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OF WILD FAUNA AND FLORA



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THE CONSERVATION STATUS, ILLEGAL TRADE AND USE OF PANGOLINS (*MANIS* SPP.)

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INFORMATION DOCUMENT FOR THE 66th MEETING OF THE CITES STANDING COMMITTEE,
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Introduction

1. The aim of this document is to provide additional information to the CITES Parties to inform their decision-making at the 66th meeting of the CITES Standing Committee, and more broadly. In particular at SC66, on agenda item 50. Pangolins (*Manidae* spp.) and 50.1 (Report of the working group). This document provides information on the global conservation status of pangolins (paragraphs 2-4), on legal and illegal trade levels and dynamics (paragraphs 5-11), on the use of pangolins (paragraphs 12-15) and on IUCN SSC Pangolin Specialist Group (PangolinSG) support to pangolin Range States (paragraphs 16-20). Also included as an Annex to this document are actions the PangolinSG considers critical to the conservation of the species in the next decade.

Global conservation status

2. Pangolins are insectivorous mammals covered in epidermal scales comprised of keratin. Four species occur in Asia which are collectively distributed from Pakistan east through Southern China, and south throughout the Indian sub-continent and much of South-east Asia (Kingdon *et al.* 2013; Challender *et al.* 2014a, b). Four species also occur in Africa and which are together distributed in West and Central Africa, east across East Africa, and south into Southern Africa (Kingdon *et al.* 2013; Waterman *et al.* 2014; Pietersen *et al.* 2014).
3. All eight species of pangolin are listed as threatened on the IUCN Red List of Threatened Species on the basis of past and future population declines, due to high levels of hunting and poaching for international trade, which by volume is almost exclusively illegal today, and for bushmeat and use in traditional medicines.
4. The current global conservation status of each species is detailed below. Note that while CITES includes each species of pangolin in the genus *Manis*, the IUCN Red List follows Gaudin *et al.* (2009) which considers the species in three genera, *Manis*, *Smutsia* and *Phataginus*. In this document we follow the taxonomy adopted by CITES.

Asia

a) Chinese pangolin *Manis pentadactyla*, Critically Endangered (A2d+3d+4d)

Listed as Critically Endangered due to high levels of poaching for its meat and scales across its range. Although used locally across its range, poaching is increasingly for international

trade which is driven largely by market demand in China. The mainland China population has been regarded as commercially extinct since the mid-1990s (e.g., Wu *et al.* 2004), while the subspecies, *M. p. pusillia*, which occurs on Hainan Island, has been reduced to remnant populations. Evidence indicates that poaching has now shifted to the south and west of this species' range and there has been a very heavy unrecorded, and therefore likely illicit, trade involving an estimated tens of thousands of animals in the last decade. There are predicted continuing declines of $\leq 90\%$ over the next 21 years or three generations. For the full IUCN Red List account for this species including a distribution map, see [here](#).

b) Sunda pangolin *Manis javanica*, Critically Endangered (A2d+3d+4d)

Listed as Critically Endangered due to high levels of hunting and poaching for its meat and scales. This is primarily driven by exports to China, though local consumption and utilisation also take place across the species' range. There have been suspected declines of $\leq 80\%$ over the last 21 years (generation length estimated at seven years), and projected continuing declines of $\geq 80\%$ over the next 21 years, with the intensity of hunting having moved into the southern parts of the species' range. For the full IUCN Red List account and distribution map, for this species, see [here](#).

c) Indian pangolin *Manis crassicaudata*, Endangered (A3d+4d)

Listed as Endangered because it is subject to hunting and increasing levels of poaching, principally for its meat and scales, both for local use and for illicit international trade. Available evidence suggests this trade is destined for East Asia where scales are used in traditional medicines. It is suspected populations of this species will fall by at least 50% in the next 21 years (generation length estimated at seven years) given the significant declines in *Manis pentadactyla* and *Manis javanica* over the last decade and the transfer of trade attention to other pangolin species following the former's collapse. For the full IUCN Red List account for this species including distribution map, see [here](#).

d) Philippine pangolin *Manis culionensis*, Endangered (A3d+4d)

Listed as Endangered due to suspected population declines of $\geq 50\%$ over a period of 21 years (three generations, generation length estimated at seven years), based on potential levels of exploitation for trade, including national and international trade, and which is exacerbated by subsistence hunting and habitat loss and alteration. For the full IUCN Red List account for this species including distribution map, see [here](#).

Africa

e) White-bellied pangolin *Manis tricuspis*, Vulnerable (A4d)

Listed as Vulnerable under criteria A4d because it is reasonable to assume that this species has already begun declining and will continue to decline by at least 40% over a 21 year period (seven years past, 14 years future; generation length estimated at 7 years). This is due mainly to the impact of bushmeat hunting and an increased demand from the international markets brought about by a decline in Asian pangolin populations, increasing sophistication of smuggling syndicates and strengthened economic ties between Africa and China. For the full IUCN Red List account for this species including distribution map, see [here](#).

f) Black-bellied pangolin *Manis tetradactyla*, Vulnerable (A4d)

Listed as Vulnerable, under criteria A4d (taking a precautionary approach). This species is projected to undergo a population decline of at least 30-40% over a 21 year period (seven years past, 14 years future; generation length estimated at seven years), primarily as a result of increased exploitation for local and international trade. However, habitat destruction is opening up previously inaccessible habitats to hunting expeditions and, following the precipitous decline in the Asian pangolin populations, increased intercontinental trade in this species to Asian markets is highly probable, though difficult to quantify as seizure reports of African pangolins rarely go beyond genus level. This species' generally low encounter rates and specialized habitat requirements are suspected to reflect generally low population densities and hence a greater proportional loss to the population of traded individuals when compared to *P. tricuspis*. For the full IUCN Red List account and distribution map for this species, see [here](#).

g) Giant Ground pangolin *Manis gigantea*, Vulnerable (A4d)

Listed as Vulnerable under criteria A4d because it is reasonable to assume that this species has already begun declining and will continue to decline by at least 40% over a 27 year period (nine years past, 18 years future; generation length estimated at 9 years) due mainly to the impact of bushmeat hunting and an increased demand from international markets. For the full IUCN Red List account and distribution map for this species, see [here](#).

h) Temminck's Ground Pangolin *Manis temminckii*, Vulnerable (A4d)

Listed as Vulnerable under criteria A4d (taking a precautionary approach) because there is an inferred past/ongoing and projected future population reduction of 30-40% over a 27 year period (nine years past, 18 years future; generation length estimated at nine years) based primarily on ongoing exploitation for traditional medicine and bushmeat throughout the species' range and evidence of increased intercontinental trade to Asia. For the full IUCN Red List account for this species and distribution map, see [here](#).

Legal and illegal trade levels and dynamics

5. Historically, pangolins have been exploited across Africa and Asia for a range of consumptive uses including for food, traditional medicines and fashion, and for international trade (Herklots 1937; Bräutigam *et al.* 1994). Based on available evidence, international trade in Asian pangolins has historically been far more voluminous than in the African species. A recent review of trade in the Asian species indicates that between 1977 and 2012 an estimated 576,303 Asian pangolins were in international trade, as reported to CITES (Challender *et al.* 2015). This mainly involved skins (90%; 521,490/576,303), most of which were traded for commercial purposes (93%; 486,987/521,490) and virtually all of which occurred prior to, or in, the year 2000. This mainly involved the Sunda pangolin *Manis javanica* and Chinese pangolin *Manis pentadactyla* and the bulk of trade involved exports from Lao PDR, Malaysia, Thailand and Indonesia to the US and Mexico for the manufacturing of leather goods. Trade in this period was likely higher than these figures as it also included substantial numbers of leather goods including handbags, belts and wallets but which are difficult to equate to a number of animals unambiguously.
6. Actual levels of international trade in Asian pangolins between 1977 up to the year 2000, however, were substantially higher than trade reported to CITES, based on data within the CITES Review of Significant Trade process and the scientific literature. As examples, up to 10t of pangolin scales were imported to Taiwan (P.R. China) annually between 1980 and 1985, up to 13t of scales were imported to South Korea annually throughout the 1980s while China also imported a minimum of 95t of scales between 1990 and 1995 from Southeast Asia but this trade was not reported to CITES (Broad *et al.* 1988; Anon 1992; Anon 1999a, b). Based on such evidence, in the recent review of pangolin trade in Asia, (see Challender *et al.* 2015) it is estimated that unreported trade in this period (1977-2000) involved an additional, estimated 88-163% (or 505,423-935,369 pangolins) of trade reported to CITES.
7. At CoP11 (2000) the Parties to CITES established zero export quotas for wild-caught Asian pangolins traded for primarily commercial purposes. Since this time, there has been comparatively little trade in the species reported to CITES (Challender *et al.* 2015). However, seizure data and records of trade (e.g., from court cases) indicate that a substantial illegal trade has taken place since. Based on an updated dataset presented in Challender *et al.* 2015, between July 2000, when the zero export quotas came into force, and the end of 2015, there were at least 1,033 seizures involving pangolins globally, 953 of which occurred in Asia. Based on these data, this trade involved an estimated 261,623 pangolins and took place in 16/19 range states for these species in Asia (Cambodia, China, Hong Kong, India, Indonesia, Lao PDR, Malaysia, Myanmar, Nepal, Pakistan, the Philippines, Singapore, Sri Lanka, Taiwan (P.R. China), Thailand and Vietnam). This trade primarily involved the Sunda pangolin and Chinese pangolin, but included all four species of Asian pangolin (Challender *et al.* 2015).
8. Worryingly, in the last few years confiscations made in Asia have also included African pangolin derivatives, primarily scales, and there have also been an increasing number of seizures occurring both in Africa and Europe (e.g., France and Belgium) involving African pangolins and their derivatives (Challender & Hywood 2012). Where intercontinental trade is occurring is it likely being facilitated by strengthening economic ties between Africa and East Asian markets.

9. This trade has involved, at a minimum, 12,000 African pangolins, and involved the Tree, Giant and Ground pangolins, and in all likelihood the Long-tailed pangolin, but understanding trade dynamics at a species level, especially where African pangolins are involved, is difficult as seizure reports tend not to go beyond the genus level. This trade has also involved relatively small volumes of pangolin scales or individual animals but also very large, commercial scale shipments. Recent examples of such seizures include the following:
- More than three tonnes of pangolin scales confiscated in Hong Kong in two shipping containers, arriving from Uganda via Kenya and Malaysia and from Cameroon via Malaysia respectively, in June 2014.
 - One and a half tonnes of African pangolin scales seized at Yaounde airport in June 2014.
 - Two tonnes of pangolin scales seized at Entebbe airport, Uganda, in January 2015, which were to be exported to Amsterdam.
 - Two tonnes of scales seized in Hong Kong in a shipping container which had arrived from Nigeria in March 2015.
10. Based on available evidence, the IUCN SSC Pangolin Specialist Group also considers trade to be of concern in the following countries in Africa: Angola, Benin, Cameroon, Central African Republic, Congo, Côte d'Ivoire, Equatorial Guinea, Gabon, Ghana, Guinea, Kenya, Liberia, Sierra Leone, Togo and Uganda. It also notes that in June 2012, the EU CITES Scientific Review Group (SRG) banned imports of Tree pangolins from Guinea into the EU, based on concerns about the sustainability of trade (SRG 2012).
11. Using a conservative extrapolation rate to account for trade which goes undetected and unreported, and based on an assumption that seizures in the updated dataset presented in Challender *et al.* (2015) represent approximately ~25% of actual trade levels (as opposed to the less conservative but frequently used estimate of 10%; see Wasser *et al.* 2007), illicit trade in pangolins in the last 15 years is estimated to involve 1,000,000 animals (Challender *et al.* 2014c).

Use of pangolins

12. As detailed in the Report of the Working Group ([SC66 Doc. 50.1](#)), the most frequently reported forms of use of pangolins are as meat consumption and the use of parts and derivatives in medicines. This is supported by an analyses of illegal, international trade in pangolins in the last 15 years, which indicates that this trade (by volume of animals) involved scales primarily (41%), live/dead animals (31%) and meat (26%) with small volumes of skins and other derivatives (2%), and trade destined primarily to China and Vietnam (Challender *et al.* 2015).
13. Pangolin scales are used in traditional medicines throughout Asia, including in China and Vietnam, where they are used to treat a wide variety of ailments. As prescribed in official Chinese and Vietnamese pharmacopeia, scales are used in medicines to improve blood circulation, cure skin diseases and stimulate milk secretion in lactating women. Challender *et al.* (2015) reported additional uses in China and Vietnam, including use in medicines to help cure cancer, and non-medicinal applications such as the use of scales as guitar plectrums. In India, pangolin scales are used by local people to reduce swelling and inflammation, cure piles, eliminate hook worm, armpit boils and back pain, to prevent pneumonia and to heal wounds (Mohapatra *et al.* 2015).
14. Throughout the range of African pangolins, scales have been used for a range of medicinal and non-medicinal applications both historically and today. These include possessing scales to protect against bad omens, burning the scales and using the smoke to ward off lions, and to treat a wide variety of medical ailments (Bräutigam *et al.* 1994; Sodeinde & Adedipe 1994). More recently, Boakye *et al.* (2015) report that 22 pangolin parts (including scales but also the meat, head, tail, brains and, *inter alia*, hearts) are used for medicinal applications in Sierra Leone. Similarly, Soewu and Adekanola (2011) report that pangolin parts and derivatives are used to treat 47 conditions among Awori people in Nigeria.
15. Pangolin meat continues to be consumed by local people in Africa and Asia today, but most illegal, international trade in pangolin meat is destined to China and Vietnam based on available evidence (e.g., Challender *et al.* 2015; Pantel & Chin 2009). It commands a high price in these countries where it is considered a luxury dish, and served in high-end restaurants it typically involves the

animal being brought into restaurants alive to be killed in front of consumers. Pangolin meat is in high demand because the animals are considered to be rare, they are wild-caught, and because the high retail price they command and illegality associated with procurement means they perform an important social function of imparting status among consumers (Challender *et al.* 2015). Based on recent research consumers are characteristically business elites (e.g., bankers) keen to 'look after' clients when signing business contracts or very wealthy consumers keen to 'try something new' (Challender *et al.* 2015; Shaipr 2013).

IUCN SSC PangolinSG support to pangolin Range States

16. The PangolinSG is keen to support pangolin Range States to implement conservation measures needed to combat the illegal trade in pangolins. In 2014, the PangolinSG launched a global conservation action plan, 'Scaling up Pangolin Conservation' (see [Challender *et al.* 2014c](#)), which lays out the key actions necessary to combat the illegal trade in pangolins (see Annex 1).
17. The recommendations made by the CITES Intersessional Working Group, and the First Pangolin Range States Meeting, which took place in June 2015 complement the PangolinSG action plan in numerous areas, including: conservation research (e.g., developing protocols for monitoring pangolin abundance), identification and protection of pangolin strongholds using patrol-based monitoring, improving legislation and enforcement, and reducing demand through evidence-based social marketing programmes.
18. The PangolinSG was involved in the First Pangolin Range States meeting, co-hosted by the governments of Vietnam and the United States of America. Nine members of the group attended and provided information on the global conservation status of pangolins, threats, conservation, management and trade, through a series of technical presentations and by participating in working groups and Q&A sessions.
19. The PangolinSG was also specifically asked to help pangolin Range States in their efforts to conserve and manage pangolin populations by undertaking the following three pieces of work:
 - a) Produce a map, that can be used to inform future conservation and management actions, depicting:
 - i. Country-specific laws and regulations governing management and trade of pangolins across Range States in Africa and Asia;
 - ii. distribution of each species; and
 - iii. legal and illegal trade routes;
 - b) Develop standardised methods for accurately and reliably assessing pangolin population status; and
 - c) Disseminate guidelines on husbandry and welfare standards for pangolin confiscation facilities, rehabilitation facilities, rescue centres, and captive breeding centres that can be implemented and enforced by range, transit, and consumer countries.
20. With regard to initiatives a), b), c) in paragraph 19, each piece of work has been initiated. Regarding initiative b) specifically, a PangolinSG working group has been formed which is undertaking this task.

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