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

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CITES

Eighteenth meeting of the Conference of the Parties
Colombo (Sri Lanka), 23 May – 3 June 2019

Species specific matters

Elephants (Elephantidae spp.)

REPORT ON THE ELEPHANT TRADE INFORMATION SYSTEM (ETIS)

1.   This document has been submitted by the Secretariat.

ETIS reporting to CoP18

2.   The Elephant Trade Information System (ETIS), established under Resolution Conf. 10.10 (Rev. CoP17) on *Trade in elephant specimens* and supervised by the Standing Committee, is conducted in accordance with the framework outlined in Annex 1 (Monitoring illegal trade in ivory and other elephant specimens) of the Resolution.

3.   ETIS is managed and coordinated by TRAFFIC, in consultation with the MIKE and ETIS Technical Advisory Group (TAG) and in collaboration with the CITES Secretariat. Data and information on illegal trade in ivory and other elephant specimens are collected by TRAFFIC in collaboration with the CITES Secretariat, and the analysis and interpretation of data are handled by TRAFFIC.

4.   Resolution Conf. 10.10 (Rev. CoP17) directs in paragraph 11 the CITES Secretariat to report on information and analysis provided by ETIS at each meeting of the Conference of the Parties. Comprehensive ETIS analyses have been submitted to the Conference of the Parties at its 11th, 12th, 13th, 14th, 15th, 16th and 17th meetings [CoP11, Gigiri, 2000, in document Doc. 11.31.1 (Annex 5); CoP12, Santiago, 2012, in document CoP12 Doc. 34.1; CoP13, Bangkok, 2004, in document CoP13 Doc. 29.2A; CoP14, The Hague, 2007, in document CoP14 Doc. 53.2; CoP15, Doha, 2010, in document CoP15 Doc. 44.1 (Rev. 1); CoP16, Bangkok, 2013, in document CoP16 Doc. 53.2.2 (Rev. 1); and CoP17, Johannesburg, 2016, in document CoP17 Doc. 57.6 (Rev. 1)].

5.   Annex 1 to this document contains the comprehensive analytical ETIS report, prepared by TRAFFIC in collaboration with the CITES Secretariat, that is called for in Resolution Conf. 10.10 (Rev. CoP17).

6.   The ETIS report prepared for the present meeting was for the first time shared with Parties concerned (i.e. Angola, Burundi, Cambodia, Cameroon, Congo, China, the Democratic Republic of Congo, Ethiopia, Gabon, Hong Kong Special Administrative Region, Kenya, Lao People's Democratic Republic, Malaysia, Mozambique, Nigeria, Singapore, South Africa, Turkey, Uganda, United Arab Emirates, United Republic of Tanzania, Viet Nam and Zimbabwe), as requested by the Standing Committee at its 69th meeting [SC69, Geneva, November 2017; see document (SC69 Sum. 10 (Rev. 1)]. At its 70th meeting (SC70, Sochi, October 2018), the Standing Committee requested the Secretariat, together with TRAFFIC, to prepare an annex with the comments received from these Parties on the ETIS report (if any), and to circulate it as part of the document to be considered by the Conference of the Parties at its 18th meeting [see document SC70 Sum. 12 (Rev. 1)]. Annex 2 contains the comments received from Parties that responded after the ETIS report was shared with all Parties concerned. Comments were received from Cambodia, China, Hong Kong SAR, Singapore, Viet Nam and the United Arab Emirates. Several amendments were made to Annex 1 based on comments received from the Parties concerned.

7. TRAFFIC's responses to the comments received from Parties concerned are contained in Annex 3. The Secretariat notes the responses by TRAFFIC to address issues brought up by Parties in relation to the ETIS analysis. It recalls that the broad review of the ETIS methodology and modus operandi that will take place following CoP18 as envisaged under draft decisions contained in Annex 1 of document CoP18 Doc. 69.1 and based on the Terms of Reference approved by SC70 [SC70 Sum. 12 (Rev. 1)] and contained in Annex 4 of document CoP18 Doc. 69.1.

8. The Secretariat concurs with the assessment of the results of the cluster analysis and the categorisation of Parties based on the assessment.

9. The Secretariat will, in line with the *Guidelines to the National Ivory Action Plans Process* in Annex 3 of Resolution Conf. 10.10 (Rev. CoP17), develop recommendations for consideration by the 71st meeting of the Standing Committee (Colombo, May 2019), and provide an oral update in this regard at the present meeting.

10. Further recommendations by the Secretariat that are linked to this ETIS report are detailed in documents CoP18 Doc. 69.1 on *Implementation of Resolution Conf. 10.10 (Rev. CoP17)*.

Support to ETIS

10. The CITES Secretariat is grateful to the European Union for its financial support to ETIS as one of the elements in the MIKES project funded by the European Union.

11. The MIKES project is closing in December 2019 and, subsequently, external funding will be required for both ETIS and MIKE. A draft decision aimed at finding a long-term solution to ensure the financial sustainability of the two monitoring systems is proposed for consideration of the Conference of the Parties in document CoP18 Doc. 69.1.

12. The tentative budget required to implement ETIS is contained in Annex 4 to the present document.

Recommendation

13. The Conference of the Parties is requested to note this document.

**The Elephant Trade Information System (ETIS) and the Illicit Trade in Ivory:
A report to the 18th meeting of the Conference of the Parties to CITES**[*]

T. Milliken, F.M. Underwood, R.W. Burn and L. Sangalakula
TRAFFIC
December 2018

Introduction

Resolution Conf. 10.10 (Rev. CoP18) mandates "*a comprehensive report to each meeting of the Conference of the Parties*" from the Elephant Trade Information System (ETIS). This report is the seventh major assessment of the ETIS data to the CITES Parties, and constitutes TRAFFIC's reporting obligations for CoP18. Prior to submission to the CITES Secretariat, the document was reviewed by members of the MIKE-ETIS Technical Advisory Group (TAG) and those Parties identified in the cluster analysis as Category A, B or C countries pursuant to Annex 3 of Resolution Conf. 10.10 (Rev. CoP17). At the outset, TRAFFIC would like to acknowledge with gratitude the funding support from: the European Union's "Minimizing the Illegal Killing of Elephants and Other Endangered Species" and the "Asia Wildlife Enforcement and Demand Management' projects; the United States Fish and Wildlife Service's African Elephant Conservation Fund; the Governments of Belgium and the Netherlands; and WWF, for providing support for the operation and management of ETIS since CoP17, including the production of this report.

PART I: THE ETIS DATA

Number of Records:

ETIS had 28,490 records on 06 June 2018, of which 25,822 represented ivory seizures, with the rest being non-ivory elephant products. Figure 1 illustrates the reported number of ivory seizure cases and their estimated weights as raw unadjusted data in each year from 1989 to 2017. Figure 1 cannot be interpreted as a trend, nor is it suggestive of absolute quantities of ivory seized over time, because of inherent bias in the data in terms of rates of interdiction and reporting seizure data to ETIS by countries over time.

Figure 1:   Number of ivory seizure cases and estimated weight of ivory by year, 1989 - 2017
(ETIS raw data, 06 June 2018)
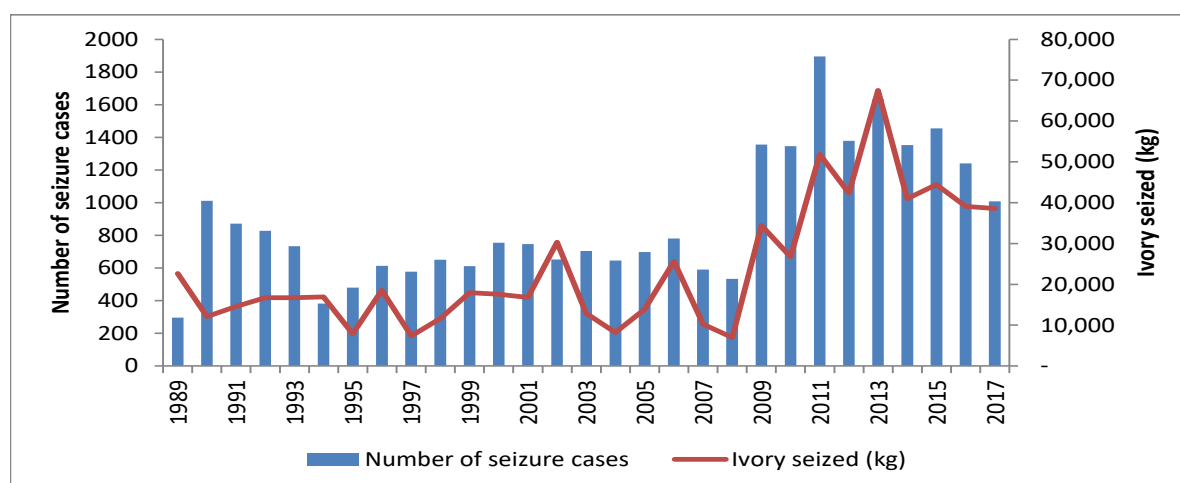
A note on data completeness for 2017:

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[*]   *The geographical designations employed in this document do not imply the expression of any opinion whatsoever on the part of the CITES Secretariat (or the United Nations Environment Programme) concerning the legal status of any country, territory, or area, or concerning the delimitation of its frontiers or boundaries. The responsibility for the contents of the document rests exclusively with its author.*

The number of ivory seizure cases reported to ETIS for 2017 totals 1,007 and represents nearly a 20% drop from the previous year and a 30% decrease against the 2015 data (Table 1). Unfortunately, late and incomplete reporting of seizure data to ETIS by the Parties characterizes the 2017 dataset. Indeed, another 179 seizure cases for 2017 have been verified for inclusion in ETIS since closure of the database for the current analysis. Further, TRAFFIC's annual data exchange with the World Customs Organization (WCO) was not possible with respect to 2017 owing to untimely personnel changes at WCO, but such data should become available in the future. Finally, for a number of countries which did submit data for this analysis, assessment of open source data suggests that the true number of seizure records could be considerably greater than what has been reported by various CITES Management Authorities. Although the statistical analysis does address bias related to differences in reporting effort, it is not currently able to deal with all issues of under-reporting described above. Thus, as more seizure cases become available, it is likely that future iterations of the ETIS trend analysis will probably show upward movement from the mean data points presented in this analysis for 2017. Consequently, the current analysis for the year 2017 may not fully represent the status of illegal global ivory trade owing to some degree of underreporting and results for the most recent year should be treated cautiously and not be over interpreted.

Weight of ivory represented in the seizures database:

In over half of the ETIS seizure records, the Parties have not specified the weight of the items seized, but rather only provided the 'number of pieces' by ivory type or given weight estimates instead of precise values. It is often not known whether 'pieces' concern whole tusks or cut pieces of raw ivory and, in the case of worked ivory, the specific product seized usually remains unidentified and could potentially range from a few grams to many kilograms. As a result, missing weight values have been calculated using updated regression models that have been employed for such purposes in all previous ETIS analyses. Finally, the inherent uncertainty surrounding weights has led to the use of weight categories (and not the actual reported or assigned weights of seizures) when analyzing the ETIS data. These caveats should be borne in mind when considering the estimated weight values described in this report.

Table 1: Estimated weight (rounded to nearest 100 kg) of ivory in raw ivory equivalent (RIE) terms represented by unadjusted ETIS seizure data, 2008-2017 (ETIS, 06 June 2018)

Year	Number of ivory seizure cases	Raw ivory weight (kg)	Worked ivory weight RIE (kg)	Total (kg)
2008	533	5,500	1,400	6,900
2009	1,355	27,600	6,700	34,300
2010	1,344	23,300	3,400	26,700
2011	1,892	45,600	6,100	51,700
2012	1,376	36,900	5,200	42,100
2013	1,634	59,900	7,500	67,400
2014	1,352	33,900	7,000	40,900
2015	1,455	39,000	5,800	44,800
2016	1,242	34,100	5,900	40,000
2017	1,007	34,600	3,700	38,300
Total	**13,190**	**340,400**	**52,700**	**393,100**

Raw ivory equivalent (RIE) values are used for all ivory seizure data examined in this report, so that an estimate of wastage that occurs during the manufacturing process for worked ivory products is considered as part of the weight; this allows worked ivory values to be comparable to, and aggregated with, raw ivory (see CoP14 Doc. 53.2 Annex for a description of the method used for this calculation). Table 1 provides a summary of the estimated ivory weights in RIE terms for each year in this analysis.

Assignment of country of origin to ivory seizures following DNA assessment:

Since the Parties agreed Decision 16.83 and incorporated recommendations for forensic examination in Resolution Conf. 10.10 (Rev. CoP16) at CoP16, ETIS has tracked the forensic examination of ivory in seizure cases and used the results to extend trade route information to encompass designated countries of origin as part of the known trade chains. Most of these results rely on published work undertaken at the University of Washington's Center for Conservation Biology under the direction of Dr. Sam Wasser. In this regard, the ETIS database has been designed to accommodate multiple countries of origin, and estimates of the proportion of weight relating to each country of origin identified through forensic results have become an integral part of such

records. Table 2 presents the number of seizure cases that potentially qualify for forensic examination against the number of actual cases for which forensic results have been integrated into the ETIS record. Overall, only 21 seizure cases out of the 107 records (19.6%) involving the seizure of 500 kg of ivory or more have been assessed forensically and the results communicated to TRAFFIC for inclusion in ETIS. Indeed, between 2015-2017, only six out of 46 (13%) such seizures were found to have been assessed forensically and the results reported to ETIS. It is evident that many CITES Parties are not making forensic examination of large ivory seizures a priority concern.

Table 2: Estimated number of large-scale ivory seizures (>500 kg) which have been forensically examined pursuant to Resolution Conf. 10.10 (Rev. CoP17) and the results reported to ETIS (ETIS, 06 June 2018)

Year	No. of large-scale ivory seizures reported to ETIS	No. of forensically examined cases with results reported to ETIS
From June 2011	13	0
2012	14	3
2013	19	6
2014	15	6
2015	20	2
2016	18	2
2017	8	2
Total	**107**	**21**

PART II: THE TREND ANALYSIS

Resolution Conf. 10.10 (Rev. CoP17) calls for ETIS to measure "*levels and trends, and changes in levels and trends*" concerning illegal trade in ivory.

A note on methods

This report is based upon the analytical framework for ETIS described in Underwood *et al.*, (2013) and Burn and Underwood (2013) with some refinements. This basic framework has been used for each ETIS analysis since CITES CoP16. For the analysis to CoP18, the following modifications or refinements can be noted:

Time period of the analysis: This analysis addresses the ten-year period from 2008 through 2017, commencing with the year in which the second CITES-approved, one-off sale of ivory occurred between six Parties. Over the ten-year period, the ETIS database contained 13,190 seizure records that relate to raw or worked ivory, which collectively weighed an estimated 393,100 kg (Table 1). Individual records range from one gram to 7,013 kg of ivory and the largest 1% of these seizure records represents 58% of the total estimated weight of all ivory seized during this period.

Weight classes: Since CoP16, each ETIS analysis has described illegal ivory trade trends using weight classes for raw and worked ivory: small (less than 10 kg), medium (10 kg to less than 100 kg) and large (100 kg or more). Whilst this categorization has generally worked well, since CoP17 the medium and large worked ivory weight classes have been combined owing to the fact that there are very few seizures of worked ivory in the large weight class. Combining these two ivory weight classes leads to more robust analytical results.

Selection of countries: Using the point systems described in the CoP17 report (CoP17 Doc. 57.5 Annex), data from 66 countries in the period 2008-2017 were examined in this analysis, accounting for 99% of the seizures by both number and weight. It should also be noted that Portugal was excluded from the analysis because it was felt to be an atypical country, in particular, by producing anomalous results for the first two years of the trend and then contributing very little in the later years which are the primary focus of this analysis.

Bias adjustment of the ETIS seizure data: As in all previous analyses, the raw ETIS seizure data presented in Figure 1 cannot be regarded as an accurate representation of the pattern of illegal ivory trade because of inherent bias in the data. Bias occurs because of differences in the ability of countries to make seizures and/or report them to ETIS. It is necessary to correct for bias in order to make relatively meaningful comparisons between countries over time. To achieve this, independent proxy variables are sought to account for some of the differences in seizure and reporting rates between and within individual countries over time, as described in Underwood *et al.*,

2013. As in the CoP16 and CoP17 analyses, the *data collection score* and the *CITES reporting score* were the two variables that best described why countries differed in their ability to report seizures.

In the CoP17 analysis, only one of several proxy variables tested was found to describe the variability in how countries make seizures (the seizure rate); the previous, or lagged, year's *law enforcement effort ratio (LE Ratio)*, (the calculation of which is described in the fourth note of Table 5). In this regard, it should be understood that the LE Ratio calculation excluded countries that were implicated in the trade chain of a seizure if the shipment was seized before reaching the country in question and thereby foreclosing on any opportunity for law enforcement action. Although this gives a better reflection of law enforcement than the definition used prior to the CoP17 analysis, a consequence was that nations which mostly function as countries of destination end up with an artificially high LE Ratio. This is because shipments are not likely to leave a country of destination where they are ultimately consumed, unlike a country of origin which they usually leave and can then be seized by other countries. Thus, in comparing a country of origin with a country of destination that in both cases have exactly the same law enforcement effort, the country of destination will end up with a higher LE Ratio. This issue was noted in documentation concerning ETIS methods submitted by Singapore to the 69th meeting of the CITES Standing Committee (SC69 Doc. 29.3 Annex 5). To mitigate this effect, a new variable, the Trade Chain Index (TCI), was derived to characterise a country's role in illegal trade transactions. In general, countries often appear in multiple parts of the trade chain. For some shipments, they may be the country of origin, whilst for others they may be a country of export or destination. The TCI is designed to capture the relative importance of the different roles countries play in illegal ivory trade chains based on the trade chain information captured in the ETIS seizure records[1]. The TCI is calculated for each country in each year and is the log of a country's Destination Score[2] (plus one) divided by a country's Non-destination Score[3] (plus one). With this calculation, countries that are mainly countries of destination have a higher TCI than countries which are usually found at earlier points in the trade chain.

In the 2018 analysis, the variables that best described differences in the rate of seizure were the lagged LE Ratio and the Trade Chain Index. The bias adjustment for these two variables can be interpreted as follows: the higher the LE Ratio, the higher the estimated seizure rate, but for two countries with the exact same LE Ratio, the estimated seizure rate will be lower for the country with the higher TCI. This refinement to the estimation of the seizure rate is an improvement over previous analyses, although it should be noted that introducing this calculation does not change the results of the trend analysis in a substantive way.

The Transaction Index – assessing the frequency of illegal trade in ivory

The Transaction Index presented in Figure 2 depicts global illegal trade activity in five ivory classes, two ivory types (raw and worked) and three weight categories (small, medium and large), although the last two are combined for worked ivory. Based upon bias-adjusted data, to account for variable seizure and reporting rates, each ivory class provides a measure of the frequency of raw and worked ivory transactions occurring over the period, with 2008 set to 100 to constitute the baseline.

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[1] *Seizure records typically include information on the countries of origin, export, transit or destination in the transaction as defined in the ETIS data collection form which was approved for use under CITES in 1998. Over 85% of ETIS records in the reporting period provide some information on the trade chain.*

[2] *The Destination Score for a country in a particular year is the number of seizures in which that country is listed as a 'country of destination' divided by the total number of seizures in that year for which a 'country of destination' is provided. This score is calculated separately for raw and worked seizures and then averaged.*

[3] *The Non-destination score is the average of the Origin, Export and Transit Scores. These consider the number of seizures in which the country is listed as the 'country of origin, export and/or transit' and are calculated in a similar manner to the Destination Score.*

Figure 2: *Trends in Transaction Index by ivory type and weight category with mean (bold dot) and 90% confidence intervals, 2008-2017 (ETIS, 06 June 2018)*
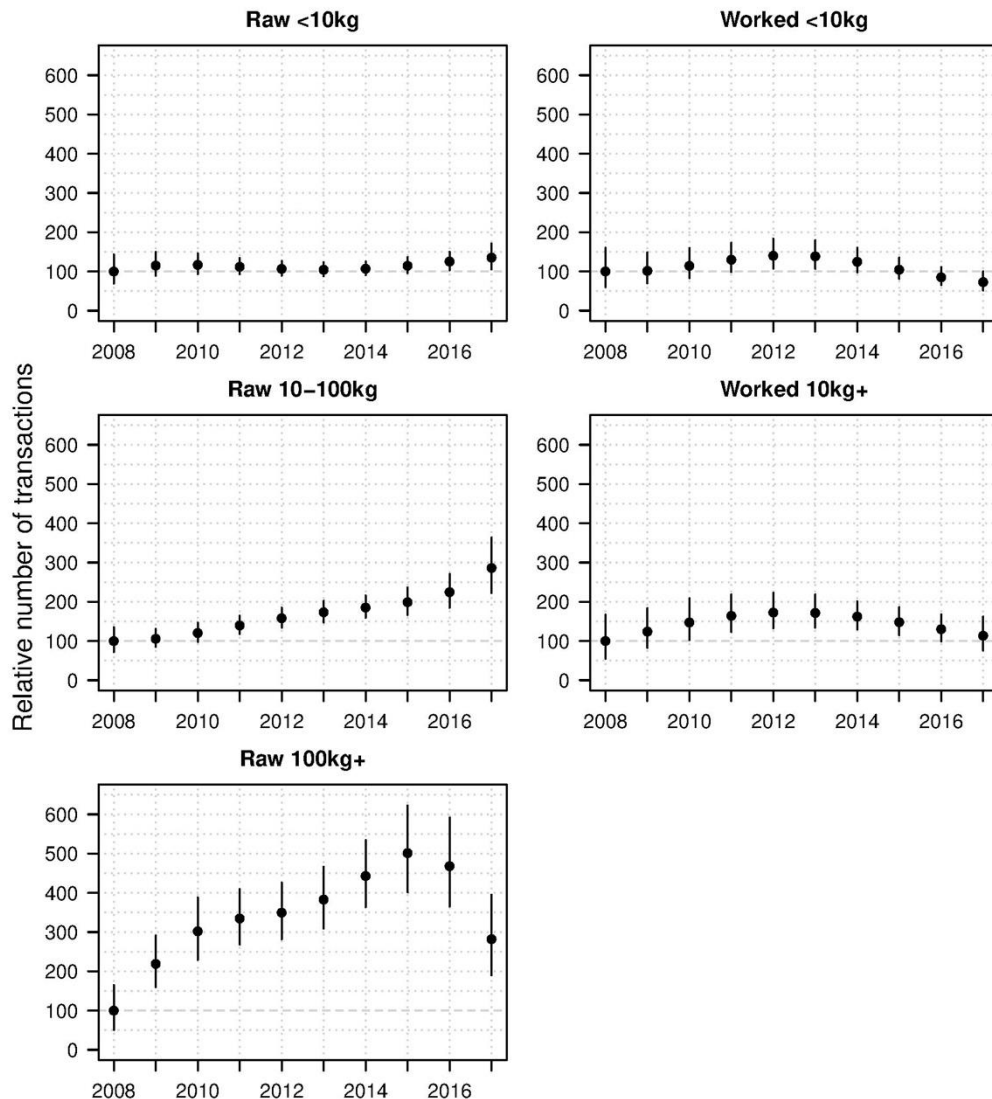
Each of the figures presents the pattern of trade activity by ivory class, with the best estimate of annual transactions being the bold dot with the vertical lines depicting 90% confidence intervals. With the exception of the 'raw 100 kg+' figure, it can be seen that the confidence range remains tight in all other classes. In general terms, the three figures for raw ivory are indicative of ivory supply from Africa, the principal source for contemporary illegal trade, whilst the two figures for worked ivory constitute a window on ivory demand and consumption globally. The underlying trade dynamics of each ivory class can be unique and reflect different aspects of illegal trade. For example, the small worked ivory class primarily relates to activity involving manufactured products seized from tourists or other individual buyers, whereas the large raw ivory class typically involves any number of commercial-scale transactions often put together pursuant to higher-level organised criminal enterprise. Viewing the ETIS data through the prism of ivory types and weight categories affords a more nuanced look at different players, locations and dynamics operating along the illegal ivory trade chain. As noted, dividing seizures into weight categories also helps mitigate the uncertainty around ivory seizure weights.

On the right side of Figure 2, illicit worked ivory trade transactions were at their highest levels in 2012/2013 and then began a gradual decline to 2017. This development coincides with a host of ivory market surveys in both Asia and Africa that generally show major reductions in the number of ivory products observed for sale in physical ivory markets, including those in China, Thailand and Singapore in Asia (Webber *et al*., 2013; Krishnasamy *et al*., 2016; Zhao, 2017; Yu, 2018), and Cameroon, the Congo, Ethiopia, Gabon in Africa (Nkoke *et al*., 2017; Vigne, 2017). Moving to raw ivory transactions on the left side of the figure, the small weight class shows incremental increase, whilst the medium weight class shows a considerable upward movement in terms of illegal trade activity in 2017. On the other hand, this coincides with a major decline in the large raw ivory weight class in 2017, following an unbroken steady increase from 2008 to a peak in 2015. The decline in the large raw weight class is important as previously it was a key driver of the overall trend in illegal ivory trade throughout the entire period

under examination. Both the increasing trend in the medium raw ivory weight class and the drop in the large raw ivory weight class could reflect changing trade dynamics, particularly the apparent emergence of illegal ivory processing within Africa for the export of products to Asian markets (CITES, 2017).

Figure 3: *Transaction Index combining weight classes by ivory type, 2007-2014* (ETIS, 21 June 2018)
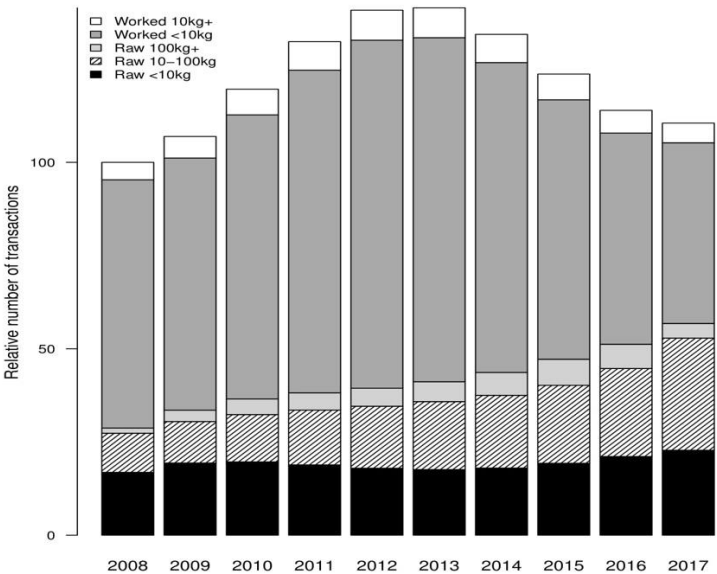

Figure 3 aggregates the overall trend by ivory type, showing a steady incremental decline in total ivory trade transactions from the peak years of 2012/2013, with the worked small weight class exhibiting the most pronounced decline. The drop in raw ivory transactions involving 100 kg or more is also apparent, but in terms of actual numbers of individual transactions the effect is much less. On the other hand, small and medium-sized raw ivory shipments have increased to the extent that all raw ivory transactions together surpass the estimate for all worked ivory transactions for the first time ever in an ETIS analysis. Again, whether this result is because the data in 2017 for worked ivory transactions remains deficient or not will only be understood in future iterations of the ETIS trend analysis.

Figure 4: *Transaction Index composite of all ivory types and weight classes with mean (bold dot) and 90% confidence intervals, 2008-2017* (ETIS, 06 June 2018)
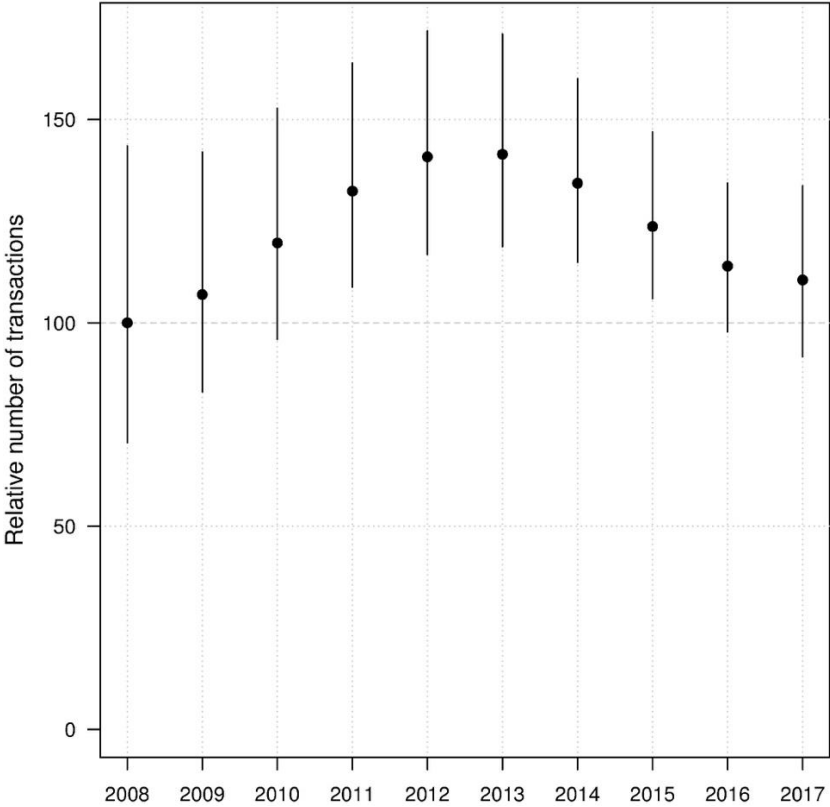
Figure 4 illustrates the overall consolidated trend of illegal ivory trade activity globally with 90% confidence intervals presented. Again, the analysis suggests a drop in illegal global ivory trade activity since 2013 but the extent of ongoing decline in 2017 remains unclear due to the data completeness issue described above. If additional seizure records are obtained subsequent to this analysis, 2017 could ultimately surpass the estimate for 2016. The overall conclusion is that there is a strong suggestion that the illegal ivory trade transactions have declined to some degree from peak levels, but the downward trend is still within the confidence bounds of the peak value. A precautionary interpretation is that the illegal ivory trade has more or less been fairly stable over the last two, possibly three, years.

The Weight Index – assessing the volume of illegal trade in ivory

The Weight Index allows for the relative quantity of ivory in trade to be assessed by ivory type in weight classes. This index results from combining the Transactions Index with a model for assigning weights to each seizure in each weight class. As previously emphasized, ETIS is not designed to provide absolute weight values of illicit ivory trade, rather the aggregated pattern of bias-adjusted data is indicative of the relative quantity of ivory being traded through illegal trade channels annually. It is also worth noting that impact on elephants becomes more apparent when assessing the Weight Index and relating ETIS results to MIKE results on the illegal killing of elephants, rather than when assessing the number of transactions. However as this is a relative index, the absolute impact on elephant numbers cannot be gauged from this analysis.

Figure 5: ***Weight Index combining weight classes by ivory types with 90% confidence intervals, 2008-2017** (ETIS, 06 June 2018)*
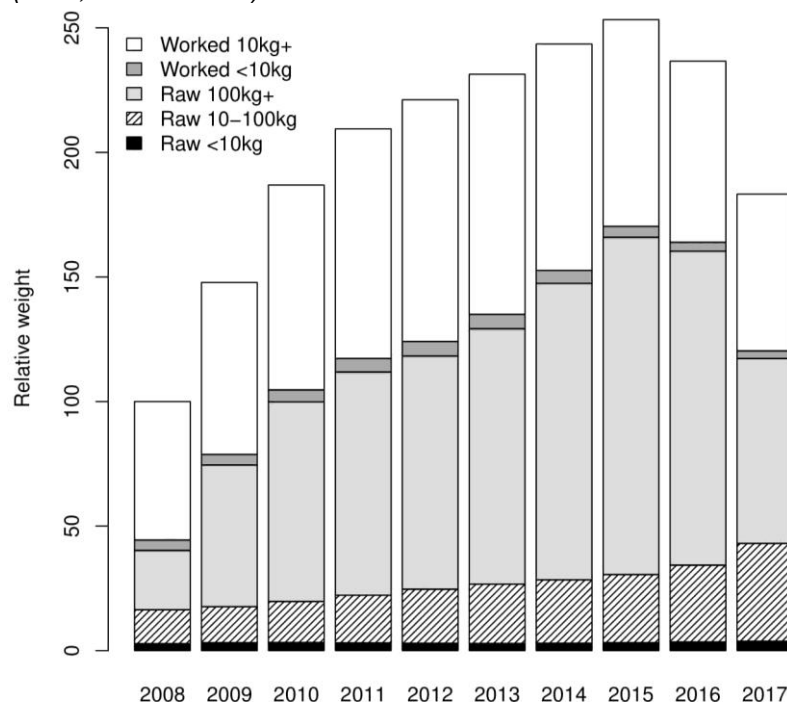

Aggregating all ivory types and weight classes, Figure 5 illustrates the relative contribution of each ivory class to illegal trade. It is evident that the large raw ivory class (the grey shading) has accounted for the greatest quantity of ivory in illicit trade overall during this period. The marked decrease in transactions in the large raw ivory weight class in 2017 has resulted in a major decline in the relative quantity of ivory in illegal trade. Current levels of trade by weight are the lowest they have been since 2010, seven years earlier. Indeed, in 2017, only the medium raw ivory weight class shows an increase in ivory quantity, possibly a reflection of changing trade dynamics. As ever, the most frequent ivory transaction entails worked ivory products weighing less than 10 kg (as illustrated in Figure 3), but when measured as aggregated weight by year, this weight class accounts for a very small proportion of the total weight of ivory in illegal trade (Figure 5).

Figure 6 presents an estimate of the relative weight totals by year with 90% confidence limits represented by the vertical lines. A steadily increasing trend in the large raw ivory class was previously driving the overall Weight Index trend to a peak in 2015. With the large raw ivory weight class now showing major decline for the first time, the overall quantity of ivory in illegal trade reflects a significant drop, rather than the more moderated decrease exhibited by the Transaction Index in Figure 4. Whilst any drop in ivory quantity in illegal trade should be

welcomed news for elephant conservation, it should be recognized that declining average tusk weights (an important variable that is neither tracked by the MIKE nor the ETIS programmes in terms of formal reporting protocols) could actually mask fairly stable or even increasing levels of illegal off-take if average tusk weights remained in a state of continual decline, which is certainly a strong possibility where heavily poached elephant populations experience ongoing attrition.

Figure 6: **Weight Index composite of all ivory types and weight classes with mean (bold dot) and 90% confidence intervals, 2007-2017** *(ETIS, 06 June 2018)*
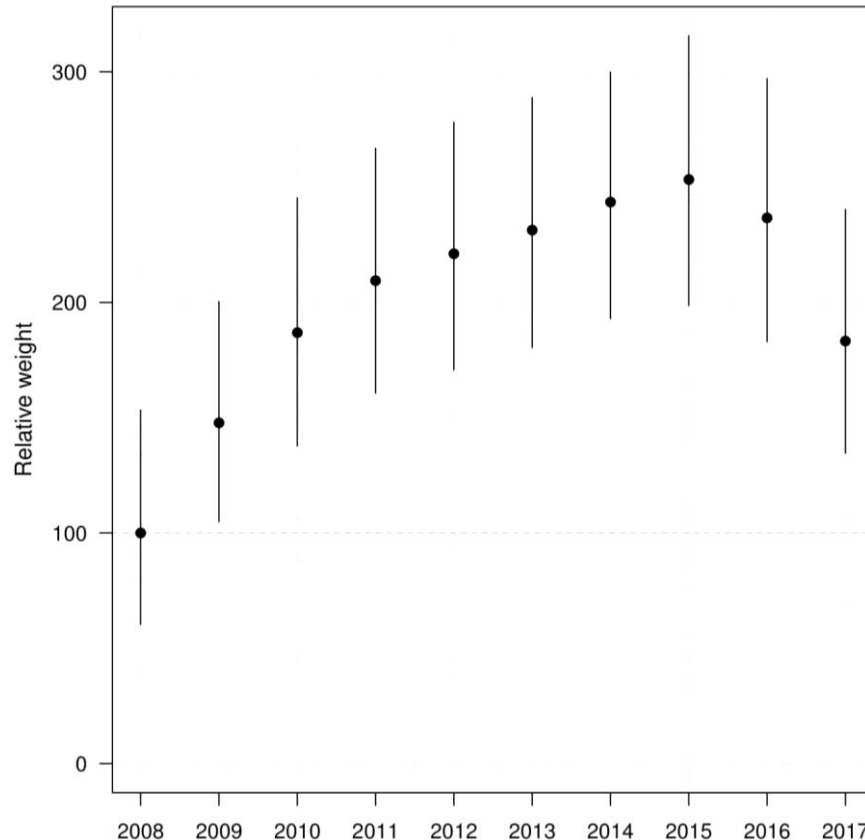
In summary, this analysis suggests a recent reduction in illegal trade quantity, with the estimated weight of ivory in illegal trade now falling below the peak levels previously recorded. As this result coincides with four full years of implementation of the National Ivory Action Plans (NIAP) process, it is plausible that this result reflects a positive impact of this CITES oversight process on overall trade dynamics. However, the extent of the apparent downturn in both the Transaction and Weight Indices is somewhat challenged by the fact that a significant number of 2017 seizures were not considered in the results presented in this report due to late reporting, so some countries' records are likely to be incomplete. The prospect of upward movement in the 2017 results in future iterations of the ETIS trend analysis cannot be discounted and further effort is required if illegal ivory trade is going to be brought down to levels that do not undermine elephant conservation in elephant range States.

PART III: THE CLUSTER ANALYSIS

In each iteration of the ETIS analysis to CITES CoPs, agglomerative hierarchical cluster analysis has been used to identify countries with similar trade characteristics. This helps the Parties identify countries most prominently implicated in the illicit ivory trade so that appropriate interventions can be considered pursuant to the Convention. At CoP17, Resolution Conf. 10.10 was amended to include Annex 3 on *Guidelines to the National Ivory Action Plans Process*, with Step 1 on the "Identification of Parties to participate in the National Ivory Action Plans Process" clearly stating:

> *The foundation for identifying Parties to participate in the National Ivory Action Plans Process (NIAP) process is the ETIS report submitted to each meeting of the Conference of the Parties under this Resolution.*

This cluster analysis is the underlying piece of the ETIS report that assists Parties in that identification and this assessment was undertaken with that in mind.

<u>Forming the clusters</u>:

Figure 7 depicts the cluster analysis for CoP18 in which 66 countries or territories were assessed for the years 2015 through 2017, the most recent years of ETIS data (whilst the analysis for the CoP17 addressed the years 2012-2014, an entirely different set of data).

Figure 7: ***The cluster analysis*** *(ETIS data, 06 June 2018)*
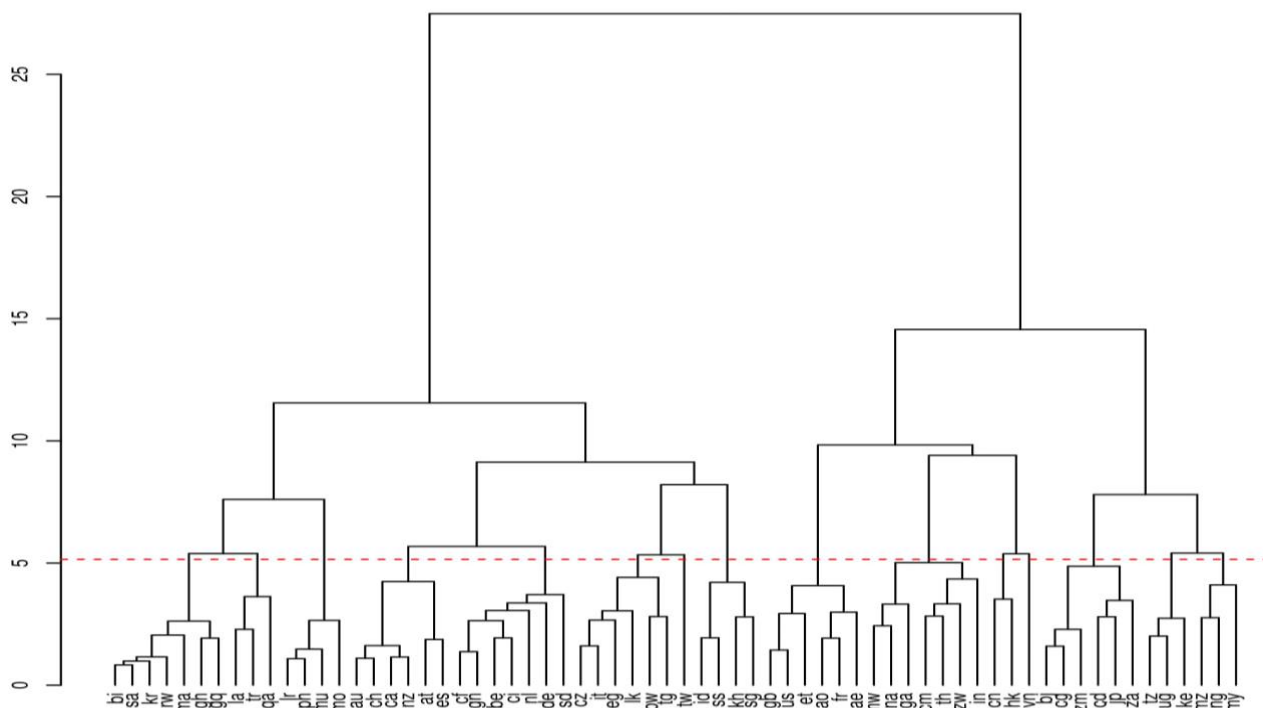
Key: AE-United Arab Emirates; AO-Angola; AT-Austria; AU-Australia; BE-Belgium; BI-Burundi; BJ-Benin; BW-Botswana; CA-Canada; CD-Democratic Republic of the Congo; CF-Central African Republic; CG-Republic of the Congo; CH-Switzerland; CI-Côte d'Ivoire; CM-Cameroon; CN-China; CZ-Czech Republic; DE-Germany; EG-Egypt; ES-Spain; ET-Ethiopia; FR-France; GA-Gabon; GB-United Kingdom of Great Britain and Northern Ireland; GH-Ghana; GN-Guinea; GQ-Equatorial Guinea; HK-Hong Kong SAR; ID-Indonesia; IN-India; IT-Italy; JP-Japan; KE-Kenya; KH-Cambodia; KR-Republic of Korea; LA-Lao People's Democratic Republic; LK-Sri Lanka; LR-Liberia; MA-Morocco; MO-Macau SAR; MU-Mauritius; MW-Malawi; MY-Malaysia; MZ-Mozambique; NA-Namibia; NG-Nigeria; NL-Netherlands; NZ-New Zealand; PH-Philippines; QA-Qatar; RW-Rwanda; SA-Saudi Arabia; SD-Sudan; SG-Singapore; SS-South Sudan; TG-Togo; TH-Thailand; TR-Turkey; TW-Taiwan Province of China; TZ-United Republic of Tanzania; UG-Uganda; US-United States of America; VN-Viet Nam; ZA-South Africa; ZM-Zambia; ZW-Zimbabwe. The dotted line is the point where the clusters are formed.

The data used to form the cluster analysis comprised the three-year totals of the following eleven bias-adjusted variables. The variables assessed were designed to draw out the general characteristics of a country's involvement in illegal ivory trade (i.e. 1 - 5), differentiate law enforcement performance (i.e. 6, 7), and consider total ivory trade flows, especially those representing the greatest trade volumes (i.e. 8, 9, 10, 11):

1 – 5.   the Transaction Index by ivory type in five weight classes for each country – these measures serve to compare the relative role of each country in the trade (raw and worked separately).

6.   the total of 'seizures out' (i.e. the number of seizures in which a country has been implicated as part of the trade chain but did not make the seizure itself although it had an opportunity to do so) that were less than 500 kg (raw and worked combined) – this measure serves to compare law enforcement performance, but only in cases where law enforcement action would have been possible.

7.   the total of 'seizures out' (i.e. the number of seizures in which a country has been implicated as part of the trade chain but did not make the seizure itself although it had an opportunity to do so) that were 500 kg or more (raw and worked combined) – this measure serves to compare law enforcement performance, but only in cases where law enforcement action would have been possible.

8.   the total of 'weights in' (i.e. the weight in kg of seizures made by a country) that were less than 500 kg

(raw and worked combined) – this measure serves to compare the relative quantity of ivory being seized coming into a country in smaller consignments.

9.   the total of 'weights out' (i.e. the weight in kg of seizures in which a country has been implicated as part of the trade chain irrespective of where the seizure took place) that were less than 500 kg (raw and worked combined) – this measure serves to compare relative ivory trade flows in terms of the quantity of ivory coming from, leaving or moving through a country in smaller consignments.

10.   the total of 'weights in' (i.e. the weight in kg of seizures made by a country) that were 500 kg or more (raw and worked combined) – this measure serves to compare the relative quantity of ivory being seized coming into a country in larger consignments.

11.   the total of 'weights out' (i.e. the weight in kg of seizures in which a country has been implicated as part of the trade chain irrespective of where the seizure took place) that were 500 kg or more (raw and worked combined) – this measure serves to compare relative ivory trade flows in terms of the quantity of ivory coming from, leaving or moving through a country in larger consignments.

The result of this assessment is the dendrogram depicted in Figure 7 whereby countries which exhibit similar characteristics are grouped together. The degree of vertical separation between different countries/territories provides a relative measure of dissimilarity based upon the distance traveled along the vertical axis. For example, it can be seen that the two sides of the dendrogram are clearly divided between the 38 countries falling on the left-hand side and the 28 countries on the right-hand side (Figure 7); this separation constitutes a critical division in this cluster analysis, with those clusters on the right having far greater values for every variable assessed, meaning that in relative terms the data show a greater association with illegal ivory trade.

Because the dendrogram shows the hierarchical relationship between countries, a horizontal line can be drawn at any height in the diagram to partition the countries into a number of clusters. A cluster consists of all countries joined by the vertical line that intersects the horizontal line. For example, drawing a line at the 20 mark (a cut-off of 20) gives the two groups described above. A cut-off (or line) at around seven would result in 10 groups forming and a cut-off (or line) close to zero gives 66 different groups – one for each country. Just as individuals in a taxonomic tree can be grouped at different resolutions, for example by species, family, genus or order, so can the countries in this analysis. Changing the resolution, and therefore the cut-off and the number of groups, does not change the structure of the dendrogram or the relationship between countries; it merely provides a different level of detail for describing ivory trade characteristics of the countries in each grouping.

For the purposes of this report 15 groups are described, comprising between one and seven entities in each grouping; the horizontal line drawn just above the 5 degree mark indicates the cut-off for this grouping. While subjective to a degree, this cut-off was chosen after careful inspection of the data because it was felt to give sufficient detail to discriminate between countries taking different roles in the trade. At best, the cluster groups exhibit an unambiguous logic in terms of the underlying attributes, but not all groups have a clear cohesion in terms of all definable characteristics. The description below identifies this where necessary and the dendrogram provides additional information on the nuances of the groupings. Finally, given that the variables in the cluster analysis are based on modelled outputs, a sensitivity analysis was conducted to assess the interconnections and unity of the components that form each cluster. With some exceptions (noted in the text below), a very high degree of cohesiveness was found, especially for those clusters considered for prioritisation later on in this report.

Describing the results:

Table 3 presents aggregated summary statistics of raw data for the 15 groups which are then used to comparatively describe salient characteristics of the various groups. Some of these explanatory variables are based on, or derive from, the original ETIS data provided by the contributors of data to ETIS, prior to bias adjustment. The cluster analysis uses bias-adjusted summaries of these data, but it is reasoned that using summaries of the original data as provided by the Parties is the best way to explain the characteristics of the clusters. In addition, other independent sources of data are used to describe the clusters, such as the corruption measure of Transparency International or the domestic ivory market score, as they implicitly serve to comparatively assess the domestic environment in which illegal ivory trade unfolds at a comparative national scale. For single country clusters, the statistics reflect the data for that particular country only, but for clusters comprised of two or more countries, the statistics represent the mean of all constituent components.

Table 3: *Summary explanatory variables to describe the 13 cluster analysis groups based on ETIS seizure data before bias adjustment and other sources of data, 2015-2017. Clusters shaded grey are in the major right-hand side cluster grouping (indicating higher levels of illicit trade).*

Group	Countries or territories	Measure of Frequency — Mean no. of seizures[1]	Measure of Scale — Mean weight (kg)[2]	Measures of Law Enforcement Effort Efficiency — Mean CPI[3]	Mean LE Ratio[4]	Measure of Organised Crime — Proportion of large-scale ivory seizures to mean weight[5]	Measure of Domestic Ivory Trade — Mean market score[6]
1	MY, MZ, NG	112	16,849	34.44	0.21	0.75	4.67
2	KE, TZ, UG	194	11,836	28.11	0.90	0.59	1.33
3	BJ, CD, CG, JP, ZA, ZM	88	3,589	39.17	0.61	0.45	4.00
4	VN	153	32,054	33.00	0.46	0.69	6.00
5	CN, HK	611	13,919	57.83	0.90	0.57	6.50
6	CM, GA, IN, MW, NA, TH, ZW	93	3,451	34.33	0.77	0.30	3.43
7	AE, AO, ET, FR, GB, US	275	2,490	57.72	0.69	0.00	4.17
8	ID, KH, SG, SS	16	5,957	38.67	0.41	0.76	3.25
9	TW	9	963	62.00	0.88	0.89	3.00
10	BW, CZ, EG, IT, LK, TG	21	646	44.56	0.82	0.00	2.83
11	BE, CF, CI, DE, GN, NL, SD	42	727	48.14	0.60	0.34	4.00
12	AT, AU, CA, CH, ES, NZ	25	318	78.22	0.70	0.00	3.00
13	LR, MO, MU, PH	1	6	30.50	0.00	0.00	2.50
14	LA, QA, TR	25	3,486	44.67	0.11	0.59	4.00
15	BI, GH, GQ, KR, MA, RW, SA	11	241	37.81	0.00	0.00	2.86

1. *Frequency* is measured by the 'mean number' of reported seizures in the period 2015-2017 (i.e. the total number of all seizures which were made by, or have implicated, each country/territory in the group divided by the number of entities in the cluster); high numbers indicate greater frequency; low numbers indicate lesser frequency.
2. *Scale* is measured by the 'mean estimated weight' of reported seizures in the period 2015-2017 (i.e. the total estimated weight of ivory represented by all seizures which were made by, or have implicated, each country/territory in the group divided by the number of entities in the cluster); high numbers indicate greater weights of ivory; low numbers indicate lesser weights of ivory.
3. *Law enforcement effort, effectiveness, and rates of reporting* is measured by the mean Corruption Perception Index of Transparency International (i.e. the total *CPI* score for each country in the period 2015-2017 divided by the number of countries/territories in the cluster divided by the number of years); scores range from 1 (weakest governance performance) to 100 (strongest governance performance).
4. *Law enforcement effort, effectiveness and rates of reporting* is measured by the 'mean LE Ratio' in the period 2015-2017 (i.e. the total number of in-country seizures divided by the total number of seizures which were made by, or have implicated, each country/territory in the group divided by the number of entities in the cluster); ratios range from 0.00 (no law enforcement effort) to 1.00 (best law enforcement effort).
5. *Involvement of organised crime* is measured by taking the proportion of the mean weight in reported seizures that represent large-scale seizures (i.e. those seizures which are equal to or greater than 500 kg of ivory (RIE) weight in which a particular country/territory either made or was implicated in) in the period 2015-2017; high values suggest the presence of organised crime in the movement of ivory; low values suggest the absence of organised crime in the movement of ivory.
6. *Domestic ivory trade* is measured by the 'mean market score'; scores range from 1 (no domestic ivory market) to 9 (very large domestic ivory market).

It should be noted that in this report seizures of 500 kg or more have been used as the threshold indicator for assessing ivory movements that are assumed to be linked to organised criminal activity (previously 800 kg was used but 500 kg conforms with the threshold first agreed by the Parties in Decision 16.83 and is now part of Resolution Conf. 10.10 (Rev. CoP17)). For assessing corruption, the Corruption Perception Index of Transparency International that was previously used in earlier iterations of the ETIS analyses is used to describe comparative national-level assessments of the general governance environment. Finally, the numerical order of the cluster groups is not a ranking of their relative importance, but simply indicates their order moving from right to left across the dendrogram.

The following can be said about each group in this cluster analysis:

Group 1 – **Malaysia** *(MY)*, **Mozambique** *(MZ)*, **Nigeria** *(NG)*: Malaysia has previously been identified as playing a major transit role in the illegal ivory trade for containerized consignments, whilst Mozambique and Nigeria function ivory entrepôt or exit points within Southern and West Africa, respectively. These three countries fall together in a cluster for the first time, collectively exhibiting the fifth highest mean number of seizures made in this time period, but also having the second largest weight value, indicating that frequency and scale in the illegal ivory trade are important factors. Nearly 60% of the total weight seized related to seizures of 500 kg or more, suggesting that the bulk of the illicit ivory traffic moving through and from these countries represents higher-level organised criminal activity. In terms of making seizures, the LE Ratio (21%) is the fourth poorest in the cluster analysis, indicating that only one in five seizures in which these countries are part of the trade chain is being made by one of these countries. The CPI value for governance is also the fourth lowest which means that corruption could potentially be a serious issue inhibiting performance against illegal ivory trade; in this regard, Malaysia has better CPI values than either Mozambique or Nigeria. Finally, the domestic ivory market score is the third largest owing to the market situation in Mozambique (Huang, 2013), and even more so in Nigeria where the Lekki market continues to offer relatively large quantities of ivory (Nkoke, in prep.). On the other hand, it is known that domestic ivory trade in Malaysia is virtually negligible (Martin & Stiles, 2002).

Group 2 – **Kenya** *(KE)*, **United Republic of Tanzania** *(TZ)*, **Uganda** *(UG):* These three East African elephant range States, whose illicit ivory trades have been interlinked for the last decade as sources and exporters of ivory or transit countries for consignments put together elsewhere, now all fall together in a cluster for the first time (although Kenya and Tanzania were paired in the CoP17 analysis). In terms of frequency, this group has the third largest number of seizures, but all of these countries are regularly making and diligently reporting seizures to ETIS. Collectively, these countries exhibit the fourth greatest value for ivory weight in this analysis, but compared to the CoP17 analysis this actually represents a major decline. Further, with a collective LE Ratio of 90%, some nine out of ten seizures in which this group is involved are being made by the group itself, which also is a very good result. About 60% of the trade by weight, however, still reflects large-scale ivory movements which are the hallmark of transnational organised crime and corruption could be a dogged factor as this group has the lowest CPI score in this analysis. On the other hand, the domestic ivory market score is the best of any cluster in this analysis, indicating that local commerce in ivory has been largely eradicated, which is another positive development.

Group 3 – **Benin** *(BJ)*, **Democratic Republic of the Congo** *(CD)*, **Congo** *(CG)*, **Japan** *(JP)*, **South Africa** *(ZA)*, **Zambia** *(ZM):* This cluster comprises five African elephant range States together with Japan, an ivory consuming country in Asia. This group represents mid-range variables in terms of the mean number of seizures and the mean weight value. The LE Ratio collectively indicates adequate performance with some 60% of the total number of seizures being made by the cluster group itself, but Japan and the Democratic Republic of the Congo individually exhibit poor performance well below the group's average. Further, just less than half of the total weight value represents large-scale movements of ivory, suggesting a considerable level of criminal activity operating in many of these countries. In terms of corruption, the CPI score is a mid-range point amongst all cluster groups, but the score itself is below the average, however, Japan's individual score is nearly twice the group average. The domestic market score is the fifth highest in this analysis, mostly owing to the more active markets in Japan and the Democratic Republic of the Congo.

Group 4 – **Viet Nam** *(VN):* For the first time, Viet Nam falls alone in a single country cluster. Long recognized as a major Asian destination and transit conduit for large quantities of ivory (see for example ETIS analyses for CoP16 and CoP17), the illegal ivory trade situation in this analysis is comparatively more problematic. In terms of the mean number of seizures, Viet Nam is in the fourth position, however, with respect to the quantity of ivory in trade it holds the number one position with a value that is double the second place position and nearly three times greater than the third place position, a rather remarkable result. Nearly 70% of the weight value comprises large-scale ivory movements signalling the presence of organised criminal syndicates in the trade. At 46%, the LE Ratio is just fair, but the measurement for corruption using CPI scores is the second poorest in this analysis. Viet Nam also has the second highest domestic ivory market score in this analysis.

*Group 5 – **China** (CN), **Hong Kong SAR** (HK):* For the first time, China is not in a single country cluster alone but is paired with Hong Kong Special Administrative Region (SAR). Indeed, this pairing is not surprising as the ivory trades of China and Hong Kong SAR have long been interlinked. In terms of the mean number of seizures, this group is paramount with the highest value in this analysis. The measure for scale is also very significant in the third highest position, indicating a trade characterised by a large quantity of ivory. More than half of this weight variable represents large-scale movements of ivory, suggesting the involvement of transnational criminal syndicates. A very positive attribute of this cluster is the exceptionally high LE Ratio which stands at 90%, indicating their very strong policing performance. Equally, the CPI variable as a measure of corruption collectively is the third best in this analysis. The domestic ivory market score is the highest value in the analysis, indicating that ivory trading was occurring throughout the period examined, though it is worth noting that, except under rare conditional circumstances, China's legal domestic market was closed on the last day of 2017.

*Group 6 – **Cameroon** (CM), **Gabon** (GA), **India** (IN), **Malawi** (MW), **Namibia** (NA), **Thailand** (TH), **Zimbabwe** (ZW):* All seven countries in this group are either African or Asian elephant range States. Collectively, this cluster exhibits mid-range variables in terms of the mean number of seizures and the mean weight value very much akin to the values seen for Group 3, but with a superior LE Ratio of 77%; this means that on average, three-quarters of the seizures in which this cluster is identified in the trade chain are seized by the countries in the group. Just less than a third of these seizures involve large-scale movements of ivory, so some, though not a notable degree of, organised criminal activity is apparent. Corruption is likely to be a serious issue in some countries in this group as the cluster holds the third poorest CPI score, with Namibia offering the best score and Zimbabwe the worst. In terms of the domestic ivory market score, the cluster as a whole falls in the middle range, however, as individual countries, Zimbabwe's score is more than double the aggregated mean.

*Group 7 – **United Arab Emirates** (AE), **Angola** (AO), **Ethiopia** (ET), **France** (FR), **United Kingdom of Great Britain and Northern Ireland** (GB), **United States of America** (US):* This cluster represents an eclectic grouping of two African elephant range States, a major Middle East transit hub connecting Africa with Asia, and two European and one North American destination countries or sources of mostly old 'legacy' ivory. In terms of the frequency measure, this cluster is collectively making lots of seizures, holding the second highest value in this analysis. The very high frequency, however, translates into a mid-range weight value and none of the weight value derives from large-scale movements of ivory, suggesting no evidence of organised crime as it relates to moving large consignments of ivory. Indeed, the complete absence of reported seizures over 500 kg for any of these countries is the key factor that results in this group coming together, followed by a relatively high aggregated weight value for seizures less than 500 kg. At 69%, the LE Ratio indicates that more than two-thirds of the total number of seizures that these countries are implicated in are being seized by these countries and not elsewhere. That good performance is generally supported by the group collectively having the fourth best CPI score, but there is considerable variability when individual country scores are assessed independently, with, for example, Angola and Ethiopia facing the greatest challenges on the corruption front. The domestic market score for this group is in the mid-range, with Angola, and the ivory trade legacy markets of the United Kingdom and the United States having the highest national scores within the group, while Ethiopia's and the United Arab Emirates' scores indicate the virtual absence of domestic ivory trade in their countries.

*Group 8 – **Indonesia** (ID), **Cambodia** (KH), **Singapore** (SG), **South Sudan** (SS):* This grouping comprises three Southeast Asian countries, two of which are Asian elephant range States, and one African elephant range State in Africa's newest country, but all function as transit countries to some extent, although Indonesia and Cambodia might also be end-use destinations in their own right. Overall, the group ranks low in terms of the frequency measure as seizures are rarely made, according to the ETIS data. However, this cluster collectively renders the fifth highest weight value, indicating that the consignments in which these countries make or are implicated in are generally large. Indeed, this group has the second highest score (76%) in terms of the proportion of the weight value that relates to large-scale movements of ivory that are likely to represent organised criminal activity. At 41%, the LE Ratio indicates that less than half of the seizure cases in which these countries are involved with are interdicted by one of these nations. The average CPI corruption score is not particularly good suggesting that corruption could be a challenge in some countries, but certainly not Singapore which has the third best CPI score of any country assessed at this time. The group's domestic ivory market score is collectively in the lower range, but Cambodia is the outlier on this measure with a domestic ivory market score well above the average.

*Group 9 – **Taiwan Province of China** (TW):* Taiwan Province of China, surprisingly falls in its own unique cluster for the first time. The frequency measure is the second lowest in this analysis, indicating very little involvement in illicit ivory trade in terms of either making seizures or otherwise being implicated in them. However, the measure indicating scale is more robust owing to the fact that Taiwan Province of China, was only implicated in a single large-scale movement of ivory in 2015 and then virtually nothing since. Because of this, this cluster has the highest proportion of the weight value (89%) representing large-scale ivory movements associated with organised crime, but again it is based on a single data seizure case. Taiwan Province of China, demonstrates a

very high LE Ratio (88%) and the second best CPI score in this analysis. The domestic market score is also low, implying very little activity locally.

*Group 10 – **Botswana (BW), Czech Republic (CZ), Egypt (EG), Italy (IT), Sri Lanka (LK), Togo (TG)***: Another diverse group of two African elephant and one Asian elephant range States, a North African nation that functions as an end-use market, and two European countries. The frequency and scale measures point to a rather small number of mostly medium weight seizures, with no involvement in the large-scale ivory movements which are the hallmark of organised crime. At 82%, four out of five seizures in which these countries are implicated are made by the nations in this group themselves, thus overall the high LE Ratio shows generally good law enforcement. Overall, the CPI score falls in the middle range, but there is considerable variability between the countries in this cluster, with Togo and Egypt at the challenging end of the spectrum in terms of corruption and Botswana and the Czech Republic offering the best scores.

*Group 11 – **Belgium (BE), Central African Republic (CF), Côte d'Ivoire (CI), Germany (DE), Guinea (GN), Netherlands (NL), Sudan (SD):*** This group is an eclectic mix of four African elephant range States (although the status of the Sudan is unclear since South Sudan, with most of previous Sudan's extant elephant range, gained independence), and three European nations. Overall, the group falls right in the middle in terms of the mean number of seizures, but, in fact, the three European nations account for over 90% of the seizures made by these countries; the Sudan did not report any seizures to ETIS and the Central African Republic reported only one. Equally, the mean weight value is at the lower end of the scale measure, but the three European countries again account for over 90% of the weight, with about one-third representing large-scale ivory seizures which probably link to organised crime. The LE Ratio (60%) is high, again owing to the performance of Germany and the Netherlands. The CPI score falls at the upper end of the middle values, but the three European countries individually exhibit scores within the ten best countries, whilst the Sudan, Central African Republic and Guinea are greatly challenged by corruption. The domestic ivory market score is tied with two other clusters in the fifth position with Germany, Côte d'Ivoire and the Sudan having national market scores above the group's average.

*Group 12 – **Austria (AT), Australia (AU), Canada (CA), Switzerland (CH), Spain (ES), New Zealand (NZ):*** This cluster of relatively wealthy nations in Europe, Oceania and North America generally exhibits good values across the entire spectrum and are not generally involved in significant illegal ivory trade in the period examined. The measure for frequency falls at the lower end of the scale, whilst the weight value is the third lowest in this analysis, indicating that most seizures involve worked ivory products in trade as personal effects. None of this trade links with large-scale movements of ivory that could be linked with higher-level organised crime and the high LE Ratio means that 70% of the transactions in which these countries are involved are made by one of countries in the group. The group also exhibits the highest CPI score indicating that corruption is not really an issue. Finally, the domestic ivory market score is in the fifth lowest position indicating some presence of mostly 'background' antique or pre-Convention ivory.

*Group 13 – **Liberia (LR), Macau SAR (MO), Mauritius (MU), Philippines (PH):*** This cluster comprises one African elephant range State, an Indian Ocean island nation, a Chinese Special Administrative Region and an Asian country that has a small ivory industry producing religious artefacts. None of these entities reported any ivory seizures to ETIS from 2015-2017 and collectively this group was only implicated in a total of five other seizures, totalling 24 kg. Thus, both the mean number of seizures and their weight as measures for frequency and scale, respectively, are the lowest of any cluster in this analysis. Equally none of the trade captured in ETIS represents large-scale ivory movements, whilst the LE Ratio is zero as none of these countries reportedly made any seizures. The mean CPI is a mid-range score. The domestic ivory market score is also the second lowest in this analysis.

*Group 14 – **Lao People's Democratic Republic (LA), Qatar (QA), Turkey (TR):*** An Asian elephant range State, Lao PDR is an important transit and destination country that shares a border with China, whilst Qatar and Turkey function as significant transit nations owing to the market growth of their national airlines in connecting Africa with a range of Asian destinations. Whilst the measure for frequency falls at the lower end of the scale, the weight value is in the upper mid-range, suggesting that most seizures involve commercial levels of trade. Indeed, 59% of the weight value is related to large-scale ivory movements that were most likely orchestrated by transnational criminal syndicates and, with a LE Ratio of just 11%, barely one in ten seizures in which these countries are implicated were made by these nations themselves. Although the overall CPI value falls in the middle range, the national score for Lao PDR is much lower and suggests that corruption is an important challenge. This is worrying as the mid-range domestic ivory market score largely reflects the growing ivory market in Lao PDR.

*Group 15 – **Burundi (BI), Ghana (GH), Equatorial Guinea (GQ), Republic of Korea (KR), Morocco (MA), Rwanda (RW), Saudi Arabia (SA):*** This catch-all group includes three African elephant range States, another African country with no elephants in recent history but still functioned as an important ivory trade entrepôt in the past, and three countries from North Africa, the Middle East and Asia. Like Group 13, none of these countries

have reported any ivory seizures to ETIS during this period, but they have collectively been implicated in 73 seizures made elsewhere, with two-thirds originating in Equatorial Guinea and Ghana. However, the weight value of this trade has been relatively low placing this cluster in the second lowest position in terms of the measure for scale. None of this trade has involved large-scale ivory consignments, suggesting an absence of organised crime in the trade. However, the LE Ratio stands at zero because no in-country seizures were made, nor is the CPI score particularly good, both factors that could potentially compromise effective law enforcement. The low domestic ivory market score suggests that none of these countries have significant local trade in ivory.

Assessing the results of the cluster analysis:

The National Ivory Action Plans (NIAPs) process is a practical tool under the direction of the Standing Committee to address illegal ivory trade by strengthening ivory trade controls, supporting law enforcement and improving awareness by identifying countries in three categories of concern:

- Category A Parties consist of Parties most affected by the illegal trade in ivory;

- Category B Parties consist of Parties markedly affected by the illegal trade in ivory; and

- Category C Parties consist of Parties affected by the illegal trade in ivory.

As detailed in Annex 3 of Resolution Conf. 10.10 (Rev. CoP17), each country-specific action plan outlines a series of urgent actions or activities that need to be implemented against specified time frames and milestones for implementation. Once completed, the CITES Standing Committee agree to allow countries to exit the oversight process. The ETIS analysis to each CITES CoP is the mechanism for identifying countries that might be included in the NIAP process based on analysis of contemporary patterns in ivory seizure data, but the CITES Parties, through the Standing Committee on recommendation from the CITES Secretariat, hold all decision-making powers.

'Category A countries'

Looking at Figure 7, the explanatory statistics presented in Table 3, and the descriptions of the clusters, Groups 1 and 4 can be considered Category A countries. **Malaysia**, **Mozambique, Nigeria** and **Viet Nam** collectively account for over half (51%) of the seized and reported estimated ivory weight in this time period, of which nearly three-quarters represents large-scale seizure events that point to higher-level criminal activity (Table 3). The generally low LE Ratio and CPI scores are indicative of persistent challenges on the law enforcement front, and most of these countries -- Malaysia being the sole exception -- have illegal domestic ivory markets of concern. For similar reasons, all of these countries have previously been identified as first or second-tier priorities in the ETIS analyses to CoP16 and CoP17, and all are currently part of the NIAP process under the direction of the CITES Standing Committee.

Despite addressing a series of issues in its NIAP, **Viet Nam**'s status in the current analysis has worsened considerably. It is of concern that, in terms of scale, the estimated weight value for illegal ivory trade that involves Viet Nam has increased by one-third compared to what was found in the period 2012-2014 for the CoP17 report; this substantial increase is particularly noteworthy as it simultaneously occurs when the total estimated weight of ivory in illegal trade in the period 2015-2017 has actually shown a marked decline of around 20% over the previous three-year period. Based on the data available for this report, Viet Nam now functions as the leading destination for illicit ivory, surpassing China (including Hong Kong SAR), which previously accounted for the majority of the weight value in every previous ETIS analysis since CoP12 in 2004. Ivory processing continues to be documented in Viet Nam and a range of ivory products move through the country's illegal retail outlets and internet/social media trading channels, servicing both domestic clients as well as large numbers of cross-border buyers from China (Nyugen *et al.*, 2018; WJC & IISD, 2016; Vigne & Martin, 2016). Vietnamese dealers also engage in raw ivory re-exports into the Chinese mainland, offering a 20% mark-up in price if buyers wish for delivery within China rather than risk crossing the border with the contraband themselves (Xiao, 2018; WJC & IISD, 2016). Recent studies also have documented ties with emerging ivory manufacturers and retail outlets in Lao PDR and Cambodia (EIA, 2018a). Finally, law enforcement data strongly indicates that Vietnamese syndicates are operating from hubs in Africa, especially in Angola, Congo, Mozambique South Africa and Togo, to move ivory from Africa to Asia, often directing shipments to Malaysia, Lao PDR or Cambodia before moving the ivory on to Viet Nam (EIA, 2018a).

Malaysia continues to be considered a Category A country for its role as an important transit country in the illegal trade but, in the period under examination, the country has also become an ivory entrepôt in the region consolidating ivory for eventual export. Indeed, investigations have shown that the largest ivory seizure (7,030 kg) in this period made in Hong Kong SAR in July 2017, not only was exported from Malaysia, but the container

had actually been packed within Malaysian territory prior to export to Hong Kong SAR (CITES, 2018a). Forensic examination of the ivory revealed most of it had come from Central Africa, including Gabon, Congo, Cameroon and the Central African Republic (McEwing *et al.*, 2018), so it appears that exceptionally large quantities of ivory from Central Africa had been smuggled into Malaysia and stockpiled prior to export to Hong Kong SAR. It also appears that another large-scale seizure made in Viet Nam in 2017 of 1,400 kg of ivory also originated in Malaysia and did not involve containerised transit trade (CITES, 2018a). Thus, the illegal ivory trade involving Malaysia is no longer restricted to shipments in transit, but also involves the country as an important consolidation and distribution point (UNODC, 2017). Malaysian nationals have also been identified in Africa and Asia-based ivory smuggling operations on numerous occasions, often in collaboration with Vietnamese or Chinese operatives in the illegal ivory trade (EIA, 2018a). For these reasons, Malaysia remains a Category A country.

Two African countries, **Mozambique** and **Nigeria**, now move into Category A for the first time, as important sources and exporters of illegal ivory. The estimated weight value for illegal ivory trade coming from these two countries has increased by some 40% in this period over what was found in the previous three years, 2012-2014, reported to CoP17. Partially in response to Kenya, United Republic of Tanzania and Uganda collectively moving to strengthen ivory trade law enforcement within their borders, there is evidence that transnational criminal syndicates previously operating in those countries have shifted their operations to Mozambique and Nigeria (EIA, 2017). With very few elephants of its own, Nigeria functions as an entrepôt from illegal ivory from West, Central and even East Africa (Milliken *et al.*, 2016; Wasser, 2015), whilst Mozambique has seen many of its own main elephant population severely impacted by poaching for illegal ivory trade (Thouless *et al.*, 2016). The presence of ivory in Mozambique's physical markets has contracted, but ready under-the-counter availability continues if specifically requested (Huang, 2013; McKenzie *et al.*, 2018)), whilst Nigeria also has a continuing highly visible domestic ivory market, especially in Lagos (Nkoke, in prep.). Production of ivory products for export to Asia is particularly pronounced in Nigeria which ranked second by numbers of seizures and third by weight of the products seized in an assessment of commercial exports of worked ivory products from Africa to Asia (Table 4). Since CoP17, serious ivory theft from official government stockpiles has occurred in Mozambique (Frey, 2018), some of which was subsequently seized in a large-scale seizure in Cambodia (Frey, 2017a, b). These two countries become the two most prominent African ivory trade bases in this analysis.

'Category B countries'

It is considered that Groups 2 and 5 constitute Category B countries in this analysis. Accordingly, **Kenya, United Republic of Tanzania, Uganda, China** and **Hong Kong SAR** fall in these clusters and together account for another 27% of the estimated ivory weight between 2015-2017, with 58% representing transactions involving large-scale movements of ivory that are believed to be put together by organised criminal syndicates (Table 3). Whilst the scale of involvement in illegal ivory trade is significant, it is encouraging to note that these two groups exhibit the highest LE Ratio values, indicating effective law enforcement in the face of persistent major illegal trade challenges during the period under examination. This characteristic basically serves to distinguish this group from the clusters designated in Category A. That said, the three African nations do have the lowest CPI value in this analysis (Table 3), so corruption could be a negative factor to guard against, whilst the two Asian countries hold the highest domestic ivory market score indicating that local ivory demand persists as an important driving force. All of these nations have participated in the NIAP process since CoP16, and all have marked considerable progress in addressing a variety of concerns related to wildlife trafficking. Indeed, China formally closed its domestic ivory market on 31 December 2017, and Hong Kong SAR has taken administrative steps to phase out its domestic ivory trade by the end of 2021. At the 70th meeting of the CITES Standing Committee (October 2018), the Committee agreed that China, Kenya, Uganda and the United Republic of Tanzania had 'substantially achieved' their NIAPs and could exit the process, whilst Hong Kong SAR was to remain in the process and was asked to submit a comprehensive report to the 73rd Standing Committee on any further measures taken to implement its NIAP (CITES, 2018b). On the basis of this analysis, and in particular their association with continuing high volume illegal ivory trade flows, China, Kenya, Uganda and the United Republic of Tanzania are now regarded as Category B priorities, whilst Hong Kong SAR is considered to join them moving from Category A to Category B.

Next to Viet Nam, **China** and **Hong Kong SAR** together still rank as the second most prominent destinations for illegal ivory in the period under examination, although their collective proportion of estimated trade quantities is now less than half of what it was in the ETIS report to CoP17. This is clearly a positive development and could partially be related to recent policy changes that have begun to constrict trade in local ivory markets. Commencing in early 2017, formerly-accredited legal ivory selling shops in China began a transition to comply with a trade ban and by the end of the year had either all closed or moved into non-ivory product sales, whilst the presence of illegal ivory products in other physical markets has contracted significantly in the largest metropolises, but trade in China's less policed second and third-tier cities remains a significant problem (Zhao *et al.*, 2017; Xiao, 2018). Internet trading of ivory products has also notably reduced in the face of concerted actions, but less observable levels of illegal trade through restricted social media channels still presents a major challenge to law enforcers

and shows far less signs of decline (Zhao *et al.*, 2017; Xiao, 2018). Rapidly growing cross-border markets in neighbouring Viet Nam, Laos and Myanmar continue to present challenges (Vigne & Martin, 2016, 2017, 2018; Nguyen *et al.*, 2018; WJC & ISSD, 2016). Hong Kong SAR has also moved to close its domestic ivory market but falls out of sync with mainland China as delayed implementation will allow commercial trade in ivory to continue until the end of 2021 in the territory. Various other studies continue to document the presence of Chinese-led criminal syndicates operating from bases in Africa to move major shipments of raw ivory illegally to Asia (EIA, 2017; EIA, 2018a), and evidence of Chinese-owned ivory processing operations continue to emerge in many parts of Africa (Nkoke *et al.*, 2017); ETIS data indicate that seizures of worked ivory products leaving Africa for Asian destination has increased significantly and that nearly 60% of the worked ivory products being exported from Africa-based ivory processing operations have been directed to China or Hong Kong SAR as the country or territory of destination (CITES, 2017). These latter seizures are another aspect of organised criminal activity with movement out of Africa involving couriers who typically are Chinese nationals with ivory items concealed on their bodies using purposely designed clothing (CITES, 2017).

With the passage of time, the past distinction between China and Hong Kong SAR as separate markets has faded and there actually seems little justification for continuing to analyse the two data sets separately 21 years on since the former British colony reverted back to China. Although ivory trade is still ostensibly governed by separate policy prescriptions in the mainland and the territory, as a collective ivory market there is little to suggest that the two entities function separately. Although legal movement of any ivory between the China and Hong Kong SAR is officially subject to the CITES permitting system and violations should be seized, there is little evidence that this is happening as ETIS has only three seizure cases made in China for illicit ivory coming from Hong Kong SAR in the period 2015-2017. In contrast, in the periods 2012-2014 and 2009-2011, there were 59 and 383 such seizure cases, respectively, made in China of ivory products coming from Hong Kong SAR. Recent trade studies in Hong Kong SAR, however, continue to report that mainland Chinese buyers are the principal consumers for Hong Kong SAR's ongoing ivory trade (Lau *et al.*, 2017; Martin & Vigne, 2015). Reporting of seizures involving cross-border regions with China is also very sparse. For example, it has been reported that 80% and 90% of the ivory products sold in the rapidly growing ivory markets of Laos and Myanmar, respectively, involve consumers from mainland China (Vigne & Martin, 2017, 2018). However, China's seizure data for 2016 and 2017 includes only two ivory seizures coming from Viet Nam and nothing whatsoever for Laos, Myanmar or Cambodia, another country with a growing ivory market predominately catering to Chinese consumers (Nguyen and Frechette, 2017). Further, in recent years, the data submitted to ETIS by the Chinese CITES Management Authority does not seem to include any seizures which have been made beyond the purview of the country's Customs Authority at ports of entry. In fact, open source media reports detail many seizures being made by provincial Forest Public Security Bureaus and various police agencies in the interior of the country, but these cases are not part of the data reported to ETIS. Thus, any under-reporting would be a factor of concern with respect to the China dataset in ETIS analyses.

In the period 2009-2014, East Africa was the primary exit point for illegal ivory from Africa with the trades of **Kenya**, **United Republic of Tanzania** and **Uganda** all heavily interlinked, especially large consignments moving through the seaports of Mombasa, Dar es Salaam and Zanzibar. Overall ivory trade flows from, through and into these three countries have collectively dropped by some 60% compared to the period 2012-2014, but each nation still individually ranks in the top ten in terms of the scale of ivory trade in this analysis. Under the NIAP process, all three nations have significantly improved legislation and law enforcement performance, resulting in more arrests, prosecutions and higher penalties to address ivory trafficking, but culmination in successful outcomes has been compromised owing to careless, even criminal, actions taken by the police, prosecutors and the judiciary during investigations and court deliberations (Karani, 2018a, 2018b; Morris, 2018). Thus, well-financed criminal syndicates have continued to use these countries for illegal trade purposes. In Kenya, for example, the high-profile conviction of an INTERPOL Red List suspect, Feisal Mohamed Ali, in a 2014 seizure of 2,152 kg of ivory was subsequently overturned by the High Court two years after his conviction and he was released from jail in August 2018; the judicial decision cited a long list of investigative and judicial transgressions (Chepkwony, 2018). One observer stated that the case "*reveals critical challenges in the criminal justice system that undermine the fragile progress in strengthening Kenya's response to wildlife crime*" (Karani, 2018a). Three out of eight (37.5%) large-scale seizures (>800 kg) that occurred prior to November 2016 in the United Republic of Tanzania are known to have been successfully prosecuted through the Courts resulting in the conviction of suspects, but progress in expediting the other five cases appears very slow (TRAFFIC unpublished data). These examples highlight how issues and developments beyond the purview of conservation authorities can impede sustained progress in curtailing wildlife trafficking.

'Category C countries'

All other countries and territories included in the cluster analysis are to some extent "affected by the illegal trade in ivory", but among them are a number that exhibit particular characteristics which merit careful tracking going forward. These include the **Democratic Republic of the Congo**, **Congo** and **South Africa** in Group 3,

Cameroon, *Gabon* and *Zimbabwe* in Group 6, *Angola*, *United Arab Emirates* and *Ethiopia* in Group 7, *Cambodia* and *Singapore* in Group 8, *Lao People's Democratic Republic* and *Turkey* in Group 14, and *Burundi* in Group 15. These fourteen nations all play roles in the illicit ivory trade that potentially could become more problematic if conditions change in the near future.

Within Africa, the four Central African nations of *Cameroon*, the Republic of *Congo*, the *Democratic Republic of the Congo* and *Gabon* remain of concern owing to the fact that they continue to be major sources of ivory in a subregion where elephant populations have experienced major declines (Maisel *et al.*, 2013), but still exhibits the highest percentage of illegally killed elephants (PIKE) values for 2017, indicating a very serious poaching threat still remains (CITES, 2018c). Although their identification as countries of origin in many illegal ivory transactions is often lost in terms of the known trade route information, all of these countries have relatively high weight values in the period 2015-2017. However, because forensic examination of seized consignments of ivory that are 500 kg or more has not regularly occurred during this period (see Table 2), the scale of the ivory trade attributed to these countries is most likely considerably under-represented in this report. It is believed that the greatest proportion of the ivory illegally shipped from Nigeria and Benin in the current assessment originates from Central Africa, as was also the case for ivory exported from Nigeria and Togo in the CoP17 analysis (Wasser *et al.*, 2015). Further the largest seizure in this period, Hong Kong SAR's interdiction of 7,013 kg. of ivory from Malaysia, was found to comprise ivory from the Central African region focused on these countries; however, estimated weight values were not assigned to individual countries in this report because the cross-border movements of affected elephant populations confounded specific assignment of ivory quantities at the national level (McEwing *et al.*, 2018). Cameroon often plays a transit country role in ivory moving from Central Africa to West African ports of export and for the ivory carving industry in Nigeria, and in the recent past the port of Douala was an exit point for large consignments of ivory. Recent studies indicate that the Democratic Republic of the Congo remains the only country in this group that still has a significant domestic ivory market (Nkoke *et al.*, 2017), and commercial scale exports of worked ivory products to Asia continue to occur (CITES, 2017; EIA, 2018b). There have been reports of government steps to close domestic ivory trade in Kinshasa, the country's capital city, but the current status of the local market remains to be examined. All four of these countries have been part of the NIAP process since the 65th meeting of the Standing Committee and remain engaged implementing their action plans.

Moving to Southern Africa, considerable quantities of ivory have entered international trade from *South Africa*, including one large-scale shipment of 2,478 kg to Viet Nam in 2017, the fifth largest seizure in this time period. Although PIKE levels have increased for South Africa's largest elephant population in Kruger National Park (CITES, 2018c), most of the ivory in the Vietnamese seizure from South Africa is believed to originate from outside of the country. Other seizure records show that small quantities of raw ivory from Botswana, Malawi, Mozambique and Zimbabwe are entering South Africa on occasion, so there is some concern that consolidation of ivory from neighbouring countries for future illegal export is a factor. Clandestine ivory processing for export is also occurring in South Africa, with some 116 worked ivory seizures reported in this period representing 364 kg of ivory, including seven cases where between 125 and 852 worked ivory products were found. As a regional air transport hub, direct flight connections between Johannesburg's O.R. Tambo International Airport and various Asian destinations are possible, and even more indirect connections occur by transiting the United Arab Emirates (Dubai and Abu Dhabi), Qatar (Doha) and Turkey (Istanbul) for onward travel to Asia. The synergistic involvement of transnational criminal groups that shift between illegally trafficking in abalone, rhino horn and elephant ivory remains a well-established law enforcement challenge in South Africa (Rademeyer, 2016 a, b). The MIKE report documents an increase in elephant poaching in Southern Africa as a whole in 2017 (CITES, 2018c), which, if sustained, could make South Africa a more prominent exit point for illegal ivory moving to Asia.

Zimbabwe and *Angola* are recognized as Category C countries as the two most important countries of origin or export for commercial shipments of worked ivory products leaving Africa for Asian markets. Data covering the period 2015-2017 are presented in Table 4, with Zimbabwe and Angola the source of some 38% of this trade by number of seizure cases and by the weight of the ivory products involved. This trade most frequently involves the use of couriers travelling by air and, overall, the items typically being moved concern ivory bangles, pendants, chopsticks and name seals, with two-thirds by weight and 83% by number of seizures destined for China, Hong Kong SAR or Viet Nam. Ivory carvers who are Asian nationals are believed to be active in both countries. Zimbabwe is also a major source of raw ivory, with 3,552 kg seized in this period, including more than half a tonne in South Africa from Zimbabwe. Angola as well has made or been implicated in the seizure of 1,732 kg of raw ivory. Angola was identified as Category C country at both CoP16 and CoP17 and has been part of the NIAP process since the 65th meeting of the Standing Committee. Zimbabwe, however, is now identified as a Category C country for the first time.

Table 4: *Country of origin or export behind commercial movements of worked ivory products (10+ kg) from Africa 2015-2017 (ETIS, 06 June 2018)*

Country	No. of Seizures	Weight (kg)	Country	No. of Seizures	Weight (kg)
Zimbabwe	34	1,403.71	**Uganda**	2	68.57
Angola	16	926.77	**South Africa**	3	62.05
Nigeria	29	833.90	**The Congo**	2	55.91
Côte d'Ivoire	7	735.90	**Senegal**	1	50.18
Egypt	2	342.86	**South Sudan**	2	49.29
Democratic Republic of the Congo	5	310.50	**Djibouti**	1	41.04
Kenya	2	270.00	**Ghana**	1	40.90
Zambia	5	257.54	**Central African Republic**	1	29.14
Malawi	3	226.29	**United Republic of Tanzania**	1	16.43
Ethiopia	6	207.29	**Guinea**	1	15.46
Burundi	2	120.00	**Benin**	1	14.29
Namibia	3	75.67	**TOTAL**	130	6,153.70

With highly successful national airline carriers, **Ethiopia,** the **United Arab Emirates** and, increasingly in the period 2015-2017, **Turkey** all play major roles as transit hubs connecting Africa with Asia. Concerning the movement of processed ivory from Africa to Asia, the United Arab Emirates made or was implicated in 44 seizures, representing 1,749 kg of ivory, presented in Table 4; of these, only eight cases, weighing 688 kg, were seized in the United Arab Emirates. Ethiopia was the country of origin or export in another 18 seizures presented in Table 4, weighing 838 kg, but only three were seized in Ethiopia, whilst another four seizures, representing 135 kg of ivory, successfully transited Turkey without being interdicted. Indeed, out of a total of 2,334 kg of ivory that moved through Turkey in transit during this period, only 1 kg was seized by the authorities. The growing evidence of ivory processing in Africa for export to Asian markets suggests that such trafficking will only increase with a heavy reliance on air travel to connect producers with consumers. Thus, strategic vigilance along specific airline routes is essential as weak links will be continually exploited to move illicit ivory to end-use buyers.

With no elephants of its own and very modest involvement in only four illegal ivory trade transactions in this reporting period, **Burundi** is regarded a Category C country for one principal reason: it holds one of Africa's oldest, largest and often controversial CITES-registered ivory stockpiles that is now steadily leaking into international trade. First registered under CITES in 1989, the year following Burundi's accession to CITES in November 1988, the detailed history of this stockpile is outlined in CoP13 Doc. 29.6 of October 2004, in the report "*Ivory Stock Verification Mission to Burundi: Report to CITES Secretariat, 23rd September 2004*" by Mr. Simon Milledge and Mr. Edison Nuwamanya, and in SC50 Doc. 21.4 which gives the perspective of the Burundi government. At the bequest of the CITES Secretariat, the stockpile was audited by TRAFFIC and the CITES MIKE programme in 2004, with each piece re-counted, re-weighed and a computerised database of the entire stockpile compiled for the 15,485 tusks weighing 83,978 kg. The entire stock was resealed into seven shipping containers held within a guarded military compound in Bujumbura, the country's capital city. Following a March 2015 seizure in Uganda at Entebbe Airport of four drum cans labelled 'Shea Butter' on the verge of export to Singapore, TRAFFIC subsequently identified 18 tusks that clearly bore registration markings of the 1989 Burundi ivory stockpile. A confidential report was prepared by TRAFFIC and immediately tabled with the CITES Secretariat in April 2015. Since then, at least three more seizures, two in Kampala, Uganda in September 2016 and February 2017, and one in June 2016 in Juba, South Sudan, have included tusks and ivory pieces that exhibit markings commensurate with the 1989 Burundi stockpile. Potentially nearly 84 tonnes of ivory could be in illegal trade and the government of Burundi has yet to make any statement regarding this longstanding ivory stockpile. At SC70, an intervention by the government Uganda noted the lack of progress and called upon the Secretariat to clarify the status this stockpile. Because this matter has remained unresolved since first reported over three years ago, Burundi is regarded as a Category C country to watch.

Moving to Asia, three countries have relatively high weight values when ivory trade flows are considered using trade chain information irrespective of where seizures actually occurred. In this regard, **Singapore**, at over 12.7 tonnes of ivory for the period 2015-2017, has the sixth largest weight value of all countries in this analysis, of which 5.3 tonnes were seized by the Singaporean authorities. Authorities in Kenya, Uganda and Zimbabwe seized other large ivory shipments slated for transit through Singapore on six occasions during these years. This is not surprising given that over 30 million containers move through Singapore's port each year, making it the world's second largest container port in the world throughout this entire period. With no domestic ivory market in

Singapore, these ivory movements are strictly of a pass through nature to China, Hong Kong SAR or Viet Nam where demand for ivory is found. The 'transit challenge' appears to be well appreciated by the authorities who recognize the need for continued vigilance, but for reasons of ivory trade flow scale in this analysis, Singapore is considered to fall in Category C.

Cambodia and ***Lao People's Democratic Republic***, also Southeast Asian nations, are in Category C because they primarily function as end-use destinations with growing domestic ivory markets, but also sometimes play the role of transit countries for ivory moving to other locations. In this regard, Cambodia has been used by transnational criminal syndicates as a 'back door' for ivory moving on to southern Viet Nam (Gray *et al.*, 2017; EIA, 2018a; 2018b), and Lao PDR has been a conduit for both Viet Nam and China (EIA, 2015; 2018b). The weight values for ivory trade flows involving Cambodia and Lao PDR in the trade chain was 6.7 tonnes and 7.2 tonnes, respectively, in the period under examination (which are the second and third highest amongst all Category C countries). In recent years, Lao PDR's domestic ivory market has grown exponentially, with a majority of the ivory selling outlets being owned by traders from mainland China and Chinese buyers purchasing some 80% of the ivory being sold in Laos in one comprehensive market survey (Vigne & Martin, 2017). Recent government pressure in Laos has resulted in some contraction of the market (EIA, 2018b), but overall law enforcement remains poor. Similarly, studies in Cambodia have found that ivory markets in the country are "*mainly fuelled by foreign demand, particularly Chinese nationals*", although local consumption of ivory products also occurs, especially in Phnom Penh, the Cambodian capital (Nguyen & Frechette, 2017). Cambodia was recommended as a Category C country in the CoP16 ETIS analysis but moved to Category B in the CoP17 report, whilst Lao PDR has been identified as a Category C country in both the CoP16 and CoP17 ETIS analyses. Since the 65th meeting of the Standing Committee both countries have been engaged in the NIAP process.

PART IV: CONCLUSIONS

Conclusions of the trend analysis:

This analysis presents the trend in illicit trade in ivory from 2008 through 2017 with illegal ivory trade activity tracked through Transaction and Weight Indices. The following conclusions can be made:

- Over the last four years, our best estimate of global illicit ivory trade activity has shown annual incremental decline after peaking in 2012 and 2013, although broad confidence intervals characterize the results (Figure 4). Whilst the inclusion of additional seizure data for 2017 may alter this result somewhat in future analyses, illegal ivory trade activity appears to be exhibiting some measure of reduction, especially in the large raw ivory weight class. Under sustained pressure from the CITES-led NIAP process and major new policy interventions such as China's landmark closure of its domestic ivory market, there is little doubt that the illegal ivory trade is experiencing more global oversight and law enforcement pressure than previously was the case. The current period of flux and adaptation suggests that trade activity is beginning to drop but whether it will be sustained will need to be carefully watched. Further, it needs to be recognized that any decline in illegal ivory trade activity is also occurring in conjunction with an overall decline in elephant populations in Africa (Thouless *et al.*, 2016).

- Concerning the weight of ivory in illicit trade, the major drop in large-scale ivory seizures has resulted in an equally large decline in the best estimate of the relative quantity of ivory by weight in global commerce. If this decline is confirmed when a more complete dataset for 2017 becomes available, this will be a welcome and long overdue development. However, any such trend may be partially influenced by a shift in ivory processing from Asia to Africa and will need to be carefully monitored. Further, the drop in weight may not necessarily translate into reduced pressure on Africa's elephants if average tusk weights are also in decline; in this regard, younger elephants with smaller tusks could make up a greater proportion of the trade if poaching pressure continues to target already reduced populations.

Conclusions of the cluster analysis:

With respect to the cluster analysis, which focused upon assessment of illicit ivory trade data in the period 2015-2017, the following conclusions can be made:

- This cluster analysis indicates some important shifts from the results presented in previous assessments. In this regard, ***Malaysia***, ***Mozambique, Nigeria*** and ***Viet Nam*** are now regarded as priorities for consideration under **Category A** owing to their linkages to the greatest illegal ivory trade flows over the period under examination.

- *China*, *Hong Kong SAR*, *Kenya*, *United Republic of Tanzania* and *Uganda* are regarded as priorities for consideration under **Category B**, which does signal an improved position for all of these entities as in previous iterations of the cluster analysis they were regarded as Category A priorities.

- It is reasoned that the 14 countries, *Angola*, *Burundi*, *Cambodia*, *Cameroon*, Republic of the *Congo*, *Democratic Republic of the Congo*, *Ethiopia*, *Gabon*, *Lao People's Democratic Republic*, *Singapore*, *South Africa*, *Turkey*, *United Arab Emirates* and *Zimbabwe* are regarded as priorities for consideration under **Category C**.

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CoP18 Doc. 69.3 (Rev. 1)
Annex 2
(in the original language / dans la langue
d'origine / en el idioma original)

ព្រះរាជាណាចក្រកម្ពុជា
Kingdom of Cambodia
ជាតិ សាសនា ព្រះមហាក្សត្រ
Nation Religion King
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ក្រសួងកសិកម្ម រុក្ខាប្រមាញ់ និងនេសាទ
Ministry of Agriculture, Forestry and Fisheries
សមត្ថកិច្ចគ្រប់គ្រងសាយតេសកម្ពុជា
CITES Management Authority of Cambodia

No: ____048____ CMAC   Phnom Penh..21...Jan...2015

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Research Assistant
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CITES Secretariat
Maison International de l'Environnement
11/13 Chemin des Anémones
1219 Chatelaine, Genève, Suisse

Subject: ETIS analysis for Cop 18-final report

Dear Mr. Dejana,

In reference to your email dated 20 December 2018, The CITES Management Authority of the Kingdom of Cambodia would like to comment on the Elephant Trade Information System (ETIS) and the Illicit Trade in Ivory report for CoP 18 as follows:

1. Page 15 Group 8: at the last paragraph "but Cambodia is the outlier on this measure with a domestic ivory market score well above the average". It should be deleted due to Cambodia is a less used ivory country and also does not have the ivory manufactures.

2. Page 23, at the first line of third paragraph: It should be deleted Cambodia from the first sentence due to currently Cambodia is not growing Ivory market. It only plays the role as a transit country.

Please accept our warmest thanks for your cooperation and assurance of our highest regards.

Sincerely yours,

Prof.Dr. NAO THUOK
Secretary of State
Ministry of Agriculture, Forestry and Fisheries
Chairman of CITES Management Authority of Cambodia

Cc: -Secretariat of MAFF
     -Forestry Administration
     -File

Dear Colleagues at CITES Secretariat,

Thank you for your email about the ETIS report.

To facilitate a better performance of ETIS, China CITES Management Authority would like to provide the following feedback on the ETIS report and some measures for your consideration.

1. Trade between mainland China and Hong Kong SAR, trade between mainland China and Macao SAR, and trade between mainland China and Taiwan Province are all domestic trade, rather than international trade. So we urge the authors to exclude the seizure data between mainland China, Hong Kong SAR, Macao SAR, and Taiwan Province in this report. Furthermore, it should be ensured that such data not be included in future ETIS reports.

2. The data collected by NGOs, from media, or in any other means may not be accurate enough, and may also be overlapped in part with the official data. So we advise that only official submissions be used in the report. If the data collected by NGOs, from media or in any other means is deemed as necessary, it should be communicated with and checked by the Management Authority of the Parties concerned.

3. The data lack of origin or transit countries does not truly reflect the whole picture of the illegal trade, and weakens the willingness of parties to investigate illegal cases. 1,815 out of 4,420 seizure records point to China without identifying the countries of origin or/and transit. So, we advise such

data should be classified as unchecked or pending data and should not be used for data analysis in the current report.

4. We advise that seizure data summaries country-by-country and the detailed methods and basis calculation for the cluster analysis should be disclosed to public.

Should you have any questions, please do not hesitate to contact me.

Thank you for your understanding and support.

Best regards,

(Mr.)SU Rui

苏 锐
国家林业和草原局野生动植物保护司/中华人民共和国濒危物种进出口管理办公室履约与执法协调处

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Date: 18 January 2019 at 14:32
To: Johannes Stahl johannes.stahl@un.org, Thea Carroll thea.carroll@un.org, Dejana Radisavljevic radisavljevicd@un.org
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Thomas De Meulenaer tom.demeulenaer@un.org

Dear Colleagues,

Thanks for forwarding us the ETIS report to CoP18.

Based on the following observations, the illegal ivory trade of Hong Kong SAR (HK) mentioned in the ETIS report does not truly reflect the actual status of HK.

1. **Mean number of seizures** (Table 3): China and HK were put in the same group and the mean number of seizures were reported to be 611 in 2015-2017. The number of seizure were significantly larger than our reported cases to ETIS which were only about 240 in 2015-2017. We note that the number of seizures shall also include cases that HK has implicated, however, the high LE ratio at 0.9 indicates that majority of the seizure cases shall have come from the "in-country" seizures.

2, **Mean weight** (Table 3): The mean weight of China and HK in 2015-2017 were 13,919 kg where our reported seizure quantity was only about 9,500 kg. Again, as the majority of the seizure cases shall have come from the "in-country" seizures, there appears a significant discrepancy between our records and the ETIS reported figure.

3. **Proportion large-scale ivory seizures to mean weight** (Table 3): The "large-scale ivory seizure" was defined as seizures which are equal to or greater than 500 kg ivory and the indicator here measures only the weight from of the seizure, neglecting the number of cases involved. In fact, Hong Kong had only 2 seizures in 2015-2017 that had seizure quantity more that 500 kg. One was in 2015 where a group of passengers smuggled a total of about 800 kg ivory in their suitcase. The other was a large seizure in 2017 where about 7 tonnes ivory was intercepted. It was no doubt that the large seizure in 2017 contributed significantly to the relatively high value of this indicator. However, apart from the 2 mentioned cases, all the seizures made in Hong Kong involved only small quantity of ivory, typically some 20 kg of ivory or less, far from the defined large-scale ivory of 500 kg. The 7 tonnes seizure is an outlier from the overall 2015-2017 records that should not be counted as the high value under this indicator appears a significant bias from the actual situation of HK.

We therefore, do not agree with the statement that HK was" a trade characterised by a large quantity of ivory. More than half of this weight variable represents large-scale movements of ivory, suggesting the involvement of transnational criminal syndicates" (P.14 under heading of Group 5). Instead, the fact that only 2 seizures out of some 240 reported seizures (ie. <1% of the cases) were "large-scale ivory seizure" shall be mentioned in the report.Also, HK should not be put under the group of the highest number of seizures as we have indicated in point 1 above.

Referring to second paragraph of P.20 which suggests China and Hong Kong as a "collective ivory market" and "there is little to suggest that the two entities function separately" is not justified. The paragraph mentioned the history of HK reverted back to China did not provide any justification on the alleged merging of the ivory markets of the 2 entities, nor the number of seizure between HK and China had any relation on the merging of the ivory markets. The corresponding statements in the paragraph should be removed.

We are of the view that HK should not be classified in Category B based on the above mentioned comments/observations.

Regards,
Timothy Lam

Endangered Species Protection Officer
Agriculture, Fisheries and Conservation Department
CITES MA of Hong Kong SAR

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Date: 21/12/2018 22:24

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) – Singapore's Comments on the Elephant Trade Information System (ETIS) Report for the 18th Meeting of the Conference of the Parties to CITES (CoP18)

Introduction

1   At its 69th meeting (SC69), the Standing Committee requested TRAFFIC to "send the ETIS report to CoP18 to all Parties identified as potentially requiring attention in the NIAP process at least 30 days prior to the release of the report on the CITES website" (SC69 SR). At SC70, the Committee further requested the CITES Secretariat, together with TRAFFIC, to "prepare an annex of the comments received from Parties on the ETIS report and circulate it as part of the document to be considered by the Parties at CoP18; and capture in the document whether comments were received and where possible, respond to issues raised by Parties" (SC70 Sum. 12 Rev. 1).

2   The Secretariat has since shared the ETIS report produced by TRAFFIC for CoP18 with Singapore on 20 Dec 2018, and requested our comments by 20 Jan 2019. In this context, Singapore is submitting the following comments.

Data Verification

3   Singapore previously raised a number of issues regarding the ETIS data collection and validation processes in information dossiers that were sent to the Secretariat in January 2017[1] and February 2018.[2] In these documents, we brought up specific concerns regarding the verification of data.

4   Upon our request, TRAFFIC sent the ETIS Country Report for Singapore covering the period 2008 to 2017, which included the raw data used for the current ETIS report, on 18 October 2018. As with previous

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[1] Please see document SC69 Doc.29.3 Annex 5 (Appendix).

[2] Please see document SC69 Doc.29.3 Annex 5.

reports, TRAFFIC did not ask Singapore to verify this data prior to using it for the report.

5   Singapore has attempted to verify the raw data used by TRAFFIC, where possible. We have identified at least one inaccurate data point, relating to a seizure made by Australia in 2016 of alleged ivory which passed through Singapore. The seized item was later identified to be of whale origin. We are currently seeking information on the remaining unverified cases, but while contact has been made with the relevant authorities, responses have not been forthcoming. Nonetheless, we remain concerned that <u>unverified data, including possibly incomplete and/or inaccurate data, continues to be used in the analysis by TRAFFIC</u>.

Cluster Analysis

6   Singapore also earlier registered our concerns with the ETIS cluster analysis in the information dossier sent in January 2017.[3]

7   <u>First</u>, while the cluster analysis seeks to "identify countries with similar trade characteristics", the report acknowledges that "not all groups have a clear cohesion in terms of all definable characteristics". This can result in generalisations at the cluster level that misrepresent individual countries' positions. For instance, the report comments that Group 8, in which Singapore was placed, "ranked low in terms of the frequency measure as seizures are rarely made and reported to ETIS". However, Singapore continues to report <u>all</u> ivory seizures through ETIS, INTERPOL Eco-messages, and the CITES Secretariat.

9   <u>Second</u>, Singapore remains concerned about the use of proxy variables to obtain the estimates used for the cluster analysis. Singapore earlier highlighted that the proxy variables are likely weakly related to both

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[3] Please see document SC69 Doc.29.3 Annex 5 (Appendix).

seizure and report rates, and also pointed out issues with the use of Deviance Information Criteria[4] to select these proxy variables.[5]

10   With regard to specific proxy variables, Singapore has raised issues on the use of the *Law Enforcement (LE) Ratio* as a proxy variable to determine seizure rates across countries as the LE Ratio is likely to be biased against countries at the start of the trade chain.[6] While TRAFFIC has introduced the new Trade Chain Index to attempt to reduce this bias, the use of the LE Ratio as a proxy variable to determine seizure rates across countries remains questionable. The ETIS analysis also uses the *proportion of large-scale ivory seizures to mean weight* as a proxy variable to measure organised crime. We disagree with the assumption that "large-scale movements of ivory are likely to represent organised criminal activity". The alleged use of Singapore as a transit point for illegal ivory shipments by organised crime syndicates was addressed during the CITES Secretariat's mission to Singapore in April 2017.[7]

11   <u>Finally</u>, it remains unclear to us why clustering, which is a descriptive technique, is used as a basis for decision-making or inference about individual countries. We had previously pointed out the lack of justification and inconsistencies across ETIS reports (e.g. the cut-off point in the dendrogram[8], which determines the number of clusters). The report

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[4] Deviance Information Criteria (DIC) is implemented in OpenBUGS which is a software for the Bayesian analysis of complex statistical models.

[5] Li et al (2015) and Chan and Grant (2016).

[6] The LE Ratio of a country is defined as the number of seizures made within a country divided by the total number of seizures a country was involved in. It is more likely for a source country at the start of the trade chain to have a lower LE Ratio compared to a destination country at the end of the chain. This is because a source country has more opportunity to be implicated in other countries' seizures down the chain, thereby increasing its total number of seizures.

[7] The report SC69 Doc. 29.3 A5, that Singapore submitted on 27 September 2017, touched on this aspect of the Secretariat's mission to Singapore. In response to allegations that illegal syndicates could choose to route their cargoes through Singapore, we clarified that neither shippers nor consignees can choose to route their cargoes through any specific transhipment port, as shipping routes are worked out by a central planner at carriers' headquarters. We have also explained that illegal syndicates would not store containers with illegal goods at our port as the costs are prohibitive, given our port's limited land area and high traffic. In addition, as dwell time is a key performance indicator, it would be conspicuous for any container to be staying unduly long.

[8] Refer to Figure 7 of the ETIS report. In 2009, the cut-off height was well under 5 on the y-axis. In 2013, it was above 5. In 2016, it was under 5. In 2018, it was again above 5.

acknowledges that the clustering method is "subjective to a degree". It is especially given this subjectivity that we are concerned that the categorisation of Parties, which forms the foundation for recommendations for the NIAP process, is done on the basis of clustering instead of prioritising countries' individual contexts.

Regular Review and Improvement of Measures

12   Singapore regularly reviews its measures and laws to ensure that they are current in addressing the illegal wildlife trade. New risk profiles and risk indicators are also continually developed and refined based on seizures, intelligence reports, active engagement with international organisations and partners, as well as open source information. This approach once again led to the successful seizure of 3.5 tonnes of ivory tusks from Africa in March 2018. The case is before the Courts.

13   Singapore is finalising the details of a domestic ivory ban. The Government recently concluded a public consultation on this proposed ban and is in the process of analysing the responses to it.

ETIS Analysis and Technical Outputs

14   Singapore will separately submit written observations on the ETIS methodology review to the Secretariat by 28 February 2019 as indicated in agenda item 49.3, SC70 Sum. 12 (Rev. 1).

15   Singapore notes, from document SC69 Inf. 47, that the ultimate aim of the ETIS review is to ensure that the ETIS analysis will be "understood, accepted and used confidently and appropriately by the Parties in the fulfilment of the requirements set out in Resolution Conf. 10.10 (Rev CoP17)." Singapore would like to reiterate the importance of the ETIS analysis being fair, robust, transparent and scientifically sound.

Conclusion

16   Singapore does not condone the illegal trade in wildlife and is determined not to be a conduit for such illegal trade. Singapore remains firmly committed to combatting the illegal trade in ivory and wildlife.

Singapore has adopted a comprehensive and robust approach to combat the illegal trade in wildlife, including ivory. At the same time, we are continually reviewing our measures and laws to enhance the effectiveness of our overall regime. **We hope that Singapore's comments in this report will assist TRAFFIC and the Secretariat to understand Singapore's unique context and the steps that Singapore has taken to combat the illegal ivory trade.**

Hanoi, 18 January 2018

The CITES Secretariat
International Environment House
Chemin des Anémones
CH-1219 Châtelaine, Geneva
Switzerland
Attention to: Thea Carroll [thea.carroll@un.org]

Sub: Comments of Viet Nam on the Elephant Trade Information System (ETIS) and the Illicit Trade in Ivory: A report to the 18th meeting of the CoP to CITES

The Viet Nam CITES Management Authority presents its compliments to the CITES Secretariat.

On 20th December 2018, we have received the Draft report prepared by TRAFFIC on to the 18th meeting of the Conference of Parties (CoP) to CITES on the Elephant Trade Information System (ETIS) and the Illicit Trade in Ivory. After reviewing the report and consulting with other relevant Governmental agencies, the Viet Nam CITES Management Authority would like to provide a few comments on the report (*refers to the attached document*).

Viet Nam acknowledges the difficulties of TRAFFIC in data collection and evaluation to provide inputs in the report. However, we questioned the reliability of the recorded data on ivory seizures and statements on illegal trade of ivory related to Viet Nam in the report. Viet Nam request the Secretariat to take our comments in the upcoming revision of the report before submitting to the 18th CoP.

I would like to take this opportunity to renew to the CITES Secretariat the assurances of its highest consideration

Yours Sincerely,

Nga Ha Thi Tuyet
Director
Viet Nam CITES Management Authority

BỘ NÔNG NGHIỆP VÀ PHÁT TRIỂN NÔNG THÔN
CƠ QUAN QUẢN LÝ CITES VIỆT NAM
MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT
VIET NAM CITES MANAGEMENT AUTHORITY

COMMENTS OF VIET NAM ON THE ELEPHANT TRADE INFORMATION SYSTEM (ETIS) AND THE ILLICIT TRADE IN IVORY: A REPORT TO THE 18TH MEETING OF THE CONFERENCE OF PARTIES TO CITES

I. GENERAL COMMENTS

Viet Nam appreciates the effort of TRAFFIC in developing the report. However, the content of the report is not subjective and does not reflect the efforts of the Parties in tackling illegal ivory trade. The report uses some indicators out of the mandate of the report itself. The data is collected in different period and from different sources lead to the inconsistent in the analysis. For example, the analysis for the period of 2008-2017 has included the data of 2018.

The classification of ivory based on weight applied for specimens less than 500kg is out of the mandate of the ETIS report. The Resolution 10.10 (Rev. CoP17) "urges Parties to collect samples from large-scale ivory seizures (i.e. a seizure of 500 kg or more) that take place in their territories". Some Parties provide data of seizures less than 500kg lead to the inconsistency in reporting and data analysing.

II. DETAILED COMMENTS

Viet Nam proposes the CITES Secretariat to take into consideration and review the below contents of the report:

1.   Table 2 (page 3) include the *"Estimated number of large-scale ivory seizures (>500 kg) which have been forensically examined pursuant to Resolution Conf. 10.10)"* that should not be an estimation but need to be accurated. This data should be summarized based on the reported data from Parties in accordance to the Resolution Conf. 10.10 (Rev. CoP17). Viet Nam requests to publish the accurate figure not an estimation.

2.   The section of "a note on methods" (page 4) includes the content on *"Bias adjustment of the ETIS seizure data"* which does not clarify the method for data bias adjustment while it also stated that *"the data collection score and the CITES reporting score were the two variables that best described why countries differed in their ability to report seizures"*.

3.   Viet Nam requests not to use the *Law enforcement effort ratio (LE ratio)* in the report. The assessment of the law enforcement capacity of countries that not in the mandate of the ETIS report. Moreover, this assessment requires a more detailed tool.

4. Viet Nam requests to consider using the Trade Chain Index (TCI) due to the low accuracy of the input data.

5. Viet Nam requests TRAFFIC not to use unofficial information not provided by the Parties. The Resolution Conf. 10.10 (Rev. CoP17) stated that "*Parties share with the Secretariat and source countries information on the origin or age of seized ivory specimens arising from forensic analysis of samples to facilitate investigations and prosecutions, and for analysis by MIKE and ETIS in their reporting to the Standing Committee and the Conference of the Parties*" and "*TRAFFIC will assist the Parties in collecting data, ensuring data quality and consistency, and providing tools and training in data collection, data utilization and information management to designated officials around the world as appropriate*". This acknowledges that the data collection needs to be completed by Parties not TRAFFIC or other organisations.

6. Viet Nam requests not use the documents, reports of EIA, TRAFFIC and other NGOs as official reference for ETIS reports. The content of the EIA reports does not include the reliable data but largely base on results from questionnaires, interviews. The TRAFFIC report was prepared by authors who had no expertise in ivory, wildlife; data has not been verified, and had no consultation with Vietnamese scientific and enforcement agencies before publication.

7. Viet Nam requests to review the figure in *Figure 3: Transaction Index combining weight classes by ivory type, 2007-2014* (page 6). Viet Nam would like to raise the point that the data collection for seizures less than 10kg from relevant Parties is not possible at this point.

8. Viet Nam requests to exclude the following statement from the ETIS report "*The overall conclusion is that there is a strong suggestion that the illegal ivory trade transactions have declined to some degree from peak levels, but the downward trend is still within the confidence bounds of the peak value. A precautionary interpretation is that the illegal ivory trade has more or less been fairly stable over the last two, possibly three, years*" (page 7). This statement is subjective and does not based on reliable data and out of mandate of the ETIS report.

9. Viet Nam requests to exclude *Figure 5: Weight Index combining weight classes by ivory types with 90% confidence intervals, 2008-2017* (page 8) due to lack of data.

10. Viet Nam requests to review the accuracy of the data in forming the clusters (page 10). The indicator "*seizures out*" is subjective which developed and based on the incomplete data of country of origin and transit country.

11. Viet Nam raises the concern on the data of Table 3 (page 12) including the data directly to Viet Nam. The data on seizures, mean LE Ratio, Corruption Perception Index of Transparency International (CPI) in tackling illegal wildlife trade is conducted based on simple analysis, subjective and lack of reliable evidence. A Party discloses data with a large number of seizures demonstrating effective law enforcement but in according to the Report, the LE ratio is low which is unreasonable. Besides, the lack of grounds for considering a country with low CPI has a more serious illegal ivory trade issue than a country with a higher CPI. The indicator of the domestic ivory trade given by TRAFFIC is based on a number of unreliable documents and reports that need to be verified. On that basis, Vietnam proposed to remove Table 3 or review the above indicator including LE ratio, CPI and domestic ivory market.

12. Viet Nam proposes to remove the statement (page 14) "*Long recognized as a major Asian destination and transit conduit for large quantities of ivory, the illegal ivory trade situation in this analysis is comparatively more problematic. In terms of the mean number of seizures, Viet Nam is in the fourth position, however, with respect to the quantity of ivory in trade it holds the number one position with a value that is double the second place position and nearly three times greater than the third place position, a rather remarkable result. Nearly 70% of the weight value comprises large-scale ivory movements signalling the presence of organised criminal syndicates in the trade. At 46%, the LE Ratio is just fair, but the measurement for corruption using CPI scores is the second poorest in this analysis. Viet Nam also has the second highest domestic ivory market score in this analysis*". Viet Nam would like to raise the point that the increasing recorded seizures especially in large-scale arrests, demonstrate that Viet Nam' effort in law enforcement.

13. Viet Nam requests to review the statement (page 18) that "*Despite addressing a series of issues in its NIAP, Viet Nam's status in the current analysis has worsened considerably. It is of concern that, in terms of scale, the estimated weight value for illegal ivory trade that involves Viet Nam has increased by one-third compared to what was found in the period 2012-2014 for the CoP17 report; this substantial increase is particularly noteworthy as it simultaneously occurs when the total estimated weight of ivory in illegal trade*

in the period 2015-2017 has actually shown a marked decline of around 20% over the previous three-year period". This is an subjective judgment in the context of Vietnam's new Penal Code.

14. Viet Nam request to remove the statement (page 18) "*Based on the data available for this report, Viet Nam now functions as the leading destination for illicit ivory, surpassing China (including Hong Kong), which previously accounted for the majority of the weight value in every previous ETIS analysis since CoP12 in 2004*". This statement is lack of basis. In addition, many large seizures in Vietnam show that ivory is transhipment via Vietnam to other destinations.

15. Viet Nam request to remove the statement (page 18) "*Ivory processing continues to be documented in Viet Nam and a range of ivory products move through the country's illegal retail outlets and internet/social media trading channels, servicing both domestic clients as well as large numbers of cross-border buyers from China (Nyugen et al., 2018; WJC & IISD, 2016; Vigne & Martin, 2016)*". This statement is based on unspecified, inferential references. Vietnam is cooperating with WJC to arrest some cases in 2018 showing high law enforcement

16. Viet Nam request to remove the statement (page 18) "Finally, law enforcement data strongly indicates that Vietnamese syndicates are operating from hubs in Africa, especially in Angola, Congo, Mozambique South Africa and Togo, to move ivory from Africa to Asia, often directing shipments to Malaysia, Lao PDR or Cambodia before moving the ivory on to Viet Nam (EIA, 2018". The content of the EIA reports does not include the reliable data but largely base on results from questionnaires, interviews

III. CONCLUSIONS AND RECOMMENDATIONS

The Viet Nam CITES Management Authority of Vietnam proposes to review the evaluation indicators in the report based on recognized/ official and reliable sources; statements on Vietnam need to be based on validated, verified documents and data must refer from official sources.

Vietnam requests the Secretariat not to submit this document to CoP18 if TRAFFIC does not revise the report base on the comments of Viet Nam and other Parties.

Implementation of CITES provisions concerning ivory

UNITED ARAB EMIRATES

UNITED ARAB EMIRATES
MINISTRY OF CLIMATE CHANGE
& ENVIRONMENT

الإمارات العربية المتحدة
وزارة التــغيــــر المنــــاخــــي
والـبــــيــــئــــة

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MINISTRY OF CLIMATE CHANGE
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والـبـيـــئـة

Introduction

In 1979, there were an estimated 1.3 million African elephants. By 1989, only 600,000 remained. The loss of more than half a million elephants in a decade was primarily due to poaching for ivory. Natural habitat loss was a second important factor; human population had doubled in elephant range states since 1970. Major public awareness campaigns were launched worldwide to save the elephant and stop the illegal trade in ivory. In October 1989, at the seventh meeting of the CITES (Convention on International Trade in Endangered Species) Convention of the Parties (CoP7), governments banned international trade in ivory, with effect from January 1990 (wildlifedirect.org).

The c Arab Emirates (UAE) recognized the importance of tackling illegal wildlife trade early on and in line with its keenness on conserving the environment, it became one of the first nations in the Middle East to ratify CITES in 1990. The UAE regularly assesses the effectiveness of its ability to implement the Convention successfully and has positioned itself as a leading nation within the region for these efforts. The nation's legislation on CITES were issued and came into force in 2002, entitled Federal Law 11, which later qualified the UAE for a category (A) status in the national legislation project. This meant that the UAE's legislation pertaining to illegal wildlife trade completely fulfilled all requirements to implement CITES.

Prior to CIETS CoP17, the UAE was categorized as Parties of 'importance to watch' by ETIS in their analysis report. The Standing Committee was directed by the CoP to review response reports presented by several parties including the UAE to determine, on the basis of the reports, whether to request these Parties to prepare a NIAP in accordance with the Guidelines to the NIAP Process. In 2017, the UAE received a letter from the CITES Secretariat stating that the UAE should not participate in the NIAP process at this time based on agreement from standing committee.

In December 2018, CITES secretariat shared the new ETIS report that TRAFFIC is submitting for consideration at CoP18 indicating that the UAE could potentially require attention under the NIAP process. As such, the Secretariat is sharing

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this report with you before its publication on the CITES website. This report showcases UAE efforts in combating illegal trade in Ivory and how the country is one of leading nations in the region when it comes to it.

UAE's legislations prohibit Ivory and its products

The geographical location of the UAE makes it a critical hub as many shipments pass through via air, sea and land ports, thus the UAE has recognized the issue and has enacted a number of legislations which include the Federal Law No. (11) for the year 2002 concerning the regulation and control of International Trade in Endangered Fauna and Flora. This law includes 40 articles governing the scope of implementation, the functions of the authorities, administrative and scientific authorities, international trade and documentation, exceptions, identifying the ports of entry, how to deal with non-member states, registration of establishments and companies, transit, cooperation with the concerned authorities, and sanctions. It also includes penal articles and sanctions for offenders which varies from fines up to 50 thousand dirhams and imprisonment up to six months. The penalties vary depending on the Appendices to the Convention.

Furthermore, the Resolution of the Cabinet No. 22 of the year 2003 to issue the executive By-law of the Federal Law No. 11 of the year 2002 on regulating and controlling the International Trade in Endangered Species of Wild Fauna & Flora. Furthermore, in 1988 Dubai Government issued an order for the ban of ivory, preventing businesses of buying and selling and manufacturing ivory and rhino horns. As a result of that order, in 1992 Dubai burnt 12 tons of confiscated ivory to demonstrate its support for the United Nations ban on trading in elephant tusks. CITES authorities in the UAE in collaboration with security agencies and NGOs are evaluating the effectiveness of CITES enforcement in the UAE and improving the efforts of CITES implementation regularly.

Recently the UAE has issued a new Federal Law No.22 of the year 2016 to regulate the ownership of dangerous wild animals. This Federal law aims to regulate the ownership, possession and handling of dangerous wild animals. The ownership of dangerous wild animals is now limited to zoos, wildlife parks and a few other designated entities only.

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The law ensures to protect people and animals from dangerous encounters with such wild animals and their health related issues, and also prevents wild animal suffering.

Innovative inspection facilities to detect ivory shipments

Ivory is transited through the UAE mostly in raw or carved trinkets form. Most of the confiscated ivory is either carried by a passenger or coming through transit without disclosure of the type of shipment. These confiscations were conducted by cooperation and coordination between the Ministry and the competent authorities of law enforcement.

The Ministry of Climate Change and Environment (MoCCaE) in collaboration and coordination with the competent authorities, monitor all main borders with the latest technologies that would help to detect and control illegal shipments. It also cooperates with international governmental and non-governmental organizations to take advantage of their expertise and develop them in line with the UAE strategy.

In an effort to curb the illegal wildlife trade in the UAE, Dubai customs developed an innovative containers inspection facilities in the UAE. The Advanced Container Scanning System is the first innovative and comprehensive solution in the world that combines and integrates multiple components of inspection technologies. It is the latest world-class integrated system for containers and trucks X-ray screening. The device is capable of screening the contents of 150 trucks per hour moving at 8 to 15 km/hour, that is one truck per every 24 seconds. The system has been developed in order to help effectively protect the borders of UAE. The Advanced Container Scanning System is aimed at enhancing border security, reducing waste of resources, and reinforcing risk mitigation while maintaining a smooth flow of trade.

MoCCaE continuously develop an ivory stockpile inventory on annual basis since 2014 as part of its commitment to the highest international standards.

60% of online advertisements on illegal wildlife products has been shut

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MoCCaE drastically reduced the electronic illegal trade of endangered animal and plant species listed in the Convention. This was done in coordination with the authorities responsible for Telecommunications Regulatory Authority (TRA), through tracking advertisements for the sale of endangered animals online. Most of these ads were posted by fake communication channels outside the state, and as a result, 60% of such sites were removed, i.e. 800 sites. The External Audit Department in the Ministry in coordination with the local environmental authorities conduct many inspection programs on pet shops and the related businesses, and take appropriate action against the violator of CITES legalizations.

Furthermore, the authorities in the UAE have formalized procedures in place to track down online adverts in social media and other platforms. The procedure allows members of society to report posts and adverts in violation of UAE CITES and animal welfare regulations, and through the cooperation of different competent authorities a task force works on following up such reports and ensure the removal and prosecution of the violators as per the UAE regulations.

No demand nor a market for ivory in the UAE

There is no domestic ivory market in the UAE, therefore, illegal ivory confiscated in the UAE is meant for transit and doesn't target the local market as there is no demand. It passes to other countries with demand for ivory. Therefore, most of the ivory confiscated in the UAE or in country of destination passing through the UAE can be detected with the passengers as personal belonging or air to air. Giving the internationally adopted procedures, the rule of customs and airlines in air to air passing shipments is limited to tasks that is agreed upon internationally to ease the flow of air traffic. Hence detecting these illegal shipments is more successful in countries of destinations or countries of source, as customs plays a much bigger rule.

National airlines prohibit the carriage of ivory

The UAE has incorporated innovation to its national agenda thereby integrating innovation into the daily government work, which pushed us to seek for effective tools to combat illegal wildlife and work hand in hand with innovators to further push the limits of creativity and enhance the implementation of UAE's strategies. The UAE is also working hand in hand with the private sector to implement CITES regulation and conserve endangered species through different

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initiatives focusing on building awareness and developing different innovative methods to combat illegal wildlife trade, through partnerships with Emirates Airlines, Etihad Airlines, Dubai Ports World and Dubai Customs World, among others. For example, Etihad airways and Emirates airlines prohibited the carriage of species listed under CITES Appendix I or listed as 'Critically Endangered' or 'Endangered' by the IUCN Red List of Threatened Species and its products.

Innovative containers to support elephant conservation worldwide

DP world have built innovative containers that will be shipped out of DP World's Dubai port, Jebel Ali to their new homes and purpose, to ensure that endangered animals can be made safer in their natural habitats. These containers which were donated from its innovation sandbox to a number of charities in Kenya, South Africa and Thailand These charities will use the containers as ranger accommodation, training units, a laboratory for work with tigers, conservation units to trial new technology (including tracking, and surveillance systems), and vet units. In these containers rangers will be able to sleep alongside orphan elephants to aid their recovery. In addition, confidential whistleblowing service have been developed by DP world and Emirates airlines for people who want to report suspicious activity. Which reflect the true nature of this trade and how it affects us all.

The UAE cooperate with international partners to track ivory shipments

Furthermore, the UAE continue to cooperate with other leading agencies in the world to track down and follow up the source of confiscated ivory shipments, in 2014, the DNA of confiscated shipments were analyzed by Conservation Biology University of Washington in the USA to determine the geographic origin of large ivory seizures which was critical to understand where elephant poaching. The analysis was carried out in cooperation with INTERPOL and Dubai Customs. Other analyses are expected to be carried out soon.

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In addition, the UAE has put a mechanism on place to communicate ivory confiscations to the INTERPOL in order to notify destination countries, as well as report to ETIS program on the details of such confiscations.

Raising awareness on illegal trade on ivory

Continuous capacity building for enforcement authorities and airline employees:

MoCCaE provides special training courses on a regular basis for enforcement officials who are working in Enforcement Authorities such as: Ministry of Climate Change and Environment, Ministry of Interior, Airports Security and Customs, and those who are assigned to implement Federal Law no. (11) for the year 2002 on the organization and control of international trade on endangered fauna and flora. Around 50 training courses were conducted for the different concerned authorities from the year 2007 to 2018. Moreover, Environment Agency Abu Dhabi (UAE CITES Scientific Authority), Emirates Nature in association with WWF (EN-WWF) and the International Fund for Animal Welfare (IFAW) are playing an important role in cooperating with the UAE CITES Management Authority in increasing the capacity building and awareness for the inspection officers and the community in general. These training sessions keep such individuals up to date with the latest updates and ensuring alignment with the best practices worldwide.

Furthermore, MoCCaE in collaboration with International Fund for Animal Welfare (IFAW) participated as a trainer in a training workshop for Omani and Moroccan authorities on combating illegal trade and implementation of CITES, in an effort to share expertise and building the capacity of other countries I the region.

In 2016, the UAE conducted a workshop on combating illegal wildlife trade and implementation of CITES for the aviation sector, the first of its kind in the region. The workshop was conducted in cooperation with the UAE General Civil Aviation Authority (GCAA), Etihad Airways, TRAFFIC, EWS-WWF and IFAW.

Training is not just limited to government officials in the UAE. DP world, Etihad airways, and Emirates airlines has developed online e-learning courses on illegal wildlife trade and how to spot the signs of smuggling wildlife, for their employees which collectively targeted more than 10,000 employees worldwide. Such courses have been shared with international partners like IATA to promote knowledge sharing internationally. As well as engaging young people

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through DP world global education program. To date, it has reached over 5,500 students across 14 countries. By ensuring that tomorrows leaders know how to detect and destroy this trade, we are empowering them to protect their own natural legacy.

Picture (2): Showing two different sessions of different training workshop conducted in 2016

<u>Reaching more than 1 million airport passengers with "ivory smuggling leads to prosecution":</u>

The UAE has also put great efforts in increasing public awareness through national awareness campaigns, distribution of leaflets, posters and guiding brochures regarding CITES and the species listed in the appendices of the convention which have been carried out for the last decade in different locations in the UAE such as shopping malls, local markets, airports, schools and universities, to demonstrate the risks and impacts of trafficking of endangered species.

In 2014, IFAW in cooperation with the MoCCaE in the UAE, Dubai Police, and Dubai International Airport conducted the "Ivory smuggling leads to prosecution" campaign – for the second year in a row- aiming to reduce the demand on ivory worldwide. The campaign message was delivered to almost 1 million passengers. The significance of such campaigns comes from the fact that it reached an international audience which gives an impression of the international status of ivory trade awareness. In 2015, a similar campaign was conducted in Abu Dhabi Airport in cooperation with IFAW, Abu Dhabi Police, Abu Dhabi Customs and Abu Dhabi Airport.
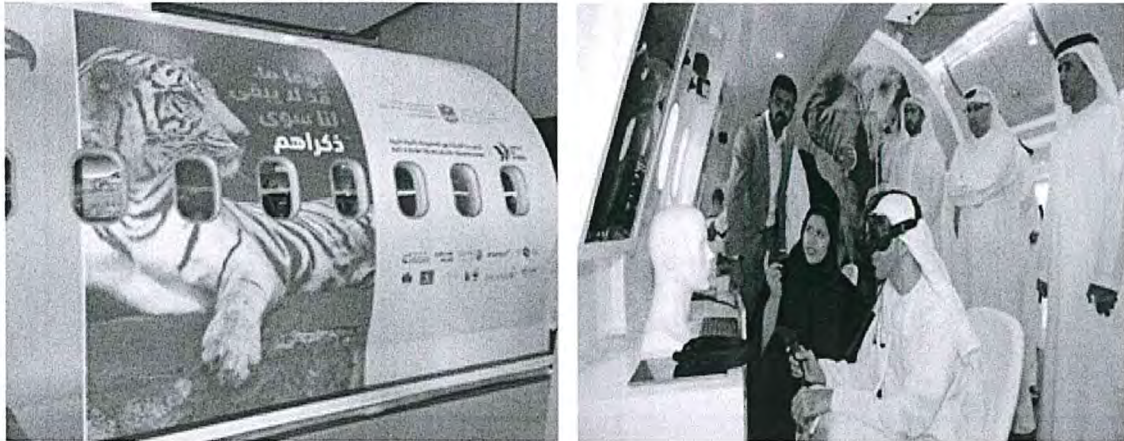
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Picture (3): Part of the "Ivory smuggling leads to prosecution" campaign held in Dubai Airport in 2014 in association with IFAW, Dubai Police, and Dubai International Airport.

In 2016, the MoCCaE held a continuous campaign titled 'Beautiful in the Wild' running in partnership with Abu Dhabi International Airport, Dubai International Airport, Etihad Airlines, Emirates Airlines, Dubai Ports World, Customs World, IFAW, and EN-WWF.

The campaign aimed to raise awareness among UAE visitors and residents about the importance of protecting endangered species to ensure the sustainability of biodiversity at local and international levels. The stand allowed passengers to travel to a virtual wildlife habitat of a selected species, and experience a simulated interaction with wild animals and learn important facts about the species and why is it important to protect the species from illicit wildlife trade.

Furthermore, Al Ain Zoo in corporation with the Ministry carries an annual Nature Conservation Festival, it aims to raise awareness among members of society on the different endangered species and roles and responsibilities for the community in combating illegal wildlife trade.

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Picture (4): Part of the 'Beautiful in the Wild' campaign carried out in Abu Dhabi International Airport

In 2017, the MoCCaE exhibited samples of CITES confiscations including ivory in its headquarters in a permanent exhibition which aims to increasing the public awareness on the importance of these species & the impact of illegal trade on endangered species.

MoCCaE has also engaged youth in raising public awareness. The Ministry carried out awareness campaigns with main focus on implementation of CITES and raising the awareness of the public on issues related to the conservation of endangered species. The campaigns targeted over 4000 from the general public including youth and students. These campaigns were organized by members of MoCCaE youth council.

Moreover, MoCCaE issued a number of printed and electronic guidelines for the use of public to raise awareness on CITES and trade in its listed species. Furthermore, several social media campaigns have been carried out to raise awareness on the importance of regulated international trade in species listed under CITES and their conservation.

https://www.moccae.gov.ae/assets/download/805017ca/CITES.pdf.aspx?view=true

First ivory destruction event in the region:

In April 2015, approximately 10 tons of elephant ivory worth US$20 million was destroyed to demonstrate the UAE's commitment to fighting the illegal trade. The stockpile of raw and crafted ivory seized from smugglers at the UAE's airports, borders and sea ports, was crushed by staff from the MoCCaE, in collaboration with Environment Agency- Abu Dhabi (Scientific Authority of CITES), Dubai Municipality, Dubai Customs, Dubai Police and IFAW. The destruction of the ivory stocks was carried out in an environmentally friendly process, according to the best industry practices. A machine was used to crush the

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ivory into very small pieces. The pieces were subsequently mixed with treated waste then buried and disposed of in designated areas to prevent its reuse.

Former CITES Secretary General acknowledged the event, he addressed the occasion by releasing a statement on the CITES website. He said: "When coupled with the seizure of ivory and prosecution of offenders, it sends a powerful message that the UAE, does not accept and will not tolerate this illegal trade or the devastating impact it is having on the African elephant, on the livelihoods of rural communities, and sometimes on national and regional security. It also provides a very public opportunity to send a message to those who trade illegally in elephant ivory that the age and origin of their contraband can today be readily identified through the use of modern forensics. Therefore, whatever may happen in the future, illegally traded elephant ivory will never have any commercial value and the return on the 'investment' will most likely be imprisonment, heavy fines, and seized assets."
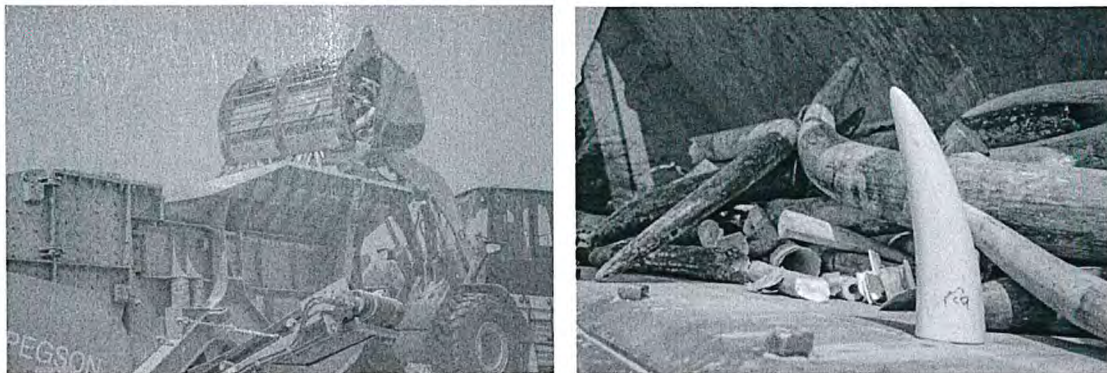
Picture (5): Ivory destruction event held in Dubai, April 2015, in cooperation with Dubai Municipality, Dubai Customs, Dubai Police and IFAW

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- The UAE is devoted to combat the illegal trade of ivory even though it doesn't have a domestic market or demand for ivory, the shipments confiscated in the country are transit shipments passing through the UAE in different forms either raw or worked either carried out by passengers or in shipment containers.

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- Most of seizures have variety of shapes, sizes and colors and this is a challenge in determining whether the shipment is raw ivory or worked. There are no standards and manuals that help countries identify and classify ivory bearing in mind that we have confiscated raw ivory were the sizes varied from 5cm to 4 m.

- The current report doesn't reflect the actual number of seizures for the year 2017, as indicated in the first para on page 2. We are concerned that actions arising from the report will not be appropriate as it's based on data that doesn't represent the full status of illegal global ivory trade.

- In the cluster analysis, the score of the explanatory variables to describe the 13 cluster analysis groups doesn't represent the actual situation of countries in different groups. Specifically "Measures of Law Enforcement Effort Efficiency and Measure of Domestic Ivory Trade", both of which doesn't reflect the actual situation for the UAE as mentioned before the shipments are only transited through UAE.

- The process of selecting the countries from different groups to be categorized in the three category is not clear, in the case of the UAE, it's not clear why the UAE along with 2 other countries from group 7 have been selected to be in category C. Besides, the definition of Category C is not clear and not applicable in the case of the UAE. The country is not affecting the illegal ivory trade in any way.

- It mentioned in the report that the United Arab Emirates made or was implicated in 44 seizures, representing 1,749 kg of ivory presented in table 4 but when reviewing the report, it was not clear which seizures reflect the UAE data as the country is not mentioned in the table.

TRAFFIC's response to the review of the ETIS analysis to CITES CoP18 by Category A, B and C countries

No.	Country	ETIS Report Reference	Comment	Response	Change Report
1.1	Cambodia	Page 15, Group 8, last paragraph	Sentence "*but Cambodia is the outlier on this measure with a domestic ivory market score well above the average* " should be deleted as Cambodia is "less used ivory country and also does not have ivory manufacturers".	Data for Cambodia's market score was taken from: Nguyen, T. & Frechette, J. L. (2017). The market for elephant ivory in Cambodia. *TRAFFIC Bulletin* 29 (2): 65-72. TRAFFIC, Cambridge, United Kingdom. The market surveys were conducted in 2015 and 2016, which fall within the period addressed by the cluster analysis; it showed that both the number of shops and number of products observed increased during this period and suggested the trade was largely driven by Chinese nationals who were the principal consumers. The ETIS report makes no claim about ivory processing in Cambodia, but does note that Cambodia is a 'back door' transit country for ivory going to Viet Nam.	Not necessary
1.2	Cambodia	Page 23, first line, third paragraph	Cambodia should be deleted from the first sentence as it is "not a growing ivory market" and "only plays the role of a transit country".		Not necessary
2.1	China	General comment about treatment of data	Ivory trade between China, Hong Kong SAR and Macau SAR all constitute domestic trade rather than international trade, seizures between these places should be excluded from ETIS and not included in future ETIS reports.	With reference to the report of the 'Verification mission related to the control of internal trade in ivory in China' from 7 –11 March 2005, paragraph 48 of SC53 Doc. 20.1 Annex, states: "*The team was conscious that domestic trade in ivory is also legal in Hong Kong S.A.R., China. For the purposes of trade in specimens of CITES-listed species, 'mainland' China and Hong Kong S.A.R. regard themselves as two different territories and trade between the two requires the issuance of CITES permits or certificates. Each territory has separate legislation implementing the Convention. A Hong Kong citizen, visiting mainland China as a 'tourist', could not purchase an ivory carving from an accredited store and take it home*". It is noted that the government of China endorsed this report when it was presented at SC53. Further, the *Basic Law of the Hong Kong Special Administrative Region of the People's Republic of China* which is the supreme law in Hong Kong SAR and a national law of the People's Republic of China, states in Article 116 that "*the Hong Kong Special Administrative Region shall be a separate customs territory* ". What is stated by the Chinese Management Authority in this response to the ETIS analysis for CoP18 is contrary to what has been the long accepted norm in past ETIS analyses, and formerly China would report many ivory seizures involving Hong Kong SAR, but that is no longer the case. It is noted that in terms of policy, China's legal market has been closed but Hong Kong's still remains open. From an ivory trade perspective, however, TRAFFIC does note that China and Hong Kong SAR are increasingly integrated and that past distinctions of 'separateness' may no longer apply.	Further discussion with China on this matter is warranted, but not necessary to change report.
2.2	China	Comment about the ETIS data in general.	Data collected from NGOs, media or any other means may not be accurate, should be communicated to Parties before using.	Since CITES CoP17, TRAFFIC has been given all of the ETIS data relating to China to the CITES Management Authority on four different occasions (as well as many other times in the past). The CITES MA is always requested to notify TRAFFIC if there are any cases which it disputes. Further, TRAFFIC has written to the Chinese MA in the past asking for confirmation on the validity of ivory seizure cases. TRAFFIC has not received any feedback from China concerning the ETIS data it has provided in the past. Judging by open source media accounts and other sources of data, there is some concern that China is not reporting seizure cases that are internal and do not take place at ports of entry.	Not necessary.
2.3	China	Comment about the ETIS data in general.	1,815 out of 4,420 seizure records involve China without identifying the countries of origin and/or transit and should be classified as unchecked or pending.	In fact, most of these cases were actually officially communicated by China's CITES Management Authority itself to TRAFFIC for inclusion in ETIS. For example, in the period 2008-2017, out of 3,895 records in ETIS in which China was the country of discovery (i.e. China made the seizure), 1,690 records (or 43.4% of the total) did not identify a country of origin, export or transit had been submitted by the government of China. Another 711 cases (32.4%) out of 2,194 seizures made by other countries in which China is identified as the country of destination do not identify a country of origin or country of transit. Again, these cases have virtually all been officially reported to ETIS. For that reason, TRAFFIC does not consider any of this data "unchecked or pending". Finally, it needs to be appreciated that there are many seizure cases in which such trade chain information will not be known, for example, abandoned luggage at an airport with no tags or identifying information, seizures in domestic markets where the provenance of the ivory has been lost, or seizures made at the point of export where the countries of origin or transit remain unknown.	Not necessary.
2.4	China	ETIS data	Seizure data summaries country-by-country should be disclosed to public.	TRAFFIC agrees with this proposal and notes that the Standing Committee requested TRAFFIC at SC70 (October 2018) to compile aggregated summaries of the validated ETIS data on an annual basis for presentation on the CITES website (see SC70 Sum. 12 Rev. 1). TRAFFIC will liaise with the CITES Secretariat to achieve this goal in the near future.	Not necessary.
2.5	China	ETIS methods	The detailed methods and basis of calculation for cluster analysis should be disclosed to public.	The ETIS methods have been published and are available on the internet. The CoP18 report also directs attention to the methods on page 3: "*This report is based upon the analytical framework for ETIS described in Underwood et al., (2013) and Burn and Underwood (2013) with some refinements* ", with full citations provided in References. The methodological 'refinements' are described in the report. TRAFFIC is further endeavouring to make the code used in the ETIS analysis for CoP18 in the public domain. This will be communicated to the Parties in due course.	Not necessary.

3.1	Hong Kong SAR	Table 3, mean number of seizures	The number of seizures is significantly larger than what Hong Kong SAR reported to ETIS.	On page 13, the calculations are given in the report. For the 'mean number' of reported seizures in the period 2015-2017, the total number of seizures each country/territory in the group was involved in is divided by the number of entities in the cluster. Hong Kong SAR is in a cluster with China and, because more seizures involve China than Hong Kong SAR, the mean number of seizures for this group of two is greater than Hong Kong SAR's total, but less than China's total.	Not necessary.
3.2	Hong Kong SAR	Table 3, mean weight of seizures	The weight of seizures is significantly larger than what Hong Kong SAR reported to ETIS.	See response in 3.1 above. The weight of seizures linked to China is greater than the weight of seizures which involve Hong Kong SAR, thus the mean value is larger than what Hong Kong SAR reported to ETIS.	Not necessary.
3.3	Hong Kong SAR	Table 3, proportion of large-scale seizures to mean weight	The calculation used does not conform with Hong Kong SAR records and believes that number, rather than weight, of large-scale seizures is a better measure.	TRAFFIC believes that weight affords a far better measure for assessing the involvement of organised crime than number of seizures. To illustrate, nine 1 kg ivory seizures and one 1,000 kg ivory seizure would provide a value of 10% if calculated by number but 99% if calculated by weight; these values convey very different levels of significance and we believe that weight better characterises the situation. Thus, the proportion of the total weight of seizures that derives from large-scale seizure events (those 500 kg or more) is thus used to assess this issue.	Not necessary.
3.4	Hong Kong SAR	Page 20, second paragraph	Does not believe statements about China and Hong Kong SAR being a "collective ivory market" or that "there is little to suggest that the two entities function separately" as markets is justified.	This comment is contrary to the comment from China noted In 2.1. The key question is whether or not the ivory trades of Hong Kong SAR and China are sufficiently integrated to be considered a collective ivory market even though the policy prescriptions may be different. In fact, the ETIS data show that many, possibly a majority, of Hong Kong SAR's seizures involve ivory destined for the Chinese mainland. Various ivory market surveys in Hong Kong SAR have indicated that mainland Chinese are the principal consumers of ivory in the territory (see Lau *et al*., 2017; Martin & Vigne, 2015 in the references of the ETIS analysis to CoP18). Finally, it appears that most of the couriers that have been arrested in Hong Kong SAR carrying worked ivory ivory products from Africa to Asia are transiting through Hong Kong SAR to China. In terms of higher-level organised criminal activity, the EIA report *The Shuidong Connection: Exposing the global hub of the illegal ivory trade,* documented evidence of financiers and operatives based in Hong Kong collaborating on the movements of some large-scale ivory shipments from Africa to China. For these reasons, TRAFFIC believes that the ivory trades of China and Hong Kong SAR are now highly integrated.	Not necessary.
4.1	Singapore	ETIS data	TRAFFIC did not ask Singapore to verify this data prior to using it for the ETIS analysis.	Firstly, TRAFFIC strongly believes that the countries who make and report seizures to ETIS have the primary responsibility for informing other nations implicated in their seizure cases. It needs to be appreciated that such data may only come to TRAFFIC a year or more after the seizure event has actually occurred. Secondly, TRAFFIC has shared the data in ETIS relating to Singapore with the government authorities in that country on several occasions. The CITES MA is always requested to notify TRAFFIC if there are any cases which it disputes and Singapore has done so on one occasion through a public document (see SC69 Doc. 29.3 Annex 5, page 16, paragraph 31) and once, very recently, through direct communication to TRAFFIC. TRAFFIC appreciates receiving comments on specific cases from government authorities. (Also see response in 4.2 and 4.3 below).	Not necessary.
4.2	Singapore	ETIS data	Singapore has found at least one inaccurate data point from Australia.	TRAFFIC explained this situation in SC69 Inf. 22, page 8, 1.9 Management Comment: "*Concerning apparent discrepancies with ETIS records provided by the Government of Australia, TRAFFIC does not believe that unverified data was used in the ETIS analysis, but rather that the status of previously validated seizures was changed at the instigation of the Government of Australia subsequent to CoP17. Between 1996 and 2017, the Government of Australia has duly reported 145 seizure cases to ETIS involving ivory products for which Singapore was identified as country of origin, export, transit or destination. Two seizure cases in this dataset which entailed two worked ivory pieces with an estimated total weight of 1.4 kg, (together with 33 other seizure cases involving other nations), were retracted by the Government of Australia in correspondence dated 26 June 2017. All of these cases had previously been reported to ETIS between 2013 and 2015 by the Government of Australia but, owing to various decisions, including legal actions taken that resulted in the release of the seized elephant products in question, these cases no longer constituted seizure cases for inclusion in ETIS. TRAFFIC has duly followed these instructions and none of these records are now eligible for inclusion in any future ETIS analyses (including the one before SC69). Concerning the other two cases noted by Singapore above, neither the Governments of Singapore nor Australia have yet brought these cases to the attention of TRAFFIC, or requested that they be investigated or retracted. TRAFFIC awaits information that could potentially change the status of another two cases that relate to Singapore. Finally, because these cases involve very small weight values and fall in the worked ivory small weight class, it is not likely that the results of the ETIS analysis to CoP17 would have been altered in any measurable way had these cases been removed prior to analysis*". Singapore has never communicated to TRAFFIC the ETIS reference numbers concerning the specific outstanding cases it disputes. Again, TRAFFIC awaits further information on which cases Singapore disputes.	Not necessary.
4.3	Singapore	ETIS data	Concerned that "unverified data, including incomplete/or inaccurate date continues to be used in the analysis by TRAFFIC".		Not necessary.
4.4	Singapore	Page 15, Group 8, paragraph 4	Concerned that the comment about Group 8, "in which Singapore was placed" "*ranks low in terms of the frequency measure as seizures are rarely made and reported to ETIS* " as Singapore reports all ivory seizures.	TRAFFIC did not 'place' Singapore into Group 8, but rather a statistical analysis was conducted in which the data for Singapore were very similar to that for three other countries that ended up aligning together in the dendrogram. In terms of the number of seizure cases, these countries all reported very few cases themselves. The wording in this sentence is not meant to imply that Singapore's record of seizures is incomplete and goes unreported to ETIS, but rather that TRAFFIC only knows what has been reported to ETIS.	Change text so it cannot be misconstrued that Singapore is not reporting seizures.

4.5	Singapore	ETIS methods	Concerned about "the use of proxy variables to obtain the estimates used for the cluster analysis" as "proxy variables are likely weakly related to both seizure and report rates".	Singapore initially raised this issue concerning proxy variables at the 69th meeting of the CITES Standing Committee in SC69 Doc. 29.3 Annex 5 under the subheading *Singapore's Concerns with the ETIS Report* on page 15, paragraph 25. TRAFFIC provided a comprehensive response in SC69 Inf. 22 in 1.3 on page 4. The ETIS methodology is an issue that will be further examined in the context of the review of the ETIS programme (see SC70 Doc. 49.3 and SC70 Com. 15).	Not necessary.
4.6	Singapore	ETIS methods	Concerned about the "use of Deviance Information Criteria to select these proxy variables".	Singapore initially raised this issue of the Deviance Information Criteria at the 69th meeting of the CITES Standing Committee in SC69 Doc. 29.3 Annex 5 under the subheading *Singapore's Concerns with the ETIS Report* on page 15, paragraph 25. The TRAFFIC statisticians provided a comprehensive response in SC69 Inf. 22 in 2.5.3 on pages 12-13. The ETIS methodology is an issue that will be further examined in the context of the review of the ETIS programme (see SC70 Doc. 49.3 and SC70 Com. 15).	Not necessary.
4.7	Singapore	ETIS methods	Concerned that "while TRAFFIC has introduced the new Trade Chain Index to attempt to reduce this bias, the use of the LE Ratio as a proxy variable to determine seizure rates across countries remains questionable".	Singapore initially raised issues about the Law Enforcement Ratio (LE Ratio) at the 69th meeting of the CITES Standing Committee in SC69 Doc. 29.3 Annex 5 under the subheading *Singapore's Concerns with the ETIS Report* on page 15, paragraph 27. TRAFFIC provided a comprehensive response in SC69 Inf. 22 in 1.5 on page 6 and in 2.5.1 on page 12 in the response from the ETIS statisticians. Further, as noted in the ETIS analysis on page 4, paragraph 2, to further refine the effect of the LE Ratio, the Trade Chain Index was developed to work in tandem with the LE Ratio. The ETIS methodology is an issue that will be further examined in the context of the review of the ETIS programme (see SC70 Doc. 49.3 and SC70 Com. 15).	Not necessary.
4.8	Singapore	ETIS assumptions	Concerned about using "the proportion of large-scale ivory seizures to mean weight as a proxy variable to measure organised crime" as Singapore disagrees with the assumption that "large-scale movements of ivory are likely to represent organised criminal activity".	It is widely believed amongst professional criminal analysts that large-scale ivory movements are the work of organised criminal activity. For example, the World Bank's *Elephant Crime Intelligence System Assessment* of March 2015 states that "*such sizable seizures of ivory are clear indicators of a growing presence of transnational organized crime groups and networks in the financially lucrative trade in ivory*". This report from the World Bank was a contribution to the International Consortium Combatting Wildlife Crime (ICCWC) partnership of which it is a member; ICCWC is chaired by the CITES Secretariat. The basis for Singapore's disagreement with this assumption is unclear to TRAFFIC. Finally, it is worth noting that this variable is a proxy measure that is only used to describe the clusters; it is not used to obtain any estimates or to determine the clusters.	Not necessary.
4.9	Singapore	Singapore's role in the trade chain	"The alleged use of Singapore as a transit point for illegal ivory shipments by organised crime syndicates was addressed during the CITES Secretariat's mission to Singapore in April 2017".	SC69 Doc. 29.3 Annex 4, the Secretariat's mission report to Singapore in April 2017 describes Singapore "*as a Party that serves almost exclusively as a transit country in the illegal ivory trade chain*". The EIA report, *The Shuidong Connection: Exposing the global hub of the illegal ivory trade*, which is mostly based on direct interactions and observations of a major transnational criminal syndicate operating between Africa and China, reported: "*The routing of the container is another vital factor in minimising the risk of interception. Direct transport from Africa to China is considered too great a risk, so transit ports are used to disguise the origins of the shipment. As Xie explained:* 'The goods can't come directly from Africa. They must first go to Singapore or elsewhere. There must be a transit point. If they came directly from Africa, they would definitely check the container'." Xie Xingbang was one of this gang's operatives, having personally shipped illegal ivory from Africa to Asia on multiple occasions; he has since been taken into custody in Tanzania, repatriated and tried in China, and is currently serving a six year prison sentence.	Not necessary.
4.10	Singapore	Methods	"It remains unclear to us why clustering, which is a descriptive technique, is used as a basis for decision-making or inference about individual countries" because of "the lack of justification and inconsistencies across ETIS reports (e.g. the cut-off point in the dendrogram, which determines the number of clusters".	Singapore initially raised the issue of the efficacy of the cluster analysis at the 69th meeting of the CITES Standing Committee in SC69 Doc. 29.3 Annex 5 under the subheading *Singapore's Concerns with the ETIS Report* on page 16, paragraph 29. TRAFFIC provided a comprehensive response in SC69 Inf. 22 in 1.7 on page 7 and in 2.3 on page 11 in the response from the ETIS statisticians. The ETIS methodology is an issue that will be further examined in the context of the review of the ETIS programme (see SC70 Doc. 49.3 and SC70 Com. 15).	Not necessary.
5.1	Viet Nam	General comments	"The content of the report is not subjective"	TRAFFIC generally agrees with this statement and has always strived to make the ETIS analysis as objective as possible.	Not necessary.
5.2	Viet Nam	General comments	The report "does not reflect the efforts of the Parties in tackling illegal ivory trade".	The methods used to assess illegal trade in ivory through ETIS do attempt to measure law enforcement effort and correct for bias in the data in a general sense. It is recognized, however, that the impact of specific actions taken to curb illegal ivory trafficking and trade may not immediately reflect in seizure data for a variety of temporal or spatial reasons, including poor implementation, corruption, the on-going adaptations that characterise the modus operandi of criminal syndicates, and a host of other factors. Our experience is that over time improved law enforcement performance by countries is reflected in ETIS results as there are numerous examples of countries who were, for example, considered to be Category C countries in the past but are now in lesser categories of the NIAP process or, in some cases, have completely exited the process.	Not necessary.

5.3	Viet Nam	General comments	"The report uses indicators out of the mandate of the report itself".	Paragraph 11 of Resolution Conf. 10.10 (Rev. CoP17) directs the CITES Secretariat to "*report on information and analyses provided by MIKE and ETIS at each meeting of the Conference of the Parties* ". Annex 1 of Resolution Conf. 10.10 (Rev. CoP17) establishes the overarching terms of reference for the ETIS analysis but it does not prescribe indicators that can be used in the analysis. Thus, it is not clear which indicators used in the ETIS analysis are considered to be beyond the mandate of the ETIS report to CITES CoPs. TRAFFIC strives to use indicators that are relevant to understanding illegal trade in ivory and the environment in which this trade operates.	Not necessary.
5.4	Viet Nam	General comments	"The data is collected in different period and from different sources", with "the period of 2008-2017 including 2018 data".	Viet Nam's data set for the cluster analysis, like that for any other country/territory in the ETIS analysis, only included seizure data from 2015 through 2017. We believe that all 2018 seizure records were excluded from consideration. It also needs to be appreciated that, for the target years, the data for all countries includes both the number and weight of seizures that they made themselves, plus the number and weight of seizures in which they were identified in the trade chains of seizures made by other countries.	Not necessary.
5.5	Viet Nam	General comments	"The classification of ivory based on weight applied for specimens less than 500 kg is out of the mandate of the ETIS report".	TRAFFIC believes that Viet Nam is referring to paragraph 22 of Resolution Conf. 10.10 (Rev. CoP17) which establishes that seizures which are 500 kg or more be forensically examined to determine the origin and age of specimens. This threshold applies to the size of illegal consignments for which the CITES Parties recommend mandatory forensically examination, but it is not applied to ETIS in terms of monitoring illegal trade in ivory in general. Annex 1 of the same resolution states: "*All Parties, through their CITES Management Authorities, following liaison with appropriate law enforcement agencies, should provide information on seizures and confiscations of ivory or other elephant specimens in the prescribed formats either to the Secretariat or directly to TRAFFIC within 90 days of their occurrence.* " This recommendation does not specify the size of a seizure. From the very beginning, ETIS has always contained the records of ivory seizure cases that were less than 500 kg. ETIS	Not necessary.
5.6	Viet Nam	General comments	"Resolution Conf. 10.10 (Rev. CoP17) '*urges Parties to collect samples from large-scale ivory seizures (i.e. a seizure of 500 kg or more) that take place in their territories* ', but "some Parties provide data of seizures less than 500 kg" which causes "inconsistency in reporting and data analysing".	training materials state: *"'Seizure' is used by ETIS as a broad term to encompass actions in which ivory and other elephant products are taken into the custody of government authorities. These include seizures (i.e. legally mandated seizure of illegal products), confiscation (i.e. seizure of products by special order), forfeiture (i.e. products voluntarily surrendered to authorities) and abandonment (i.e. products found abandoned by smugglers or poachers). Any quantity of ivory or other elephant product can comprise a seizure."* Thus, seizures of any weight are considered in the ETIS analysis that uses weight classes to assess the data; these weight classes are described in the report and have characterised the ETIS analysis since CoP16.	Not necessary.
5.7	Viet Nam	Page 3, Table 2	Title of table says "estimated number of large-scale (>500 kg) which have been forensically examined …"; should not be an estimation and the "accurate figure" should be published.	TRAFFIC uses the word "estimated" in this table because the ETIS data only reflects what has been reported to ETIS at a particular point in time. It is recognised that there may be other cases for which forensic examination has occurred but were never reported to ETIS. Also, "estimated" is used because not all seizures reported to ETIS provide a weight and so in some cases it is necessary to estimate weight from pieces. Thus, the word 'estimated' is used in recognition of these facts.	Not necessary.
5.8	Viet Nam	Page 4, A note on methods	This note "does not clarify the method for data bias adjustment".	The method for bias adjustment is further explained in: Underwood, F.M., Burn, R.W., Milliken, T. (2013). Dissecting the Illegal Ivory Trade: An Analysis of Ivory Seizures Data. PLoS One 8 (10): e76539. This report can be downloaded directly from the internet: https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0076539	Not necessary.
5.9	Viet Nam	General comment of methods	Requests that the "Law enforcement effort ratio (LE ratio)" not be used in the report, believing that assessment of the law enforcement capacity of countries in not in the mandate of the ETIS report and that it is not a detailed tool.	The law enforcement effort ratio (LE Ratio) is described on page 4, paragraph 5 and its calculation with respect to the cluster analysis is described in the fourth note under Table 5 on page 11. The LE Ratio is derived from the ETIS data directly and is used in bias adjustment for understanding varying rates of seizures by countries. These methods have been peer reviewed (see Underwood *et al.* , 2013 immediately above) and TRAFFIC believes that the use of the LE Ratio as described in the ETIS analysis to CoP18 leads to more robust results in terms of understanding patterns, trends and the role of various players in the illegal ivory trade.	Not necessary.
5.10	Viet Nam	General comment of methods	Requests "to consider using the Trade Chain Index (TCI) due to low accuracy of the input data".	TRAFFIC believes that this comment meant to use the word 'reconsider' rather than 'consider'. TRAFFIC believes that the Trade Chain Index (TCI) is a necessary refinement that improves the ETIS analysis by strengthening the LE Ratio as described on page 4, paragraphs 2 and 3.	Not necessary.
5.11	Viet Nam	General comment on data	Requests that "TRAFFIC not use unofficial information not provided by Parties".	TRAFFIC can report that, in the analysis to CoP18, 12,275 seizure records out of 13,190 cases in total (or 93%) were received from government authorities or the World Customs Organization. Of the 915 records that came from other sources, 889 (97.2%) of these cases were formally shared with government authorities in the countries in which the seizures reportedly took place (including all NIAP countries and elephant range States); TRAFFIC can further report that none of these countries subsequently disputed the validity of any of these seizure records. The remaining 26 records (two tenths of one per cent by number) were considered to be valid by TRAFFIC, of which 14 of these records were in the period 2015-2017 and therefore used in the cluster analysis. Only one of these records concerned a country which was subsequently identified as a Category C country in this analysis, and that concerned a media report of a seizure in Turkey involving a single worked ivory product that weighed an estimated 490 grams. TRAFFIC believes that it is trying its best to validate all seizure records in ETIS responsibly.	Not necessary.

5.12	Viet Nam	General comment on report content	Requests that "documents, reports of EIA, TRAFFIC and other NGOs [not be used] as official references for ETIS reports".	TRAFFIC believes that that the reports which are referenced in this ETIS analysis to CITES CoP18 are all credible pieces of research and provide important independent observations about the state of the illegal ivory trade in the period under examination. There are four EIA reports cited in the ETIS analysis to CoP18; it is TRAFFIC's belief that none of these reports were based on questionnaires and interviews. Again, TRAFFIC believes that the citations from these reports provide credible information, support and context for the statements that are being made in the ETIS analysis to CoP18.	Not necessary.
5.13	Viet Nam	General comment on report content	"The content of the EIA report does not include reliable data but is largely based on results from questionnaires, interviews".		Not necessary.
5.14	Viet Nam	General comment on report content	"The TRAFFIC reports was prepared by authors who had no expertise in ivory, wildlife; data has not been verified, and had no consultation with Vietnamese scientific and enforcement agencies before publication".	With respect to the TRAFFIC report (Nguyen, M. D. T., Indenbaum, R. A., Willemsen, M. (2018). *From Tusk to Trinket: Persistent Illegal Ivory Markets in Viet Nam* . TRAFFIC Ha Noi, Viet Nam), the standard methodological framework for market surveys was employed using trained surveyors skilled in the identification of ivory products. The report was peer reviewed within TRAFFIC and the results were shared with a government agency in Viet Nam, specifically the Ministry of Public Security.	Not necessary.
5.15	Viet Nam	Page 6, Figure 3, Transaction Index	Contests that data on seizures which are less than 10 kg should not be used.	See comment for Viet Nam 5.5 and 5.6.	Not necessary.
5.16	Viet Nam	Page 7, paragraph 2	Requests the exclusion of the statement: "*The overall conclusion is that there is a strong suggestion that the illegal ivory trade transactions have declined to some degree from peak levels, but the downward trend is still within the confidence bounds of the peak value. A precautionary interpretation is that the illegal ivory trade has more or less been fairly stable over the last two, possibly three, years* ".	This comment sums up the Transaction Index that depicts illegal ivory trade activity over time. TRAFFIC believes that it is an accurate explanation of the results of this analysis. It needs to be appreciated that this report is reviewed by the members of the MIKE-ETIS Technical Advisory Group (TAG) prior to being presented to the CITES Parties. The scientists who are members of the TAG were in agreement that this comment describes the results of this analysis. TRAFFIC does not believe it should be excluded.	Not necessary.
5.17	Viet Nam	Page 5, Figure 5, Weight Index	Requests the exclusion of Figure 5 "due to lack of data".	Figure 5, which presents the Weight Index by ivory types and weight classes, is based on assessment of 13,190 seizure records from 66 countries around the world. TRAFFIC does not believe that there is a lack of data overall, however, as indicated in the report on page 2, we do caution that the dataset for 2017 probably under-represents the true picture for illegal ivory trade in that particular year; with respect to Table 5, we therefore expect that the values presented for 2017 will increase by some (as yet) unknown margin in future iterations of the ETIS trend analysis. But we do not believe that this figure should be excluded from the report.	Not necessary.
5.18	Viet Nam	Page 10, Cluster analysis	Requests to review the accuracy of the data used in the cluster analysis.	TRAFFIC is happy to show and review the data used in the cluster analysis with the government of Viet Nam.	Not necessary, but TRAFFIC is happy to share the data used in the cluster analysis with Viet Nam.
5.19	Viet Nam	Page 12, Table 3, data sources	Wants to either remove Table 3 or review data on LE ratio, CPI and domestic ivory market.	Table 3 presents ETIS data and other factors that serve to explain the characteristics of the countries or territories that fall in the various clusters. TRAFFIC is more than happy to share all of the data that relate to Viet Nam and ensure that the LE Ratio, CPI and domestic ivory market scores are accurate.	Not necessary, but share data with Viet Nam.
5.20	Viet Nam	Page 14, paragraph 4	Request the exclusion of the statement: "*Long recognized as a major Asian destination and transit conduit for large quantities of ivory, the illegal ivory trade situation in this analysis is comparatively more problematic. In terms of the mean number of seizures, Viet Nam is in the fourth position, however, with respect to the quantity of ivory in trade it holds the number one position with a value that is double the second place position and nearly three times greater than the third place position, a rather remarkable result. Nearly 70% of the weight value comprises large-scale ivory movements signalling the presence of organised criminal syndicates in the trade. At 46%, the LE Ratio is just fair, but the measurement for corruption using CPI scores is the second poorest in this analysis. Viet Nam also has the second highest domestic ivory market score in this analysis* ".	TRAFFIC believes that this description of the data that relates to Viet Nam represents an accurate and objective assessment in this analysis. The variables used to describe the characteristics of Viet Nam's ivory trade should be familiar as they are the same as what was previously used in ETIS analyses presented to the CITES Parties. TRAFFIC does not believe that this description of the variables that relate to Viet Nam should be excluded from this analysis.	TRAFFIC will add references for various statements. TRAFFIC will also share the values mentioned with the Vietnamese government.

5.21	Viet Nam	Page 18, paragraph 2	Requests to review the statement: "*Despite addressing a series of issues in its NIAP, Viet Nam's status in the current analysis has worsened considerably. It is of concern that, in terms of scale, the estimated weight value for illegal ivory trade that involves Viet Nam has increased by one-third compared to what was found in the period 2012-2014 for the CoP17 report; this substantial increase is particularly noteworthy as it simultaneously occurs when the total estimated weight of ivory in illegal trade in the period 2015-2017 has actually shown a marked decline of around 20% over the previous three-year period*" because it is a "subjective judgement in the context of Vietnam's new Penal Code".	TRAFFIC acknowledges that reformation of the Penal Code for wildlife crime offences in Viet Nam represents a major step forward in terms of policing illegal ivory trade in the country. However, the new penalties only went into effect on 1 January 2018 and thus were not applicable during the time frame of the cluster analysis for this report, which addresses the years 2015-2017. TRAFFIC looks forward to the successful implementation of the new Penal Code in Viet Nam and would expect that such impact would be seen in the next iteration of the cluster analysis for CoP19. Again, TRAFFIC is happy to share the data that are behind this statement in the ETIS analysis with the government of Viet Nam.	Not necessary.
5.22	Viet Nam	Page 18, paragraph 2	Requests the exclusion of the statement: "*Based on the data available for this report, Viet Nam now functions as the leading destination for illicit ivory, surpassing China (including Hong Kong), which previously accounted for the majority of the weight value in every previous ETIS analysis since CoP12 in 2004*" because it lacks "a basis".	The basis for this statement, using the raw data reported to ETIS, are the mean weight values of the various cluster groups and of China and Hong Kong SAR individually. TRAFFIC is prepared to share the data with the Vietnamese government to show that this comment has a basis in fact in the ETIS data.	Not necessary.
5.23	Viet Nam	Page 18, paragraph 2	Requests the exclusion of the statement: "*Ivory processing continues to be documented in Viet Nam and a range of ivory products move through the country's illegal retail outlets and internet/social media trading channels, servicing both domestic clients as well as large numbers of cross-border buyers from China (Nyugen et al., 2018; WJC & IISD, 2016; Vigne & Martin, 2016)*" because it is "based on unspecified, inferential references" and some arrests have been made in 2018.	TRAFFIC believes that this statement is accurate. The independent references behind these comments will attest to the fact that ivory processing and retail trade in ivory products has been documented on numerous occasions in Viet Nam. The reports in this regard are specified and involve a range of sources observing the situation in Viet Nam independently of TRAFFIC. Again, the period of the cluster analysis is 2015-2017. TRAFFIC is pleased to learn that arrests have been made in 2018. In the meantime, there is no reason to remove this sentence from the ETIS analysis at this time.	Not necessary.
5.24	Viet Nam	Page 18, paragraph 2	Requests the removal of the statement: "*Finally, law enforcement data strongly indicates that Vietnamese syndicates are operating from hubs in Africa, especially in Angola, Congo, Mozambique South Africa and Togo, to move ivory from Africa to Asia, often directing shipments to Malaysia, Lao PDR or Cambodia before moving the ivory on to Viet Nam (EIA, 2018a)*" because the content of the EIA report does not include reliable data but is largely based on results from questionnaires, interviews".	TRAFFIC believes that this comment is an accurate reflection of the situation. Seizure data reported to ETIS by the named African countries have involved the arrest of Vietnamese nationals on various occasions. The EIA report also provides significant detail on named Vietnamese individuals who are allegedly moving illegal ivory shipments from Africa to Viet Nam or other countries. There is a documented factual basis behind this description and TRAFFIC does not believe that this sentence should be removed from the ETIS analysis to CoP18.	Not necessary.
5.25	Viet Nam	Final remarks	Requests the Secretariat not to submit this document to CoP18 if TRAFFIC does not revise the report based on the comments of Viet Nam and other Parties.	TRAFFIC is prepared to correct any inaccuracies in this report and to work directly with individual Parties to ensure that there is mutual understanding concerning what the ETIS data relating to them show. TRAFFIC hopes this is the case with Viet Nam and all other Parties.	Not necessary.
6.1	United Arab Emirates	General comment on report content	"The shipments confiscated in the country are transit shipments passing through the UAE in different forms either raw or worked either carried out by passengers or in shipment containers."	TRAFFIC agrees with this statement and has accurately characterised the UAE in the ETIS analysis to CoP18 as "a major transit hub connecting Africa with Asia". We have no evidence that UAE plays any other role in the illegal ivory trade.	Not necessary.
6.2	United Arab Emirates	General comment on report content	"There are no standards or manuals that help countries identify and classify ivory."	This is not exactly an ETIS issue, but a number of NGOs have developed various training tools that provide guidance on the identification of elephant ivory. Further, the CITES Secretariat, through its website, distributes the U.S. Fish and Wildlife Service manual on the observable and forensic characteristics of various ivories, including elephant and mammoth ivory, see: Espinoza, E.O. and Mann, M.J. (1991). *Ivory Guide for Ivory and Ivory Substitutes* . U.S. Fish and Wildlife Service, Forensic Laboratory, Ashland, Oregon, USA. https://www.cites.org/sites/default/files/eng/resources/pub/E-Ivory-guide.pdf	Not necessary.

6.3	United Arab Emirates	Page 2, paragraph 1	Data for 2017 does not reflect the actual number of seizures so results are questionable.	with reference to 5.17, TRAFFIC agrees that the dataset for 2017 will grow in the future as many additional seizure cases for that year have become apparent since the database was closed for the CoP18 analysis. This is stated in the report as indicated in UAE's comment and is especially relevant in terms of understanding that the apparent decreases in illegal ivory trade activity and its weight for 2017 could change and move upward in the future. Further, the 2017 data are not exclusively used in this report, for example, in the cluster analysis, three years of data are combined, 2015-2017, thus the patterns that emerge are far more robust than a single year. Finally, it needs to be appreciated that no ETIS report to CITES has ever represented the "actual number of seizures" that have occurred around the world for any particular year. However, by correcting for bias in the data concerning rates of seizures and rates of reporting, TRAFFIC believes that the ETIS results do represent the best estimate of the actual trade.	Not necessary.
6.4	United Arab Emirates	Cluster analysis explanatory variables	Cluster analysis explanatory variables do not represent the actual situation of countries in different groups and, in the case of UAE specifically, the measures of Law Enforcement Effort and Efficiency and Domestic Market Trade do not reflect their situation.	In the cluster analysis, countries which have similar characteristics align in close proximity in the dendrogram. The explanatory variables for each cluster group are presented as mean values for the entire group and it may be the case that certain mean values do not serve to adequately describe the situation in all countries in the cluster. TRAFFIC can report that, in fact, UAE had the lowest Domestic Ivory Market score of the group, which means there is no domestic trade in ivory to speak of in the country, and the fourth highest score in terms of the Corruption Perception Index (i.e. high scores represent low levels of corruption). However, the Law Enforcement Ratio was the second lowest, meaning that a considerable number of ivory transactions pass through UAE without being detected.	<mark>Amend text to make sure that it is clear that UAE is well below the mean in terms of the Domestic Ivory Market score.</mark>
6.5	United Arab Emirates	The selection of Category 3 countries	The process of selecting countries from different groups to be Category C countries is unclear.	Unlike Category A and B countries which fall together in the cluster analysis, Category C countries are determined by assessing individual country data and noting particular issues that deserve further attention going forward. In the case of UAE, this was done because a considerable number of seizure cases associated with the illegal export of worked ivory products from Africa to Asia passed through UAE undetected. The pattern in the data showed that the flights of certain airlines were repeatedly used, both from Africa to Dubai and then onward from Dubai to Asian destinations. Concerning the process for identifying Category C countries, it is largely subjective and that is the reason why, in Resolution Conf. 10.10 (Rev. CoP17), Annex 3, Step 1, c, "there is a presumption that Parties categorised as of 'importance to watch' [now Category C] are not recommended for participation in the NIAP Process".	No necessary.
6.6	United Arab Emirates	ETIS data	Seizure data relating to UAE that is mentioned in the report is unclear.	TRAFFIC has given all of the seizure data that relates to UAE to the CITES Management Authority. TRAFFIC is prepared to share with the authorities in UAE the exact calculation concerning the precise figures that are mentioned in the report.	Not necessary.

TENTATIVE BUDGET AND SOURCE OF FUNDING FOR THE IMPLEMENTATION OF DRAFT
RESOLUTIONS OR DECISIONS

According to Resolution Conf. 4.6 (Rev. CoP16) on *Submission of draft resolutions, draft decisions and other documents for meetings of the Conference of the Parties*, the Conference of the Parties decided that any draft resolutions or decisions submitted for consideration at a meeting of the Conference of the Parties that have budgetary and workload implications for the Secretariat or permanent committees must contain or be accompanied by a budget for the work involved and an indication of the source of funding.

The estimated budget for the implementation of ETIS (2020 – 2023) is presented below. Provision has been made for ETIS in the proposal submitted to the European Union for the next phase of the implementation of the MIKE Programme. As mentioned in Annex 2 of document CoP18 Doc. 69.2, the European Union indicated that it will not be able to provide funding to cover the full cost reflected in the budget proposal submitted for the MIKE Programme in Africa for 2020 – 2023 and therefore additional funding will have to be secured to cover the total cost associated with the ETIS programme (shortfall of approximately USD 200,000).

Result area	Budget
The operational integrity of ETIS as a world class monitoring system tracking illegal trade in ivory and other elephant products is maintained.	USD 360,000
An on-line ETIS website for the benefit of the CITES Parties in two languages is maintained.	USD 100,000
Monitoring techniques, research protocols and analytical methods for understanding the drivers, trade routes, markets and other related factors behind illegal trade in elephants and elephant products are refined and/or developed.	USD 218,000
Analytical results, data and information from ETIS to support decision making for, and foster awareness and understanding of, elephant product trade is produced, disseminated and communicated.	USD 202,000
Total	**USD 880,000**