

Melursus ursinus, Sloth Bear

Assessment by: Dharaiya, N., Bargali, H.S. & Sharp, T.



View on www.iucnredlist.org

Citation: Dharaiya, N., Bargali, H.S. & Sharp, T. 2016. *Melursus ursinus*. *The IUCN Red List of Threatened Species 2016*: e.T13143A45033815. <http://dx.doi.org/10.2305/IUCN.UK.2016-3.RLTS.T13143A45033815.en>

Copyright: © 2016 International Union for Conservation of Nature and Natural Resources

Reproduction of this publication for educational or other non-commercial purposes is authorized without prior written permission from the copyright holder provided the source is fully acknowledged.

Reproduction of this publication for resale, reposting or other commercial purposes is prohibited without prior written permission from the copyright holder. For further details see [Terms of Use](#).

The IUCN Red List of Threatened Species™ is produced and managed by the [IUCN Global Species Programme](#), the [IUCN Species Survival Commission \(SSC\)](#) and [The IUCN Red List Partnership](#). The IUCN Red List Partners are: [Arizona State University](#); [BirdLife International](#); [Botanic Gardens Conservation International](#); [Conservation International](#); [NatureServe](#); [Royal Botanic Gardens, Kew](#); [Sapienza University of Rome](#); [Texas A&M University](#); and [Zoological Society of London](#).

If you see any errors or have any questions or suggestions on what is shown in this document, please provide us with [feedback](#) so that we can correct or extend the information provided.

Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Mammalia	Carnivora	Ursidae

Taxon Name: *Melursus ursinus* (Shaw, 1791)

Synonym(s):

- *Bradypus ursinus* Shaw, 1791

Common Name(s):

- English: Sloth Bear
- French: Ours lippu de l'Inde, Ours prochile lippu
- Spanish: Oso Perezoso

Taxonomic Notes:

This species was initially classified in the genus *Bradypus*, as it was thought that it was related to South American sloths, due to the absence of the two first upper incisors. Debate persists as to whether this species should be in the mono-specific genus *Melursus*, or in *Ursus* (Pagès *et al.* 2008, Krause *et al.* 2008, Kitchener 2010).

Two subspecies have been recognized. There is some evidence that they are distinct genetic clades (Fain *et al.* 1994). *Melursus ursinus inornatus* only occurs on the island of Sri Lanka and is physically smaller with shorter and sparser hair than its mainland (*M. u. ursinus*) counterpart.

The principal colour phase is black, with a white or cream/yellow crescent on the chest. Rusty brown phases are also known. The species is often confused with the Asiatic Black Bear (*Ursus thibetanus*), due to similar appearance.

Assessment Information

Red List Category & Criteria: Vulnerable A3c [ver 3.1](#)

Year Published: 2016

Date Assessed: March 18, 2016

Justification:

There are no reliable large-scale population estimates for Sloth Bears, nor any reliable large-scale estimates of population change. Since the total occupied area in India has been variously estimated at between 200,000 km² (Johnsingh 2003, Akhtar *et al.* 2004, Chauhan 2006) and 400,000 km² (Sathyakumar *et al.* 2012), or even more (Puri *et al.* 2015), it is impossible to gauge population trend from changes in occupied area. However, there is, throughout most of the range, a clear trend in deterioration of habitat, which has caused Sloth Bear populations to decline (Akhtar and Chauhan 2008). This deterioration in habitat is expected to accelerate in the future.

Habitat outside of protected areas is under severe and growing pressure due to demands for natural

resources and the ever increasing populations of both humans and livestock in the region (Akhtar *et al.* 2006a). This problem is compounded by many factors including that in India, where the vast majority of Sloth Bear habitat is located: 1) the per capita forest area is only one-tenth of the world's average; 2) there is a demand–supply gap for construction timber leading to over-harvesting and degradation of natural ecosystems; 3) an estimated 78% of forests are subjected to heavy grazing causing degradation of forest habitat; and 4) vast stretches of forest are still diverted for a variety of developmental and infrastructural projects (Ministry of Environment and Forests, Government of India 2009). The Food and Agriculture Organization of the United Nations (FAO 2015) reported that India had a 0.3% rate increase of forest area during 2010-2015, due to afforestation. However, the type and location of all the forest planted is unspecified. Much of this afforestation effort is occurring in more urban areas and it is not known how much is accessible to Sloth Bears.

The human population growth in India is presently the greatest threat to Sloth Bears. It drives the loss and degradation of habitat and is likely the cause for growing human-bear conflicts in the country. The population of India is expected to increase by 366,000,000 people (roughly 30%) over the next 30 years (US Census bureau, International database <http://www.census.gov/population/international/data/idb/informationGateway.php>). This extraordinary population growth is likely to have major direct and indirect impacts on Sloth Bear populations, especially those existing outside protected areas. The human population growth of India is particularly alarming because 90-95% of the range of Sloth Bears is in India. Likewise, Ratnayeke *et al.* (2007) predicted a future decline in Sloth Bear numbers in Sri Lanka due to burgeoning human densities and commensurate habitat deterioration and increasing conflicts.

The recent extirpation of Sloth Bears in Bangladesh (Islam *et al.* 2013) highlights serious concerns over persistence of small, isolated Sloth Bear populations, especially outside of protected areas, where half or more of the populations exist. Sloth Bears are particularly vulnerable to loss of habitat because of their reliance on lowland areas, which tend to be the places most readily used and developed by people. Moreover, the aggressiveness of this species makes them incompatible with high human populations (Ratnayeke *et al.* 2014). Given the lack of effective measures to control the rate of habitat loss and exploitation, Sloth Bear populations are expected to continue declining, at an increasing rate, resulting in a >30% loss over the next 30 years (three generations).

Previously Published Red List Assessments

2008 – Vulnerable (VU) – <http://dx.doi.org/10.2305/IUCN.UK.2008.RLTS.T13143A3413440.en>

1996 – Vulnerable (VU)

1994 – Vulnerable (V)

1990 – Vulnerable (V)

1988 – Indeterminate (I)

1986 – Indeterminate (I)

Geographic Range

Range Description:

The Sloth Bear's historical distribution includes a large portion of India, Bangladesh, and Sri Lanka, as well as the southern lowlands of Nepal and presumably Bhutan. Some unverified reports suggested that they once occurred in the western-most corner of present day Myanmar (Erdbrink 1953), but this was never confirmed and seems unlikely based on the mountainous habitat. Historically this species overlapped the distributions of Asiatic Black Bears (*Ursus thibetanus*) in northern India (Bargali *et al.* 2012), and with both Asiatic Black Bears and Sun Bears (*Helarctos malayanus*) in northeastern India (Choudhury 2011). Historical records are confusing, though, because Sloth Bears and Asiatic Black Bears look alike and were often not reliably distinguished.

India

At least 90% of the present Sloth Bear range occurs in India. Within India their distribution is constrained to the south by the ocean, to the northwest by deserts, and to the north and east by mountains. Although Sloth Bears were once common and even abundant throughout the Indian Peninsula (McTaggart Cowan 1972, Krishnan 1972, Brander 1982), their range has shrunk and densities reduced due to continuous habitat loss and human-caused mortalities. Although still found scattered across much of its former range, their actual distribution is now highly fragmented and confined mainly to five distinct regions, namely northern, northeastern, central, southeastern, and southwestern (Garshelis *et al.* 1999a, Johnsingh 2003, Yoganand *et al.* 2006, Sathyakumar *et al.* 2012).

The northern distribution region occurs largely within the state of Uttarakhand (Bargali 2012), but also includes the neighbouring states of Uttar Pradesh and the northwestern tip of Bihar. This northern region borders the southern and western areas of Nepal and includes trans-border populations. However, the northern region remains completely isolated from the other population regions in India due to large scale forest removal and agriculture and human settlements.

The northeastern region is the farthest east that this species occurs and is perhaps the least understood region in terms of Sloth Bear distribution. The bulk of the distribution appears to occur in the state of Assam (Choudhury 2011, Sathyakumar *et al.* 2012), though Sloth Bears are also known from Manipur, Meghalaya and Arunachal Pradesh (where it is very rare). The fact that the distribution of Sloth Bears in this region overlaps with that of both Asiatic Black Bears and Sun Bears has made reports of Sloth Bear occurrence less reliable.

The central region is the largest region. The bulk of the distribution occurs in the states of Madhya Pradesh and Chattisgarh, but includes the states of Orissa, Andhra Pradesh, Maharashtra, Uttar Pradesh, Bihar, Jharkhand and West Bengal. Just south of this region, in the southern half of Andhra Pradesh, is the southeastern region, which occurs along the Eastern Ghats. It is not known whether bears move between the central and southeastern regions.

The southwestern area follows the Western Ghats and principally falls within the states of Maharashtra, Goa, Karnataka, Kerala and Tamil Nadu, where there may be a connection to the southeastern region. They have been observed up to 2,000 m elevation in the Western Ghats (A.J.T. Johnsingh, personal communication, in Garshelis *et al.* 1999a). They also stretch northwestward into Gujarat and Rajasthan.

Nepal

In Nepal, Sloth Bears are most common within the narrow strip of lowland grassland–forest mosaic called the Terai. They also range into the lower Siwaliks (maximum elevation is unknown). The bears are

mainly in protected areas in the central and western portions of the Terai. Since the mid-1980s, they were thought to have been extirpated from the Sukla Phanta Wildlife Reserve in western Nepal, an area containing the largest patch of continuous grassland in Nepal (Garshelis *et al.* 1999b). However, during a 2013 Tiger camera trap study in the reserve a photo of a Sloth Bear was captured. Then in 2014 Sloth Bear tracks and scat were recorded in the reserve as well (Babu Ram Lamichane, National Trust for Nature Conservation—Suklaphanta Conservation Program, pers. comm., 2015). Therefore, it appears that Sloth Bears have recolonized Sulka Phanta Wildlife Reserve, likely from adjacent Piliphit Tiger Reserve in Uttar Pradesh, India, which is known to have Sloth Bears (Sathyakumar *et al.* 2012); alternately, Sloth Bears persisted in such small numbers that they went undetected for several years (Johnsingh 2003). Some of the Sloth Bear populations in Nepal remain connected with the Indian northern region (Sathyakumar *et al.* 2012).

Bangladesh

Sloth Bears have been extirpated from Bangladesh (Islam *et al.* 2013). The last documented records are from the mid-1990s (NCSIP-1 2001, Sarker 2006). Although they had been present in the southeastern, eastern and northeastern parts of the country, the forest patches in which they persisted have been largely removed (Sarker 2006).

Bhutan

Recent investigations suggest that if Sloth Bears occupy Bhutan, they are very rare. Garshelis *et al.* (1999a) mapped two populations of Sloth Bears in Bhutan, including Royal Manas National Park (RMNP) and Phipsoo Wildlife Sanctuary. Their range map was based on habitat-elevation information and purported documentation of presence. However, due to frequent confusion in distinguishing Sloth Bears from Asiatic Black Bears, it is now apparent that this range map was wrong. Sloth Bears appear to have a much narrower range in Bhutan, if at all. One camera trap photo in RMNP, taken in 2009, 2 km from the Indian border, is the only current verified record of presence (Garshelis *et al.* 2015). Grasslands, which are preferred habitat for Sloth Bears (Garshelis *et al.* 1999 a,b; Choudhury 2011) are present in both RMNP and Phipsoo Wildlife Sanctuary, and both of these protected areas are connected to protected areas in India, known to contain sloth bears. However, it is not known whether a true trans-boundary population exists anywhere along this border, or if just a few vagrant bears occasionally come across to the Bhutan side (Garshelis *et al.* 2015).

Sri Lanka

The Sri Lankan Sloth Bear subspecies is distributed in the north and east sides of the island and is closely tied with forest cover (Ratnayeke *et al.* 2007a). Sloth Bears occupy roughly 17% of the island and there is still a high connectivity between occupied areas. However, recent civil war activities largely occurred in the northern and eastern sides of the island, which are home to the largest contiguous forest patches and which historically supported healthy Sloth Bear populations. These areas have gone largely unprotected and it is still unknown how sloth bear distribution may have been affected (Ratnayeke *et al.* 2006, 2007a).

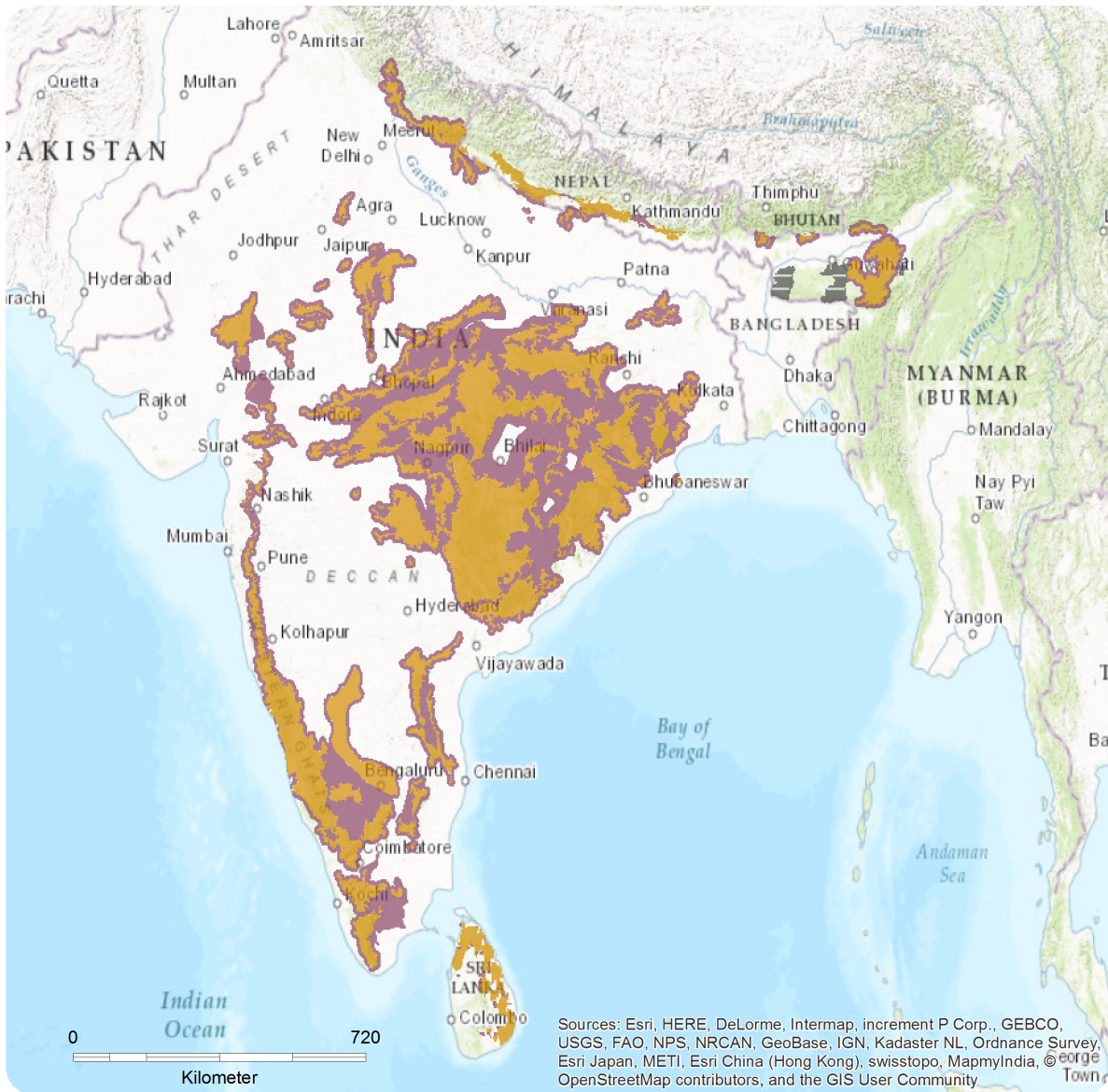
Country Occurrence:

Native: India; Nepal; Sri Lanka

Regionally extinct: Bangladesh

Distribution Map

Melursus ursinus

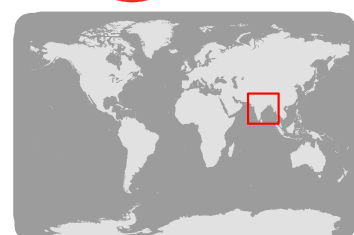


Range

- Extant (resident)
- Possibly Extant & Origin Uncertain (resident)
- Possibly Extant (resident)
- Presence Uncertain

Compiled by:

Wildlife & Conservation Biology Lab, HNG University



The boundaries and names shown and the designations used on this map do not imply any official endorsement, acceptance or opinion by IUCN.



Population

Information is available on the area of potentially occupied range in India (Chauhan 2006, Yoganand *et al.* 2006, Sathyakumar *et al.* 2012), Nepal (Garshelis *et al.* 1999a), and Sri Lanka (Ratnayeke *et al.* 2007a,b). The potential Sloth Bear distribution in India was estimated to be *ca.* 200,000 km² (Johnsingh 2003, Akhtar *et al.* 2004, Chauhan 2006) but the more recent National Bear Conservation and Welfare Action Plan 2012 (Sathyakumar *et al.* 2012) indicated that the occupied range is twice that large (400,000 km²). An even more recent survey suggested that Sloth Bears may occupy 52% of the land area of India (Puri *et al.* 2015). Notably, though, the latter study was based on very large sampling cells (2,800 km² across a sampling region of nearly 3 million km²), and any cell estimated to be occupied would have been considered as fully occupied; this would inflate the range area considerably. In short, the results of this study do not appear to reflect the reality of Sloth Bear distribution in India as they clearly do not occur in >50% of the land area. Additionally, the model predicts Sloth Bear occurrence in specific places where they are known to be absent, such as Gir Forest. However, the study does demonstrate that Sloth Bears can live in relatively small degraded areas.

Sloth Bears can occur at high densities. However, there are few reliable Sloth Bear density estimates: most estimates have been based on opinions gleaned from interviews and questionnaires (e.g., Yoganand *et al.* 2006). The one robust density estimate for this species, which was based on mark–resight of radio-collared bears, yielded an estimate of 27 bears/100 km² for Royal Chitwan National Park, Nepal, and as high as 72 bears/100 km² in a core area of the park (Garshelis *et al.* 1999b). Gopalaswamy (2006) attempted a rigorous estimate based on presence-absence records at camera traps (as per Royle and Nichols 2003), but detection rates were too low to produce a useful estimate.

Attempts have been made to apply estimated densities in various protected areas to all occupied areas to obtain a range-wide population estimate. Depending on methods and data employed in this process, range-wide estimates have varied from <10,000 to >20,000 bears (Garshelis *et al.* 1999a, Chauhan 2006, Yoganand *et al.* 2006, Sathyakumar *et al.* 2012). None of these estimates are considered reliable enough to track changes in population size, especially since the total range area is not well defined. Estimates for individual Indian states are also not reliable enough to track population trends (Sathyakumar *et al.* 2012).

The population of Sloth Bears on the island of Sri Lanka is equally not well understood. Santiapillai and Santiapillai (1990) tentatively reported a population of 300–600 bears for the island. Ratnayeke *et al.* (2007a) estimated, based on home ranges of radio-collared bears that Wasgomuwa National Park alone may support more than 100–150 sloth bears. This national park only makes up roughly 5% of the known Sloth Bear range in Sri Lanka and therefore the population likely well exceeds the previous estimate.

Increased habitat fragmentation and a decrease of occupied habitat have been observed in many parts of the Sloth Bear range (Akhtar and Chauhan 2008, Bargali 2012, Bargali and Sharma 2013). However, rigorous assessments of population change are rare. Jhala *et al.* (2011) compared occupancy of Sloth Bears in select areas from 2006 to 2010, during a comprehensive Tiger survey across India, and reported five decreasing, four increasing, and three stable bear populations; although the methods and short time span between surveys probably precluded a reliable indication of population trend.

Current Population Trend: Decreasing

Habitat and Ecology (see Appendix for additional information)

Sloth Bears subsist primarily on termites, ants, and fruits. Sloth Bears are the only species of bear adapted specifically for myrmecophagy (ant and termite-eating; Garshelis *et al.* 1999a, Sacco and Van Valkenburgh 2004). Like other myrmecophagous mammals, they have especially small home ranges compared to other ursids (Joshi *et al.* 1995, Ratnayeke *et al.* 2007a, Akhtar *et al.* 2006b). The ratio of insects to fruits in the diet varies with the seasonal and geographical availability of each food (Baskaran *et al.* 1997, Joshi *et al.* 1997, Bargali *et al.* 2004, Sreekumar and Balakrishnan 2002, Mewada and Dharaiya 2010, Sukhadiya *et al.* 2013). Fruits may comprise 70–90% of the diet during the fruiting season, whereas termites and other insects may comprise >80% of the diet the rest of the year (Ratnayeke *et al.* 2007b, Seidensticker *et al.* 2011, Yoganand *et al.* 2012).

Sloth Bears occupy a wide range of habitats on the Indian mainland including wet and dry tropical forests, savannahs, scrublands, and grasslands (Joshi *et al.* 1995, Sreekumar and Balakrishnan 2002, Akhtar *et al.* 2004, Yoganand *et al.* 2006, Seidensticker *et al.* 2011, Ramesh *et al.* 2012). They are primarily a lowland species. Most Sloth Bear range in India, Nepal, and Sri Lanka is limited to habitats below 1500 m, although the species may occur as high as 2,000 m in the forests of the Western Ghats (Johnsingh 2003, Seidensticker *et al.* 2011). In Sri Lanka, Sloth Bears are confined to the remaining dry forests in the north and eastern parts of the island, mostly below 300 m (Ratnayeke *et al.* 2006). In areas where forest cover is sparse but daytime temperatures are high (a large part of the range), the bear is principally nocturnal or crepuscular and shelters in rock outcrops, thickets, and tree cavities during the heat of the day. Although some Sloth Bears may be active during the day in protected areas (Joshi *et al.* 1999), they tend to be almost exclusively nocturnal in disturbed and fragmented forests interspersed with human habitations (Akhtar *et al.* 2004; Bargali *et al.* 2005, 2012).

Studies in Nepal and Sri Lanka suggest that Sloth Bears avoid areas where human disturbance is high, so crop depredation by Sloth Bears is uncommon (Joshi *et al.* 1995, Ratnayeke *et al.* 2007a). However, in some parts of India, Sloth Bears routinely raid peanut, maize, and fruit crops (Chhangani 2002, Akhtar *et al.* 2004, Bargali *et al.* 2004). In some of these areas the habitats are severely degraded and affected by human exploitation, including the extraction of several food sources of the Sloth Bear.

Sloth Bears typically breed May through July, and females give birth, usually to one or two cubs, from November to January (Laurie and Seidensticker 1977, Iswariah 1984, Gopal 1991, Joshi *et al.* 1999, Chauhan *et al.* 2003, Spady *et al.* 2007). Cubs often ride on the mother's back during their first nine months, presumably to reduce the risk of predation. Cubs remain with their mothers for 1.5–2.5 years resulting in a 2 or 3 year interbirth interval (Joshi *et al.* 1999).

Systems: Terrestrial

Use and Trade

Poaching of Sloth Bears for trade in parts has been reported (Servheen 1990, Garshelis *et al.* 1999a, Sathyakumar *et al.* 2012), but its current extent and impact on bear populations is uncertain. Compared to other Asian bear species, commercial trade in Sloth Bear parts appears to be relatively low (Burgess *et al.* 2014). Poaching also occurs for local use: male reproductive organs used as aphrodisiac; bones, teeth and claws used to ward off evil spirits; bear fat used for native medicine and hair regeneration (Santiapillai and Santiapillai 1990, Seshamani and Satyanarayan 1997, Chauhan 2006). Occasional rashes

of poaching incidents have been reported. For example, in Madhya Pradesh in 2014, at least eight male bears were found professionally poached, as indicated by the skilful removal of their reproductive organs, gall bladders and claws (Basu 2014, Naveen 2014). Two of the dead bears were found near the buffer area of Khana Tiger Reserve, while the others were found in less protected forests in the state. The manner in which the bear parts were removed led many to speculate that that the poaching may be taking place on a larger scale and that the parts may have been removed for illegal international trade.

The capture of cubs, which often includes the killing of the mother bear, for use as street-show "dancing bears" (Seshamani and Satyanarayan 1997) used to be a threat in some parts of India, but has been controlled to a significant level (D'Cruze *et al.* 2011). This practice has been illegal in India since 1972, though it continued in earnest until 2009. However it persists to a small degree in southern Nepal. It is unclear if the practitioners were always in Nepal or if they crossed the border to Nepal from India due to the political pressure to end the practice in India. Several dancing bears have been confiscated at the Nepal-India border while they were being brought into India (K. Satyanarayan, Wildlife SOS, personal communication, 2015). Additionally, a cub was rescued that was being smuggled into Nepal with clear signs that it was to be sold for use as a dancing bear (Wildlife SOS 2015).

Threats (see Appendix for additional information)

Major threats to this species are habitat loss or degradation (often related to human population growth), retaliation from human-bear conflicts, and (to a lesser degree) poaching (Johnsingh 2003, Chauhan 2006, Yoganand *et al.* 2006, Bargali *et al.* 2012, Bargali and Sharma 2013). Habitat has been lost, degraded, and fragmented by overharvest of forest products (timber, fuelwood, fodder, fruits, honey), establishment of monoculture plantations (e.g. teak, eucalyptus), over-grazing, extraction of minerals, quarrying, settlement of refugees, and expansion of agricultural areas, human settlements, and roads (Santiapillai and Santiapillai 1990).

In some parts of the range, encounters between people and Sloth Bears have led to numerous serious human injuries and many deaths (Rajpurohit and Krausman 2000, Bargali *et al.* 2005, Dharaiya and Ratnayeke 2009, Ratnayeke *et al.* 2014). Such incidents occur where people frequently use bear habitat, and where the habitat has become severely degraded, prompting bears to seek food and water in closer proximity to humans. Most attacks occur when people and bears surprised each other in thickets or around rock outcrops, where visibility is obstructed: the bear(s)—sometimes multiple adult bears are involved—rush at, pursue, and knock down the person, and often attack the face. Bears that attack or threaten to attack people may ultimately be killed. Sloth Bear attacks outside protected areas are increasing, and hostility of local people towards bears has made bear conservation more difficult (Bargali *et al.* 2005, Dharaiya and Ratnayeke 2009, Mardaraj 2014). Increasing numbers of Sloth Bear attacks appear to be related to rising human populations (Ratnayeke *et al.* 2014).

The only natural (non-human) threats to Sloth Bears are Tigers (*Panthera tigris*) and possibly Leopards (*P. pardus*). The threat of Tiger predation may account for the aggressive nature of Sloth Bears (Joshi *et al.* 1999). Sloth Bears have been observed fending off Tigers, but they are also occasionally killed by Tigers (Gopal 1991).

Conservation Actions (see Appendix for additional information)

Sloth Bears are listed in Appendix I of CITES and are completely protected under Schedule I of the Indian Wildlife Protection Act of 1972. They are also protected to varying degrees by national laws in the other

range countries. However, they can be killed to protect life or property.

Sloth Bears are reported to exist in 174 Protected Areas (PAs) in India, which include 46 National Parks and 128 Wildlife Sanctuaries (Chauhan 2006). Populations appear to be reasonably well protected when inside these PAs, but face deteriorating habitat conditions outside (Santiapillai and Santiapillai 1990, Akhtar *et al.* 2004, Dharaiya, 2009). Reduced cover and food resources outside PAs (Akhtar *et al.* 2004) have led to increased human–bear conflicts, including frequent maulings (Bargali *et al.* 2005). It is estimated that half to two-thirds of the Sloth Bears in India live outside PAs. Roughly half the occupied range in Sri Lanka occurs outside PAs (Ratnayeke *et al.* 2007b).

Human-bear conflicts, both crop raiding and bear attacks, are a growing concern for this species. Given the aggressive nature of this animal, and the increasing number of encounters between bears and people, these bears are widely feared. Although education may help reduce human-bear conflicts and enhance a conservation ethic among locals, the root of the problem is largely related to the expansion of human settlement and deteriorating habitat, which increases the chance of interaction between people and bears. Thus, habitat improvements (government or community-based reforestation) would be helpful in alleviating such conflicts. Potential solutions to this problem have not been studied in depth and further research on this issue is critical to getting this problem under control. The planting of fruit trees, to provide both food and cover, has been undertaken in several states in India.

Other projects to help ameliorate human-bear conflicts will probably need to be implemented for a number of years to produce useful outcomes; long-term funding will thus be needed to advance the science of human-bear conflict resolution. Where sufficient human resources and funding exist, conflict rapid-response teams (staffed by NGOs, government personnel, and local people) can be effective. Safety guidelines can be devised and disseminated, based on knowledge of bear behaviour and ecology, to help people avoid bears or minimize chances of being attacked. Better methods to deter bears are also needed. Additionally, educational efforts to increase awareness and promote greater tolerance are likely to be keys to success.

Aside from the global Status Survey and Conservation Action Plan for this species, published by the IUCN in 1999 (Servheen *et al.* 1999), India developed a National Conservation Action Plan for bears (Sathyakumar *et al.* 2012). This action plan was developed through a wide range of consultations with stakeholders and covers all four species present in India. The plan emphasizes mitigation of human-bear conflicts, increased habitat management, enhanced research and information gathering, capacity building, and improved communication and education. Priority actions in the action plan include: strengthening methods of crop and livestock protection; reducing bear-caused human injuries, creating rapid response teams to investigate conflicts with bears (and possible claims for monetary compensation); enhancing human tolerance toward bears; identifying critical habitats and corridors used by bears, especially those outside PAs; increasing habitat protection and restoring degraded habitats outside PAs; reducing dependency of local communities on resources needed by bears; discouraging shifting agriculture; developing methods to track population size and trends; involving communities in bear monitoring programs; equipping forest and wildlife staff with adequate knowledge and modern equipment to manage all types of human-bear interactions; and developing an advocacy program for bear conservation through active communication to the public and pressure on corporations and politicians.

Credits

Assessor(s): Dharaiya, N., Bargali, H.S. & Sharp, T.

Reviewer(s): Garshelis, D.L. & Steinmetz, R.

Contributor(s): Joshi, H.

Bibliography

- Akhtar, N., and Chauhan, N.P.S. 2008. Status of human-wildlife conflict and mitigation strategies in Marwahi forest division, Bilaspur, Chhattisgarh. *The Indian Forester* 134(10): 1349-1358.
- Akhtar, N., Bargali, H.S. and Chauhan, N.P.S. 2004. Sloth bear habitat use in disturbed and unprotected areas of Madhya Pradesh, India. *Ursus* 15: 203-211.
- Akhtar, N., Bargali, H.S. and Chauhan, N.P.S. 2006a. Extent of biotic pressure on unprotected sloth bear habitat and human-bear conflict in North Bilaspur Forest Division. *Tiger Paper* 33(1): 33-40.
- Akhtar, N., Bargali, H.S. and Chauhan, N.P.S. 2006b. Home range and management of sloth bear (*Melursus ursinus*) in disturbed and unprotected habitat of North Bilaspur forest division, Chhattisgarh, India. *The Indian Forester* 132(12): 123-132.
- Bargali, H.S. 2012. Distribution of different species of bears and status of human-bear conflict in the State of Uttarakhand, India. *Advances in Biological Research* 6(3): 121-127.
- Bargali, H.S., Akhtar N. and Chauhan, N.P.S. 2004. Feeding ecology of sloth bears in a disturbed area in central India. *Ursus* 15: 212-217.
- Bargali, H.S., Akhtar N. and Chauhan, N.P.S. 2005. Characteristics of sloth bear attacks and human casualties in North Bilaspur forest division, Chhattisgarh, India. *Ursus* 16: 263-267.
- Bargali, H.S., Akhtar N. and Chauhan, N.P.S. 2012. The sloth bear activity and movement in highly fragmented and disturbed habitat in Central India. *World Journal of Zoology* 7(4): 312-319.
- Bargali, H.S. and Sharma, B.K. 2013. The status and conservation of sloth bear in Rajasthan. In: B.K. Sharma, S. Kulshreshtha, and A. R. Rahmani (eds), *Faunal heritage of Rajasthan, India: general background and ecology of vertebrates*, pp. 499-504. Springer, New York.
- Baskaran, N., Sivanagesan, N. and Krishnamoorthy, J. 1997. Food habits of the sloth bear at Mudumalai Wildlife Sanctuary, Tamil Nadu, South India. *Journal of the Bombay Natural History Society* 94: 1-9.
- Basu, M. 2014. MP wildlife dept no longer 'sloth' to endangered bears! Available at: <http://www.dailypioneer.com>.
- Brander, A.A.D. 1982. *Wild animals in central India*. Natraj Publishers, Dehradun, India.
- Burgess, E.A., Stoner, S.S. and Foley, K.E. 2014. *Brought to bear: an analysis of seizures across Asia (2000-2011)*. TRAFFIC Southeast Asia, Petaling Jaya, Selangor, Malaysia.
- Chauhan, N. P. S., Bargali, H. S. and Akhtar, N. 2003. Ecology and management of problematic sloth bear in North Bilaspur forest division Madhya Pradesh. Wildlife Institute of India, Dehradun, India.
- Chauhan, N. S. 2006. The status of sloth bears in India. *Understanding Asian bears to secure their future*, pp. 26-34. Japan Bear Network, Ibaraki, Japan.
- Chhangani, A. K. 2002. Food and feeding of sloth bear (*Melursus ursinus*) in Aravalli Hills of Rajasthan, India. *Tiger Paper* 29(2): 1-6.
- Choudhury, A.U. 2011. Records of sloth bear and Malayan sun bear in north east India. Final report to International Association for Bear Research & Management (IBA). The Rhino Foundation for Nature in NE India, Guwahati, Assam, India.
- D'Cruze, N., Sarma, U.K., Mookerjee, A., Singh, B., Louis, J., Mahapatra, R.P., Jaiswal, V.P., Roy, T.K., Kumari, I., and Menon, V. 2011. Dancing bears in India: a sloth bear status report. *Ursus* 22: 99-105.

Dharaiya, N. 2009. Evaluating Habitat & Human-Bear Conflicts in North Gujarat, India, to Seek Solutions for Human-Bear Coexistence. Final Report submitted to Rufford Small Grant Foundation.

Dharaiya, N. and Ratnayeke, S. 2009. Escalating human-sloth bear conflicts in north Gujarat: a tough time to encourage support for bear conservation. *International Bear News* 18(3): 12-14.

Erdbrink, D.P. 1953. *A review of fossil and recent bears of the Old World with remarks on their phylogeny based upon their dentition*. Drukkerij Jan de Lange, Deventer, Netherlands.

Fain, S.R., Jarrell, P., Morse, C., Nicholson, A., Gill, S., Collins, D. and Ball, J.A. 1994. DNA analysis and wildlife law enforcement: efforts to stop international commerce in bear products can benefit greatly by the valuable resource of zoo breeding programs. In: J. Ball (ed.), *North American regional Asian studbook, third edition*, Woodland Park Zoological Gardens, Seattle, Washington.

FAO. 2015. Global Forest Resources Assessment. 2015. Food and Agriculture Organization of the United Nations, Rome, Italy.

Garshelis, D.L., Dhariaya, N.A., Sharp, T.R., Steinmetz, R., Wangdi, Y. and Wangchuck, S. 2015. Sloth bears at the northern edge of their range: status of the transboundary population linking northeastern India to Bhutan. Final report to International Association for Bear Research and Management.

Garshelis, D. L., Joshi, A. R. and Smith, J. L. D. 1999. Estimating density and relative abundance of sloth bears. *Ursus* 11: 87-98.

Garshelis, D.L., Joshi, A.R., Smith, J.L.D. and Rice, C.G. 1999. Sloth bear conservation action plan. In: C. Servheen, S. Herrero, and B. Peyton (eds), *Bears: status survey and conservation action plan*, pp. 225-240. IUCN/SSC Bear and Polar Bear Specialist Groups, Gland, Switzerland and Cambridge, U.K.

Gopalswamy, A.M. 2006. Estimating Sloth Bear abundance from repeated presence-absence data in Nagarhole-Bandipur National Parks, India. University of Florida, Gainesville, USA.

Gopal, R. 1991. Ethological observations on the sloth bear (*Melursus ursinus*). *Indian Forester* 117: 915-920.

Islam, M.A., Uddin, M., Aziz, M.A., Muzaffar, S.B., Chakma, S., Chowdhury, S.U., Chowdhury, G.W., Rashid, M.A., Mohsanin, S., Jahan, I., Saif, S., Hossain, M.B., Chakma, D., Kamruzzaman, M. and Akter, R. 2013. Status of bears in Bangladesh: going, going, gone? *Ursus* 24: 83-90.

Iswariah, V. 1984. Status survey report and recommendations for conservation of Sloth bear in Ramangram Taluk, Karnataka, WWF India. Unpublished report. Bangalore.

IUCN. 2016. The IUCN Red List of Threatened Species. Version 2016-3. Available at: www.iucnredlist.org. (Accessed: 07 December 2016).

Jhala, Y.V., Qureshi, Q. and Sinha, P.R. 2011. Status of tigers, co-predators and prey in India. National Tiger Conservation Authority, Govt of India and the Wildlife Institute of India, New Delhi and Dehra Dun, India.

Johnsingh, A. J. T. 2003. Bear conservation in India. *The Journal of the Bombay Natural History Society* 100: 190-201.

Joshi, A. R., Garshelis, D. L. and Smith, J. L. D. 1997. Seasonal and habitat-related diets of sloth bears in Nepal. *Journal of Mammalogy* 78: 584-597.

Joshi, A. R., Garshelis, D. L. and Smith, L. D. 1995. Home ranges of sloth bears to Nepal: Implications for conservation. *Journal of Wildlife Management* 59: 204-214.

- Joshi, A. R., Smith, J. L. D. and Garshelis, D. L. 1999. Sociobiology of the myrmecophagous sloth bear in Nepal. *Canadian Journal of Zoology* 77: 1690-1704.
- Kitchener, A.C. 2010. Taxonomic issues in bears: impacts on conservation in zoos and the wild, and gaps in current knowledge. *International Zoo Yearbook* 44: 33-46.
- Krause, J., Unger, T., Nocon, A., Malaspinas, A., Kolokotronis, S., Stiller, M., Soibelzon, L., Spriggs, H., Dear, P.H., Briggs, A.W., Bray, S.C.E., O'Brien, S.J., Rabeder, G., Matheus, P., Cooper, A., Slatkin, M., Paabo, S. and Hofreiter, M. 2008. Mitochondrial genomes reveal an explosive radiation of extinct and extant bears near the Miocene-Pliocene boundary. *BMC Evolutionary Biology* 8: 220.
- Krishnan, M. 1977. An ecological survey of the large mammals of peninsular India. *The Journal of the Bombay Natural History Society* 69: 47-49.
- Laurie, A. and Seidensticker, J. 1977. Behavioral ecology of the sloth bear (*Melursus ursinus*). *Journal of Zoology (London)* 182: 187-204.
- Mardaraj, P.C. 2014. A sloth bear rescued from retaliation killing in eastern India. *International Bear News* 23(2): 16-17.
- Mardaraj, P.C., Debata, S. and Swain, K.K. 2012. Sloth bears prey on domestic animals in response in habitat degradation in eastern India. *International Bear News* 37(2): 8-13.
- McTaggart-Cowan, I. 1972. The status and conservation of bears (*Ursidae*) of the world-1970. *International Conference on Bear Research and Management* 2: 342-367.
- Mewada, T. and Dharaiya, N. 2010. Seasonal dietary composition of sloth bear in the reserve forest of Vijaynagar forest, North Gujarat, India. *Tigerpape* 37(2): 8-13.
- Ministry of Environment and Forests, Government of India. 2009. India Forestry Outlook Study. Food and agriculture organization of the United Nations regional office for Asia and the Pacific. Bangkok.
- Naveen, P. 2014. Sloth bear poaching for aphrodisiacs: Madhya Pradesh constitutes SIT. Available at: timesofindia.indiatimes.com.
- NCSIP-1. 2001. Survey of Fauna, National Conservation Strategy Implementation Project-1. Ministry of Environment and Forest, Government of the People's Republic of Bangladesh.
- Pagès, M., Calvignac, S., Klein, C., Paris, M., Hughes, S. and Hanni, C. 2008. Combined analysis of fourteen nuclear genes refines the Ursidae phylogeny. *Molecular Phylogenetics and Evolution* 47: 73-83.
- Puri, M., Srivathsa, A., Karanth, K.K., Kumar, N.S. and Karanth, K.U. 2015. Multiscale distribution models for conserving widespread species: the case of the sloth bear *Melurus ursinus* in India. *Diversity and Distributions* 21: 1087-1100.
- Rajpurohit, K. S. and Krausman, P. R. 2000. Human-sloth bear conflicts in Madhya Pradesh, India. *Wildlife Society Bulletin* 28: 393-399.
- Ramesh, T., Kalle, R., Sankar, K., and Qureshi, Q. 2012. Factors affecting habitat patch use by sloth bears in Mudumalai Tiger Reserve, Western Ghats, India. *Ursus* 23(1): 78-85.
- Ratnayeke, S., van Manen, F.T. and Padmalal, U.K.G.K. 2007a. Landscape characteristics of sloth bear range in Sri Lanka. *Ursus* 18: 189-202.
- Ratnayeke, S., van Manen, F.T. and Padmalal, U.K.G.K. 2007b. Home ranges and habitat use of the sloth bear (*Melursus ursinus inornatus*) at Wasgomuwa National Park, Sri Lanka. *Wildlife Biology* 13(3): 272-284.

- Ratnayeke, S., van Manen, F.T., Pieris, R., and Pragash, V. S.J. 2014. Challenges of large carnivore conservation: sloth bear attacks in Sri Lanka. *Human Ecology* 42: 467-479.
- Ratnayeke, S., Wijeyamohan, S. and Santiapillai, C. 2006. The status of sloth bears in Sri Lanka. *Understanding Asian bears to secure their future*, pp. 35-40. Japan Bear Network, Ibaraki, Japan.
- Royle, J.A., and Nichols, J.D. 2003. Estimating abundance from repeated presence-absence data or point counts. *Ecology* 84: 777-790.
- Sacco, T. and Van Valkenburgh, B. 2004. Ecomorphological indicators of feeding behaviour in the bears (Carnivora: Ursidae). *Journal of Zoology (London)* 263: 41-54.
- Santiapillai, A. and Santiapillai, C. 1990. Status, distribution and conservation of the sloth bear (*Melursus ursinus*) in Sri Lanka. *Tiger Paper* 1: 13–15.
- Sarkar, M.S.U. 2006. The Status and Conservation of Bears in Bangladesh. *Understanding Asian bears to secure their future*, pp. 41-44. Japan Bear Network, Ibaraki, Japan.
- Sathyakumar, S., Kaul, R., Ashraf, N.V.K., Mookherjee, A., and Menon, V. 2012. *National Bear Conservation and Welfare Action Plan*. Ministry of Environment and Forests, Wildlife Institute of India, and Wildlife Trust of India, India.
- Seidensticker, J., Yoganand, K., and Johnsingh, A.J.T. 2011. Sloth bears living in seasonally dry tropical and moist broadleaf forests and their conservation. In: W. McShea, S. Davies, and N. Bhumpakphan (eds), *Dry forests of Asia: conservation and ecology*, pp. 217-236. Smithsonian Institution Press, Washington, D.C.
- Servheen, C. 1990. The status and conservation of the bears of the world. *International Conference on Bear Research and Management Monograph* 2.
- Servheen, C., Herrero, S., and Peyton, B. (compilers). 1999. *Bears. Status Survey and Conservation Action Plan*. IUCN/SSC Bear and Polar Bear Specialist Groups. IUCN, Gland, Switzerland and Cambridge, UK. X + 399 pp..
- Seshamani, G. and Satyanarayan, K. 1997. *The dancing bears of India*. World Society for the Protection of Animals.
- Spady, T.J., Lindburg, D.J. and Durant, B.S. 2007. Evolution of reproductive seasonality in bears. *Mammal Review* 37(1): 21-53.
- Sreekumar, P. G. and Balakrishnan, M. 2002. Seed dispersal by the sloth bear (*Melursus ursinus*) in South India. *Biotropica* 34: 474-477.
- Sukhadiya D., Joshi, J.V. and Dharaiya, N. 2013. Feeding ecology and habitat use of sloth bear in Jassore wildlife sanctuary, Gujarat, India. *Indian Journal of Ecology* 40(1): 14-18.
- Wildlife SOS. 2015. An innocent life saved from poachers by Wildlife SOS.
- Yoganand, K., Rice, C.G. and Johnsingh, A.J.T. 2012. Sloth bear *Melursus ursinus*. In: Johnsingh, A.J.T. and Manjrekar, N. (eds), *Mammals of South Asia*, pp. 438-456. University Press (India), Hyderabad, India.
- Yoganand, K, Rice, C.G., Johnsingh, A.J.T. and Seidensticker, J. 2006. Is the sloth bear in India secure? A preliminary report on distribution, threats and conservation requirements. *Journal of the Bombay Natural History Society* 103(2-3): 172-181.

Citation

Dharaiya, N., Bargali, H.S. & Sharp, T. 2016. *Melursus ursinus*. *The IUCN Red List of Threatened Species 2016*: e.T13143A45033815. <http://dx.doi.org/10.2305/IUCN.UK.2016-3.RLTS.T13143A45033815.en>

Disclaimer

To make use of this information, please check the [Terms of Use](#).

External Resources

For [Images and External Links to Additional Information](#), please see the [Red List website](#).

Appendix

Habitats

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Habitat	Season	Suitability	Major Importance?
1. Forest -> 1.5. Forest - Subtropical/Tropical Dry	-	Suitable	Yes
1. Forest -> 1.6. Forest - Subtropical/Tropical Moist Lowland	-	Suitable	Yes
1. Forest -> 1.9. Forest - Subtropical/Tropical Moist Montane	-	Suitable	Yes
2. Savanna -> 2.1. Savanna - Dry	-	Suitable	Yes
2. Savanna -> 2.2. Savanna - Moist	-	Suitable	Yes
3. Shrubland -> 3.5. Shrubland - Subtropical/Tropical Dry	-	Suitable	Yes
3. Shrubland -> 3.6. Shrubland - Subtropical/Tropical Moist	-	Suitable	Yes
4. Grassland -> 4.5. Grassland - Subtropical/Tropical Dry	-	Marginal	-
4. Grassland -> 4.6. Grassland - Subtropical/Tropical Seasonally Wet/Flooded	-	Marginal	-
14. Artificial/Terrestrial -> 14.4. Artificial/Terrestrial - Rural Gardens	-	Marginal	-
14. Artificial/Terrestrial -> 14.6. Artificial/Terrestrial - Subtropical/Tropical Heavily Degraded Former Forest	-	Marginal	-

Threats

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Threat	Timing	Scope	Severity	Impact Score
1. Residential & commercial development -> 1.1. Housing & urban areas	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.2. Species disturbance		
1. Residential & commercial development -> 1.2. Commercial & industrial areas	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.2. Species disturbance		
1. Residential & commercial development -> 1.3. Tourism & recreation areas	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.2. Species disturbance		
11. Climate change & severe weather -> 11.1. Habitat shifting & alteration	Future	Unknown	Slow, significant declines	Unknown
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation		

2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.1. Shifting agriculture	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 2. Species Stresses -> 2.2. Species disturbance		
2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.2. Small-holder farming	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 2. Species Stresses -> 2.2. Species disturbance		
2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.3. Agro-industry farming	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 2. Species Stresses -> 2.2. Species disturbance		
2. Agriculture & aquaculture -> 2.2. Wood & pulp plantations -> 2.2.1. Small-holder plantations	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 2. Species Stresses -> 2.2. Species disturbance		
2. Agriculture & aquaculture -> 2.2. Wood & pulp plantations -> 2.2.2. Agro-industry plantations	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 2. Species Stresses -> 2.2. Species disturbance		
2. Agriculture & aquaculture -> 2.3. Livestock farming & ranching -> 2.3.1. Nomadic grazing	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.2. Species disturbance		
2. Agriculture & aquaculture -> 2.3. Livestock farming & ranching -> 2.3.2. Small-holder grazing, ranching or farming	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.2. Species disturbance		
2. Agriculture & aquaculture -> 2.3. Livestock farming & ranching -> 2.3.3. Agro-industry grazing, ranching or farming	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.2. Species disturbance		
3. Energy production & mining -> 3.2. Mining & quarrying	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.2. Species disturbance		
4. Transportation & service corridors -> 4.1. Roads & railroads	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.2. Species disturbance		
5. Biological resource use -> 5.1. Hunting & trapping terrestrial animals -> 5.1.1. Intentional use (species is the target)	Ongoing	Majority (50-90%)	Slow, significant declines	Medium impact: 6
	Stresses:	2. Species Stresses -> 2.1. Species mortality		

5. Biological resource use -> 5.2. Gathering terrestrial plants -> 5.2.2. Unintentional effects (species is not the target)	Ongoing	Unknown	Unknown	Unknown
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation		
5. Biological resource use -> 5.3. Logging & wood harvesting -> 5.3.1. Intentional use: (subsistence/small scale) [harvest]	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.2. Species disturbance		
5. Biological resource use -> 5.3. Logging & wood harvesting -> 5.3.2. Intentional use: (large scale) [harvest]	Ongoing	Unknown	Slow, significant declines	Unknown
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.2. Species disturbance		
6. Human intrusions & disturbance -> 6.1. Recreational activities	Ongoing	Majority (50-90%)	Unknown	Unknown
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.2. Species disturbance		
6. Human intrusions & disturbance -> 6.2. War, civil unrest & military exercises	Past, unlikely to return	Minority (50%)	Unknown	Past impact
	Stresses:	2. Species Stresses -> 2.1. Species mortality		
6. Human intrusions & disturbance -> 6.3. Work & other activities	Ongoing	Unknown	Slow, significant declines	Unknown
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.2. Species disturbance		

Conservation Actions in Place

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Conservation Actions in Place
In-Place Land/Water Protection and Management
Conservation sites identified: Yes, over entire range
In-Place Education
Included in international legislation: Yes
Subject to any international management/trade controls: Yes

Conservation Actions Needed

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Conservation Actions Needed
1. Land/water protection -> 1.1. Site/area protection
2. Land/water management -> 2.1. Site/area management

Conservation Actions Needed
3. Species management -> 3.1. Species management -> 3.1.1. Harvest management
4. Education & awareness -> 4.3. Awareness & communications

Research Needed

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Research Needed
1. Research -> 1.2. Population size, distribution & trends
1. Research -> 1.5. Threats
3. Monitoring -> 3.1. Population trends

Additional Data Fields

Distribution
Lower elevation limit (m): 0
Upper elevation limit (m): 2000
Population
Population severely fragmented: No
Habitats and Ecology
Generation Length (years): 10

The IUCN Red List Partnership



The IUCN Red List of Threatened Species™ is produced and managed by the [IUCN Global Species Programme](#), the [IUCN Species Survival Commission \(SSC\)](#) and [The IUCN Red List Partnership](#).

The IUCN Red List Partners are: [Arizona State University](#); [BirdLife International](#); [Botanic Gardens Conservation International](#); [Conservation International](#); [NatureServe](#); [Royal Botanic Gardens, Kew](#); [Sapienza University of Rome](#); [Texas A&M University](#); and [Zoological Society of London](#).