

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA



Seventy-fourth meeting of the Standing Committee
Lyon (France), 7 - 11 March 2022

Species specific matters

PANGOLINS (MANIS SPP.):
REPORT OF THE SECRETARIAT

1. This document has been prepared by the Secretariat.
2. At its 18th meeting (CoP18, Geneva, 2019), the Conference of the Parties adopted Decisions 18.238 to 18.243 on *Pangolins* (*Manis spp.*), as follows:

18.238 Directed to all pangolin range States

All pangolin range States that have not yet done so, are encouraged to take urgent steps to develop and implement in situ pangolin management and conservation programmes, which includes population assessments, as anticipated in paragraph 7 of Resolution Conf. 17.10 on Conservation of and trade in pangolins, and report on the implementation of this Decision to the Secretariat.

18.239 Directed to the Secretariat

The Secretariat shall, subject to external funding, work with the Species Survival Commission Pangolin Specialist Group of the International Union for Conservation of Nature (IUCN) and other relevant experts and in collaboration with the pangolin range States to develop conversion parameters for all pangolin species, that will enable the reliable determination of the number of animals associated with any quantity of pangolin scales seized, that can be used by Parties in cases where national legislation demands that such information be provided for court purposes.

18.240 Directed to the Secretariat

The Secretariat shall:

- a) *report on the implementation of Decisions 18.238 and 18.239, to the Animals Committee, as appropriate;*
- b) *bring any tools or materials brought to its attention in accordance with Decision 18.242, to the attention of the Animals Committee or the Standing Committee, as appropriate, together with any recommendations it may have, and taking into account any subsequent recommendations from the Animals Committee or the Standing Committee, make such tools or materials available to the Parties;*
- c) *subject to external funding, work with relevant experts and the pangolin range States to prepare a report for review by the Animals Committee and Standing Committee on:*

- i) *the national conservation status of pangolin species,*
- ii) *legal and illegal trade in pangolins,*
- iii) *stocks of specimens of pangolins and stockpile management, and*
- iv) *enforcement issues.*

18.241 Directed to the Standing Committee

The Standing Committee shall:

- a) *consider the report and any recommendations of the Secretariat in accordance with Decision 18.240 paragraphs b) and c), and any recommendations of the Animals Committee in accordance with Decision 18.243;*
- b) *make recommendations to the Parties or the Secretariat as appropriate; and*
- c) *report the results of its work together with any recommendations it may have, to the Conference of the Parties at its 19th meeting.*

18.242 Directed to Parties, intergovernmental organizations, international aid agencies and nongovernmental organizations

Parties, intergovernmental organizations, international aid agencies and non-governmental organizations that develop tools or materials that could assist Parties in the implementation of Resolution Conf. 17.10, are invited to bring such tools or materials to the attention of the Secretariat.

18.243 Directed to the Animals Committee

The Animals Committee shall review any information brought to its attention by the Secretariat in accordance with Decisions 18.238, 18.239, 18.240 and 18.242, and make recommendations as appropriate to the Standing Committee and the Secretariat.

Implementation of Decisions 18.238 and 18.240, paragraph a)

3. In document [AC31 Doc. 27](#) on *Pangolins (Manis spp.)* and its [addendum](#), the Secretariat informed the Animals Committee that it had not received any information in the context of Decision 18.238. The Secretariat reminds pangolin range States to report to the Secretariat on the development and implementation of *in situ* pangolin management and conservation programmes, as requested in Decision 18.238.

Implementation of Decisions 18.239, 18.240, paragraph a) and 18.243

4. At its 31st meeting (AC31, online, June 2021), the Animals Committee discussed document [AC31 Doc. 27](#) and its addendum that provided an update on the development of conversion parameters for all pangolin species under Decision 18.239. The conversion parameters were not available at the time and the Committee agreed to extend this work beyond the 19th meeting of the Conference of the Parties (CoP19). The Animals Committee agreed to submit the following draft decision for consideration by the Standing Committee at its 74th meeting and onward submission to CoP19.

19.AA Directed to the Animals Committee

The Animals Committee shall:

- a) review the conversion parameters for all pangolin species, developed in accordance with the provisions of Decision 18.239, to enable the reliable determination of the number of animals associated with any quantity of pangolin scales seized, and that can be used by Parties in cases where national legislation demands that such information be provided for law enforcement and court purposes; and
- b) make recommendations, as appropriate, to the Standing Committee and the Secretariat.

Implementation of Decisions 18.240, paragraphs b) and c), 18.242 and 18.243

5. Decision 18.240, paragraph c), was implemented thanks to the contribution from the United Kingdom of Great Britain and Northern Ireland to the Strategic Programme of the International Consortium on Combating Wildlife Crime (ICCWC).
6. The Secretariat commissioned the International Union for Conservation of Nature (IUCN) to support the implementation of Decision 18.240, paragraph c), and prepare, in cooperation with relevant experts and pangolin range States, a report on: i) the national conservation status of pangolin species; ii) legal and illegal trade in pangolins; iii) stocks of specimens of pangolins and stockpile management; and iv) enforcement issues.
7. In consultation with the Secretariat, IUCN developed a questionnaire to collect data from Parties on the matters outlined in Decision 18.240, paragraph c) and requesting information regarding tools or materials that could assist Parties in the implementation of Resolution Conf. 17.10 on *Conservation of and trade in pangolins*, as anticipated by Decision 18.242. The Secretariat made this questionnaire available as an Annex to [Notification to the Parties No. 2021/016](#) of 5 February 2021.
8. The Secretariat received responses to the Notification from 17 Parties, including 12 pangolin range States (Bangladesh, Botswana, China, Côte d'Ivoire, India, Indonesia, Mozambique, Namibia, Nigeria, Singapore, Thailand, and Zimbabwe). The non-range States that responded were the Gambia, Japan, New Zealand, Slovakia, and the United Kingdom of Great Britain and Northern Ireland. In addition, information concerning one Party was received from a non-governmental organization (NGO). In light of the content of the NGO submission, which included illegal trade data from open sources which seemed to be unverified, the Secretariat consulted with the Management Authority (MA) of the Party concerned regarding the submission, and was informed that the submission was not cleared by the MA and should not be taken into consideration in the report.
9. The completed questionnaires submitted by Parties and the information in Annex 1 of document SC69 Doc. 57 on *Pangolins (Manis spp.)* was used to prepare the report called for in Decision 18.240, paragraph c). In addition, relevant scientific literature, trade data on pangolins obtained from the CITES Trade Database, and seizure data obtained from the CITES annual illegal trade reports was reviewed to inform respective sections of the report.
10. Information anticipated by Decision 18.242, regarding tools and materials that could assist Parties in the implementation of Resolution Conf. 17.10, was integrated in the report. In brief, six Parties (Bangladesh, China, Nigeria, Singapore, Thailand, and the United Kingdom of Great Britain and Northern Ireland) provided details on tools and materials, including DNA and chemical methods to gain insight on seizures and a technique to lift fingerprints from scales to identify criminals.
11. The Secretariat reported to the Animals Committee on progress with the implementation of Decision 18.240, paragraph c), noting that the report would not be ready in time for the 31st meeting of the Animals Committee. The Animals Committee, as detailed in paragraph 27 of document [AC31 SR](#), recommended that the Secretariat consult with and seek input from the Chair of the Animals Committee on the draft report, before submitting it to the Standing Committee. The input from the Chair was taken into consideration in the finalization of the report.
12. The Chair of the Animals Committee highlighted the following matters on which the Animals Committee could potentially assist the Parties: i) producing or improving guidance on the identification of pangolins species, their parts and derivatives, to support the determination of species seized, given that illegal trade is currently reported at a high taxonomic level precluding analysis regarding the most traded species, ii) reviewing tools or materials shared by Parties that could assist in the implementation of Resolution Conf. 17.10, as anticipated by Decision 18.243, iii) discussing, analysing and making available to all range States existing studies on distribution and abundance of pangolin species for use within the range States, iv) considering existing conservation plans and formulating recommendations for range States, and v) considering the potential impact of the destruction of stocks on the loss of information to fulfil Decision 18.239.
13. The executive summary of the report, available in English, French and Spanish, is presented in Annex 1 to the present document. The full report is available in English only, and presented in Annex 2 to the present document.

14. The Secretariat highlights some of the key findings and matters outlined in the report in paragraphs 15 to 28 below.

Conservation status of pangolin species

15. The report provides an overview of the conservation status of African and Asian pangolins and, where possible, information on inferred population trends for the last five years for each range State. It highlights the lack of data and knowledge on pangolin species and the absence of status assessments and population estimates in most range States. Available information indicates that pangolin populations in most range States are declining and remain under threat. Parties are invited to consult the report for details on the status of each species and information on the status of species in different range States.
16. In comparison with Asian pangolins, there is less information available on the four African pangolin species. However, the publication of the first book dedicated to pangolins and their conservation (Challender *et al.* 2020a), the 2019 IUCN Red List assessments for all four African species (Ingram *et al.* 2019; Nixon *et al.* 2019; Pietersen *et al.* 2019 a, b), and the United States Agency for International Development (USAID) West Africa Biodiversity and Climate Change (WA BiCC) programme *Scoping Study on the Pangolins of West and Central Africa* (WA BiCC 2020) permit a more in-depth assessment than was available in document [SC69 Doc. 57 Annexes 1 and 2](#).
17. The report notes that high levels of harvesting of African pangolins for international illegal trade in recent decades combined with local use, and habitat loss and degradation, pose a threat to all four African pangolin species.

Legal and illegal trade in pangolins

18. Legal trade in the period 2014 to 2018 involved small volumes of trade in Asian pangolins, but comparatively higher volumes in African pangolins, including scales, live animals and scientific specimens, among other derivatives. More details about this trade, which primarily entailed trade under source codes W and I, can be found in Annexes 4 and 5 to the report. Given the zero-export quota for commercial trade in wild caught Asian pangolins since 2000, the majority of trade recorded in the CITES Trade Database involves African pangolins, and most of the recorded African pangolin trade consisted of scales from *M. tricuspis* and *M. gigantea*.
19. In the responses to Notification No. 2021/016, 15 out of 17 Parties reported that illegal trade involving pangolin specimens occurred in their territories. Based on Parties' illegal trade data, between 2016 and 2020, there were 955 seizures involving pangolins or their derivatives in 33 countries, which were estimated to amount to around 259,000 pangolins (see Annex 1 in the report for conversion parameters). By volume, 98% of the seizures involved scales. It should be noted that 20 seizures that took place in Côte d'Ivoire, Malaysia, Singapore, Thailand and Viet Nam between 2017 and 2019, accounted for 95% of the scales seized. Regarding these seizures, the alleged countries of origin included Cameroon, Congo, the Democratic Republic of the Congo, Mozambique, Nigeria and Côte d'Ivoire or Liberia, noting that there is uncertainty over alleged origins between Côte d'Ivoire and Liberia. Transit countries reportedly included Malaysia, Singapore and Thailand, with China, the Lao People's Democratic Republic and Viet Nam identified as the most likely countries of destination. The report indicates that based on additional data from other sources (e.g., academic literature, global news agency and non-governmental organization reports), the actual illegal trade volumes could be much higher, involving up to approximately 600,000 pangolins between 2016 and 2019, and potentially close to a million pangolins in the last decades, including all eight species. These figures may however be dwarfed by local use with one study cited estimating that 0.4–2.7 million pangolins are hunted annually in Central Africa.
20. The report highlights that 60% of the seizures were reported as '*Manis spp.*', i.e. without species-specific information. The lack of reporting of seizures to the species-level has prevented analysis regarding the impact of illegal trade on the different species of pangolin and the impact of harvest for illegal trade on wild populations. Although identification materials for pangolins are available, several Parties in their reporting asked for more training, better access to existing materials, and new identification materials. The report also highlights a lack of knowledge about the extent to which harvest of pangolins for local and domestic use relates to international trafficking. Another finding was that in Ghana, stakeholders close to protected areas traded more pangolins compared to those further away, suggesting that hunters are increasingly focusing their efforts on the nearest protected areas because of the greater availability of animals.

21. The report concludes that demand reduction efforts for pangolin specimens in key consumer countries for pangolin products and derivatives are not proving effective, and that incentives for the harvest and illegal trade of pangolins and their parts, principally scales, continue throughout the range of African species, particularly as Asian pangolins continue to decline.

Disposal of pangolin specimens

22. In response to Notification No. 2021/016, eight Parties out of 17 reported that they have Standard Operating Procedures (SOPs) in place for managing, storing, and disposing of confiscated pangolin specimens, while nine Parties do not. Based on all responses to Notifications to the Parties 2021/016, 2017/035 and 2014/059, only nine out of 56 pangolin range States have such systems in place. The report concludes that this is a concern for the implementation of the Convention because of the number of animals and quantities of the derivatives in illegal trade and the lack of systems in place to ensure that they do not re-enter illegal trade.

Pangolin specimen stocks and stockpile management

23. In responses to Notification No. 2021/016, 11 Parties out of 17 reported that stocks of pangolin scales, skins, or other derivatives existed in their territories, which ranged from a small number of scales or specimens to several tons of scales. Most stocks are held by governmental agencies and originated from seizures and confiscations. Only two Parties reported privately held stocks. Further details on pangolin specimen stockpiles can be found in the report, such as weight, species and content, where known.
24. Ten out of 17 Parties reported that they consider having adequate control measures in place to secure stocks of pangolin parts and derivatives, as recommended in Resolution Conf. 17.10.

Enforcement issues

25. From the Parties that responded to Notification 2021/016, many had taken part in [Operation Thunder 2020](#), and other similar law enforcement operations. Several Parties had identified and dismantled organized crime groups involved in pangolin trafficking in the last five years. The report highlights a 2018 case in which China dismantled a nationwide illegal trade network that transported pangolins from Guangxi province to Guangzhou. As part of this operation, a significant number of suspects were arrested. In 2019, China and Singapore, through collaboration and information exchange, dismantled an organized criminal group involved in pangolin smuggling from Africa to Asia. This collaboration led to large scale seizures of pangolin scales in Singapore, and the arrest of 14 suspects in China.
26. Although Parties are actively implementing domestic measures and participating in international efforts to address illegal trade in pangolins, critical law enforcement challenges remain, especially among pangolin range States. These challenges are not necessarily pangolin specific and include an ongoing lack of technical, human, and budgetary resources to adequately enforce applicable laws, as well as the influence of corruption. Many of these challenges were already highlighted at the 69th meeting of the Standing Committee (SC69, Geneva, November 2017) in documents [SC69 Doc 57](#) and [SC69 Doc. 57 A](#).
27. Most Parties that responded to the questionnaire reported that illegal trade in pangolins and/or their derivatives on the internet is not common.

Tools and materials that could assist Parties in the implementation of Resolution Conf. 17.10

28. Regarding the development of tools and materials that could assist Parties in implementation of Resolution Conf 17.10, a number of Parties indicated that they have, or are, developing such tools or materials. These include for example the Centre for Wildlife Forensics in Singapore launched in August 2020 to strengthen Singapore's detection and diagnostic capabilities to identify and analyse specimens involved in illegal wildlife trade. The report also notes the development of a technique for lifting fingerprints from pangolin scales by a team from the University of Portsmouth in the United Kingdom of Great Britain and Northern Ireland, demonstrating the potential to connect criminals to illegally traded pangolin specimens. More information on this can be found in Annex 17 of the report in Annex 2 to the present document.

Observations of the Secretariat

29. Pangolins continue to be significantly affected by illegal trade. The lack of up-to-date knowledge and data about pangolin abundance and population trends poses a challenge, however, to determining the true impact of poaching and illegal trade. Available information suggests that pangolin populations in most countries are

declining and that the illegal trade in pangolin specimens is likely having a significant impact on pangolin populations. There is also a lack of knowledge about the extent to which harvest of pangolins for local and domestic use relates to international trafficking, and further research in this regard seems necessary.

30. The [World Wildlife Crime Report 2020](#) developed by the United Nations Office on Drugs and Crime (UNODC) in collaboration with partners from the International Consortium on Combating Wildlife Crime (ICWC) also contains a chapter dedicated to pangolins which complements the report developed in accordance with Decision 18.240, paragraph c). Parties are encouraged to also draw upon this report to inform their responses to illegal pangolin trade.
31. Due to the high number of pangolin specimens and derivatives in illegal trade, it is important for Parties in whose territories pangolin specimen stocks exist to ensure that adequate control measures are in place to secure these stocks, and that measures are strictly applied as called for in paragraph 3 of Resolution Conf. 17.10.
32. Due to the high levels of illegal trade in pangolin specimens, the involvement of organized crime groups, and the challenges posed by corruption, it is crucial that source, transit, and destination States continue to strengthen and scale up cooperation to address this illegal trade. The example of collaboration and information exchange between China and Singapore that resulted in significant seizures and arrests, as highlighted in paragraph 25 above, is testimony to what can be achieved through strengthened collaboration and joint action. Further, it is essential that Parties step up efforts to actively pursue activities that could facilitate engagement to target money-laundering and illicit financial flows associated with illegal pangolin trade. To counter corruption, Parties are reminded of the importance of actively pursuing the implementation of Resolution Conf. 17.6 on *Prohibiting, preventing, detecting and countering corruption, which facilitates activities conducted in violation of the Convention*.
33. The Secretariat also reminds Parties of the [Pangolin Species Identification Guide and reference materials](#) developed by the United States Agency for International Development (USAID) [see also document CoP18 Doc. 75 on *Pangolins (Manis spp)*]. The Guide and reference materials are available in multiple languages and formats, including hard copy, smart phone application and web-based. The USAID pangolin species identification materials were developed to assist law enforcement officers to identify pangolin specimens in trade, including body parts and scales. Parties, intergovernmental organizations, international aid agencies and non-governmental organizations that develop tools or materials that could assist Parties in the implementation of Resolution Conf. 17.10 are also again encouraged to bring such tools or materials to the attention of the Secretariat as anticipated in Decision 18.242.

Recommendations

34. The Standing Committee is invited to:
 - a) take note of the report presented in Annex 2 to the present document;
 - b) consider draft decision 19. AA agreed by the Animals Committee and proposed for submission to the 19th meeting of the Conference of the Parties, as presented in paragraph 4 of the present document;
 - c) encourage all pangolin range States to step up efforts and actively pursue the implementation of Decision 18.238, by taking urgent steps, where not yet done, to develop and implement *in situ* pangolin management and conservation programmes, which include population assessments;
 - d) remind Parties about the [Pangolin Species Identification Guide and reference materials](#) developed by the United States Agency for International Development (USAID) and encourage Parties to bring the guide and materials to the attention of all relevant authorities;and
 - e) encourage Parties in whose territories stocks of parts and derivatives of pangolins exist to establish and apply, where not yet done, strict control measures to secure these stocks, as called for in paragraph 3 of [Resolution Conf. 17.10](#) on *Conservation of and trade in pangolins*.
35. The Secretariat further invites the Standing Committee to consider the following draft decisions, for submission to the 19th meeting of the Conference of the Parties:

19.BB *Directed to Parties*

All Parties are encouraged to identify seized pangolin specimens at species level and report the seizures at species level in their annual illegal trade reports.

19.CC *Directed to the Secretariat*

The Secretariat shall:

- a) issue a Notification inviting Parties, international organizations, international aid agencies and non-governmental organizations that developed identification materials concerning pangolin species, their parts and derivatives, to bring such materials to the attention of the Secretariat;
- b) bring any materials reported in accordance with Decision 19.CC paragraph a) to the attention of the Animals Committee, together with any recommendations the Secretariat may have;
- c) subject to external funding, provide training to Parties on the identification of pangolin specimens;
- c) work with its partners in the International Consortium on Combating Wildlife Crime (ICWC) to initiate activities and support the efforts of Parties to address illegal trade in Pangolin specimens; and
- d) report to the 20th meeting of the Conference of the Parties on the implementation of Decision 19.CC.

19.DD *Directed to the Animals Committee*

The Animals Committee shall review existing identification materials concerning pangolin species, their parts and derivatives, and consider the need for new or additional materials to be developed, including to support the identification of seized pangolin specimens at species level, and make recommendations for consideration by the Standing Committee.

19.EE *Directed to the Standing Committee*

The Standing Committee shall:

- a) consider the report and any recommendations of the Animals Committee in accordance with Decisions 19.AA and 19.DD, and make recommendations to the Parties or the Secretariat as appropriate; and
- b) report the results of its work together with any recommendations it may have to the 20th meeting of the Conference of the Parties.

Executive summary of the report on
Implementation of CITES Decision 18.240 paragraph c)
on Pangolins (*Manis spp.*)

All eight species of pangolin were transferred from CITES Appendix II to I at the 17th meeting of the Conference of the Parties (CoP17, Johannesburg, 2016). At CoP18 (Geneva, 2019), the Parties adopted a suite of Decisions pertaining to pangolins. Decision 18.240 paragraph c) directs the CITES Secretariat, subject to external funding, to work with relevant experts and the pangolin range States to prepare a report for review by the Animals Committee and Standing Committee on: i) the national conservation status of pangolin species, ii) legal and illegal trade in pangolins, iii) stocks of specimens of pangolins and stockpile management, and iv) enforcement issues. In December 2020, having acquired the necessary external funding, the CITES Secretariat commissioned the International Union for Conservation of Nature (IUCN) to prepare the report referred to in Decision 18.240 paragraph c), in consultation with the CITES Secretariat, and working with relevant experts and pangolin range States.

To inform this report, IUCN developed a questionnaire, in consultation with the CITES Secretariat, with which to collect data from the CITES Parties. The CITES Secretariat made the questionnaire available to Parties as an Annex to Notification to the Parties No. 2021/016. The CITES Secretariat received responses to this Notification from 17 Parties, including 12 pangolin range States: Bangladesh, Botswana, China, Côte d'Ivoire, India, Indonesia, Mozambique, Namibia, Nigeria, Singapore, Thailand, and Zimbabwe. The other Parties that responded were The Gambia, Japan, New Zealand, Slovakia, and the United Kingdom of Great Britain and Northern Ireland ('United Kingdom'). Data from the CITES Trade Database was downloaded for the period 2014-2020 and analysed and data on illegal trade were provided by UNODC, the CITES Secretariat, and the CITES Parties. Relevant academic literature on the status of pangolins and illegal trade in the species was also consulted (see Methods).

Global and national conservation status

All eight species of pangolin were assessed at the global level for the IUCN Red List of Threatened Species in 2019. This resulted in *M. pentadactyla*, *M. javanica*, and *M. culionensis* being categorised as Critically Endangered; *M. crassicaudata*, *M. gigantea*, and *M. tricuspis* as Endangered; and *M. tetradactyla* and *M. temminckii* as Vulnerable. Previous assessments were conducted in 2014; in the 2019 assessments *M. culionensis* was categorised as Critically Endangered rather than Endangered, and *M. tricuspis* and *M. gigantea* were categorised as Endangered rather than Vulnerable. These changes were non-genuine based on new information (see IUCN, 2021). The 2019 assessments were based on past, ongoing, and/or future levels of (actual or potential) exploitation, including for illegal international trade and, for the three West and Central African species (*M. gigantea*, *M. tetradactyla* and *M. tricuspis*), rates of forest loss. The assessments reflect that the threat to pangolins from overexploitation is compounded by various factors, including the likelihood that governance and law enforcement changes on a level needed to prevent the overexploitation of pangolins are unlikely to occur in the next few decades; there is weak evidence that demand reduction efforts for pangolin products in key consumer countries are proving effective; and the incentives for the harvest and illegal trade of pangolins and their parts—at all levels—appears to remain high in large parts of these species' ranges due to the high financial value of pangolins and their parts, especially scales.

Status assessments at the national level using the IUCN Red List Categories and Criteria have been completed for seven species but in a small number of range States only. Red List categories range from Near Threatened to Critically Endangered, but some assessments are now a decade old (see Section 4). Critically, there remains a lack of up-to-date knowledge on the status of pangolin populations in most range States, especially in Africa, including population estimates and basic information on distribution. Where research has been conducted, it has generated knowledge of populations. There are recent population estimates for Singapore (~1000 *M. javanica*) (Nash et al., 2021), South Africa (7002–32,135 mature *M. temminckii*) (Pietersen et al., 2016), and Taiwan Province of China (15,000 *M. pentadactyla*) (Kao et al., 2019). Based on responses to Notification to the Parties No. 2021/016 (and 2017/035 and 2014/059) pangolin populations are generally considered by range States to be declining. *Manis tricuspis* was reported to be declining in many range States but was reported to be 'quite common' or 'abundant' in parts of the species range in Central African Republic, Democratic Republic of the Congo (DRC), Gabon, Ghana, Liberia, Sierra Leone, and Togo.

Legal international trade based on data in the CITES Trade Database

There were small volumes of trade in Asian pangolins in the period 2014–2018, but comparatively higher volumes in African pangolins, which included scales, live animals and scientific specimens, among other derivatives. Low volumes of reported trade in Asian pangolins are not surprising given that the species have been subject to zero export quotas since the year 2000 (i.e., measures almost as restrictive as an Appendix I listing). Most trade in African pangolins involved scales. Overall volumes of trade in pangolins reported to CITES in the period 2014–2018 were small compared to volumes of illegal trade in the period 2016–2020 (see below).

One impact of the transfer of African pangolins from Appendix II to I is that international trade authorised by CITES authorities has ceased but is continuing illegally (see below). However, reports of seizures involving pangolins typically refer to ‘pangolin’ or ‘*Manis* spp.’, which precludes accurate assessment of the impact of illegal trade on the different species. Given knowledge gaps around the harvest of pangolins for local and national (i.e., domestic) use and international trade, in particular how harvesters, legal trade actors, and illegal trade networks, operate and how harvest relates to the different levels of use and trade—legal and/or illegal—the lack of accurate recording and reporting of the different pangolin species in illegal trade precludes a holistic understanding of the impact of harvest for use and trade at all levels

Although identification materials for pangolins are available (e.g., [USAID’s Pangolin Species Identification Guide](#)), several Parties welcomed more training, better access to existing materials, and new identification materials.

Illegal trade based on data provided by UNODC, the CITES Secretariat, Parties, and other sources of information

Between 2016 and 2020 there were 955 seizures involving pangolins or their derivatives that took place in 33 countries. This involved an estimated 258,466 pangolins¹ traded illegally in the form of scales, individuals (including live animals, bodies and skins), meat, medicines, and other derivatives. Of this illegal trade, 98% by volume involved scales, and of illegal trade in scales, 95% by volume can be accounted for by 20 seizures that took place in Côte d’Ivoire, Malaysia, Singapore, Thailand, and Viet Nam between 2017 and 2019. Regarding these seizures, the alleged origin of scales included Cameroon, Congo, DRC, Mozambique, Nigeria, and Côte d’Ivoire or Liberia (i.e., there is uncertainty over alleged origins between Côte d’Ivoire and Liberia). Transit countries reportedly included Malaysia, Singapore, Thailand, and unknown countries. Alleged final destinations included China, Lao People’s Democratic Republic, and Viet Nam. Of these 955 seizures, 60% were reported as *Manis* spp., i.e., at the genus level². Much smaller numbers of seizures were reported to involve particular species of pangolin, highlighting the lack of identification of pangolins to species level. It should be noted that figures relating to particular species in illegal trade rely on accurate identification of the different pangolin species by law enforcement agencies and which may or may not have been verified and therefore may not be accurate.

Data from other source (e.g., the academic literature drawing on global news, agency and NGO reports as data sources) suggest that actual illegal trade volumes were much higher, involving ~600,000 pangolins between 2016 and 2019 and potentially close to a million pangolins in the last decade, including all eight species.

Disposal of pangolin specimens

Of 17 respondents to the Notification to the Parties 2021/016 questionnaire, eight Parties reported that they have Standard Operating Procedures (SOPs) in place for managing, storing, and disposing of confiscated pangolin specimens while nine Parties do not. Based on all responses to Notification to the Parties 2021/016, 2017/035 and 2014/059, only 19 of 56 pangolin range States have such systems in place. This is a concern for implementation of the Convention because of the number of animals and quantities of their derivatives in illegal trade and the lack of systems in place to ensure that they do not re-enter illegal trade.

Stockpiles and stockpile management

Of the 17 Parties that responded to the questionnaire to Notification to the Parties No. 2021/016, 11 reported that stocks, whether containing pangolin scales, skins, or other derivatives, exist. The stocks range in size from small numbers of scales or specimens to several tonnes of scales. Nigeria, Singapore, and Thailand reported possessing stocks of over 1,000 kg of scales (range = 1450–3117 kg). These are all recorded as *Manis* spp. with

¹ This estimate is based on calculating the number of Equivalent Whole Pangolins (EWP) for illegal trade involving scales using conversion parameters presented in Annex 1.

² It should be noted that scientific consensus is to use three genera for pangolins (*Manis*, *Phataginus*, and *Smutsia*, but the CITES nomenclature and this report uses a single genus (*Manis*) for all species.

the exception of stocks held by Nigeria (3117 kg), which reportedly comprise *M. tricuspis*. Cameroon, Kenya, and Uganda previously reported possessing tonnes of scales. Other Parties hold smaller quantities of scales and other derivatives, including skins and taxidermized specimens. Singapore reported that it has privately held stocks of pre-Convention scales, skins, and stuffed specimens and reported that the intended use is commerce. Based on responses to earlier Notifications (i.e., 2017/035 and/or 2014/059), and without more up-to-date information, sizable stocks (>1,500 kg) of scales may still exist in Cameroon, China, Kenya, and Uganda. Côte d'Ivoire reported possessing 3000 kg of *Manis* spp. scales but reports in the press suggest that this quantity of scales was recently destroyed. Other Parties reported destroying much smaller quantities of specimens.

The destruction of stocks is one of the recommended provisions of Res. Conf. 17.8 for confiscated and accumulated dead specimens of Appendix-I species, including parts and derivatives, if not being stored or used for bona fide scientific, educational, enforcement, or identification purposes. Parties are also not supposed to sell off confiscated Appendix-I specimens. However, it should be noted that insights from the examination of stockpile issues for other species (e.g., elephants; see 't Sas-Rolfes et al., 2014) suggests that stock destruction may violate the precautionary principle because associated outcomes for pangolin conservation are unknown. This could be the case if stockpile destruction led to accelerated wild harvest of pangolins if organised crime groups involved in trafficking sought to recover losses incurred through the seizure of large volumes of scales.

Enforcement challenges

A number of law enforcement challenges were identified by range States in Africa and Asia. Eleven Parties reported that a lack of equipment and technical or human resources are challenges to effective law enforcement, though it should be noted that these challenges are not necessarily pangolin-specific. They include a lack of equipment (e.g., scanners, sniffer dogs), a lack of vehicles and fuel to conduct patrols (especially in more remote locations), and a lack of resources to detain individuals that have been apprehended (e.g., transport). Other challenges include inadequate budgets to effectively enforce applicable laws—including to employ sufficient numbers of well-trained law enforcement staff—a lack of law enforcement personnel, and an inadequate capacity of frontline law enforcement officers. Many of these challenges were highlighted five years ago [CITES SC69 Doc. 57. Annex 1](#) and are ongoing.

Nigeria reported that corruption influenced the ability of the country to enforce laws affording protection to pangolins from poaching and trafficking. Nigeria described these issues as: (i) a lack of data management to ensure accountability among agencies, (ii) the long prosecution process which results in out of court settlements, (iii) seizures which are ostensibly abandoned, and (iv) funds for equipment (e.g., scanners at seaports) being appropriated.

Law enforcement best practices

Pangolin range States reported a number of law enforcement best practices regarding combatting the poaching and illegal trade of pangolins. These include inter-agency cooperation and collaboration, intelligence networking within local communities co-existing with pangolins, the use of technologies such as SMART to help map poaching hotspots, and among others, the adoption of a whole-of-government approach, including a robust domestic framework combining strong enforcement, tough laws, and heavy penalties.

Operations to combat pangolin poaching and trafficking

Parties reported that they had collaborated with other countries and/or participated in international operations (e.g., under INTERPOL, World Customs Organization (WCO), and Wildlife Enforcement Networks) aimed at combating the poaching and illegal trade in species that has specifically or inadvertently included pangolins. Of Parties responding to Notification to the Parties 2021/016, many had taken part in the INTERPOL and WCO Thunder operation in 2020, which resulted in seizures of pangolins, and other similar operations.

Tools and materials for implementing Res. Conf. 17.10

A number of Parties indicated that they have, or are, developing tools or materials that could assist in the implementation of Resolution Conf. 17.10. They include the Centre for Wildlife Forensics in Singapore, which launched in August 2020, to strengthen Singapore's detection and diagnostic capabilities to identify and analyse specimens involved in the illegal wildlife trade. They also include the development of a technique, by a team from the University of Portsmouth in the United Kingdom, for lifting fingerprints from the scales of pangolins, demonstrating the potential to connect criminals to illegally traded pangolins via fingerprints.

Dismantling of organised crime groups

Singapore and China reported that, through a collaboration, they had dismantled an organised crime group. Key to this was sharing information through mutual legal assistance channels. This bilateral information exchange helped China to pursue its investigations, leading to arrests of suspects of Chinese nationality based in Africa and Viet Nam.