Transfer of African pangolin species *Manis tetradactyla, M. tricuspis*, *M. gigantea* and *M. temminckii* from Appendix II to Appendix I

Proponents: Angola, Botswana, Chad, Côte d'Ivoire, Gabon, Guinea, Kenya, Liberia, Nigeria, Senegal, South Africa, Togo and United States of America

Note: *This document should be read in conjunction with the introduction to the pangolin proposals.*

Summary: There are four species of pangolin in Africa. Three, *Manis gigantea* (Giant Pangolin)*, M. tricuspis* (White-bellied Pangolin) and *M. tetradactyla* (Black-bellied Pangolin)*,* occur in moist forests and associated habitats in West and Central Africa. The fourth, *M. temminckii* (Temminck's Ground Pangolin)*,* is more widespread and occurs in drier habitats principally in eastern and southern Africa. All are solitary and give birth to a single young. Gestation period is taken as five months except for *M. temminckii*, where it may be three to four months. This and *M. gigantea* may only breed every second year; in the other two species breeding is believed to be aseasonal and more or less continuous. Generation time is taken as seven years for *M. tetradactyla* and *M. tricuspis,* and nine years for *M. gigantea* and *M. temminckii*.

Manis gigantea
Manis gigantea is a terrestrial species discontinuously distributed in 18 range States in West and Central Africa from Senegal eastwards to South Sudan[1], Uganda and Tanzania. It was previously considered extinct in Rwanda but recent evidence suggests it still persists there[2]. The CITES Management Authority of Uganda reported a national population estimate, based on camera trapping, of just over 2000 individuals, with densities of up to six individuals per km^2. Based on observed population densities for *M. temminckii*, also a terrestrial species, this seems high. The species reportedly generally avoids areas of high human impact, but has been found in forest mosaics. It is classified in the IUCN Red List as Vulnerable (2014).

Manis tricuspis
Manis tricuspis is a semi-terrestrial species occurring in 22 range States from Guinea-Bissau through much of West and Central Africa to southwest Kenya and northwest Tanzania, south to northwestern Zambia and northern Angola. The species is known to be present in modified habitats, including secondary growth in oil palm groves, teak plantations and secondary rainforest as well as agricultural areas of former lowland rainforest. It can reportedly be found at relatively high densities in suitable habitat. Research in Benin has suggested an average density of 0.84 individuals per km^2 during the dry season in both plantations and natural forest. This species is classified in the IUCN Red List as Vulnerable (2014).

Manis tetradactyla
Manis tetradactyla has been recorded in 11 range States from Sierra Leone eastward through West Africa to the Congo Basin. It may also occur in Angola and Uganda. It is the most arboreal of African pangolins and may therefore be expected to be the most forest-dependent, although has also been recorded in altered forests and farmland**Error! Bookmark not defined.**. It is classified in the IUCN Red List as Vulnerable (2014).

Manis temminckii
Manis temminckii is recorded in 14 range States and is possibly extinct in a 15th (Swaziland). It is the most widespread African pangolin species occurring from southeast Chad and extreme northeast Central African Republic through much of East and southern Africa as far south as South Africa. It mainly inhabits savannah woodland with dense scrub as well as floodplain grasslands and sandveld, and occurs on well-managed livestock farms. Limited information is available on population densities. Research in the Northern Cape Province of South Africa showed average densities of 0.24-0.3 individuals per km^2. In the Gokwe district of Zimbabwe they have been estimated at 0.1 individuals per km^2. *Manis temminckii* is classified in the IUCN Red List as Vulnerable (2014).

The main factors believed to be affecting African pangolins are exploitation and, in the case of the three forest-dwelling species, habitat loss and degradation. African pangolins continue to be hunted locally for their meat and use of their body parts and derivatives in traditional medicines. As well as local use there is evidence of (growing) international trade most of which is illicit, and involves pangolin derivatives, mainly scales, to Asian markets. Recent research suggests that the proportion of pangolins hunted has increased significantly compared to other vertebrates in sub-Saharan Africa, with a 9-fold increase from 2005 to 2014. Prices for pangolins in Nigeria (where all three forest-dwelling species occur) have reportedly increased 10-fold over the last five years. In Zimbabwe (where only *M. temminckii* occurs) the number of poaching

cases has been shown to be increasing rapidly, and as of 2015, poachers and traffickers from neighbouring countries have reportedly become involved in pangolin poaching in Zimbabwe[3]. Seizures of African pangolin derivatives in trade have been made with increasing frequency in recent years. These have mainly involved scales destined for Asian markets; some shipments have been detected in Europe en route to Asia[4]. According to the Supporting Statement, almost 15,000kg of scales from African pangolins were seized between 2013 and 2015, representing between 4,000 and 25,000 animals, depending on the species involved.

The apparently growing international trade is believed to have two causes: declining availability of Asiatic pangolin derivatives, and increasing trade globally between African nations and East Asia, which facilitates trafficking of these species[5].

The scale or proportion of the illegal trade in the different species is difficult to determine from seizure data given the difficultly in differentiating between pangolin species on the basis of the products in trade (chiefly scales).

Conversion of forest is believed to have an impact on *M. gigantea, M. tricuspis* and *M. tetradactyla*. Overall loss of tree cover in West and Central Africa, where these species occur, has been estimated at just under 4% in the period 2000 to 2014, or roughly 0.25% p.a.[6]. Rates of loss in Central Africa, where roughly 80% of the total forest cover in this area is found, are lower (ca. 0.2%) than they are in West Africa. All three species are found in modified habitats, but there is little information on their ability to persist in areas of entirely modified habitat. As well as affecting habitat for the species, the opening up of areas for activities such as logging also improves access for hunting.

Manis temminckii is likely to be less affected by loss of tree cover but may be affected by other land-use changes. There is mortality from electrocution on electric fences, especially in South Africa. Mortality rates of one individual per 11km of electrified fence per year have been estimated, with a bias towards male mortalities, probably because males range more widely than females.

All four species have been included in Appendix II since1994 (*M. temminckii* was listed in Appendix I between 1975 and 1994). Trade since then reported in the CITES Trade Database has been very limited. Most has been in *M. tricuspis*, with an annual average of 50 live animals, 20 skins and 40kg of scales exported across all range States in the period 1994 to 2014. Annual averages of round 150kg of scales and 12 skins per year of *M. gigantea* were also recorded. Recorded trade in the other two species has been negligible.

A number of range States have prohibited hunting and trade in native pangolin species.

Analysis: Information on population status of all four African species of pangolins is scarce. None of them have a restricted range and, although they may occur at low densities (less than one individual per square kilometre in the case of the only two, *Manis tricuspis* and *M. temminckii,* for which reliable information is available), none is likely to have a small population. There is no population trend information. Changes in population have been inferred from the presumed impacts of habitat alteration and hunting. Rates of conversion of habitat for the three forest-dwelling species (*M. gigantea, M. tetradactyla* and *M. tricuspis*) are relatively low (roughly 0.25% p.a.) and would not in themselves lead to reductions in line with the guidelines in Annex 1 of *Res. Conf. 9.24 (Rev. CoP16)*, particularly as all species are known to occur in modified habitats. Given their low productivity, hunting is very likely to have an impact on populations of all species. There is evidence that hunting intensity for pangolins in general in Africa has increased markedly in recent years. However, there is insufficient information to determine whether this has led to declines in line with the guidelines in the Resolution. There is therefore insufficient information to determine whether any of the species meets the criteria for inclusion in Appendix I.

Reviewers: D. Pietersen, C. Waterman and C. Shepherd.

References:

Information not referenced in the Summary section is from the Supporting Statement.

[1] FFI (2015) Remote cameras offer glimpse into the 'forgotten forests' of South Sudan. http://www.fauna-flora.org/news/remote-cameras-offer-glimpse-into-the-forgotten-forests-of-south-sudan/. Viewed on 06 June 2016.
[2] Pietersen, D. (2016) *In litt*. to the IUCN/TRAFFIC Analyses Team, Cambridge, UK.
[3] Shepherd, C.R., Connelly, E., Hywood, L. & Cassey, P. (2016) Taking a stand against illegal wildlife trade: the Zimbabwean approach to pangolin conservation. Oryx, Published online: 27 April 2016.

[4] Gomez, L., Leupen, B.T.C. & Hwa, T.K. (2016) The trade of African pangolins to Asia: a brief case study of pangolin shipments from Nigeria. *TRAFFIC Bulletin* 28:3–5.
[5] Challender, D.W.S., Baillie, J.E.M., Waterman, C., Pietersen, D., Nash, H., Wicker, L., Parker, K., Thomson, P., Nguyen, T.V., Hywood, L. & Shepherd, C.R. (2016) On Scaling Up Pangolin Conservation. *TRAFFIC Bulletin* 28:19-21.
[6] Global Forest Watch (2016) http://blog.globalforestwatch.org/. Viewed on 16 June 2016.