Minnesota, for example, found that incentives for importation and consumption were multifactorial, and that nostalgia and cultural connections were significant drivers of consumption (Walz *et al.*, 2017).

Responses to the Cultural Drivers of the Trade

This chapter highlights that cultural practices do not exist in a vacuum; rather, they are embedded in the broader socioeconomic, historical and religious dynamics of a given community, reflecting how local people relate to their environment and its flora and fauna. It suggests that conservationists are more likely to design effective measures to curb the hunting and sale of apes in any

location if they supplement their ecological understanding of the landscape with an awareness of cultural drivers of the trade. For some practitioners, this approach may require a reassessment of assumptions about local communities, their attitudes and their behavior. It may also call for a reframing of commonly applied concepts and terminology. The term “nature,” for instance, is a Western notion for which there is no equivalent word in many ape range states (Bakels *et al.*, 2016). Its use implies that there is a distinction between nature and culture, reproducing a dichotomy that sets human communities apart from the landscapes in which they live. There are alternatives to prevailing conservation methods, however. Biocultural approaches, for example, use local cultural perspectives and recognize feedback between ecosystems and human well-being (Sterling *et al.*, 2017).

By employing a variety of social science approaches, conservationists can use community-based and participatory methods to define and assess the specific cultural factors that might influence the ape trade. As shown above, hunting is not always driven by economic incentives alone; it may have deep-seated relevance linked to identity. For some communities, the trade in meat or

parts may be an offshoot of hunting rather than its central aim. Such may be the case in Viet Nam, a country notorious for its trade in wildlife. While gibbons do not appear to be targeted for their parts in Viet Nam, they are traded as pets and consumed locally; once the meat has been eaten, their bones are sometimes sold as generic “monkey” parts (J. Kempinski, personal communication, 2018). Any attempt to stage conservation interventions to curb the trade will require a nuanced understanding of this type of context.

A key issue in this context is the dearth of relevant information. With respect to Viet Nam, for instance, it is not known how many gibbons are taken as pets or killed, nor are details available on the reasons for killing them or the locations from which they are removed. What is understood is that gibbons are found only in isolated areas, that their occupancy rate is low, even within protected areas, and that many populations are still in decline. It is not clear whether extra layers of protection in certain sites are enough to dissuade people from going after them, particularly since they are not a “high-value” wildlife product, such as pangolins. Evidence points to an active trade in lorises (as pets) and regular incidents of hunting

Photo: In more recent times, orangutan skulls have commonly been used as trophies at Dayak cultural events and festivals. Participants flaunt orangutan skulls as ornaments and as part of their attire, even though such elements were not previously known to be part of broader Dayak tradition or culture. Orangutan skull confiscated by New Zealand customs officials.
© Urban Zone/Alamy

TABLE 2.2

Methodological Approaches and Research Questions

Methodological approach	Focus	Sample research question
Biography	The meaning of an individual's lived experience	How can the lived experiences of individuals or communities in ape range states be integrated in conservation decision-making processes?
Phenomenology	Shared lived experience of a phenomenon by multiple people	How does the experience of gorilla-focused, community-led tourism in Uganda influence local perceptions of different conservation initiatives?
Case studies	What has been experienced in a given event or context	What impact does migration have on Dayak livelihoods, village politics, forms of authority and, by extension, hunting behavior that can affect apes?
Ethnography	Understanding a different culture by living or observing it	What role do beliefs about ancestors play in shaping hunting decisions among communities in western Cameroon, and how can conservationists engage with ways of seeing and managing “resources” that are relevant to local residents?

Source: McCaslin and Scott (2003)

Photo: The term “nature” is a Western notion for which there is no equivalent word in many ape range states. Its use implies that there is a distinction between nature and culture, reproducing a dichotomy that sets human communities apart from the landscapes in which they live. © Alison White

and selling of langurs (whole or dried); rumors suggest that animals are being sold into markets in China, and gibbons may be among them (J. Kempinski, personal communication, 2018). Any interventions set to disrupt these dynamics will need to rely on newly commissioned research and take local attitudes into account.

Biocultural and participatory methods can be designed to collect qualitative data about decision-making processes as well as the unique social–ecological contexts in which they take place (Moon *et al.*, 2019). Table 2.2 presents selected methodological approaches and research questions linked to issues described in this chapter. Case Study 2.3 takes an ethnographic (or anthropological) approach to examining the killing of orangutans in Kalimantan, the subject of Case Study 2.2.

The examples in Case Study 2.3 show how different research approaches can offer unique insight into social, cultural and political decision-making contexts, rather than the processes alone. In this way, conservationists can enhance their understanding of communities in ape range states, and potentially rely on them as experts, instead of viewing them as hurdles to be overcome. An in-depth study carried out in the Nam Kading National Protected Area in Lao PDR identified key factors that play a role in driving hunting behavior in local communities:

- reliable access to markets and services;
- gradual economic development;
- a low cost of living (US\$90 per month on average);
- an agriculture- and livestock-based local economy;



CASE STUDY 2.3

How Anthropological Research Can Contribute to Understanding and Addressing the Killing of Orangutans in Rural Borneo

As described in Case Study 2.2, the trade in live orangutans and, to a lesser extent, their body parts in Borneo is inseparable from a larger set of practices, including the hunting of these apes. Killing is often opportunistic rather than premeditated—an offshoot of other phenomena, such as hunting for different animals or human–orangutan conflict (Freund, Rahman and Knott, 2017; Meijaard *et al.*, 2011; Nijman, 2005). An adult female orangutan killed in retaliation for damaging a plantation might have her flesh consumed and certain body parts retained or sold for medicinal uses, while her baby might be kept locally as a pet, before being sold on to wildlife traffickers (Nijman, 2005).

Analyses have shed light on certain dimensions of this problem, notably spatial and demographic patterns of orangutan killing, the workings of the illegal wildlife trade, and rural villagers' perceptions of orangutans, the forest and the law.¹ These unprecedented insights are the product of interviews, surveys and focus group discussions carried out across a large number of villages. Due to their inherent brevity and thematic focus, however, such methods only scratch the surface of the cultural, social, political, economic, historical and religious complexities at the village level. Yet, an inside understanding of these realities could be key to understanding and thus mitigating orangutan killing in these areas.

Anthropological Methods and Insights

Ethnographic, or sociocultural anthropological, approaches are well suited to illuminating what goes on in small-scale settings. Unlike large-scale surveys and predictive modeling, anthropological methods emphasize depth and holism, situating specific phenomena (such as orangutan killing) within their multifarious contexts (Eriksen, 2015, chapter 1; Geertz, 1973). Such research is often carried out by individual anthropologists, working solo or sometimes as part of teams.

The hallmark of sociocultural anthropology is participant observation. This means immersing oneself as both participant and observer in a particular setting—anything from a village to a global network—in order to gain an “inside” understanding of how it functions and is perceived and experienced by its members. Participant observation fundamentally entails “being there,” rather than setting up formal research encounters (such as questionnaires), and being led by the day-to-day flows and informal interactions of the field (Borneman and Hammoudi, 2009).

Anthropological research typically takes place over an extended period, from several months to one or two years. This enables anthropologists to build up an everyday familiarity with their field site (including by learning local languages),

to gain the trust of their research participants—including people of different ages, sexes, social status, religions, occupations, political affiliations, and other characteristics—and to follow up on new leads and emerging insights. Participant observation is frequently carried out in conjunction with other social science methods, including semi-structured interviews, oral histories, biographical research, archival analysis, maps and censuses, and comparative research in other field sites or with other anthropologists (Bennett *et al.*, 2017a).

Building Knowledge and Understanding

Anthropological methods generate distinctive forms of data that can fill important gaps in our understanding of the multiple dimensions of orangutan killing. First, the insights gained from fieldwork conversations tend to be more candid and honest than those elicited in the confines of structured interviews, surveys and questionnaires (Eriksen, 2015, chapter 3; Hume and Mulcock, 2004). Participants' responses to the latter might be shaped by a lack of familiarity or trust as well as their own vested interests (such as seeking financial rewards). Conversely, anthropologists' extended presence and investment in social relationships in the field often give them access to opinions and experiences that remain invisible to outsiders. This is especially important when exploring a topic as sensitive and potentially incriminating as orangutan killing, which villagers may not discuss openly with conservationists or interviewers.

Second, the holistic, open-ended nature of anthropological research can generate a fuller picture of village life than is possible through other methods. Rather than focusing on specific problems and solutions, anthropologists start by exploring the wider contexts, attending to phenomena such as gender relations, kinship, morality, economic pressures, local power structures and political formations, religion and ritual, and relationships with the state (Eriksen, 2015). These are integral to the milieu in which orangutan killing occurs and often of greater concern than biodiversity conservation to people in rural Borneo—many of whom have little interest in or experience of orangutans.

Third, anthropological methods can reveal real-life complexity, ambiguity and fluidity. People's lives and identities are as multifaceted as the problem of orangutan killing: one person can be a subsistence farmer, cash cropper, oil palm plantation employee and government official all at once—and hold multiple, even conflicting, views of orangutans, the forest, and conservation that vary situationally and evolve over time. Through their extended presence in the field, anthropologists are well equipped to trace changes and developments, and to understand their drivers, manifestations and impacts (Eriksen, 2015; Howell and Talle, 2012). Orangutan killing is not a static problem, nor is the context in which it occurs; anthropological analyses can serve to capture related vicissitudes.

The utility of anthropological insights for conservation is illustrated by research on hunting within and beyond Borneo. Studies in Africa and Papua New Guinea, for example, reveal



how hunting practices are not only utilitarian, but also structure social relationships and identities at the village level and incorporate remote places into global economies (Gordon, 2016; Sillitoe, 2003; Tadie and Fischer, 2013). Failure to acknowledge these functions and meanings of hunting has frustrated many well-intended conservation efforts (Marks, 2016; West, 2005). Conservation interventions into hunting patterns in Borneo would therefore benefit from taking seriously the deep social embeddedness of hunting practices (Puri, 2005; Wadley and Colfer, 2004; Wadley, Colfer and Hood, 1997).

Other research shows how shifting livelihoods and rural-urban migration can reshape human-wildlife interactions (Margulies and Karanth, 2018). On Borneo, these processes have a profound impact on village politics and forms of authority, which in turn influence how conservation interventions and the law are implemented at this level (Elmhirst *et al.*, 2017; Li, 2015). These processes can also generate new aspirations, forms of identity and affiliation, and religious beliefs that shape how villagers conceive of the forest, modernity and human-animal relations in general (Chua, 2012; König, 2016; Schiller, 1997; Schreer, 2016; Sillander and Alexander,

2016). Tracing how such conceptions influence social dynamics and transform over time is vital to our understanding of how villagers in rural Borneo relate to orangutans and conservation.

Formulating New Strategies

More than supplementing conservationists' understanding of the causes and contexts of orangutan killing, the above insights can inform and generate new strategies and approaches for addressing the problem at its source—the rural village level. Such strategies and approaches could also be applied to other conservation contexts involving poaching, hunting or human-wildlife conflict.

First, anthropological analysis can shed light on why certain conservation interventions succeed or fail, and how legal directives and conservation initiatives are implemented, interpreted, responded to, transformed and/or rejected on the ground (Großmann, 2018; Lounela, 2015). The approach is useful in answering a host of specific questions. For example, do people disregard wildlife protection laws out of ignorance or indifference, or due to resentment of the state, conservationists or other parties? How do they navigate the competing demands of kinship obligations, economic pressures and legal

prohibitions? Did a scheme fail because of poor implementation or incompatibility with local moral ideals? Did another succeed because it converged with local agendas or through the backing of a powerful individual? By foregrounding such seemingly external considerations, anthropologists can show how they intersect with conservation in various, sometimes unexpected ways (Kockelman, 2016; Lowe, 2006; Perez, 2018; West, 2006).

Second, anthropological insights can push conservationists to consider new, contextually specific problems and possibilities when designing evidence-based interventions. Understanding local power relations, for example, can facilitate collaborations with certain networks (such as farmers' collectives, credit unions, women's groups and religious communities) or interventions at multiple levels (such as with provincial governments, customary authorities and village-based mutual assistance systems). Understanding influential cultural values and taboos, including those about reciprocity or shame, can inspire new ways of framing conservation messages in community engagement (Aini and West, 2018; Infield *et al.*, 2018; Rubis, 2017). Moreover, understanding the circuits and technologies (such as radio and social media) through which such messages travel could give conservationists new entry points into ongoing conversations that occur beyond established channels, such as schools and "socialization" events.

Finally, anthropology can help transform the relationship between conservation and local communities. Knowledge of the diversity and complexity of life on the ground can challenge one-dimensional stereotypes about "local people" (such as forest protectors or ignorant savages) and better equip conservationists to address local concerns and priorities—some of which may have little to do with orangutans. For such contextual, evidence-based approaches to bear fruit, however, it is vital that anthropological and other social science methods be fully incorporated into the conservation mainstream, treated as primary rather than supplementary components of conservation, and allocated the time, resources and support they require to succeed (Bennett *et al.*, 2017b).

- a close-knit community;
- protected areas and conservation of natural resources;
- a preference for wild meat consumption, mostly among hunters;
- an absence of non-local hunters in community forests (Head, 2014, p. 43).

This research revealed that while hunting was primarily a cultural activity, with wild meat almost always eaten solely by the hunter and his family, it was one of the few sources of income for adolescent boys, who do not inherit agricultural land until they are married. Head (2015) developed a number of questions that proved key to understanding the social, educational and political dynamics at play in Nam Kading. By including these questions in situational analyses of given landscapes prior to an intervention, conservationists may be able to expand their understanding of the identity and practices of local residents. The questions are:

- How is the local community structured? Who exerts the greatest degree of control over community members?
- Do local role models comprise men and women?
- How does wildlife feature in the local belief system?
- Is the area home to indigenous peoples? Do their beliefs regarding wildlife differ from those of other local residents?
- Do any local ceremonies involve the use of wildlife?
- Are social or cultural functions attributed to the consumption or hunting of wildlife?
- Is hunting apes or other species taboo? What is the origin of these taboos and how closely are they followed?
- Are community members becoming less or more likely to adhere to the taboos? Do changing attitudes to hunting or eating wild meat reflect changes in the area, such as an influx of migrants or a local extinction?

Photo: Research on hunting has revealed how hunting practices are not only utilitarian, but also structure social relationships and identities at the village level and incorporate remote places into global economies. Illegal snare in a protected area; positioned along a fence to guide animals into it. © Tim Laman/naturepl.com

- Do community members tolerate, appreciate or disapprove of ownership of wildlife and forest products?
- Could wildlife be replaced by sustainable alternatives? What obstacles would need to be overcome?
- Has the local population undergone recent cultural changes?
- Is wild meat consumption associated with different beliefs and taboos among immigrants in the area?
- What is the role of immigrants in the wild meat trade?
- Have local beliefs and taboos changed as a result of the arrival of immigrants? (Head, 2015, p. 45).

Of particular importance in this part of Lao PDR was the need to understand the social and cultural impacts of political and economic changes in rural areas. In particular, it was useful to gain an appreciation of how communities relate to the state, national and international NGOs, and other external parties, since these entities can shape their perspectives on interventions, such as wildlife protection laws and conservation initiatives. Similarly, it was valuable to keep abreast of local responses to developments such as the arrival of industrial agriculture or the emergence of extractive supply chains (Head, 2014). Case Study 2.4 discusses the importance of understanding local factors in efforts to promote conservation and engage communities in Uganda.

Intersectionality of Culture and Other Factors Relevant to the Ape Trade

This chapter suggests that effective conservation strategies rely on a solid understanding of cultural norms and practices of local communities, including hunting, and that

CASE STUDY 2.4

Integrating Culture and Conservation in Uganda

The Cross-Cultural Foundation of Uganda carried out research to establish the extent to which cultural attitudes can contribute to the conservation of chimpanzees. The work focused on two communities that exhibited a cultural affinity with apes: Uganda's Bakonzo, who are mainly found north of Lake Edward, along the border with the DRC, and the Banyoro, one of the country's largest ethnic groups, occupying forested areas east of Lake Albert (CCFU, 2018; see Figure 2.2). The study indicates that ape habitat, and land and natural resources more generally, are prized not only for their economic value, but also for their cultural and spiritual significance, which provides the community with an important sense of identity and belonging. Although many of the large forests have been gazetted as forest reserves or national parks, members of neighboring communities expressed their attachment to these natural landscapes and their wildlife. Some respondents referred to chimpanzees as "people who ran away from the community" or "relatives who should be respected" (CCFU, 2018, p. 3). In view of their similarities to humans and their obvious intelligence, as illustrated by their ability to use tools and make their own bed every night, communities have refrained from hunting or eating them (CCFU, 2018).

Both the Batangyi (of the Bakonzo ethnic group) and the Bayanja (of the Banyoro) claimed the chimpanzee as a totem (CCFU, 2018; see Box 2.3). Despite modernization, the traditional clan systems in both communities still proved to be vibrant aspects of contemporary life, with children taught at an early age not to hurt or abuse a chimpanzee, but rather to identify the animal as "grandfather" or "owner of the forest" (CCFU, 2018, p. 3). This type of identification can serve as a cultural resource in raising awareness about the importance of conserving the chimpanzee — both within and outside clans that have this species as their totem.

In certain areas, positive attitudes towards wildlife coexist with practices that have a negative impact on chimpanzee conservation. Traditional medicine practitioners in

▶ this region reported using body parts in their healing practices, allegedly due to the influence of Congolese migrants. The influx of people from elsewhere may indeed be contributing to changes in cultural practices in Uganda, where communities are not generally known to eat chimpanzee meat. In both research locations in Uganda, population growth and demographic change have led not only to the deforestation of chimpanzee habitat, but also to a shift in attitudes to the species (CCFU, 2018). Case Study 2.1 provides examples of such behavior change in Cameroon, which has seen an influx of people from diverse cultural backgrounds (CCFU, 2018; Chuo, 2018). These developments highlight the need to be sensitive to ongoing cultural changes when developing local conservation interventions.

Notwithstanding demographic changes in Uganda, cultural identity remains key to social organization and relationships within clans and beyond. Cultural institutions in both the Bakonzo and Banyoro homelands are actively engaged in the transmission of cultural values, a practice that could be amplified if undertaken in conjunction with conservation partners, the Uganda Wildlife Authority (UWA) and the district community development offices. Private forest owners in these areas are also likely to hold positive attitudes towards biodiversity and may thus be able to contribute to the preservation of chimpanzees and their habitat outside of protected areas. Together, these stakeholders are well positioned to support culturally relevant processes and practices, and thereby to promote the behavior change that is required to curb significantly both hunting and trading in apes (CCFU, 2018).

As part of the study, respondents suggested changes to the Uganda Wildlife Act, which guides UWA's conservation practice (Parliament of Uganda, 1996). In particular, they recommended that policy guidance be provided on:

- involving cultural centers in conservation activities and ensuring that indigenous knowledge and skills inform local interventions and awareness raising campaigns;
- joining forces with private forest owners to protect forests and chimpanzees, for example by setting up wildlife ranches for tourists;
- holding investors responsible for damage caused to natural and cultural heritage, and ensuring they engage in requisite restoration efforts; and
- conducting a census of chimpanzees in the country to evaluate how culture and other factors affect their endangered status (CCFU, 2018, p. 23).

Links between people and biodiversity are important aspects of individual and ethnic identity and contribute significantly to the experience of well-being. Without connections to the environment, individuals and communities may lose their sense of identity and rootedness in place and time. By going beyond the traditional fines-and-fences approach, governments and their partners can ensure that cultural heritage plays a role in promoting conservation and benefitting communities. They can do so by allowing communities to define their needs and goals in a manner that makes the most sense to them, and by identifying other ways to strengthen their ability to engage meaningfully in decision-making processes.

conservationists can best gain such an understanding by asking—rather than ascribing to or telling—people what is important to them about their natural environment. As discussed in Case Study 2.4, traditional communities pass on traditional beliefs and practices in an effort to conserve what is considered valuable. In cases where such practices—including the use of ape parts in traditional medicine—are in conflict with conservation objectives, dialog between local people and conservationists can help to identify required compromises. In the best-case scenario, such collaboration can serve to protect individual species as well people's livelihood and cultural identity, all of which depend on the ecological integrity of the local environment.

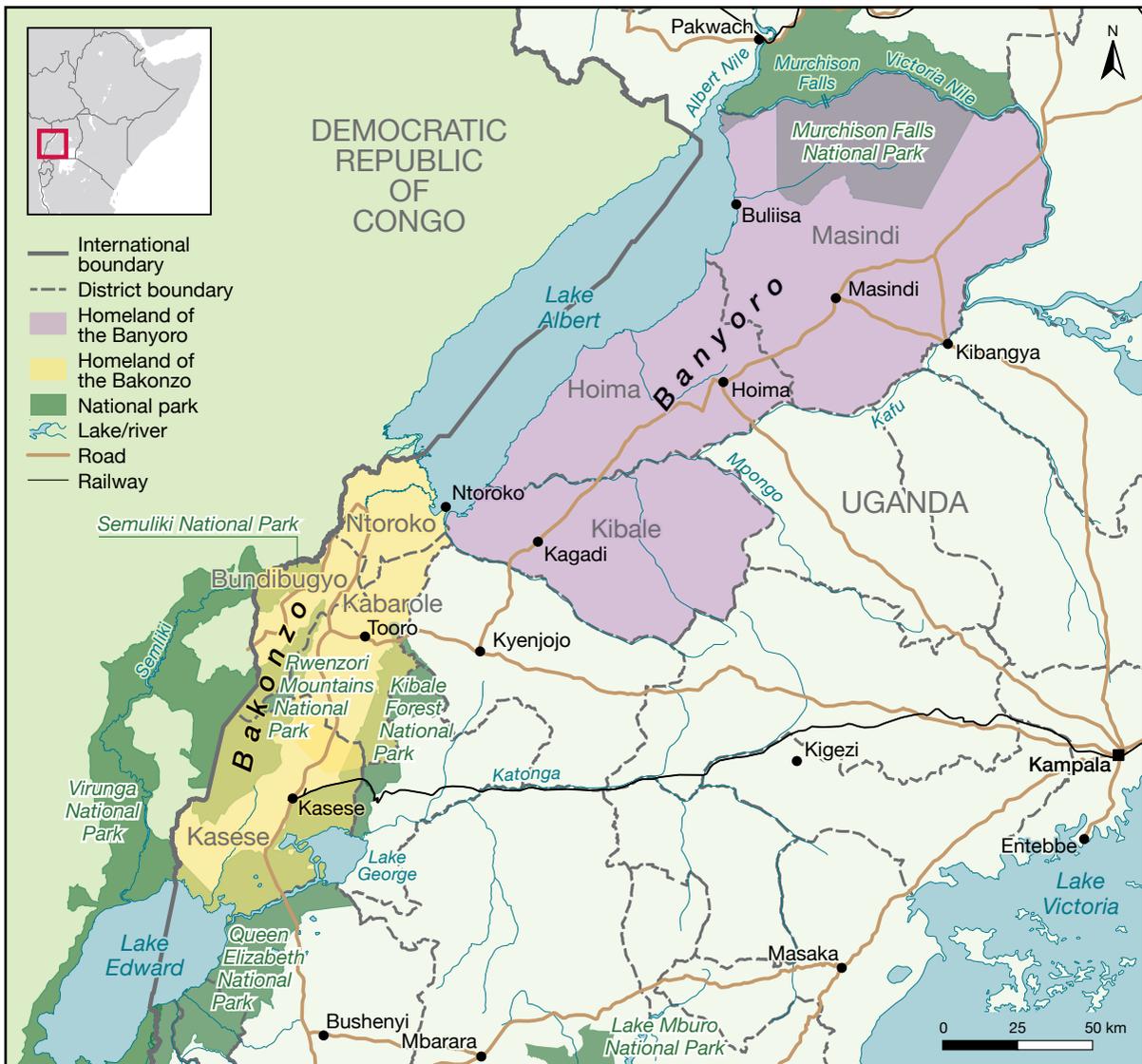
In addition to partnering with local communities, conservationists can undertake supplementary research to ensure that gender and other issues are properly factored

into interventions. Wildlife conservation and management efforts often overlook gender dimensions, even though gender inequalities and differences are reflected in the use, management and conservation of wildlife at the local level (Meola, 2013; Ogra, 2012). Moreover, anecdotal evidence suggests that the roles of actors in the illegal wildlife trade are particularly gender-differentiated (L. Aguilar, personal communication, 2018). Steps to integrate gender into conservation projects can include: assessing the gender dimensions of the project and setting; developing project indicators for monitoring gender integration; and developing broader institutional processes to further this integration (L. Aguilar, personal communication, 2018).

As this chapter demonstrates, questions about ape conservation are also questions about human identity and well-being. The

BOX 2.3**Bonesetting and Totemic Protection**

I am a Mutangi by clan. I am aware that bonesetters use the bones of chimpanzees to mend broken bones. In August 2017, my son had a broken leg and I went to a bonesetter for treatment. When I asked him what bone he was going to use to attach to my son's leg, he told me it was a chimpanzee's bone. I immediately refused this treatment because it is my totem and my child's totem. I decided to go to a bonesetter who uses a different method (herbs) for fear that other bonesetters would use the chimpanzee bone on my son, even if they claimed they would not do so (CCFU, 2018, p. 16).

FIGURE 2.2**Homelands of the Bakonzo and Banyoro Peoples of Uganda**

Sources: Bunyoro-Kitara Kingdom (n.d.), Protected Planet (n.d.-b), UNEP-WCMC (2019b, 2019d)

values held by local communities often reveal how they connect with their environment; conservationists who understand these values are best placed to explore how they can benefit ape conservation as well as the communities themselves.

Conclusion

Cultural attitudes and practices are among the factors that both drive and inhibit the ape trade. This chapter suggests that conservationists can benefit from a solid understanding of how these dynamic factors affect the killing and capture of apes in local contexts. Indeed, cultural behavior can be assessed alongside the economic drivers of ape population declines, and related interventions can target both via similar approaches, such as awareness raising, behavior change strategies and appropriate law enforcement (see Box I.4; Chapters 4 and 5; Annex II).

This chapter emphasizes the advantages of approaching interventions in a way that is sensitive to the identities and practices of local individuals and communities. By engaging with local people in a respectful way and identifying the co-benefits of protecting great apes and gibbons, conservationists may be able to open up avenues for compromise, such as by suggesting alternative practices that do not require the killing of apes. As Case Study 2.4 indicates, it is possible to strengthen conservation practices by better appreciating the sociocultural significance of apes among local communities—rather than seeing them purely as objects of tourism or zoology, for example. By supporting the well-being of communities—that is, their overall health and sense of identity—interventions may thus also help to secure conservation benefits.

In practice, however, it may not be possible to strike a perfect balance between the aim of curbing the ape trade and the goal of supporting local communities, their complex value systems and their socioeconomic

needs. As shown in Table 2.2 and in Case Study 2.3, a number of social science methods can complement traditional ecological assessments of the ape trade and its impact, yet conservationists may not have the budgets required to carry out detailed studies of a place and its inhabitants. Moreover, while current biodiversity theory and practice suffer from certain false assumptions and misrepresentations of cultural norms, some traditional attitudes and behavior do indeed drive declines in ape and gibbon numbers. Despite these complexities, compromise and positive change are most likely to be reached if conservationists situate their interventions in local settings, in the context of social and familial relationships. In so doing, they can help to rethink narratives such that they maintain links to the past but also become more relevant to the 21st century, with outcomes that do not reinforce the traditional nature–culture dichotomy and thus have the potential to conserve biodiversity and promote well-being at the same time.

Acknowledgments

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Case Study 2.2: Karmele Llano Sánchez

Case Study 2.3: Liana Chua and Paul Hasan Thung

Endnotes

- 1 Abram *et al.* (2015); Campbell-Smith, Sembiring and Linkie (2012); Campbell-Smith *et al.* (2010); Davis *et al.* (2013); Freund, Rahman and Knott (2017); Marshall *et al.* (2006); Meijaard *et al.* (2011, 2013); Nijman (2005, 2009, 2017).
- 2 Arcus Foundation (www.arcusfoundation.org).
- 3 Brunel University London (www.brunel.ac.uk/anthropology).
- 4 Yayasan International Animal Rescue Indonesia (www.internationalanimalrescue.or.id).
- 5 Brunel University London (www.brunel.ac.uk/anthropology).