

**REVIEW OF IMPLEMENTATION OF RESOLUTION CONF. 12.5 (REV. COP16)
ON CONSERVATION OF AND TRADE IN TIGERS AND OTHER APPENDIX-I
ASIAN BIG CAT SPECIES***

Report to the CITES Secretariat for the 65th meeting of the Standing Committee

Kristin Nowell, CAT and IUCN Cat Specialist Group
and
Natalia Pervushina, TRAFFIC

With additional support from WWF

Table of Contents

Section	Page
Executive Summary	2
1. Introduction	8
2. Methods	11
3. Conservation status of Asian big cats	12
4. Seizure records for Asian big cats	13
4.1. Seizures – government reports	13
4.1.1. International trade databases	13
4.1.2. Party reports to CITES	18
4.1.3. Interpol Operation Prey	19
4.2. Seizures – range State and NGO databases	20
4.2.1. Tigers	21
4.2.2. Snow leopards	25
4.2.3. Leopards	26
4.2.4. Other species	27
5. Implementation of CITES recommendations: best practices and continuing challenges	28
5.1. Legislative and regulatory measures	28
5.2. National law enforcement	37
5.3. International cooperation for enforcement and conservation	44
5.4. Recording, availability and analysis of information	46
5.5. Demand reduction, education, and awareness	48
5.6. Prevention of illegal trade in parts and derivatives from captive facilities	53
5.7. Management of government and privately-held stocks of parts and derivatives	56
5.8. Recent meetings relevant to Asian big cat conservation and trade control	60
6. Recommendations	62
References	65

* 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.

Executive Summary

Introduction. Asian big cats (“ABCs,” including tiger, snow leopard, clouded leopards, and subspecies of leopard, cheetah and lion) are listed in the top three categories of threat on the IUCN Red List, with illegal trade included among the threats to their survival. They are all included in CITES Appendix I, so that all international commercial trade is prohibited, although there is a sizeable international trade in captive-bred live animals, particularly tigers, which can be for commercial purposes. CITES Parties have over the years adopted, through Resolution Conf. 12.5 on *Conservation of and trade in tigers and other Appendix-I Asian big cat species* (last revised at the 16th meeting of the CITES Conference of the Parties [CoP16] in March 2013) (“the Resolution”) and related Decisions, a series of measures to regulate trade and promote Asian big cat conservation. This review provides background on the conservation status and illegal trade of ABCs, and identifies current best practices and continuing challenges in implementation of the Resolution, highlighting significant developments since CoP16. Much of it focuses on tigers, reflecting that the Resolution was originally developed to address tiger trade, with its particular dynamics, although information on other species is also included where possible.

Methods. Information for this review was gathered from contributions from Parties, international governmental organizations, nongovernmental organizations, as well as public sources (the Internet).

Overview of illegal trade through seizure analysis. Seizures reported in the CITES Trade Database and EU-TWIX database, which are most complete for the United States and Europe, show that tiger derivatives are detected most frequently (thousands of units seized annually), followed closely by leopard derivatives, with China and Viet Nam being the main countries of origin and/or export. The vast majority of these items are seized at airports from travelers carrying these items for personal use.

In contrast, few derivative seizures have been reported from the range States, where tiger skins are the most common seizure item for this species, followed by bones. Also, an increasing number of live animals and frozen bodies are being detected, with more than 50% of live tiger seizures over the past 14 years occurring since 2010, and it is suspected that many of these may be of captive origin, which should be verifiable more often in the future with development of captive DNA databases and more regular forensic analysis of seizures. Overall, the estimated number of tigers represented by the seizures has grown since 2000, from below 100 annually to approximately 150 annually. India, highlighted several times in this review for best practices and exemplary implementation of the Resolution, has made progress conserving tigers and reducing poaching, with an increasing tiger population and declining levels of reported poaching and seizures. However, for leopards in India there is a high ongoing seizure rate averaging 3.5 leopard seizure cases of leopard per month since 2000, indicating a persistent challenge. Preliminary information indicates that the equivalent of more than 300 snow leopards have been seized in range States since 2003, mainly skins but also bones, skulls and teeth. Few seizures have been reported for clouded leopard (30) or lion (1 trophy and unspecified number of claws) in the range States.

Implementation of the Resolution: best practices and continuing challenges. It is clear from seizures analyses that illegal trade remains an ongoing threat to Asian big cats (and especially the tiger) and a challenge for law enforcement, underlining the importance of implementing best practices as called for in the Resolution. This review is focused on

major progress and problems, and as such is not a comprehensive overview of all relevant Parties implementation efforts. It focuses on eight key elements of the Resolution as enumerated in the headings below.

1. Legislative and regulatory measures. Best practices: Legislation and regulations with increased penalties to deter illegal wildlife trade were enacted in Bhutan, Japan, Russia and Viet Nam in 2013, and India's comprehensive legal protections and internal trade prohibitions for Asian big cat parts and derivatives are highlighted as a case study contributed by the Wildlife Protection Society of India. **Continuing challenges:** policies need continued improvement and attention, and several countries are developing or amending legislation to strengthen species protections and internal trade controls. The Resolution urges Parties to "voluntarily prohibit internal trade in parts, derivatives and products" and it appears that almost all have, except that these restrictions do not necessarily extend to items of captive-bred origin. In particular, China has systematically exercised internal trading privileges for companies dealing in big cat skins and derivatives, produced mainly but not exclusively from captive breeding. It is not evident that any sale restrictions apply (e.g., for non-commercial purposes as should be required for wild specimens), nor how permitted sales are monitored and enforced.

2. National law enforcement. Best practices: A number of innovative enforcement measures have been taken in countries including Afghanistan, Cambodia, China, India, Kyrgyzstan, Lao People's Democratic Republic, Malaysia, Mongolia, Nepal, Russia, Thailand, and Viet Nam. These include improvements to anti-poaching, development of intelligence networks, targeted enforcement operations, zero tolerance policies for online trading, development of specialized judiciary bodies, multi-agency coordinating mechanisms, and top-level political support. **Continuing challenges:** controlling illegal trade along national border areas, particularly areas bordering China, was identified as a continuing challenge by this review, with Myanmar a major hub in the trade chain. Other challenges include enforcement of trade bans in the online environment, increasing the use of and improving forensic tools, the flow of conflict-killed cats into illegal trade, and corruption.

3. International cooperation for conservation and enforcement. Best practices: New intergovernmental conservation processes were initiated for snow leopards and the Arabian leopard in 2013. Wildlife crime also received high-level political attention in international fora, and the strengthening of a key regional Wildlife Enforcement Network (WEN), the Association of Southeast Asian Nations (ASEAN) WEN, through a technical support program is highlighted as a model for other WEN's to consider, including the one in development in West Asia. **Continuing challenges:** Tiger range States recognized the need in 2013 for further improvements in international cooperation in adopting the Kunming Consensus, both to protect tiger populations and to combat illegal trade. Movement toward a common economic community in the ASEAN countries suggests the need to adopt a common CITES framework, as done in the EU.

4. Recording, availability and analysis of information. Best practices: India is recognized for Tigernet (tigernet.nic.in), an online public database of tiger mortalities and illegal trade seizures. The database is populated by wildlife officials with secure access; there is a separate system for the public to provide information. Despite the long history of illegal tiger trade, authentic and centralized data of direct indicators such as poaching and interdictions have not until this pioneering effort been available. NGOs have compiled seizure databases from public information, which do appear to correspond well to official government data when it is made available, and have led the way with applying analytical

tools to the data. **Continuing challenges:** INTERPOL's recent assessment of enforcement responses to tiger crime noted that many countries lack systematic data management platforms, and emphasized the need for improved capacity for intelligence-led enforcement.

5. Demand reduction, education and awareness. Best practices: Several recent major demand reduction initiatives are highlighted which are taking place under the auspices of the Global Tiger Recovery Program, including a global demand reduction program led by NGO's, and a national strategy to reduce wildlife consumption being developed by Viet Nam. **Continuing challenges:** New forms of demand are emerging, with "wealth" replacing "health" as a primary form of consumer motivation. Tiger parts (such as meat) and derivatives (such as wine) are now consumed less as medicine and more as an exotic luxury products (with some wines selling at prices near US\$500 per bottle). Collectibles such as jewelry are most commonly encountered in online advertising searches. New species are increasingly being drawn into the parts and derivatives trade, including the African lion, and there are indications of an entirely new type of demand for "canned" hunts of captive tigers in South Africa.

6. Prevention of illegal trade in parts and derivatives from captive breeding facilities. Best practices: The Resolution urges Parties "*to ensure that adequate management practices and controls are in place to prevent parts and derivatives from entering illegal trade from or through such facilities.*" Pakistan is recognized for recently promulgating comprehensive captive felid management guidelines purposely developed to control illegal trade and restrict captive facilities to the objectives of conservation and education. The TRACE Wildlife Forensics Network is also working to assist ASEAN governments to set up DNA databases for captive tigers, to provide intelligence information to local enforcement officers where there is a suspicion of illegal activity relating to tigers or their parts. The **continuing challenge** is to identify the source and legality of captive-origin parts and derivatives. Seizures of suspected captive-origin tigers (live and frozen) have risen in three Southeast Asian countries (Lao People's Democratic Republic, Thailand and Viet Nam), and evidence suggests such trade is also taking place in Indonesia (where non-native cat species have been seized alongside Asian big cat specimens). NGOs have observed several different brands of wine which appear to contain tiger parts of captive origin for sale in China, and it is not clear whether such production and sale has been legally authorized.

7. Management of national and privately-held stocks of parts and derivatives. Best practices: The Resolution recommends that stocks be consolidated and destroyed, and several countries including Indonesia, Lao People's Democratic Republic, Nepal and Viet Nam have on an occasional basis done so for seized items held by authorities. There are two types of stocks – those held by governmental authorities, resulting from confiscations, and those held by the private sector. Pre-Convention stocks are not addressed in the Resolution, but stocks can accumulate from captive animals after such protections take effect. Viet Nam has stated that captive mortalities in registered facilities must be disposed of according to regulations, and India is also recognized for having an official policy, the Standard Operating Procedure for Disposing Tiger/Leopard Carcass/Body Parts, which requires their prescribed and monitored destruction. **Continuing challenge:** China has permitted continued private stockpiling at its large captive tiger facilities since 1993. These stocks are frozen, which is not an ideal way to store perishables for periods of longer than a year, especially if they are intended for human consumption. Given the increasing detection of frozen carcasses in illegal trade (although their provenance is unclear without captive DNA registries and forensic tests), as well as the continued production in China of

wine suggestively marketed as containing tiger, it appears that government oversight of privately held stocks may not be sufficient to guarantee their security.

8. Meetings for Asian big cat conservation and trade control. Decision 16.70 paragraph a) envisages national enforcement seminars in range States to promote a multi-disciplinary approach that will facilitate improved coordination and cooperation in the detection, investigation and prosecution of wildlife crime offences. Strong interest in law enforcement and conservation of Asian big cats is evident from more than 30 relevant national and international meetings which have taken place since CoP16.

Recommendations. For background information, previous actions taken by the CITES Standing Committee and subsequent outcomes are presented in Table 16. Recommendations offered on the basis of this review are summarized below:

Legislative and regulatory measures

- Parties should be encouraged to conduct reviews of all relevant national legislation to ensure that national measures restricting internal and international trade in Asian big cat parts and derivatives are comprehensive, and include parts and derivatives obtained from specimens bred in captivity.
- China should be requested to clarify whether its permitted internal trade in Asian big cat parts and derivatives is for non-commercial purposes, report the species and trade volume involved, and describe how such trade is monitored and enforced. Recognizing that China has the sovereign right to govern its internal ABC trade, this information would allow a more complete assessment of implementation of the Resolution. Illegal import of derivatives represents a challenge for other Parties seeking to enforce their own CITES protections, and China should also indicate what measures it is taking to prevent illegal exports.

National law enforcement

- Parties should be encouraged to adopt China's "Zero Tolerance" approach to online advertising for protected species products, working closely with major trading site companies and nongovernmental organizations.
- Tiger range states should be encouraged to consider the recommendations of INTERPOL's 2014 assessment of enforcement responses to tiger crime. This is particularly urgent for Indonesia, which has seen recent increases in tiger seizures, accounting for 20% of all range State tiger seizures from 2010-2012.
- Further information should be sought from Myanmar on how it plans to address major illegal wildlife consumption destination markets near its borders with China and Thailand.
- Further information should be sought from Viet Nam as to its strategy to counter the illegal movement of tigers of suspected captive origin across its border with China.

International cooperation for conservation and enforcement

- Action should be taken to further a key recommendation of INTERPOL's 2014 assessment of enforcement responses to tiger crime: that an international network

of intelligence analysts from tiger and other Asian big cat range States be established, and work toward development of a single international reporting system for sensitive law enforcement information on tiger and other Asian big cat incidents.

- Establishment of appropriate international monitoring mechanism(s) for regular reporting, review and analysis of information on Asian big cat conservation and trade control should be explored by the range States in cooperation with relevant intergovernmental and nongovernmental organizations.

Recording, availability and analysis of information

- Asian big cat range States are recommended to develop, in partnership with relevant organizations, publicly available databases on poaching and seizures, along the lines of India's TigerNet model, with transparent data collection standards.
- All Parties are encouraged to develop secure data management platforms to improve intelligence-led enforcement.

Demand reduction, education and awareness

- The growing use of tiger parts and derivatives as luxury items needs to be addressed as a matter of urgency through targeted behavioural change interventions to reduce consumer demand. This need is evident in China and Viet Nam, and it is recommended that current efforts to develop appropriate strategies be strengthened.

Prevention of illegal trade in parts and derivatives from captive breeding facilities

- Parties are recommended to develop comprehensive legal frameworks for Asian big cat captive breeding facilities to prevent illegal trade, which should include oversight of any international trade to ensure non-commercial purposes in accordance with CITES and national policies, and monitored destruction of the bodies of captive mortalities.
- Parties developing DNA registration databases of captive Asian big cats are encouraged to make this information available outside national borders to assist forensic determination of the origin of seized specimens. Parties that have yet to establish national registries for Asian big cats held by at least their larger captive facilities are encouraged to do so.
- Further information should be sought from the Lao People's Democratic Republic, Thailand and Viet Nam as to the measures in place to prevent illegal trade from captive facilities. The Lao PDR and Viet Nam should also be requested to clarify the purpose for recent sizeable imports of lion bone from South Africa.

Management of national and privately-held stocks of parts and derivatives

- Clarification should be sought from China as to the measures it is taking to guarantee the security of growing privately-held stocks of captive-origin tiger parts. China should be requested to declare the size and location of privately-held stocks, in accordance with previous agreements of the Committee on this issue, as well as

provide more details to clarify its recent statement that stocks have been periodically destroyed.

Leopards

- Leopard seizures are comparable with those of tigers in many Asian range States, and outside Asia in terms of derivative seizures. A detailed study of leopard trade should be conducted, including its impacts on the wild population in Asia, where conservation concern for the species is increasing.

1. Introduction

Asian big cats include seven species, distributed in 31 range States as shown in Table 1. By acceding to CITES, Parties agree to prohibit international commercial trade in these species, which are all listed on CITES Appendix I, including their parts and derivatives.

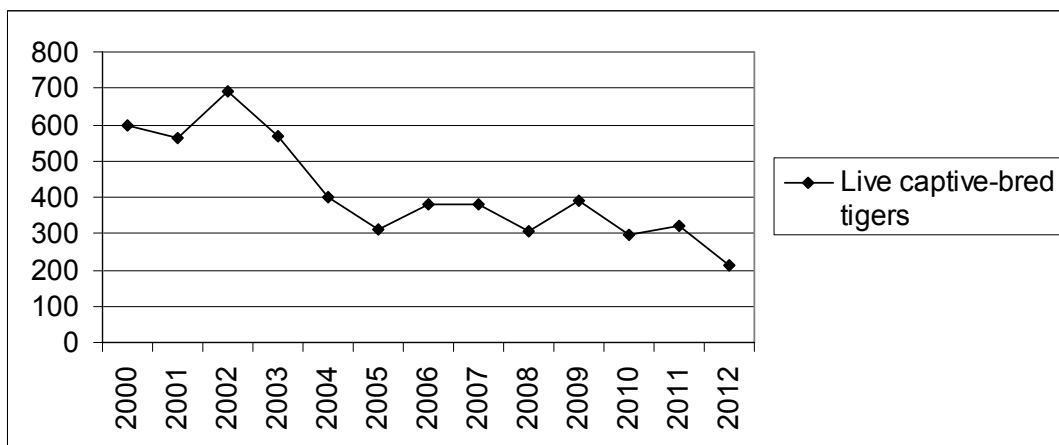
Table 1. Asian big cat range States (IUCN Cat SG in litt. 2014)

Country	Tiger <i>Panthera tigris</i>	Snow Leopard <i>Panthera uncia</i>	Leopard <i>Panthera pardus*</i>	Clouded Leopard <i>Neofelis nebulosa & Neofelis diardi</i>	Lion <i>Panthera leo*</i>	Cheetah <i>Acinonyx jubatus*</i>
Afghanistan		X	X			
Armenia			X			
Azerbaijan			X			
Bangladesh	X		X	X		
Bhutan	X	X	X	X		
Cambodia	X		X	X		
China	X	X	X	X		
India	X	X	X	X	X	
Indonesia	X		X	X		
Iraq			X			
Islamic Republic of Iran			X			X
Israel			X			
Kazakhstan		X	X			
Kyrgyzstan		X	X			
Lao PDR	X		X	X		
Malaysia	X		X	X		
Mongolia		X				
Myanmar	X		X	X		
Nepal	X	X	X	X		
Oman			X			
Pakistan		X	X			
Russian Federation	X	X	X			
Saudi Arabia			X			
Sri Lanka			X			
<i>Tajikistan</i>		X	X			
Thailand	X		X	X		
Turkey			X			
<i>Turkmenistan</i>			X			
Uzbekistan		X	X			
Viet Nam	X		X	X		
Yemen			X			
<i>Countries not Party to CITES in italics</i> *Majority of species range in Africa						

While international trade in wild Asian big cat specimens is prohibited for commercial purposes, the same protections do not extend to captive live big cats and parts or products derived from captive animals. Under CITES, international trade in bred-in-captivity specimens is permissible for both commercial and non-commercial purposes. Imports for primarily commercial purposes should be limited to those produced by operations registered with the CITES Secretariat following the procedures outlined in Resolution Conf. 12.10 (Rev. CoP15); there are none currently registered for Asian big cats. However, the same Resolution notes that, in accordance with Article VII, paragraph 5 of the Convention, the import of specimens of Appendix-I species bred in captivity that are covered by a certificate of captive breeding does not require the issuance of the permits or certificates required under the provisions of Article III, IV or V of the Convention and may therefore be authorized whether or not the purpose is commercial. In both cases, captive live animals and their parts and products are treated as Appendix II specimens; they require only a certificate of captive breeding from the exporting government, and not an import permit as would a wild specimen (AC27 Doc. 18: 14-15).

Analysis of the CITES Trade Database shows a substantial international trade in live captive tigers, although it appears to be declining (Figure 1). Over 90% of more than 1,500 transactions since 2000 were reported as non-commercial for the purposes of zoos or circuses, although some were reported as commercial, including China's import of 100 tigers from Thailand in 2002. Parties have not reported any significant international trade in parts and products of captive-bred tigers for any purposes.

Figure 1. Gross annual exports of captive-bred live tigers



All tigers and other Asian big cat species are included in Appendix I, and commercial international trade in specimens, parts and derivatives has been prohibited by the Convention since 1975, with the exception of the Asiatic lion and the Amur tiger *Panthera tigris altaica*, which were included in 1977 and 1987, respectively. CITES Parties have adopted, through Resolutions and Decisions, a series of additional measures to control trade and promote Asian big cat conservation. The current main set of CITES adopted provisions on Asian big cats are contained in Resolution Conf. 12.5 (Rev. CoP16) on *Conservation of and trade in tigers and other Appendix-I Asian big cat species* (hereafter "the Resolution"). Many of these measures were originally adopted for the tiger, beginning in 1994, with *Resolution Conf. 9.13*. This Resolution was modified and expanded to include all Asian big cat species in 2002, becoming *Resolution Conf. 12.5*. Not only are all Asian big cats considered threatened by illegal trade, particularly in skins (IUCN Cat SG,

TRAFFIC in litt. 2014), but they also feed into and perpetuate the demand for tigers when they are used as fakes or substitutes (Figure 2: WCS in litt. 2014).

Figure 2. In April 2013 Hanoi Police confiscated what was initially considered to be a frozen tiger carcass from a vehicle in Hanoi. However, it was later identified as a poorly painted clouded leopard (Vietnam CITES MA in litt 2014, Figure 8) (photo: ENV 2013)



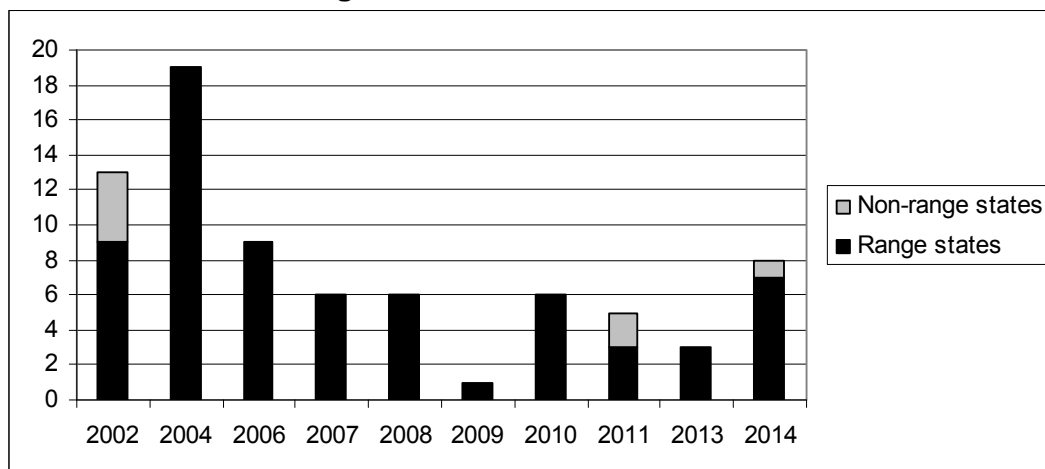
The Resolution addresses the following subjects: national legislation and policy; national law enforcement, international cooperation for enforcement and conservation; recording, availability and analysis of information; demand reduction, education, and awareness; prevention of illegal trade in parts and derivatives from captive facilities; management of specimen stockpiles; and meetings for ABC conservation and trade control (Notification 2013/037 Annex).

When the Resolution was expanded from tigers to all Asian big cats in 2002, TRAFFIC and WWF assessed that progress had "been made in some areas", specifically in terms of "strengthening domestic legislation, increasing awareness amongst user groups, convening training workshops and establishing anti-poaching initiatives" (TRAFFIC/WWF 2002). TRAFFIC later more fully reviewed implementation of the Resolution in 13 range States (Nowell 2007). Overall, there appeared to be less implementation of trade control measures in comparison to anti-poaching and public awareness, showing the importance of increasing investment in law enforcement. Also recommended was an increase in support in resources and capacity building for the less developed range States, and increased effort to protect not only the tiger, but the other Asian big cat species which have received less attention.

At CoP15 in 2010 the following language was added to the Resolution: "*CONCERNED that the failure to provide regular detailed reports on progress in implementing measures aimed at conserving tigers and other Appendix-I Asian big cats has prevented adequate assessment of the effectiveness of the measures taken.*" Figure 3 shows the number of Party reports on Asian big cat trade control measures submitted to CITES meetings since 2002; reporting rates have declined and only a minority of range States have responded to CITES requests for information, although some -- particularly China, India, Thailand and Viet Nam -- have submitted reports most years. A reporting requirement was included in the Resolution's revisions in 2010 -- for the CITES Secretariat to "*report to the Standing*

Committee and the Conference of the Parties on the status of Asian big cats in the wild, their conservation, and trade controls in place in Parties, using information provided by the range States on measures taken to comply with this Resolution and related relevant Decisions and any relevant additional information provided by relevant countries.” Additionally, Parties at CoP16 in 2013 adopted Decision 16.70 paragraph c), requesting the Secretariat to conduct an implementation review of the Resolution, in cooperation with partner organizations in the International Consortium on Combating Wildlife Crime and, as appropriate, other experts and organizations, and in consultation with Appendix-I Asian big cat range and consumer States.

Figure 3. Number of Party reports received in response to CITES requests for information on Asian big cat conservation and trade controls since 2002



This review provides background on the conservation status of, and illegal trade in Asian big cats, and identifies current best practices and continuing challenges, highlighting significant developments since CoP16. Much of it focuses on tigers, reflecting that the Resolution was originally developed to address tiger trade, with its particular dynamics, although information on other species is also included where possible. It follows eight thematic elements as enumerated in the Annex to Notification to the Parties No. 2013/037, dated 27 August 2013, and Decision 16.70 paragraph a).

2. Methods

The following methods were employed for this review.

Analysis of the CITES Trade Database

Searches were conducted for Asian big cat species where the source was seizures/confiscations (code: I). Net imports were used to derive annual totals; comparative tabulations were used to examine individual records and identify country of export or origin (when known).

Consultation with CITES Party governments and international governmental organizations

Parties were requested in Notification 2013/037 to contribute to this study; an optional questionnaire format was provided as an Annex. Reports were received from the following Parties: Cambodia, China, Malaysia, Nepal, Pakistan, Thailand, the United Kingdom (UK)

and Viet Nam. Information received from Parties is referenced in this document as *in litt.* (2014). The European Union and the UK provided data on tiger seizures from 2000-2012 from the EU-TWIX database, and the European Commission an analysis of that data by TRAFFIC, for the CITES Secretariat's consideration in this review. INTERPOL's Environmental Security Sub-Directorate provided a copy of its March 2014 report *Assessing Enforcement Response to Tiger Crime*. The Secretariats of the Global Tiger Forum (based in India) and the Global Snow Leopard Forum (based in Kyrgyzstan) also contributed information.

Consultation with nongovernmental organizations

Organizations which have recently focused on illegal trade in Asian big cats were consulted, with contributors listed in Table 2. Organizations contributed published and unpublished papers and reports; unpublished information that was contributed is referenced in this study by the contributing organization's name or acronym as *in litt.* (2014).

Internet searches

Internet searches were conducted focusing on news articles, government and nongovernmental organization websites.

Table 2. Intergovernmental and nongovernmental organizations contributing to this review

Intergovernmental organizations	Nongovernmental organizations
Global Snow Leopard Forum National Secretariat, Kyrgyzstan (GSLF)	Asian Leopard Specialist Society, Iran (ALSS)
Global Tiger Forum Secretariat, India (GTF)	Environmental Investigation Agency (EIA)
INTERPOL	Foundation for Endangered Wildlife, Yemen (FEW)
	Freeland Foundation
	International Fund for Animal Welfare (IFAW)
	IUCN SSC Cat Specialist Group
	MyCAT (Malaysia)
	Panthera
	ProFauna, Indonesia
	TRACE Network, UK (wildlife forensics)
	Trace and Environmental DNA laboratory (TrEnD), Australia (wildlife forensics)
	TRAFFIC
	Wildlife Conservation Society (WCS)
	Wildlife Protection Society of India (WPSI)
	World Wide Fund for Nature (WWF)

3. Conservation status of Asian big cats

Table 3 shows the conservation status of Asian big cat species and subspecies on the IUCN Red List of Threatened Species. Species are currently being reassessed by the IUCN SSC Cat Specialist Group with publication planned for 2015, and some subspecies

appear more threatened (including the Malayan tiger). Taxonomy of the family Felidae at the sub-specific level is under revision by a Cat SG task force, and a full Red List assessment of subspecies will be carried out once the task force completes its work (IUCN Cat SG in litt. 2014).

Table 3. Conservation status of Asian big cat species and subspecies on the IUCN Red List of Threatened Species

Species or subspecies	Name	IUCN Red List category	Estimated population	Trend
<i>Acinonyx jubatus</i> *	Cheetah	VU	<10,000	Declining
<i>Acinonyx jubatus venaticus</i>	Asiatic cheetah	CR	40-100	Stable
<i>Neofelis diardi</i>	Sunda clouded leopard	VU		Declining
<i>Neofelis diardi borneensis</i>	Bornean clouded leopard	EN		Declining
<i>Neofelis diardi sumatrensis</i>	Sumatran clouded leopard	EN		Declining
<i>Neofelis nebulosa</i>	Clouded leopard	VU		Declining
<i>Panthera leo</i> *	Lion	VU	<30,000	Declining
<i>Panthera leo persica</i>	Asiatic lion	EN	300	Stable
<i>Panthera pardus</i> *	Leopard	NT		Declining
<i>Panthera pardus kotiya</i>	Sri Lankan leopard	EN	835	Declining
<i>Panthera pardus melas</i>	Javan leopard	CR	350-525	Declining
<i>Panthera pardus nimr</i>	Arabian leopard	CR	<100	Declining
<i>Panthera pardus orientalis</i>	Amur leopard	CR	50	Increasing
<i>Panthera pardus saxicolor</i>	Persian leopard	EN		Declining
<i>Panthera tigris</i>	Tiger	EN	3,000	Declining
<i>Panthera tigris amoyensis</i>	South China tiger	CR/PE	Probably extinct	
<i>Panthera tigris corbetti</i>	Indochinese tiger	EN		Declining
<i>Panthera tigris jacksoni</i>	Malayan tiger	EN	200	Declining
<i>Panthera tigris sumatrae</i>	Sumatran tiger	CR		Declining
<i>Panthera tigris tigris</i>	Bengal tiger	EN		Declining
<i>Panthera uncia</i>	Snow leopard	EN	3,920-6,390	Declining

*the majority of these species ranges are in Africa. CR–Critically Endangered. EN–Endangered. VU–Vulnerable.

4. Seizure records for Asian big cat species

This section gives an overview of illegal trade on the basis of seizure reports, collected by a variety of government and nongovernmental sources. Seizures are a useful measure of illegal trade, and are also suggestive of enforcement effort.

4.1. Seizures – government reports

4.1.1. International trade databases

Seizures reported by government authorities since 2000 to two databases were analyzed: the CITES Trade Database (transactions reported as seizures/confiscations) and the European Union’s Wildlife Trade Information Exchange (EU-TWIX) (tigers only, as contributed by the UK and EU). Many countries do not include confiscations in their annual reports to CITES; the Standing Committee, with the assistance of its Working Group on Special Reporting Requirements, is considering appropriate means for collecting statistical information on illegal trade through the annual report. The US does have a long

history of providing seizure information to the CITES Trade Database, and its records are given attention in this section. For Europe, there is some overlap between the records in the CITES Trade Database and those in EU-TWIX, but the latter is more complete. While some seizures may represent re-exports for scientific or research purposes, these appear to be in the minority (e.g., in the CITES Trade Database there are only 7 out of 213 tiger seizures where transaction purpose was recorded by the importing country as for educational purposes, with the remainder all coded Personal or Commercial).

Seizure volume is indicative of both illegal trade levels as well as enforcement effort. The tiger is the species where the greatest number and variety of specimens, parts, products and derivatives have been reported confiscated (Table 4). Derivatives are generally some form of processed medicinal product (liquid, powder, tablets), usually with a label indicating the contents include

Table 4. Total reported tiger seizures in the CITES (2000-2013) and EU-TWIX (2001-2012) Trade Databases

	CITES Trade Database	EU-TWIX seizure Database*
Term	Quantity	Quantity
Bodies	1	4
Bone pieces	7	
Bones	7	
Carvings	1	
Claws	40	16
Derivatives, boxes	16	
Derivatives, kg	7	
Derivatives, l	1	
Derivatives	27,225	
Derivs + medicines +oil	6,535	
Extract, ml	61	
Genitalia	2	
Hair	39	
Live	13	32
Meat, g	100	
Musk	1	
Plates	4	
Skin pieces	8	
Skins	19	14
Skulls	1	2
Specimens	59	
Teeth	52	26
Trophies	1	1

*There is some overlap between the two databases' records from Europe, but EU-TWIX contains more records.

Appendix-I listed species, as otherwise such items are unrecognizable as to ingredients. There is no standardized way to report derivative units, nor to convert these units into numbers of tigers. Forensic testing to determine whether such products genuinely contain tiger bone or other body parts has failed to be conclusive (SC61 Doc 41 Annex 1, TRACE Network in litt. 2014).

In Europe transaction reports indicate that most tiger products are seized at airports from passengers lacking appropriate CITES permits. Most transactions for tiger (and other big cat product) seizures in the CITES Trade Database are coded Personal (suggesting that they were also likely confiscated from arriving passengers), although some derivative

seizures are recorded as commercial. From 2007-2010 a study based on 13 Party reports also found that in countries outside Asia (including Australia, the US and European countries), the most frequently-seized items were plasters and pills used for traditional or complementary medicinal use, carried in the personal luggage of travelers (SC61 Doc 41 Annex 1).

Figure 4. Annual seizures of tiger derivatives in the US and EU

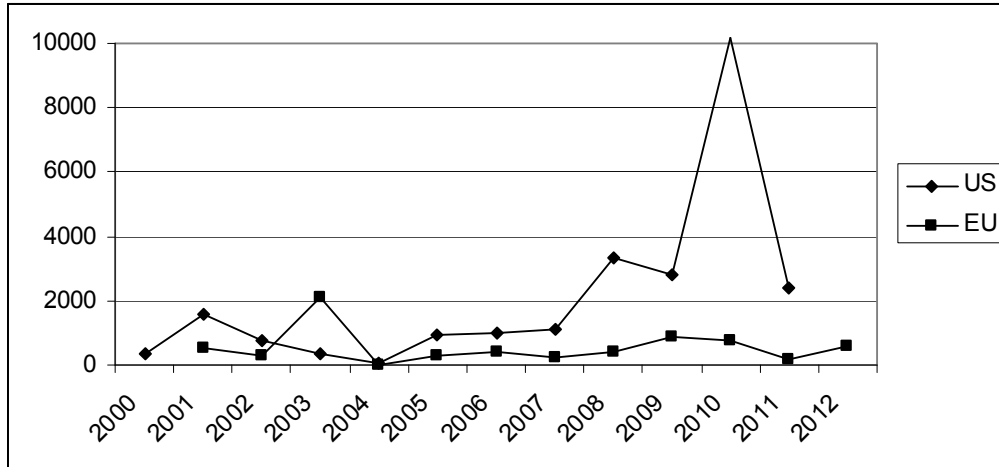
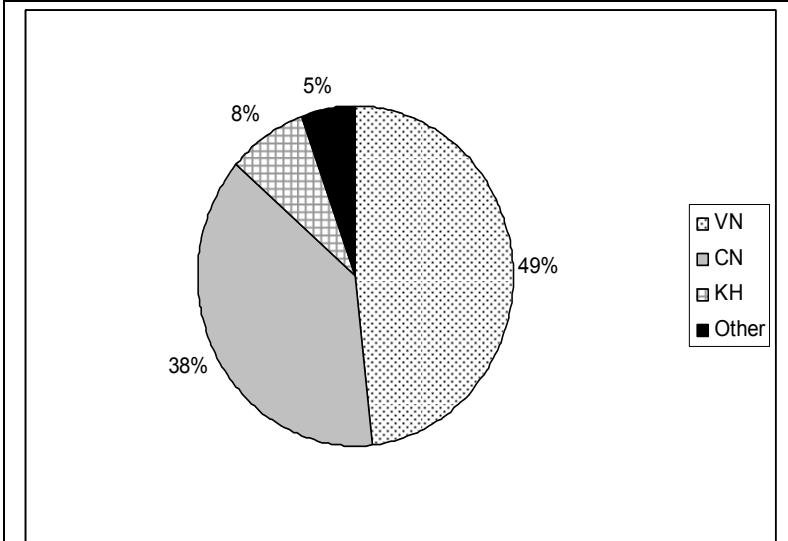


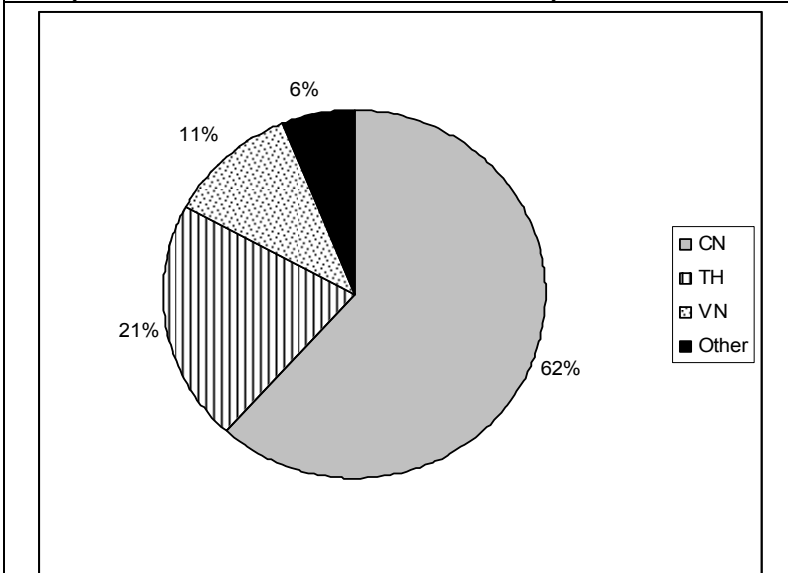
Figure 4 compares annual reported seizures of derivatives in the US (from the CITES Trade Database) and EU (EU-TWIX database). China and Viet Nam were most frequently identified as country of export (where the item arrived from) or origin (where the product was produced) for these seizures (Figure 5). Tiger derivative seizure records from the US suggest that, for that country, Viet Nam is growing in importance as an export source of illegal trade in such products (Figure 6). When the origin of derivatives exported from Viet Nam and seized by the US was known, it was China, in six recent (since 2009) seizure cases out of 28 total since 2000.

Leopards are the second-most common species in terms of seizures in the CITES Trade Database, although there are fewer types of products encountered, as shown in Table 5, which does not include transactions reported as originating from African countries, including all skin and skin product seizures). As for tigers, derivatives are most numerous, and China was identified as the country of export or origin for 77% of seized derivatives. The government of China prohibited trade in leopard bone in 2005, and in March 2006 ordered manufacturers of products containing leopard bone to use existing stockpiles only, after which no further production would be allowed (CoP14 Doc 52 Annex 1). However, quantities of derivatives reported as originating from China for both leopards and tigers seized in the US have been higher in recent years in comparison to 10 years ago (Figure 7, which shows annual seizures for the term “Derivatives”).

Figure 5. China and Vietnam are reported most frequently as country of export or origin for seizures of tiger derivatives in the US and EU



US (CITES Trade Database 2000-2013)



EU (EU-TWIX database 2001-2012)

Figure 6. US annual seizures of tiger derivatives where country of export identified as China or Vietnam (CITES Trade Database)

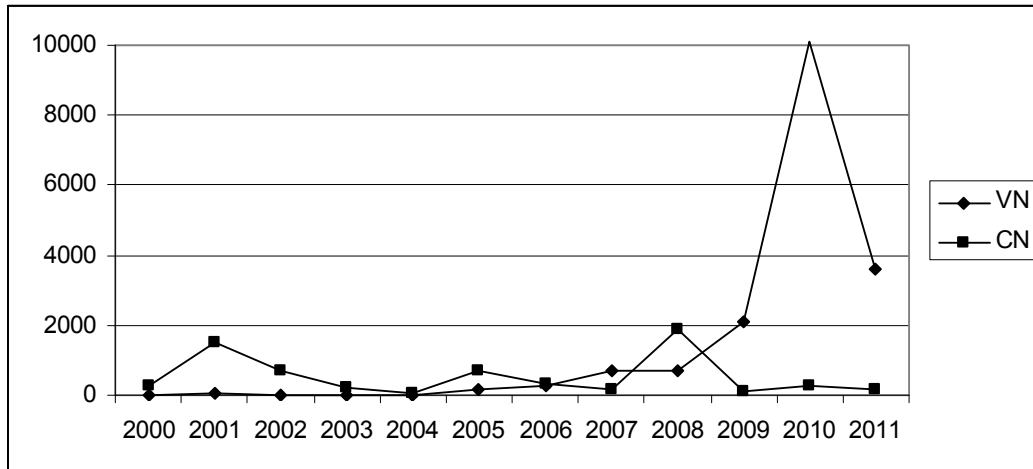
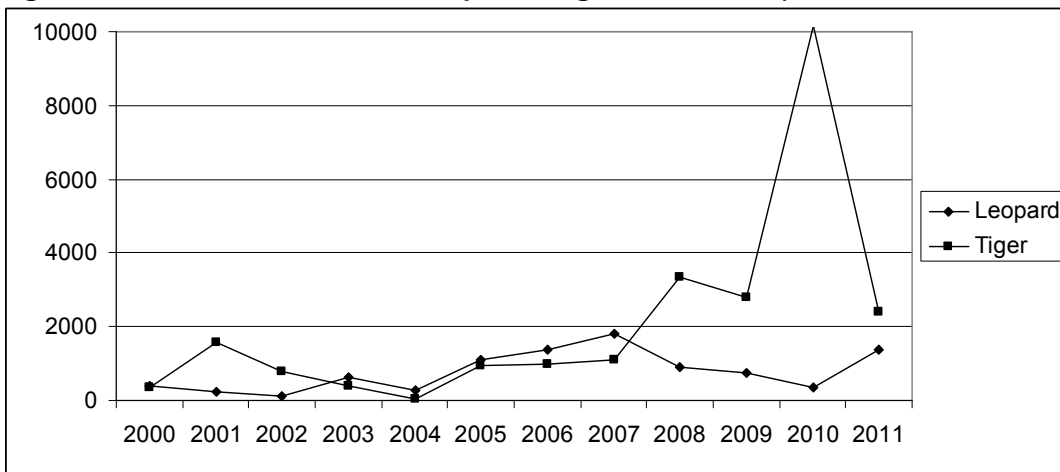


Table 5. Total leopard seizures (originating mainly from Asian countries) compared with the same terms for tigers (CITES Trade Database, 2000-2013)

Term	Leopard	Tiger
Bone pieces	2	7
Bones	54	7
Claws	32	40
Derivatives, boxes	21	16
Derivatives, kg	18	7
Derivatives	16,296	27,225
Musk	2	1
Teeth	28	52

Figure 7. US annual seizures of leopard & tiger derivatives (CITES trade database)



There are few reported seizures of other Asian big cats – for example, only two records in the CITES Trade Database for the snow leopard (a total of four skins seized by the United Arab Emirates in 2002 and 2004, originating from Pakistan and Afghanistan). No seizures of derivatives identified as snow leopard have been reported, in contrast to all other Asian big cats. However, a recent analysis (in submission) of derivatives apparently produced in China has found snow leopard DNA in a product not claiming to contain it, using advanced forensic tools which have a high success rate (80-90%) for obtaining amplifiable genetic material (TrEnD in litt. 2014). Table 6 shows the variety of clouded leopard products

seized and the countries of export, and Table 7 shows US seizures for derivatives exported from or originating in China for the lion and the cheetah.

Table 6. Clouded leopard seizures recorded in the CITES Trade Database (2000-2013)

Year	Country of seizure	Country of origin	Quantity	Term
2002	US	TH	8	skin pieces
2004	US	ID	1	skin pieces
2004	US	TH	4	feet
2005	US	TH	1	carvings
2009	NZ	CN	72	derivatives

Table 7. US seizures of other cat species derivatives exported or originating from China (CITES Trade Database)

Species	Year	Quantity
<i>Panthera leo persica</i>	2010	14
<i>Panthera leo</i>	2009	200
	2010	15
<i>Acinonyx jubatus</i>	2009	4
	2010	2

4.1.2. Party reports to CITES

In response to Notification 2013/037, some Parties reported seizures as shown in Figure 8. The most seizures and the widest variety of products, mainly tiger, were reported by Viet Nam, whereas Thailand reported seizing only live cats over the same time period of 2012-2013. China did not provide details in 2014 as to how many of its reported seizures were of Asian big cats compared to other wildlife, so Figure 8 also includes a previous report from China (to CoP16) which provides such details for tigers from mid-2010-mid 2012.

Figure 8. Party reports of seizures to CITES (2014) from China, Thailand, UK and Vietnam (continues on next page)

<p>China (China CITES MA in litt 2014)</p> <p>According to an incomplete statistics, from the beginning of 2012 to the end of October 2013, China has investigated and dealt with 11,836 cases of destruction of wildlife resources and 14,279 criminals.</p> <p>China September 2012 (CoP16 Doc. 50 (Rev. 1), Annex 3 b)</p> <p>According to incomplete statistics, since July 2010, the Chinese forest police had detected 8 tiger cases and seized 5 live tigers, 1 tiger skins, 4 tiger teeth, 1.8kg tiger bones and 9 boxes + 20 bottles tiger-bone liquor. Meanwhile, the Chinese Customs police had detected 5 tiger cases and seized 2 tiger skins and 35kg + 9 pieces tiger bones. Those seizures have already been informed the CITES Secretariat.</p>
<p>Thailand (Thailand CITES MA in litt. 2014)</p>

Table: Details of significant seizure of tigers and other big cats.

Seizure year	Species	Description	Number	Seizure location
3/6/2013	<i>Catopuma temminckii</i>	live	1	Bangkok
8/1/2013	<i>Prionailurus viverrinus</i>	live	1	Tak
26/10/2013	<i>Panthera tigris</i>	live	16	Sukhothai
28/6/2013	<i>Panthera tigris</i>	live	5	Nakhonsawan

UK (UK CITES MA in litt. 2014)

- 2010 – Police/NWCU/Border Force – male defendant was convicted in August 2010 on one charge related to keeping for sale, one tiger skin.
- 2011- Police/NWCU/Border Force – one tiger skin was sent by post from UK and seized by China Post in Shenzhen.
- 2013 – Ongoing case - Police/NWCU – one tiger rug and head was seized
- 2013 – Police/NWCU -Male offered one clouded leopard skull was offered for sale on eBay – given restorative justice/resolved by community resolution

Vietnam (Vietnam CITES MA in litt. 2014)

2012

Type of specimen	Scientific name	Place of seizure	Description		
			Live	Dead	Product
1 full skeleton	<i>Panthera tigris</i>	Hà Nội			x
1 frozen body	<i>Panthera tigris</i>	Quảng Ninh		x	
1 frozen body	<i>Panthera tigris</i>	Hà Nội		x	
3 frozen bodies	<i>Panthera tigris</i>	Nghệ An		x	
2 Skins	<i>Panthera tigris</i>	Hà Nội			x
4 Canines	<i>Panthera tigris</i>	Hà Nội			x
22 Claws	<i>Panthera tigris</i>	Hà Nội			x
1 full skeleton	<i>Panthera tigris</i>	Hà Nội			x
1 frozen body	<i>Panthera tigris</i>	Hà Nội		X	
1 full skeleton	<i>Panthera tigris</i>	Hà Nội			x
Meat and bone on processing	<i>Panthera tigris</i>	Phú Thọ			
2 frozen bodies	<i>Panthera tigris</i>	Quảng Bình		X	
4 live cubs	<i>Panthera tigris</i>	Hà Tĩnh	X		
1 frozen body	<i>Panthera tigris</i>	Thanh Hoa		X	

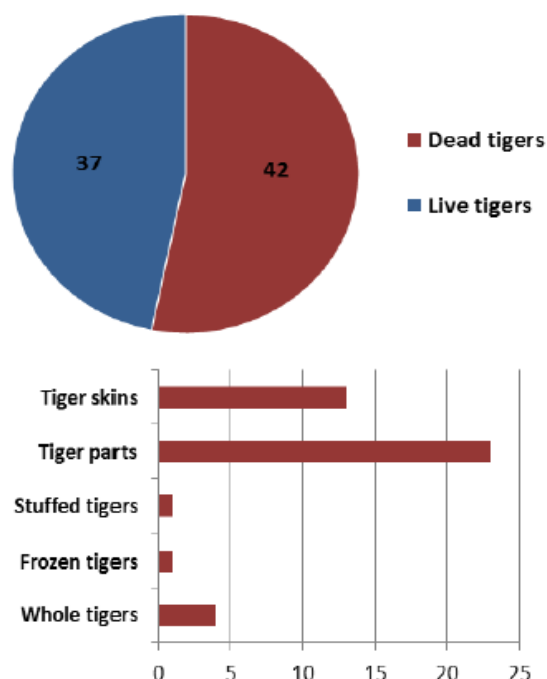
2013

Type of specimen	Scientific name	Place of seized	Description		
			Live	Death	Products
01 live Tiger	<i>Panthera tigris</i>	Nghệ An	X		
01 Fake tiger (frozen)	<i>Neofelis nebulosa</i>	Hà Nội		X	
01 Tiger processed	<i>Panthera tigris</i>	Hà Tĩnh			X

4.1.3. Interpol Operation Prey

Between May 2012 - April 2013 INTERPOL's Project Predator coordinated a transnational enforcement operation in four phases in the 13 tiger range States. It resulted in the seizure of live tigers, dead and frozen whole tigers, a wide range of tiger parts including skins, bodies, bones, claws, teeth, heads and tiger derivatives like tiger bone glue and traditional Asian medicines (INTERPOL 2014) (Figure 9). Live and frozen dead tigers were mainly reported seized in Southeast Asia, while tiger parts comprised the majority of seizures in South Asia. Tiger derivatives were typically seized from the luggage of arriving passengers and described as for personal use.

Figure 9. Tigers seized by 13 tiger range States during Operation Prey May 2012-April 2013 (INTERPOL 2014)



4.2. Seizures - range State and NGO databases

While several range States reported that they record seizure information (CITES MAs of China, Malaysia, Nepal, Thailand, and Viet Nam in litt.), only one, India, makes it publicly available. In 2010 the National Tiger Conservation Authority (NTCA), in association with TRAFFIC’s India office, established a database that records tiger mortality and seizures by secured input from authorized government officers. Statistics and some case details are made available to the public, and other information is reportedly available to authorized officers. Statistics for 2013 and 2014 (Jan-April) are shown in Table 8. Many of the mortality cases for 2013 and 2014 are under investigation, but where cause of death could be identified natural mortalities were few.

Table 8. Tiger mortalities and seizures from India’s national TigerNet database

Year	Mortalities (wild tiger deaths from all causes)	Number of cases of seizure of tiger body parts
2013	63	5
2014 (Jan-Apr)	5	3

Other NGOs including TRAFFIC, the Environmental Investigation Agency (EIA), and the Wildlife Protection Society of India (WPSI) have compiled seizure databases for Asian big cat range States based on public information (primarily government announcements of interdictions covered in news media). Results from recent TRAFFIC publications are discussed below (information was also provided directly to TRAFFIC by some governments).

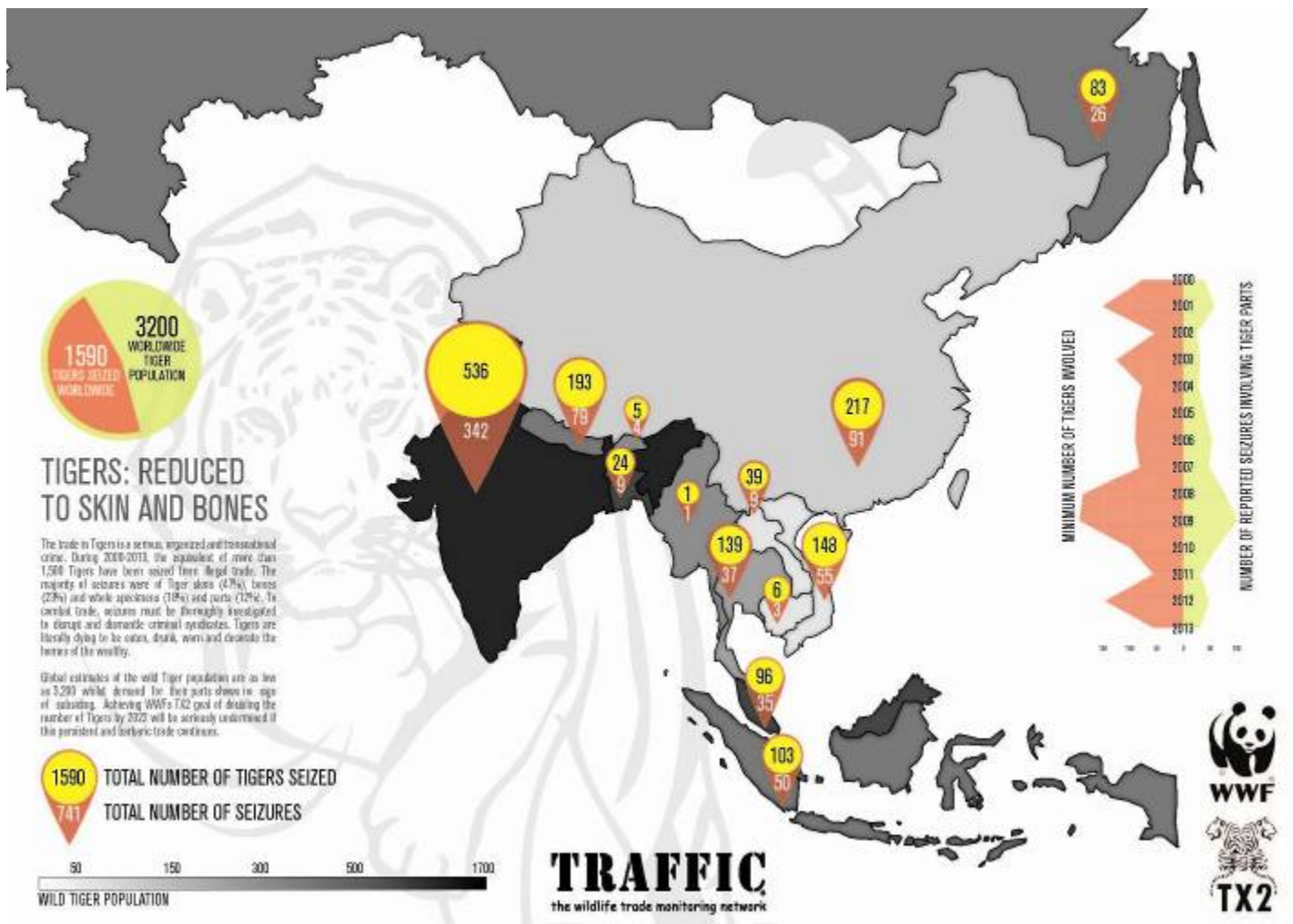
4.2.1. Tigers

For the purposes of this review, TRAFFIC cooperated with EIA to compare seizure datasets, eliminate duplicates and include additional records, in order to create an updated table of tiger seizures from January 2000 to April 2014 (Table 9). The data include number of seizure cases, estimated number of tigers represented (see Stoner and Pervushina 2013, pp 4-5 for methodology), and the proportion each range State accounts for over the time period. There are over 750 seizure cases over this nearly 15 year period, totaling nearly 1,600 tigers. China, India and Nepal have made the most seizures and seized the most tigers, followed by Thailand and Viet Nam. This information is presented graphically in Figure 10 (WWF in litt. 2014).

Table 9. Range State (TRC) tiger seizures Jan 2000-Apr 2014 (TRAFFIC in litt. 2014)

TRC	Total number of seizures	% of total	Estd number of tigers seized	% of total
Bangladesh	9	1%	24	2%
Bhutan	4	1%	5	0%
Cambodia	3	0%	6	0%
China	91	12%	217	14%
India	342	46%	536	34%
Indonesia	50	7%	103	6%
Lao PDR	9	1%	39	2%
Malaysia	35	5%	96	6%
Myanmar	1	0%	1	0%
Nepal	79	11%	193	12%
Russia	26	4%	83	5%
Thailand	37	5%	139	9%
Viet Nam	55	7%	148	9%
Total	741	100%	1590	100%

Figure 10. Infographic for Table 9, showing number of seizures and estimated number of tigers seized in tiger range States (WWF in litt. 2014)



Two analysis reports of range State tiger seizures have previously been published by TRAFFIC (Verheij et al 2010, Stoner and Pervushina 2013). Figure 11 compares seizures between two time periods. Whereas India, the range State with by far the largest tiger population accounted for over half of all tiger seizures in 2000-2009, from 2010-2012 increasing numbers of seizures were made by other countries -- especially Viet Nam, but also China, Indonesia (which accounted for 20% of all seizures during this period), Malaysia, Nepal and Russia. Overall, the estimated number of tigers represented by the seizures has grown since 2000, from below 100 annually to nearing 150 annually (Figure 12). Only 31% of seizures were made near to a protected area; most seizures occur far from wild tiger habitat (Stoner and Pervushina 2013).

Figure 11. Range state (TRC) tiger seizures: Comparison of 2000-2009 to 2010-2012 (Stoner and Pervushina 2013)

Tiger Range Country	Total no. of seizures (2000-2009)	Percentage of Total	Total no. of seizures (2010-2012)	Percentage of Total	Proportion of seizures each TRC accounts for
Bangladesh	4	1%	2	1%	No change
Bhutan	2	0%	1	1%	Increase
China	41	8%	17	12%	Increase
India	294	58%	42	29%	Decrease
Indonesia	31	6%	11	8%	Increase
Lao PDR	8	2%	1	1%	Decrease
Malaysia	18	4%	15	10%	Increase
Myanmar	1	0%	0	0%	Not applicable
Nepal	49	10%	19	13%	Increase
Russia	10	2%	8	6%	Increase
Thailand	21	4%	9	6%	Increase
Viet Nam	30	6%	20	14%	Increase
Grand Total	509	100%	145	100%	

Figure 12. Annual tiger seizures in tiger range countries since 2000 (Stoner and Pervushina 2013)

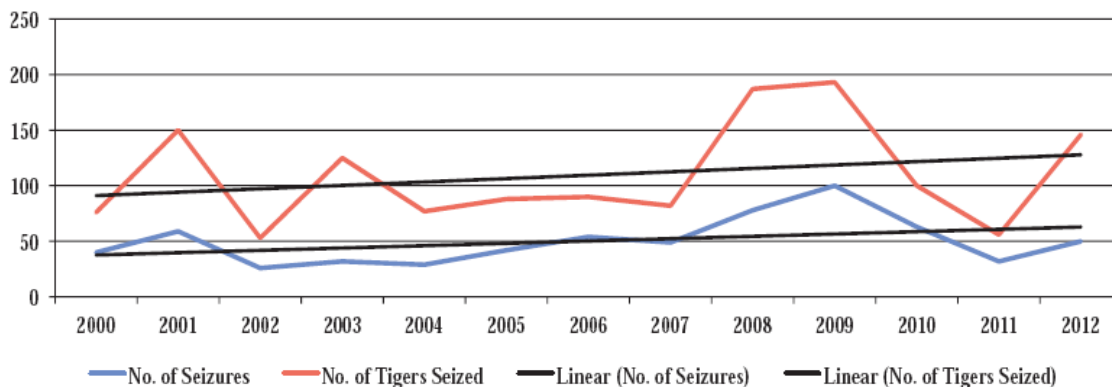


Figure 13 presents recent reported seizure cases by type of tiger seizure. It is striking, in comparison to seizures consisting largely of derivatives reported in the US and Europe, that mainly unprocessed forms are reported from the range States. Most seizure cases are for skins or skin pieces, followed by bones or skeletons. Viet Nam stands out for having 63% of its seizures consist of bodies. Seizures of live tigers are on the rise in the range States, with 61 seized in the recent three-year period 2010-2012 (Figure 14),

compared to an equivalent number (62) in the preceding 10-year period 2000-2009 (both figures: Stoner and Pervushina 2013). Given the difficulties of capturing and transporting live wild tigers, as well as frozen bodies, it is likely that these types of seizures represent captive animals, as discussed in section 5.6.2. Only DNA testing can conclusively identify a captive tiger (TRACE Network in litt. 2014). Figure 15 shows that suspected captive-origin tiger seizures since 2000 have been made primarily in Thailand and Viet Nam, but also in China and the Lao People’s Democratic Republic (EIA in litt. 2014).

Figure 13. Number of cases of different types of tiger seizures in the range States 2010-2012 (Stoner and Pervushina 2013)

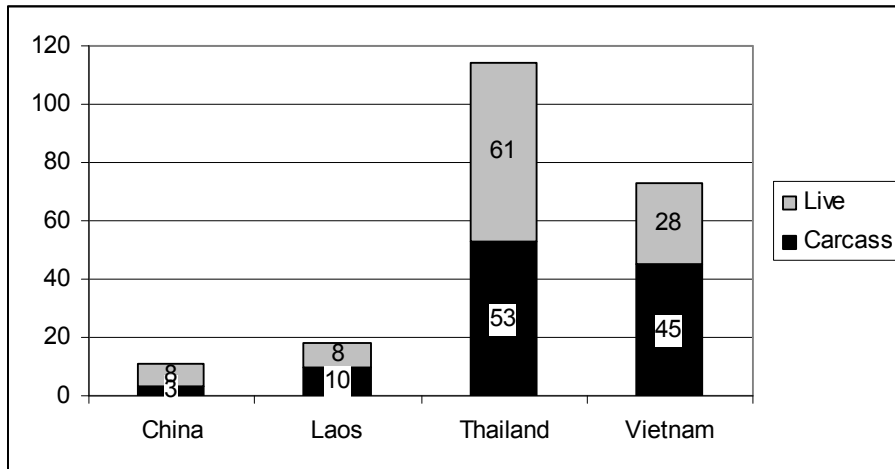
Tiger Range Country	Bone / Skeleton	Carcass	Claw / Paw	Live	Skin / Skin piece
Bangladesh	50% (2)			25% (1)	25% (1)
Bhutan					100% (1)
China	46% (5)	9% (1)	18% (2)	9% (1)	18% (2)
India	28% (13)	2% (1)	13% (6)		57% (26)
Indonesia	20% (3)	7% (1)		7% (1)	66% (10)
Lao PDR		50% (1)		50% (1)	
Malaysia	14% (1)	14% (1)	29% (2)	14% (1)	29% (2)
Nepal	23% (5)				77% (17)
Russia	29% (2)	29% (2)			42% (3)
Thailand	20% (2)	20% (2)		50% (5)	10% (1)
Viet Nam	32% (6)	63% (12)		5% (1)	

Figure 14. Number of live tigers reported seized in range States 2010-2012 (Stoner and Pervushina 2013)

Tiger Range Country	No. of Live Tigers
Thailand	30
Lao PDR	11
Indonesia	9
Viet Nam	4
China	3
Bangladesh	3
Malaysia	1
Total	61

Looking ahead to 2022, one major goal of the 12-year Global Tiger Recovery Program adopted in 2010 by the tiger range countries (TRCs) is to effectively eliminate Tiger poaching and trade (GTRP 2010). In its section on Expected Results, the GTRP anticipates that tiger seizures may increase initially as law enforcement effort is improved and scaled up, but by 2015 they should start to decline so that tigers and tiger products (parts and derivatives) are no longer evident in illegal trade. Stoner and Pervushina (2013) found that as of 2012 seizures are generally on the increase in most TRCs, and only in India is there any indication, although still tentative, that extensive national wildlife crime-fighting and tiger protection efforts may be starting to pay off through a reduction in illegal trade.

Figure 15. Suspected captive-origin tigers seized since 2000 (EIA in litt. 2014)



Methodology for defining “suspected captive-source” (from/through facility): Seized from a specific facility OR Outside facility but information indicates connection with specific facility or individuals connected to a specific facility OR historical/contemporary Information indicates captive trade from this specific location OR DNA results show subspecies not endemic to location OR Quantity and form of intercepted seizure is vastly disproportionate to wild population in country (e.g., eight live tiger cubs seized in Lao PDR in 2012). Additional criteria, when fulfilling one or more of the above criteria: High quantity and diversity of species in seized consignment OR presence of frozen carcasses. In cases where numbers recovered vary between official reports and other sources, official figures are used (EIA in litt. 2014)

A previous TRAFFIC review of implementation of CITES Resolution Conf 12.5 (Nowell 2007) found that India stood out for having relatively high levels of poaching and illegal trade, but suggested that this could be reduced, given time, due to the government’s high levels of implementation effort. In 1994-1999, NGO databases indicated that an average of 22 tigers was poached in India annually (Nowell 2000). For the period 2000-2006, the average was 14.5, and 12 from 2007-2013. These numbers do not include seizure cases so are not a total reflection of illegal offtake, but seizures also show a declining trend, falling from an average of 32.5 (estimated number of tigers) per year in 2000-2006, to 17 in 2007-2013 (WPSI in litt. 2014). Meanwhile the estimated Indian tiger population has increased from 1,411 in 2008 to 1,706 in 2011, and a new nationwide census exercise began in December 2013 (IUCN Cat SG in litt. 2014).

4.2.2. Snow leopards

TRAFFIC has developed a list of snow leopard seizures, based on public information as well as information received from governments and researchers. A preliminary analysis based on desktop search was presented at the Global Snow Leopard Conservation Forum in Bishkek, Kyrgyzstan in October 2013 (TRAFFIC 2013a), and a full analysis and report is in preparation (TRAFFIC in litt. 2014). The Bishkek presentation compared the database at that time (2003-2012) with similar records collected by a previous TRAFFIC report over a 10-year period (Theile, 2003). The data shown in Figure 16 have been superseded, as recent seizures are higher than shown, and the proportions per country differ, but are presented here as indicative of the state of knowledge in late 2013.

Figure 16. Comparison of numbers of snow leopards reported seized by range State over two decades (TRAFFIC 2013)

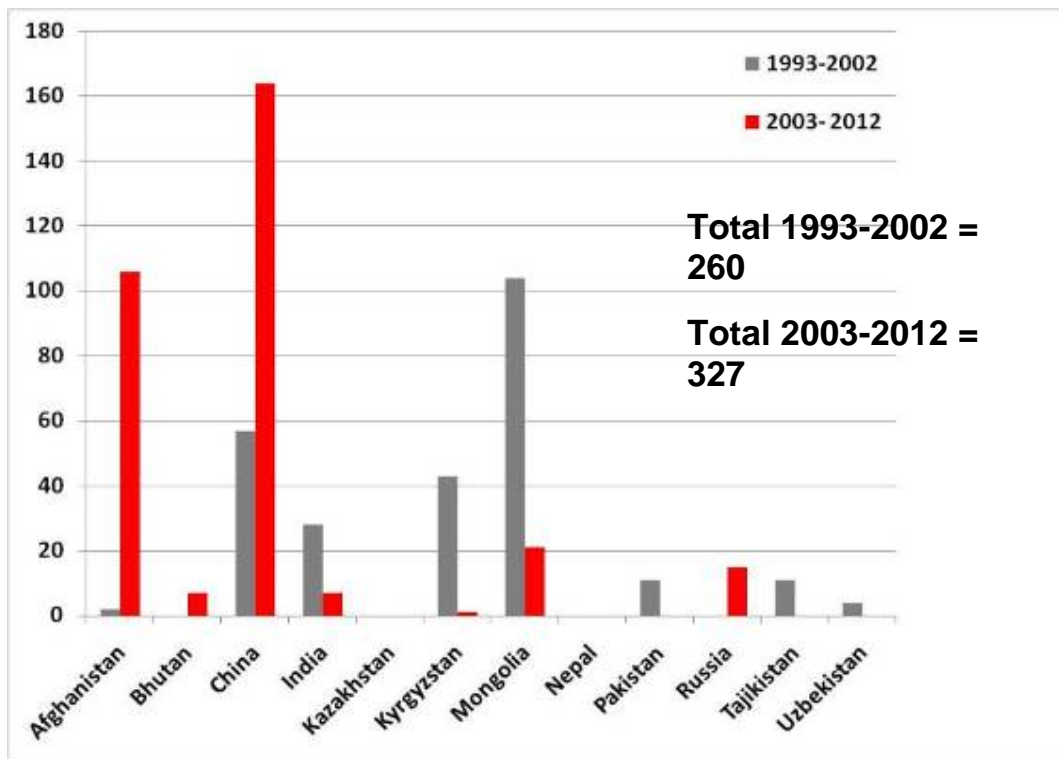


Figure 16 indicates that most seizures have been made in Afghanistan, China (home to what is considered probably the largest global population of snow leopards: GSLEP 2013) and Mongolia. Seized products were mainly skins, heads, teeth and bones. While the Tibet Autonomous Region comprises most of the species range in China (IUCN Cat SG in litt. 2014), most seizures (at least 145) are from other provinces in north-western China (TRAFFIC in litt. 2014). These seizures indicate a much higher level of illegal trade in the range States than is apparent from reports in the CITES Trade Database.

4.2.3. Leopards

TRAFFIC has developed and analyzed a database of leopard seizures in India (Raza et al 2012), which probably holds Asia's largest population of the species (IUCN Cat SG in litt. 2014). The database was based on news reports and government records. During 2001-2010, 420 seizure incidents took place involving a minimum of 1,127 leopards (Figure 17). Newspaper reports of leopards killed in India as a result of human-predator conflict were not included, so the seizures do not reflect the full range of leopard mortality, but it is likely that conflict-killed animals enter illegal trade. This is also reflected in information contributed by the EIA and WPS of India which show higher figures for leopards in India, including poaching cases in addition to seizures (EIA, WPSI in litt. 2014). Most seizures (88% of incidents) analyzed in the TRAFFIC report involved only leopard skins, with very few seizures involving bones or other body parts (although there was one notorious case involving thousands of leopard claws). There was a very high frequency of seizures, with 70% occurring within 10 days of each other, for an average of 3.5 seizures per month over the ten year period. According to a separate database of seizures from 2000-2013 (EIA in litt. 2014), there have been even more leopard skins seized in China, and nearly as many in Nepal (Figure 18). This dataset does not appear complete for Southeast Asia as

additional seizures have come to TRAFFIC's attention (in litt. 2014) but due to time constraints could not be included here.

4.2.4. Other species

Seizure records compiled from public information sources document 30 clouded leopards (mainly skins) interdicted since 2000 (including India, so the figure is slightly higher than shown in Figure 18: EIA in litt. 2014). In India, home to only remaining wild population of lions in Asia, 16 poaching incidents have been documented since 2000, although there have been few seizures (1 trophy and unspecified number of claws: WPSI in litt. 2014).

Figure 17. Annual leopard seizures in India: cases, locations, and estimated number of leopards killed (Raza et al 2012)

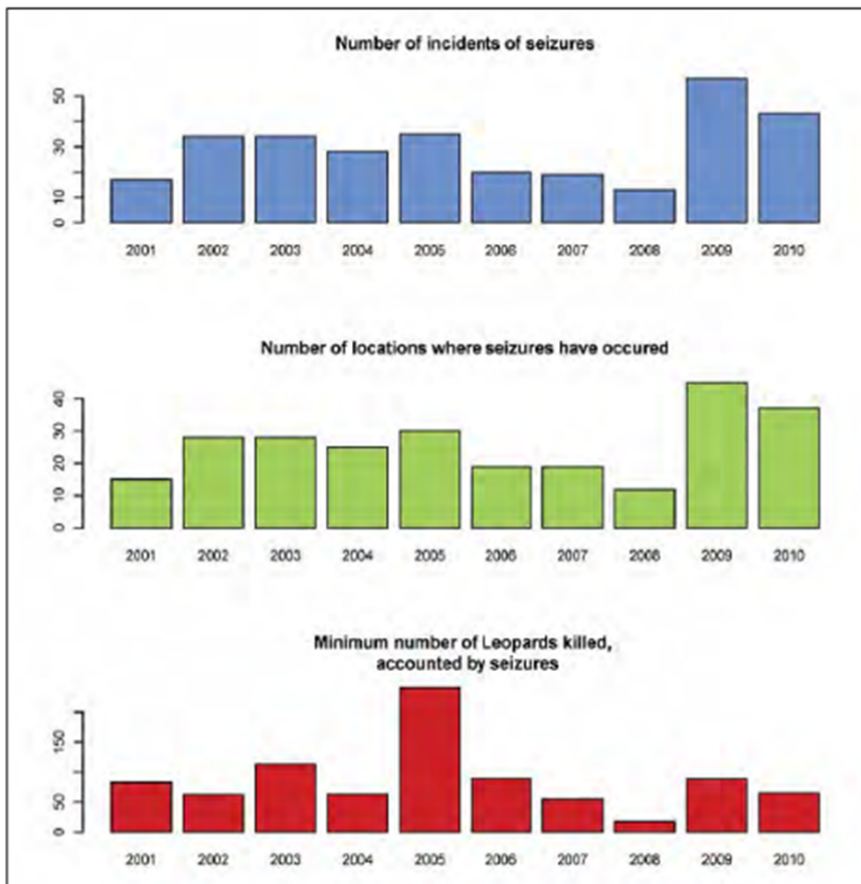


Figure 18. Leopard and clouded seizures outside India since 2000 (EIA in litt. 2014)

Country	Leopard skin	Leopard body	Leopard live	Total by country leopard	Clouded leopard skin	Clouded leopard body	Clouded leopard live	Total by country clouded leopard
Bhutan	7			7	5			5
China	695			695	2		1	3
Indonesia	1			1				
Malaysia		6		6				
Myanmar					2			2
Nepal	295			295	4			4
Russia	1			1				
Sri Lanka	1			1				
Thailand	0	14	6	20		4		4
Viet Nam		2		2		2	1	3
Totals	1000	22	6	1028	15	6	2	23

5. Implementation of CITES Resolution Conf. 12.5 (Rev. CoP16) on *Conservation of and trade in tigers and other Appendix-I Asian big cat species: Best practices and continuing challenges*

It is clear from seizures analyses that illegal trade remains an ongoing threat to Asian big cats and a challenge for law enforcement, underlining the importance of implementing best practices as called for in the Resolution. This section highlights recent developments which have come to the attention of the authors and are judged to represent exemplary implementation of the Resolution. Correspondingly, recent developments, or lack thereof, which appear to undermine the Resolution are also reviewed as continuing challenges. This review is focused on major progress and problems, and as such is not a comprehensive overview of all relevant Parties implementation efforts. It focuses on eight key elements of the Resolution as enumerated in the headings below.

5.1. Legislative and regulatory measures

The Resolution urges all range and “*consumer*” (or destination) States to accede to CITES, and all Parties seeking to improve their legislation prohibiting international commercial trade to consider introducing national measures to facilitate implementation of CITES, such as including deterrent penalties, “clearly defining management responsibilities for regulating trade both around protected areas and in potential trade outlets including markets and shops”, and “*voluntarily prohibiting internal trade in such parts, derivatives and products, as provided for in Resolution Conf. 9.6 (Rev. CoP16)*” (including products labeled as or claiming to contain their parts and derivatives). This presumably also includes parts, derivatives and products from captive-bred big cats, as underscored by Parties adoption of Decision 14.69 stating that “*tigers should not be bred for trade in their parts and derivatives*” (CITES 2013).

As shown in Table 10, all range States except Turkmenistan and Tajikistan have joined CITES. The table also shows Party categories under the CITES National Legislation Project for meeting the requirements of the Convention. Of the 28 range States assessed, the legislation of 11 (39%) are in Category 1, as are all the major non-range consumer States. More than half of Asian range States still require legislative improvements to implement CITES effectively. However, it is notable that most of the countries assessed

as Category 1 still see substantial levels of illegal trade in Asian big cats and their products, as indicated by seizures.

Table 10. Evaluation (as of March 2013) of national legislation specific to CITES implementation in Asian big cat range and non-range consumer States

Range states	Evaluation of national CITES implementing legislation*	Non-range consumer States**	Evaluation of national CITES implementing legislation*
Afghanistan	3	Canada	1
Armenia	3	Denmark	1
Azerbaijan	2	France	1
Bangladesh	2	Germany	1
Bhutan	3	The Netherlands	1
Cambodia	1	Republic of Korea	1
China	1	Singapore	1
India	2	UK	1
Indonesia	1	US	1
Iraq	n/a		
Islamic Republic of Iran	1		
Israel	2		
Kazakhstan	2		
Kyrgyzstan	2		
Lao PDR	3		
Malaysia	1		
Mongolia	2		
Myanmar	3		
Nepal	3		
Oman	3		
Pakistan	3		
Russian Federation	1		
Saudi Arabia	1		
Sri Lanka	3		
Thailand	1		
Turkey	1		
Uzbekistan	2		
Viet Nam	1		
Yemen	1		

Source: CoP16 Doc. 28 Annex 2 (Rev. 1).

*Category definitions: 1: legislation that is believed generally to meet the requirements for implementation of CITES; 2: legislation that is believed generally not to meet all requirements for the implementation of CITES; 3: legislation that is believed generally not to meet the requirements for the implementation of CITES

**Non-range consumer states identified through analysis of seizures in the CITES Trade and EU-TWIX databases

This review did not find any range or major consumer States which do not have any internal or international restrictions on trade in wild-sourced Asian big cat parts and derivatives. The same protections, however, do not necessarily extend to prohibiting trade in captive-bred big cats and their parts and derivatives. While a more comprehensive legal analysis would be necessary to determine the extent to which other countries extend trade protections to captive-derived specimens, it appears that China has systematically exercised internal trading privileges for skins and derivatives produced from captive breeding.

While national policies regulating internal trade are beyond the scope of the Convention text, they receive emphasis in several parts of the Resolution as well as related Decisions (14.66 and 14.69) (CITES 2013). The Parties clearly intend their views to pertain to domestic trade, as demonstrated by the rejection of China's suggestion at CoP14 that Decision 14.69 should pertain only to "international" trade (CoP14 Com. II Rep 14 [Rev. 1] and CoP14 Plen. 4 [Rev. 2]). In three of its last four meetings where Asian big cats were considered, the CITES Standing Committee has emphasized compliance with Decision 14.69 (Table 16), also demonstrating the importance that Parties place on domestic policy concerning trade in tiger parts and derivatives of captive-bred origin.

5.1.1. Best practices: increased penalties for wildlife crime, comprehensive national legislative protections for Asian big cats

In April 2013, the United Nations Commission on Crime Prevention and Criminal Justice adopted a draft Resolution, which was subsequently adopted by the United Nations Economic and Social Council (ECOSOC) on 25 July 2013. The Resolution encourages States to treat illicit trafficking in wild fauna and flora as a serious crime when organized criminal groups are involved, to fully utilize the UN Conventions against Transnational Organized Crime and Corruption to prevent and combat illicit trafficking in wild fauna and flora, and to implement appropriate measures to prevent and combat illicit trafficking in wild fauna and flora.

Three range States, Bhutan, Russia and Viet Nam, significantly increased penalties for Asian big cat crimes in 2013. Bhutan's new penalties are specific to two species, tiger and leopard, as shown in Table 11, and different levels of additional penalties are set depending on the body part. Viet Nam decreed a maximum financial penalty level for illegal wildlife trade at USD25,000 (Decree No. 157/2013/NĐ-CP: Viet Nam CITES MA in litt. 2014), and Russia raised the maximum penalty for killing, transporting, keeping, taking and selling of wild protected endangered species (including tiger, snow leopard and leopard) to RUB1.1 million (USD35,000) (TRAFFIC 2013b). With this decree Russia automatically classified these offenses as criminal subject to criminal law, whereas previously they were classified as an administrative offense, where the penalty was dependent on the amount of the estimated ecological damage (TRAFFIC in litt. 2014). China recently clarified and strengthened its legislative protections in April 2014, to the effect that eating of protected species or purchasing them for other purposes will be deemed a criminal offense, with a jail term of 5-10 years (Xinhua 2014, TRAFFIC in litt. 2014).

Table 11. Bhutan enacts new penalties in 2013 for Tiger and Snow Leopard

For attempted capture or injury: fine of Nu 0.500 million (US\$8,181)
For un-permitted taking, destroying, capturing or trade of their parts and products regardless of whether such animal was taken in Bhutan or elsewhere: fine of Nu 1 million (US\$16,362) or a penalty of up to ten years imprisonment or both
In addition, any parts or products possessed by the offender will be confiscated, and the offender will be subject to the following series of fines: <ul style="list-style-type: none"> o Entire skin: Nu 0.300 million o Any missing parts of a skin: Nu 0.050 million o Set of bones: Nu 0.300 million o Any missing part of bones: Nu 0.050 million o Claws: Nu 5,000 each o Canine: Nu 10,000 each o Any other parts: Nu 10,000 each
Repeated offenses result in a doubling or tripling of fines and penalties (up to 20 years imprisonment).

Source: Royal Govt of Bhutan, Ministry of Agriculture and Forests, Department of Forest and Park Services, Thimpu. Notification No DoFPS/Kha-01/2013/598. <http://www.moaf.gov.bt/moaf/?p=17126>

Other maximum penalties as reported by Parties and organizations contributing information for this report are shown in Table 12; while there is wide variation, especially in financial penalties, most are stringent.

Table 12. Maximum penalties for wildlife crime involving Asian big cats reported by contributing Parties and organizations (in litt. 2013, 2014)

Party	Maximum jail sentence	Maximum financial penalty (USD)
Cambodia*	5-10 years	according to wildlife product valuation notifications
China	Life imprisonment	according to wildlife product valuation notification issued in 2012
India*	7 years	\$415
Indonesia	5 years	\$10,000
Japan*	5 years	\$1.04 million
Lao PDR*	5 years	\$75
Malaysia*	7 years	\$61,246
Nepal*	15 years	\$1028
Pakistan*	2 years	\$10,194
Viet Nam	7 years	\$25,000
UK*	7 years	Unlimited

*IN: under amendment as announced by the Ministry of Environment and Forests in May 2014

*JP: maximum fine for commercial entities trafficking endangered species (TRAFFIC 2013b)

*LA: maximum financial penalty for multiple offenses shown

*KH: 10 years for tiger or clouded leopard offense; 5 years for leopard. A Wildlife Law remains in development, and WCS is supportive of this important initiative, and has proposed the leopard be given the highest level of legal protection (Annex 3).

*MY: fine is per animal (higher for females and juveniles), in aggregate not to exceed MYR2 million, for a corporate body (fines are half this level for an individual).

*NP: Penalties lower for leopard (maximum 10 years, USD780)

*PK: for CITES-listed species

*UK: 7 years for international violation, 5 years for domestic violation

Although the financial penalties under Indian law are the lowest shown in Table 12, amendments have been prepared to significantly raise them, it was recently announced (May 2014) by the Minister of Environment and Forests. India is widely recognized for its success conserving big cat populations, and there is little evidence of domestic trade. Although it has suffered relatively high levels of poaching, most cat parts seem destined for export. The progress India has made is in part due to its comprehensive national

legislative protections, highlighted here as a best practice in the following analysis contributed the Wildlife Protection Society of India (in litt. 2014). This is included as a detailed example of best practices; other countries could have been included as well (e.g., Nepal and Russia, among other range and non-range States: TRAFFIC in litt. 2014) but in the interest of space a single example was chosen. It should also be noted that India's implementation of these protections, particularly in terms of the judicial prosecution of wildlife crime where there is a large backlog of cases, has not been as thorough as could be.

"In India, the central pillar that supports ABC conservation efforts is the Wild Life (Protection) Act, 1972 (the WLPA). The WLPA is a strict domestic measure that regulates not just import or export, but the hunting, possession, and trade of ABC specimens¹ in India. The tiger, leopard, snow leopard, clouded leopard and Asiatic lion are listed in Schedule I of the WLPA, which gives them the highest degree of protection. As a result of such listing:

- 1) *Hunting, including capture and attempts to capture ABCs, is prohibited.² The only exceptions to this are when:
 - a) *an ABC is killed in self defence; or*
 - b) *the Chief Wild Life Warden of a State is satisfied that an animal has become dangerous to human life or is disabled or diseased beyond recovery and he issues an order to this effect in writing.³ The National Tiger Conservation Authority (the NTCA) has issued guidelines on the subject of when a big cat may be declared as a man-eater;⁴ and*
 - c) *the Chief Wildlife Warden grants a permit to a person to hunt (hunting is defined to include capture, even if the animal is subsequently released) an ABC for the purpose of education, scientific research, scientific management, or for the collection of specimens. However, no such permit can be issued without the previous permission of the Central Government.⁵**
- 2) *Possession of ABC Specimens (including live captive animals), without an ownership certificate is an offence. There was a fixed period for making declarations of ownership for such specimens so as to receive ownership certificates. This period has passed.⁶ Therefore, no new ABC specimens can be declared or legalized in India.*
 - 3) *All trade in ABC specimens is prohibited (apart from trade between recognized zoos as per applicable regulations⁷). Legal ABC specimens can only be transferred from one person to another through inheritance.⁸ "Offers for sale" are also prohibited and this would cover advertising.⁹*

¹ An ABC Specimen may be a captive animal, trophy, an uncured trophy, an animal article, meat or salted or dried skins of an ABC. These items are defined so as to cover any item which may contain any part of an ABC (Section 2 of the WLPA).

² Sections 9 and 2(16) of the WLPA.

³ Section 11 of the WLPA.

⁴ Available at http://projecttiger.nic.in/Guideline/Guidelines_%20bigger_catS_%20man.pdf.

⁵ Section 12 of the WLPA.

⁶ Sections 40, 41 and 42 of the WLPA. There are provisions under which the Central or State Governments may provide for a period of immunity during which fresh declarations can be made (Sections 40(4) and 40-A of the WLPA). One such immunity period was provided in 2003.

⁷ Under Section 38H of the WLPA, no zoo shall be operated without being recognised by the Central Zoo Authority (CZA). The WLPA prescribes that no recognition to a zoo shall be granted unless the CZA, having due regard to the interests of protection and conservation of wild life, and such standards, norms and other matters as may be prescribed, is satisfied that recognition should be granted. Standards for recognition of zoos has been adopted by the CZA in the Recognition of Zoo Rules, 2009 and the CZA will only recognize a zoo if the standards and norms prescribed in these Rules have been met (EIA in litt. 2014).

⁸ Sections 40, 42, 43(1) and Chapter V-A of the WLPA. Specifically see Section 40(2-A) and (2-B).

⁹ Sections 40(2) and 43(1) of the WLPA.

- 4) *The transport of any legal ABC specimen from one State to another requires the reporting of such transport to the Chief Wild Life Warden within whose jurisdiction the transport is affected. Transporters are prohibited from accepting any ABC specimen for transport without taking due care to ascertain that permission from the required officer has been obtained for such transport.*¹⁰
- 5) *Any offence in relation to ABCs carries a penalty of imprisonment for a period between 3 – 7 years and a fine not less than 10,000 INR for a first offence. For a second offence the minimum fine is increased to 25,000 INR. The WPLA also provides for higher punishments for any offences committed in Tiger reserves.*¹¹
- 6) *The WLPA reverses the burden of proof such that a person established to be in possession of an ABC specimen will be required to prove that he is in lawful possession of such specimen instead of the prosecution having to prove he is in unlawful possession.*¹²
- 7) *The import¹³ and export¹⁴ of ABC specimens (apart from trade between recognized zoos as per applicable regulations) is prohibited by the Export-Import Policy of India and would involve violations of the Customs Act 1962.*
- 8) *Apart from the Customs Act, the import or export of any ABC Specimen which does not already have a certificate of ownership, and other permissions required for transport under the WLPA, will be an offence under the WLPA.*¹⁵

“Therefore, with the limited exception of regulated trade between recognized zoos, Indian law creates a complete ban on all trade in all parts and products of all ABCs from all sources. Despite problems with implementation, in the judgement of the Wildlife Protection Society of India, it is these strong laws that form the fulcrum for India’s success at conserving Tigers and other ABCs thus far.” (WPSI in litt. 2014).

5.1.2. Continuing challenges: national legislative development and revisions, national trade prohibitions don’t necessarily extend to parts, products and derivatives from captive big cats

Even strong legal protections should be continuously reviewed and improved to evolve to changing circumstances, as in other countries mentioned above including India, which is currently circulating amendments to address, among other issues, financial penalties originally set in 1972 which in today’s economy are insufficiently deterrent. Of the range and relevant States Afghanistan appears to lack even basic wildlife legislation (although it has banned hunting of certain species by proclamation: WCS in litt. 2014), and more detail on deficiencies and recommendations were made by Johnson and Wingard (2010). Other countries protect wildlife under more general forestry or environment legislation perceived as insufficiently comprehensive, and are developing wildlife-specific law, including

¹⁰ Sections 43(2) and 48-A of the WLPA.

¹¹ Section 51 of the WLPA.

¹² Section 57 of the WLPA.

¹³ A Policy Condition to Chapters I-V of Schedule I of the ITC(HS) Code 2012 dealing with live animals and animal products states that the import of Wild Animals (including their parts and products) as defined in the WLPA is prohibited.

¹⁴ All wild animals, animal articles including their products and derivatives excluding those for which ownership certificates have been granted and also those required for transactions for education, scientific research and management under Wild Life (Protection) Act, 1972, are prohibited exports as per S.No.1 of Table A of Schedule II of the ITC(HS) Code 2012. The list of prohibited items for import also specifically includes “Tiger-Cat Skins”, “Articles of apparel and clothing accessories Of wild animals covered under Wild Life Protection Act,1972”, “other articles of fur skin of wild animals covered under Wild Life Protection Act,1972”, “Sinews and tendons of wild life”, etc.

¹⁵ See the Delhi High Court judgment in **Samir Thapar v. Union of India and Others** 2010 (171) DLT 33.

Cambodia (WCS in litt. 2014). Expert workshops to review and recommend improvements to national legislation were held recently in China and Thailand (ARREST 2014).

A problem particular to Indonesia has been identified in that leopards are protected as a species under 1990 environmental legislation, while tigers are listed by subspecies (Sumatran and Javan, the latter is now extinct). When a tiger skin and stuffed leopard were seized in 2012, charges were only brought for the leopard, as forensic testing was inconclusive as to the tiger subspecies (Stoner and Pervushina 2013). Many captive-bred cats are a mixture of subspecies, and the Siberian tiger subspecies is also relatively common in captivity (IUCN Cat SG in litt. 2014), and as such Indonesian legal restrictions would not seem to apply to such trade, thus creating a potential loophole for traders of tigers and tiger parts to exploit.

The international community has recognized the importance of China's internal trade policy for tiger conservation on several occasions (e.g. SC58 Summary Record). At CoP14 in 2007, "China stated their intention to maintain [its] voluntary 1993 ban on domestic trade unless a policy review otherwise demonstrated that lifting the ban would provide positive benefits for wild Tiger populations" (CoP14 Com. II Rep 13). In 2011, China reported that from August-December 2010, it "employed special label system and standardized packages with official seal to enhance monitoring...at facilities of tiger breeding in captivities and markets" (SC61 Doc 41 Annex 2). In 2011, 2013 and 2014 China reported to CITES that "the policy on banning of trade in tiger bone has been implemented by China since 1993...and the tiger parts coming from captive bred tigers are strictly regulated" (SC61 Doc. 42 Annex 2, CoP16 Doc. 50 (Rev. 1), Annex 3 b, and Govt of China in litt. 2014).

Under China's 1988 Wildlife Conservation Law,¹⁶ as well as the 1993 State Council Notice prohibiting medicinal use of tiger bone,¹⁷ trade in Asian big cats is allowed only with national government permission for scientific research, domestication and breeding, exhibition and other special purposes. Such exemptions are common in wildlife-related legislation around the world, intended to provide administrative flexibility; potentially, however, such language could result in regulatory actions which substantially deviate from legislative intent. Regulations to implement the 1988 Wildlife Conservation Law specify that "the sale and purchase of species of wildlife under special protection by the State or the products thereof in the market place shall be prohibited."¹⁸ Regulations to implement an approval process for trade exceptions have been issued by the State Forestry Administration, which state that eligibility is restricted to scientific research, domestication and breeding, exhibition and other special circumstances (SFA no date). Applicants are required to submit information including proof of legal acquisition, a business plan, and the opinion of the provincial forestry department, among other items.

SFA has announced in several Notifications (Notification 6, SFA 2004; Notification 8, SFA 2007; Notification 1, SFA 2014) approved pilot enterprises, businesses that are allowed to trade in wildlife products affixed with a special mark. Species (when specified) varied, including reptiles, and many of the announced businesses were licensed to trade in ivory. A dedicated website and marking system has been set up to track sale permits for legal ivory items (SC63 Doc. 18: <http://www.ivory2004.cn>). Outside ivory, other approved products from pilot enterprises are individually marked under the China National Wildlife

¹⁶ <http://www.china.org.cn/english/environment/34349.htm>

¹⁷ http://www.eia-international.org/wp-content/uploads/State-Council-Ban-on-Tiger-Bone-and-Rhino-Horn_1993_ENG.pdf

¹⁸ <http://www.asianlii.org/cn/legis/cen/laws/rftiotpotw755/>

Marking scheme (<http://www.cnwm.org.cn>). Among the approved enterprises were China's two largest captive tiger facilities. Although the Notifications did not specify the approved ingredients for these wines, the permit labels issued under this scheme, shown in Figure 28, list lion *Panthera leo* (presumably of African stock and bred-in-captivity).

Other approved enterprises have received government permits to trade in tiger skins. One recently approved company (for "wild animal skins": SFA 2014) claims to have nine Amur and Bengal tigers (which it plans to increase to 500) and to have received a "tiger specimen collection certificate" under this Notification and the CNWM permit system.¹⁹ An example of such a certificate is shown in Figures 19, with the CNWM website permit record in Figure 20. A third approved company includes a photo of its certificate on its website; it is for a tiger specimen, removed from the wild in 1993 (Figure 21). As shown in Table 13, the company's website has a price list which includes not only tiger (price "negotiable"), but other Asian big cats including snow leopard. Two other companies approved in 2004 also list several cat species (including tiger and snow leopard) with negotiable prices on their websites.²⁰ The snow leopard is afforded the same level of protection under the Wildlife Conservation Law as the tiger, leopard and clouded leopard (China CITES MA in litt. 2014). Regarding the snow leopard, China has stated that "no permits have been issued for commercial purposes," and that "there are no legal industries using snow leopard fur or bone for commercial purposes" (GSLEP 2013: Table 5). (However, in Australia snow leopard DNA from medicinals has recently been recovered using advanced forensic techniques of apparent Chinese origin not labeled as containing the species: TrEnD in litt. 2014).

It appears from Figure 21 (certificate for wild tiger specimen) that trading permissions have been mainly but not entirely limited to products derived from captive big cats. Another SFA Notification issued in 2007 (Notice No. 206, SFA2007b) specified the eligibility of tiger and leopard skins obtained by "legal breeding or via other legal means" (presumably including wild skins determined to be obtained before national legal protections took effect).

Chinese law and regulations stipulate that Asian big cat internal trade should be restricted to non-commercial purposes; this is a prerequisite for government approval to trade, as specified in SFA guidelines (No date), and as indicated by a recent publicly available application from one of the companies discussed above, submitted to SFA via a provincial forestry department, for trade approval for two Siberian tiger skins.²¹ However, the certificates attached to approved specimens (Figures 19 and 21), while they spell out certain restrictions in both Chinese and English (the specimens must be individually marked and cannot be exported without a CITES permit), do not otherwise appear to restrict trade to non-commercial purposes. Neither do the websites of the companies offering the approved big cat specimens for sale.

In order to implement CITES, Party legislative and regulatory policy must distinguish between "primarily commercial" and "non-commercial" purposes, which are not defined in the text of the Convention. To provide guidance in this determination, Parties adopted Resolution Conf. 5.10 (Rev. CoP15), setting out general principles for international trade in Appendix I species, which must be subject to particularly strict regulation and authorized only in exceptional

¹⁹ <http://www.eyuwan.com.cn/NewsDetailInfo.asp?lmid=6&id=35>

²⁰ http://www.gybb.com.cn/cpml_1.htm
http://fzhengda.zonstar.net/cpzx_bbcpl/index.shtml

²¹ <http://eia-international.org/wp-content/uploads/2010.4-two-siberian-tiger-skins.jpg>

Figure 19. A tiger skin offered for sale in 2012 was tagged with a government permit for domestic trade in China (EIA 2013a); the B after *Panthera tigris altaica* denotes bred-in-captivity.



Figure 20. The permit shown in Figure 19 appears genuine as it is listed on the government’s China National Wildlife Mark database website (April 2014: <http://piju.cnwm.org.cn/>)



Figure 21. One approved taxidermy company shows a trade permit for a wild tiger specimen (origin 1992, issued in 2005) on the front page of its website (http://www.specimen.cn/order/mofei_input.asp); the registration number appears from the photo to be Fj02/05/K/000001, but in the CNWM search engine this yields a permit for the same company for a captive-origin slow loris *Nycticebus coucang*



Table 13. The same company's price list for Asian big cat specimens (www.specimen.cn/index3.htm)

Type of specimen	Price (USD)
Tiger	Negotiable
Lion	12,780 (M), 9,585 (F), 639 (cub)
Snow leopard	11,183
Leopard	9,905
Clouded leopard	4,473

circumstances. An activity can be described as “commercial” if its purpose is to obtain economic benefit, and uses where non-commercial aspects do not clearly predominate shall be considered primarily commercial. The trade in wines suggestively marketed as containing tiger but labeled as containing captive-bred lion derivatives would clearly appear to be commercial.

It is unclear how permitted sales are monitored and enforced. The permits shown in Figures 19 and 21 are similar to those China employs for its legal internal commercial ivory sales (IFAW 2012). In 2011, four separate NGO surveys documented widespread availability of unregistered ivory, suggesting that illegally obtained ivory is entering the system, as well as abuse of the identification card system in licensed shops and factories (Nowell 2012). For example, licensed vendors offered TRAFFIC investigators discounts of 10-30 per cent if the seller could retain the item's identification card, in violation of controls which stipulate the card is to remain with the registered item, suggesting the re-use of identity cards to launder illegal ivory (Nowell 2012). Similarly, a representative of a company licensed to sell tiger skins offered an NGO investigator a substantial discount if he could retain its skin permit (EIA 2013a: 8).

5.2. National law enforcement

Resolution Conf. 12.5 calls for “all Parties, especially range and consumer States, to introduce innovative enforcement methods,” and many have been introduced recently in countries as discussed below. However, numerous challenges to enforcement persist. Enforcement responses to tiger crime were assessed by INTERPOL in a recent report (INTERPOL, 2014). The assessment classifies such crime into three categories (which also apply to the other Asian big cats): 1) poaching of wild tigers; 2) smuggling of tiger

specimens and 3) commercial trade in parts and derivatives. The enforcement responses reviewed below are relevant to all three types.

5.2.1. Best practices: innovative enforcement methods -- anti-poaching, intelligence networks, targeted enforcement, zero tolerance for online trading, specialized judiciary, multi-agency coordinating mechanisms, high-level political support

In recent months, several political leaders took strong action to enhance national enforcement actions against wildlife crime. In his Executive Order mandating a national strategy to combat wildlife trafficking (Govt of US 2013), the US President specifically mentioned tigers as among the target species of concern. In March 2014 Vietnam's Prime Minister issued a Directive to his line ministries to strengthen responses to wildlife crime, recognizing wildlife crime not only as an environmental threat, but also as a threat to the country's economy, national security, public health and international relationships. Among the key provisions of the Directive are a strong judiciary response to prosecute those convicted of the sale and transport of rhino horn, ivory and other wildlife specimens; the deployment of inter-agency teams at border gates to detect and prevent smuggling of wildlife across Viet Nam's border; central agencies to co-ordinate investigations into trafficking syndicates; and education and mass media reporting on regulations on wildlife trade. The Directive also acknowledges the need to collaborate with non-governmental organizations in order for Viet Nam to meet its national and international commitments to tackling illegal wildlife trade (Vietnam CITES MA in litt. 2014, TRAFFIC 2014a).

Nepal celebrated 2013 as a year of Zero Poaching for tigers, with an increasing tiger population (the estimated number in national parks rose from 121 in 2009 to 198 in 2013). The army has worked closely with the Department of National Parks and Wildlife Conservation (DNPWC), and more than a thousand soldiers patrol Chitwan National Park (home to the country's most significant tiger population) from more than 40 posts. Dedicated leadership at high levels has also been important. Nepal's prime minister chairs a National Tiger Coordination Committee, and the country takes what is known as a "People to Prime Minister" approach (Nepal CITES MA in litt. 2014). The Chitwan area has been the focus of a solid history of engaging with local communities and creating mechanisms for them to benefit financially from tourism in the park; estimates are that half of every tourist dollar spent in the area is returned to local communities through the government. And in return, communities have provided the DNPWC with valued local intelligence on poaching and illegal wildlife trade (Neme 2014).

Countries are increasingly making use of so-called SMART anti-poaching monitoring, and rangers in key protected areas for Asian big cats are, amongst other things, being trained to counter poaching through data analysis. Parties that reported they are making use of such systems in 2014 include China, India, Lao PDR, Malaysia, Myanmar, Nepal, Thailand and Viet Nam (CITES MAs, GTF, WCS in litt. 2013, 2014). In 2013 Thailand also established an innovative national level elite anti-poaching squad called the King of Tigers, authorized under the Department of National Parks, Wildlife and Plant Conservation (DNP) to enforce environmental laws on land and waterways (Thailand CITES MA in litt. 2014). Interagency anti-poaching squads have been formed, notably in Mongolia and Russia (GSLEP 2013). Substantial NGO support for anti-poaching is evident in countries including Afghanistan, Cambodia, Indonesia, Kyrgyzstan, Lao People's Democratic Republic and Myanmar (GSLEP 2013 and IUCN Cat SG, WCS in litt. 2014).

There are several recent notable examples of targeted enforcement actions from China. In order to strengthen enforcement at international border points, China's Customs Authority introduced its first three trained sniffer dogs in 2013; the canines passed a sniff test and were able to successfully detect hidden tiger bone (WWF 2013). In China 85% of 37 recent advertisements for tiger bone wine claimed that it was manufactured before the 1993 trade ban (Stoner 2014). China closed this potential loophole for "antiques" when in 2011 it halted a high profile auction including 400 bottles of purportedly old tiger bone wine, and in 2013 sent all art auction houses official notices about the prohibition of trade in tiger bone, rhino horn and elephant ivory under Chinese law. According to continuous web monitoring by the International Fund for Animal Welfare, the art auction industry association appears in compliance, and an industry spokesman said the rhino horn and ivory prohibitions in particular had led to a 40% drop in annual sales revenues (IFAW in litt. 2014).

Targeted enforcement operations in Afghanistan reduced the illegal trade in snow leopard skins and other protected species among the international military and development communities located there, identified by market surveys as the main source of demand (Johnson and Wingard 2010, GSLEP 2013; WCS in litt. 2014).

Online wildlife trade poses significant enforcement challenges, and these are best addressed through a cooperative "zero tolerance" policy between government, online trading companies, and nongovernment organizations (China CITES MA in litt. 2013). China announced that it would "launch a national program against cyber-crime in tiger parts" as parts of its efforts under the Global Tiger Recovery Program (Govt of China 2011). China's largest online e-commerce companies have signed an innovative "Zero Tolerance" pledge towards illegal wildlife trade, and have met with China's National Interagency CITES Enforcement Coordination Group (NICE-CG). Independent monitoring of Chinese language trading sites by two organizations have found that advertisements for protected species products have sharply declined in recent months, with fewer new ads being posted. Referral of ads for protected species products to the host company sites has resulted in their deletion (Stoner 2014, IFAW in litt. 2014).

The judiciary is a key element of national enforcement. Having a specialized division for environmental prosecutors has been recognized as a best practice, such as in the United States, but it is also important that judges are properly versed in the laws as well. The Malaysian conservation community and public have protested that maximum sentences and fines under the Wildlife Conservation Act of 2010 have not been applied even in egregious cases of illegal tiger trade (Heng 2013; MyCAT, TRAFFIC in litt. 2014). In 2012, Malaysia took a step toward creating a specialization in the judiciary by setting up Green Courts in every district nationwide. Judges will receive annual training, and environmental crimes will receive a dedicated time slot within the district courts (Malaysia CITES MA in litt. 2014; Heng 2013).

Another innovative approach to adjudicating wildlife crime is Nepal's legal deputization (through its Forest Law) of judiciary function to district forest officers and chief wildlife wardens, who can impose fines and other penalties allowed by the law, including prison sentences of up to 14 or 15 years. Describing this system, former CITES Enforcement Officer John Sellar noted: "Whilst this scenario might seem at odds with other judicial systems, probably its greatest advantage is that it means that any poacher who is caught can expect to be dealt with much quickly than in other countries suffering high levels of poaching, where court systems regularly have lengthy backlogs and where, currently, insufficient deterrence is present" (Neme 2014).

Multi-agency coordinating bodies to foster cooperation in addressing wildlife crime are recommended by the Resolution and increasingly being adopted, especially with encouragement from regional Wildlife Enforcement Networks. Notable examples include: China (which has a national and 31 provincial CITES Enforcement Coordination Groups: China CITES MA, TRAFFIC in litt. 2014), Lao People's Democratic Republic (WCS in litt. 2014), Nepal (Nepal CITES MA in litt. 2014), Thailand (Thailand CITES MA in litt. 2014), the UK (UK CITES MA in litt. 2014), and Viet Nam (Viet Nam CITES MA in litt. 2014). Regionally, southwest Asia lags behind in developing such coordinating mechanisms, which was recently described (ALSS in litt. 2014) as a challenge for enforcing protections for Persian leopard in Iran.

5.2.2. Key challenges: border controls, the demand “diaspora”, online trade, wildlife forensics, conflict-killed cats, corruption

While much progress has been made in bilateral and multi-lateral enforcement cooperation for Asian big cat conservation and wildlife crime control, as discussed in section 5.3.1, trafficking across national borders still poses significant challenges to national law enforcement authorities, particularly along China's border but also others in South-east Asia. TRAFFIC's analysis of range State tiger seizure location (since 2000) identified the following border areas as major trade routes for tiger crime: Nepal/China border, Russian Far East/China, and Viet Nam/China, Malaysia/Indonesia, Malaysia/Thailand, and Viet Nam/Thailand (Stoner and Pervushina 2013). New Delhi, India was flagged as a hotspot for crime involving tigers as well as leopards (Raza et al 2012, Stoner and Pervushina 2013). Based on its research, EIA has identified seven border towns in China, Nepal and India as hotspots of illegal trade in Asian big cats²² (EIA in litt. 2014). According to the results of three months of monitoring by the WCS at a Viet Nam border town (Mong Cai), 90% of all products (34,000 shipments of all types of goods, legal and illegal) crossed into China illegally across a 100 m wide stretch of the Ka Long river rather than through the official border post (Robertson 2012). China's borders with Myanmar and Lao People's Democratic Republic have also been highlighted as seeing significant levels of illegal trade according to TRAFFIC market monitoring since 2001 (Oswell 2010). Figure 22, taken from that report, shows known trade routes for Asian big cat parts and derivatives in South-east Asia.

Not only are the levels of illegal Asian big cat trade destined for China a persistent challenge, but so too is the demand from Chinese traveling and residing abroad (the “demand diaspora”). With increasing international travel by citizens of China (and, to lesser extent, other countries with a history of consuming tiger derivatives), Customs officials seeking to enforce CITES must be alert to this increasing trend and implement measures to address any potential increase in illegal trade this may cause. In fact China has taken substantial efforts to educate and dissuade Chinese nationals traveling overseas from returning with ivory, and such measures (including airport posters and SMS messages to travellers) are a potential model for deterring other types of illegal trade and consumption by travellers (TRAFFIC in litt. 2014).

A number of towns in countries neighboring China cater to Chinese tourists and businessmen seeking to consume exotic wildlife, with Myanmar's border town of Mong La

²² Burang (in Chinese) or Purang (in Tibetan), local name Tagla Kbar also known as Taklakot, in addition to Leh (IN), Shiquanhe town (named in Tibetan, Senge Khabab, and in Chinese, Ali), Siliguri (IN), Dharchula (IN) and Darchula (NP), Raxaul (IN) and Birgunj (NP), Manipur (IN) including Imphal and Moreh, Biratnagar (NP), and Zhangmu (named in Nepali: Khasa).

being the most well-documented. “There’s not much to do here but gamble and eat wild animals,” one journalist quoted a visiting woman from China (Jacobs 2014). TRAFFIC currently identifies Mong La, Golden Rock, and Three

Figure 22. Known trans-border transportation routes of big cats and their derivatives in Southeast Asia (Oswell 2010)



Pagodas Pass as the major illegal markets for wildlife sold as trophies, food and medicine in Asia (TRAFFIC in litt. 2014); these border towns were also flagged for illegal Asian big cat trade by a recent UNODC transnational crime assessment (UNODC 2013: 81). Hundreds of skins of all Asian big cats, and especially clouded leopard, have been observed by TRAFFIC market surveys since 2001 (Figure 23), as well as parts and derivatives, especially tiger bone wine (Oswell 2010). Some businesses in Mong La have displayed whole tiger carcasses in large wine vats, promoted as an aphrodisiac (Oswell 2010, Finch 2014), an increasingly common claim which is unrelated to its history of use in traditional Asian medicine (Nowell et al 2011). Illegal ABC trade does appear to have

increased in the border town of Tachilek as evidenced by market surveys in January 2014 (TRAFFIC in litt.).

Figure 23. Tiger skin for sale in Mong La market, Myanmar, 2010 (Stoner and Pervushina 2013)



Tiger skin displayed for sale at one of the many retails outlets for Tiger products in Mong La Special Region 4, Shan State, Myanmar, June 2010.

Adam Oswell / TRAFFIC

Market observations by several NGOs over recent years suggests that, in general, illegal trade in Asian big cat parts and derivatives more and more frequently takes place via the Internet (EIA, IFAW, TRAFFIC in litt. 2014). Online trade poses significant enforcement challenges, as a platform for connecting buyer and seller that does not require bringing the parties or the products into physical proximity. A recent study of successfully completed international online sales of CITES-listed plants on an auction site compared these to reported exports in the CITES trade database, and estimated that fewer than 10% of the plants in their online sample were legally traded (Sajeva 2013). The authenticity of advertised items can be difficult to verify, but real tigers are involved, as the Harimau Kita Forum reported that Indonesian wildlife authorities in 2011-2012 seized, from online traders, tiger pelts, claws, teeth, whiskers and whole stuffed animals believed to have come from at least 22 tigers. Adverts for Sumatran tiger claws and teeth have been found on Chinese websites, showing that illegal trade can occur both nationally and internationally (Stoner 2014).

Another persistent challenge for enforcement authorities is the lack of adequate forensics capacity and tools. Improved forensics would enable authorities to better conduct intelligence-led investigation of wildlife crime, by helping to identify the origin of seized big cat parts, as well as enhance prosecutorial ability by identifying species content in otherwise unrecognizable and perhaps not adequately or correctly labeled processed derivatives. Forensics capacity in Asia is being improved, with development of the ASEAN Wildlife Forensic Network (<http://www.asean-wfn.org/>) and additional training being provided through the ARREST program (Freeland in litt. 2014). The use of sophisticated techniques (next generation sequencing, metabarcoding) is recommended as a best practice, as researchers in Australia have had a high success rate of obtaining amplifiable DNA from processed medicinals (Coghlan et al 2012, TrEnD in litt. 2014).

A challenge of a different nature is that posed by conflict between big cats and people. There can be no doubt that these large predators can pose a significant danger to human life and livelihood (Figure 24). Sumatra is a known hotspot for both tiger human-conflict and illegal domestic tiger trade in skins, claws, teeth and other body parts which have been documented by market monitoring for several decades (Shepherd and Magnus 2004, ProFauna 2009, Harimau Kita Forum 2013, Stoner 2014, TRAFFIC 2014b). Tiger-human

conflict is exacerbated when natural habitat is lost. A recent report by a coalition of environmental organizations including WWF found that most violent conflict between people and tigers in Sumatra's Riau Province between 1997 and 2009 occurred near deforestation sites operated by major commercial wood suppliers. At least 147 of 245 or 60% of all conflicts, resulting in 27 human deaths (49%), 8 tiger deaths (53%) and 14 tiger capture & relocations (82%) occurred in an area called Senepis, where five supplier concessions have been clearing natural forest since 1999 (Eyes on the Forest 2013).

Figure 24. The challenge of managing conflict: in this 2011 incident a leopard which strayed into a nearby village from a national park in north-east India wounded six people before it could be tranquilized by forest guards, and later died of its own wounds (Anon. 2011)



The Sundarbans mangrove forest of Bangladesh is another hotspot of tiger-human conflict. One example of a best practice for managing such conflicts are the nearly 50 Village Tiger Response Teams set up by the NGO WildTeam, consisting of 5-7 local people with a leader, who take responsibility for managing cases where tigers enter into villages, and help control the crowds until authorities arrive. One of the team leaders said that: *"In the past I killed tigers because I did not know if tigers are important for our life. But then after my father was killed by a tiger, I realized that what I did was wrong. Something from within myself forced me to shun this path of poaching. Now, I feel sorry for killing many tigers before. I promise I would utilize my skills to protect the tigers. Since becoming a VTRT member, I have rescued two tigers and tried to prevent retaliation killing of tigers by communities. I also conducted awareness activities in my village to inform people about what the importance of the Sundarbans and the tiger"* (WildTeam 2013).

The potential for conflict-killed cats to enter into and perpetuate illegal markets is particularly relevant to the snow leopard, which occurs in high montane areas of central Asia where nomadic pastoralist herding is the most common livelihood, and to the leopard – in India, where it is still relatively widespread and abundant, and in South-west Asia, where it is nearly extinct and the loss of any animal significant (50 Persian leopards were documented to have been shot or poisoned between 2007-2011 in Iran: Sanei et al 2012).

Numerous innovative approaches are being employed to reduce conflict, especially for the snow leopard, including predator-proof corrals, improved livestock management training, alternative income sources, and village predation insurance pools and wildlife management committees (GSLEP 2013, Panthera in litt. 2014). But conflict-killed cats have been documented to supply the illegal trade (three known cases of conflict-killed snow leopard skin illegal sales, along with a captured cub which later died, during a six-month recent period in Tajikistan: Panthera in litt. 2014).

In South-west Asia leopards are Critically Endangered with very small populations, so that any illegal trade is a serious threat. There is little effective anti-poaching protection for the population in Oman (Moqanaki et al 2013, Breitenmoser 2013, FEW in litt. 2014). The Arabian leopard is the flagship species in the region, and high prices are known to have been paid for captive-bred animals (\$300,000 for six leopards sold by Yemen's Taiz Zoo to a private collector in 2007: FEW in litt. 2014). While most reports of leopard killing are generally attributable to a shepherd's desire to protect his animals (e.g. Toumi 2014), in recent years several cases of live-captured (and badly injured) Arabian leopards being offered for sale in Yemen have been reported to the Foundation for Endangered Wildlife, as well as three cases (two verified) of leopards killed and made into taxidermic mounts for home display (FEW in litt. 2014). Similar cases have also been reported for the Persian leopard in Iran (ALSS in litt. 2014).

Corruption represents a challenge to effective enforcement in many fields, but the NGO community has repeatedly flagged it as a major obstacle to addressing what would appear to be high-profile and relatively flagrant violations of legal protections for Asian big cats. The INTERPOL tiger crime assessment notes that, "Internal integrity in law enforcement agencies should be encouraged and may be facilitated through internal investigative units" (INTERPOL 2014).

5.3. International cooperation for conservation and enforcement

The Resolution urges range and consumer States to cooperate in regional enforcement networks and through bilateral and multilateral arrangements. Most range States are members of regional enforcement networks either in existence (ASEAN-WEN [2005] as well as SAWEN [2011], which held its first regional meeting in Sri Lanka in June 2012) or in development (West Asia WEN, with an exploratory workshop held in November 2013). However, there are some gaps, especially in East and Central Asia, and two major ABC range States, Russia and China, are not members in any regional WEN, although there have been some contacts and cooperation, with China holding annual meetings with ASEAN WEN (China CITES MA in litt. 2014), and recently seconding an official from its CITES Management Authority to the ASEAN WEN Secretariat in Bangkok (ARREST 2013). A number of bilateral environmental and enforcement agreements have been established, as shown in Table 14. These range in scope from trade control to transboundary protected area management, and it is evident that in particular China, India, Kyrgyzstan, Russia and Viet Nam have been particularly active in formalizing cooperation and engagement. This table is not comprehensive as there are additional specific Customs agreements between countries as well (TRAFFIC in litt. 2014).

Table 14. Bilateral and multilateral agreements for conservation and wildlife trade control, established and in development

Established	In development
Bangladesh and India (GTF in litt. 2014)	Afghanistan, China, Kyrgyzstan and Tajikistan (WCS in litt. 2014)
Bhutan and India (GTF in litt. 2014)	China and Indonesia (China CITES MA in litt. 2013)
Cambodia and Viet Nam (Cambodia CITES MA, WCS in litt. 2014)	China and Viet Nam (China CITES MA in litt. 2013)
China and India (GTF in litt. 2014)	India and Myanmar (COP16 Doc 50 Annex 3C Rev. 1)
China and Nepal (Nepal CITES MA in litt. 2014)	India and Russia (COP16 Doc 50 Annex 3C Rev. 1)
China, India and Nepal (TRAFFIC in litt. 2014)	Kyrgyzstan and Tajikistan (GSLEP 2013)
China and Russia (China CITES MA in litt. 2013)	Malaysia and Thailand (Malaysia CITES MA in litt. 2014)
India and Nepal (GTF in litt. 2014)	
Indonesia and Viet Nam (Viet Nam CITES MA in litt. 2014)	

5.3.1. Best practices: attention to wildlife crime at top political levels in international fora, technical support program for regional wildlife enforcement networks, international cooperative programs for ABC conservation

In 2013 wildlife crime was a prominent theme of discussion at the United Nations General Assembly and at regional political fora. The latter include the 8th East Asia Summit (EAS) in October 2013 in Brunei, which recognized wildlife crime as a non-traditional security threat in East Asia, requiring enhanced cooperation, and underlined the importance of strengthening national laws and regulations (EAS 2013). The US Secretary of State made a statement at the 8th ASEAN Summit referring to his country's support for ASEAN-WEN (ARREST 2013). The US has been a major donor to the ARREST program of support for ASEAN-WEN, which provides technical and training support to build the capacity of both country members and the Secretariat itself (Freeland in litt. 2014). Wildlife crime was also given high level international attention in the 2013 Asia Pacific Economic Cooperation (APEC) Leaders meeting, the European Parliament, the US-China Economic Dialogue (TRAFFIC in litt. 2014) and in 2014 at the UK-hosted London Conference on Illegal Wildlife Trade.²³ Wildlife crime is increasingly being linked to wider issues of national concern such as national security, rule of law and socio-economic development, and these fora recognized the urgent need for a coordinated international response to this threat.

The tiger, being the most threatened of the Asian big cats, has received most of attention for international government cooperation. This culminated in a Heads of State International Tiger Forum in St Petersburg, Russia, in 2010, and the adoption of a Global Tiger Recovery Program, with national action plans developed by participating range States (GTRP 2010). This model, under continued leadership by the World Bank's Global Tiger Initiative, has now been extended to snow leopards, with the adoption of the Global Snow Leopard and Ecosystem Program by range States in Kyrgyzstan in 2013 (GSLEP 2013). That program intends to (among other goals) "develop regional inter-agency and inter-governmental initiative to counter the illegal cross-border trade in endangered flora and fauna." In addition, it was recently announced by the ruler of Sharjah, one of the seven

²³ <https://www.gov.uk/government/topical-events/illegal-wildlife-trade-2014/about>

United Arab Emirates, that an Arabian Leopard Initiative, modeled on the tiger and snow leopard, is under development (Anon. 2014).

5.3.2. Continuing challenge: improving international information sharing and coordination, lack of common CITES frameworks

While recent years have seen much progress in developing and strengthening regional WENs and bilateral and multilateral agreements, there is still an acknowledged need for improvement. ASEAN-WEN is still not being fully utilized by member countries as an enforcement platform (TRAFFIC in litt. 2014). Tiger range State governments met in China in August 2013 and adopted the Kunming Consensus (IWTCT 2013). They recognized the need to “increase collaboration, cooperation and communication among the Tiger Range Countries to combat illegal trade” and operationalize transboundary tiger population management. “As a priority” they seek to make progress in the “use [of] existing international mechanisms to strengthen bilateral, regional, and global coordination and communication among counterpart agencies.”

ASEAN is exploring common border economic integration with its development of the ASEAN Economic Community (ASEAN Economic Community Blueprint, ASEAN Secretariat, Jakarta, 2008). Member countries presently face major challenges controlling wildlife trade, and all are likely to face increasing international scrutiny as the ASEAN EC becomes a reality. Under common border economic integration, imbalances in enforcement or inconsistencies in national laws may result in wildlife criminals moving to exploit the weakest nations. The European Union addressed this potentiality when it was formed by implementing a common CITES framework that encompasses all of its member States. ASEAN has yet to adopt a similarly consistent approach to wildlife laws and enforcement (Schaedla 2013). TRAFFIC has also identified the need for harmonization of national CITES controls in the Eurasian Customs Union (Belarus, Kazakhstan and Russia), which is planned to enter into force in 2015 (TRAFFIC in litt. 2014).

There is some indication that this is happening with tigers. China has announced its intention to crack down on illegal tiger trade and tighten oversight of captive facilities (Nowell et al 2011), and it appears that some illegal supply and production activity may be taking place in neighboring countries, including Viet Nam (TRAFFIC in litt. 2014) and Lao People’s Democratic Republic (Nowell 2012).

5.4. Recording, availability and analysis of information

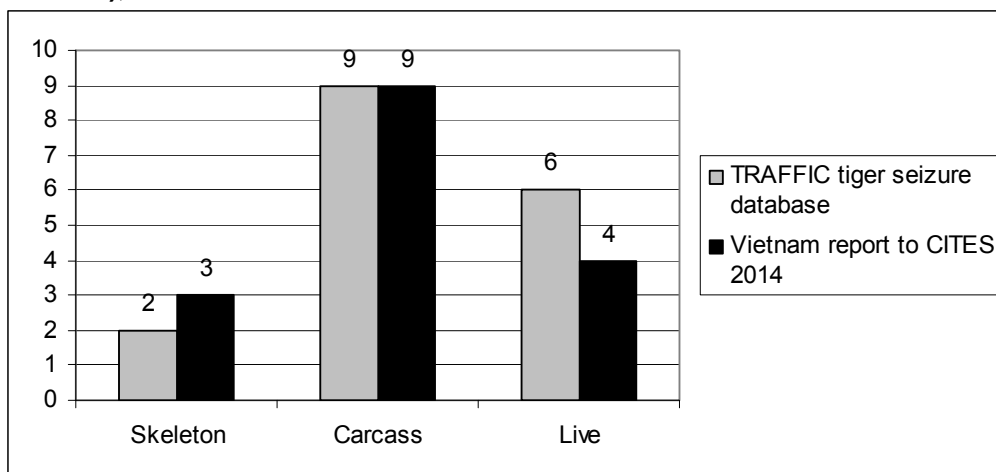
The Resolution urges “*all range States and other relevant Parties to implement systems for the recording of information relating to illegal trade in Asian big cats and to share this information as appropriate to ensure coordinated investigations and enforcement.*” INTERPOL, in its assessment of enforcement responses to tiger crime, noted that “intelligence is the foundation for effective law enforcement. When information is analyzed and shared in a timely manner and it reaches the agencies that can action the intelligence, there is an overwhelming benefit to the officers responsible for targeting wildlife criminals” (INTERPOL 2014). Most Parties contributing to this review reported that they do collect information, but generally it does not appear to be in a standardized nor centralized format accessible to sharing and analysis.

5.4.1. Best practice: information databases and innovative analytical tools

India stands out for its innovative approach to recording, sharing and analyzing information on illegal trade in Asian big cats. In partnership with TRAFFIC, the government maintains Tigernet (www.tigernet.nic.in), an online public database of tiger mortalities and illegal trade seizures that was established in January 2009. The database is populated by wildlife officials with secure access; there is a separate system for the public to provide information. Despite the long history of illegal the tiger trade, authentic and centralized data of direct indicators such as poaching and interdictions have not until this effort been available. The database currently only relates to tigers, and it could be expanded to include other ABCs as well. Since only part of the information on the database is accessible to the public, it is not possible to independently verify statistics or reports.

NGOs have also compiled seizure and poaching databases from public information, as reviewed in section 4 of this report. While not a substitute for official government records, there can be fairly good correspondance, as indicated by a comparison of the TRAFFIC tiger seizure database records for Viet Nam to those reported recently by the Viet Nam CITES MA (in litt. 2014) for this review (Figure 25). This suggests that NGO databases can also be a useful source of information for law enforcement analysis, as noted also by the INTERPOL assessment of enforcement responses to tiger crime (INTERPOL 2014).

Figure 25. Correspondance between TRAFFIC tiger seizure database records for Vietnam (TRAFFIC in litt. 2014) and those recently reported by its CITES Management Authority (in litt. 2014), 2012-2013



TRAFFIC has undertaken several pioneering approaches to analyzing seizure data. As it is unknown what proportion of illegal trade is interdicted, seizures are often assumed to represent a small fraction of the true trade volume, “the tip of the iceberg” being a frequently applied descriptor. In their study of a decade’s worth of Indian news reports of leopard seizures, Raza et al (2010) applied analytical tools developed for estimating animal populations when it is not possible to count all individuals due to imperfect detection. Known as mark-recapture analysis, this technique has also been used in crime analysis and depends on the mapping of interdiction information. Analysis suggested a true illegal trade problem double that of the number of seizures (Raza et al 2010), suggesting an interdiction rate possibly as high as 50%. Mapped seizures can also be used to identify hotspots of illegal trade using statistical tools (Raza et al 2010, Stoner and Pervushina 2013). EIA (2013a) has also used intelligence analysis to illuminate trade chain linkages.

5.4.2. Continuing challenge: using data to aid law enforcement

The primary purpose of gathering information on illegal trade should be to aid intelligence-led investigation by authorities. However, it has been noted that many countries do not have a systematic information management system, which results in information gaps that can obstruct investigations and operations and lead to the inefficient use of limited resources and personnel (INTERPOL 2014). INTERPOL has recommended that countries work to develop intelligence platforms, and called for the development of a supporting international network of intelligence analysts from tiger and other Asian big cat range countries for the purpose of operational and strategic analysis (INTERPOL 2014). Despite the evident growth of international information-sharing mechanisms such as the WENs discussed in Section 5.3, without centralized databases maintained with regular inputs, law enforcement cooperation between countries still tends to be ad-hoc and occasional rather than intelligence-led (EIA, TRAFFIC in litt. 2014).

5.5. Demand reduction, education, and awareness

The Resolution recommends that consumer States “*work with traditional medicine communities and industries to develop and implement strategies for gradually reducing and eventually eliminating the use of Asian big cat parts and derivatives,*” and that range States raise public awareness of Asian big cat conservation and research motivations underlying poaching. Concerning the latter, Asian big cat parts and derivatives command high prices, and a TRAFFIC study of economic and social drivers of the wildlife trade in Southeast Asia concluded that most tiger hunting is carried out by professionals, and the trade is driven by demand from wealthy consumers (TRAFFIC 2008). In Cambodia, where tigers appear to have recently been hunted to extinction, a study of big cat hunters from 2007-2009 found that hunting for trade was the major motivation (Cambodia CITES MA in litt. 2014). Body parts from big cats killed in conflict-type situations may also enter the trade, as discussed in Section 5.2.2.

Education and awareness (coupled with law enforcement) can have a powerful impact on consumer demand for Asian big cat parts and products when the message is delivered from political and cultural leaders. This is evidenced by several examples from East Asia: parts of China (Tibet Autonomous Region and the province of Taiwan), and other East Asian countries (Japan, Singapore and South Korea), all formerly relatively high volume consumers (Mills and Jackson 1994, EIA 2006), have seen significant reductions in usage (as evidenced by few seizures in the CITES Trade database and observations by NGOs including TRAFFIC and EIA [in litt. 2014]). However, while some forms of use have declined, new ones are rising, particularly the demand for Asian big cat luxury food and drink.

5.5.1. Best practice: developing a strategic approach to demand reduction

With the rise of luxury big cat consumption in Asia becoming a primary driver of illegal trade (TRAFFIC 2008, Nowell et al 2011, IFAW 2012), tackling it requires not only a strong and coordinated law enforcement approach but also attempts to change consumer behaviour. In order to develop appropriate messages, this requires targeted research to identify consumer motivations, and such information can also serve as a baseline against which to measure the long-term affect of such messages (Anon. 2010).

Several recent demand reduction initiatives have grown out of the Global Tiger Recovery Program, with facilitated by the World Bank. In December 2013 Viet Nam unveiled its

official work plan on reducing consumption of wildlife at a consultation meeting to government officials and NGOs in Hanoi, soliciting feedback before the plan is made final. The GEF-funded “Wildlife Consumption Project” being implemented since 2012 includes a campaign to raise public awareness and reduce demand, as well as elements on policy, legal reform, and enforcement (ARREST 2013, TRAFFIC in litt. 2014). Viet Nam also reported to this review (in litt. 2014) that “in 2012-2013, the CITES Management Authority and the Biodiversity Conservation Agency conducted a series of awareness campaign, workshops, and meetings to raise awareness on wildlife conservation, wildlife laws and to reduce wildlife consumption for several target group including government officers, journalists, University students, Women’s union, youth union and Communist Party members.” A government poster produced under this initiative is shown in Figure 26.

Figure 26. Awareness-raising poster to reduce demand for tiger products (Vietnam CITES MA in litt. 2014)



Also under the auspices of the GTRP, and funded through its Multi-Donor Trust Fund by the government of the UK, a pioneering demand reduction program is being developed by NGO partners including TRAFFIC, WildAid, WWF and the Zoological Society of London (TRAFFIC 2014b). The program has five components: identifying consumer behaviors and groups; identifying the factors needed to influence behaviors; developing practical behavioral models; developing a marketing strategy; and producing demand reduction campaigns that can be implemented by relevant stakeholders in tiger range States (Zain 2012). TRAFFIC has also facilitated several stakeholder workshops, including government representatives, in China to explore design of demand reduction strategies in that country

(Nowell et al 2011, TRAFFIC 2012, TRAFFIC 2013c). Reducing demand for illegal wildlife products was listed as one of the priorities for China's NICE-CG multi-agency CITES implementation group when it was first established in December 2011 (TRAFFIC in litt. 2014).

5.5.2. Continuing challenges: “Wealth not health” – new forms of demand, new cat species drawn in

Tiger bone, generally in powdered form mixed with other ingredients, has been used medicinally for over 1,500 years in China and other Asian countries, primarily as a treatment for rheumatism. Factory techniques modernized production, and before production was banned in China in 1993 there were more than 200 companies producing processed derivatives with tiger bone listed as an ingredient (Nowell and Xu 2007). However, wine suggestively marketed as containing tiger bone is being marketed less as a treatment for illness and more like an expensive luxury cognac (Nowell et al 2011, IFAW in litt. 2014), costing up to nearly USD500 per bottle (EIA 2013a). Entirely new kinds of demand have also arisen, as discussed below. In the words of IFAW (2012), “wealth not health” is increasingly becoming the demand driver of the tiger trade.

New types of demand include that for tiger meat, not a traditional Chinese dish. A recent newspaper article concerning the arrest of 15 suspects (a 16th jumped to his death as police pursued) in the act of butchering a tiger in southern China reported that exotic banquets featuring tiger meat and tiger bone wine have become increasingly popular among the wealthy and powerful in the region, and that the suspects were believed to have been involved in the slaughter of more than 10 tigers, reportedly originating in Viet Nam (He 2014). A professor associated with the WCS said “It is very hard to verify if a product really comes from tigers. These people may have wanted proof” (Leavenworth 2014).

A recent survey of online tiger trade in China (Stoner 2014) found that tiger bone wine was the most expensive product for sale, but not the most common, although the Internet is probably the main sales distribution channel for such wines now (TRAFFIC in litt. 2014). In TRAFFIC's online survey, over 90% of 438 advertised products could be classified as curios or collectibles, with more than half being made up of jewelry, the most common type being a completely new type of tiger product, a thumb or “archer's” ring purportedly made of tiger bone (Figure 27). These findings correspond to an online trade survey conducted by IFAW in 2011 on a large Chinese trading website which found that 99% of advertised wildlife products were collectibles rather than medicinals (IFAW 2012).

Figure 27. “Archer's” thumb ring purportedly made from tiger bone (Stoner 2014)



There appears to be increasing interest in the use of lion bone in Asia. There is no history of lion bone being used in traditional medicine there, but the two largest captive tiger facilities in China received government permission to manufacture wine from lion bone.

Small labels issued under the China National Wildlife Mark registration scheme, which regulates national trade in wildlife products, identify the wine as being made from *Panthera leo* as shown in Figure 28, although neither of the permit numbers on the labels could be found in an April 2014 search of the CNWM database (see section 5.1.2). Since it is not possible to search the government's database by species, only by permit number, there is no publicly available information to determine the extent of permissions to manufacture products from lion bone. Although purportedly containing lion, the wine is packaged and marketed suggestively as tiger (Nowell and Xu 2007, Nowell et al 2011, EIA 2013a).

In recent years South Africa has reported the export of large quantities of lion bone sourced from captive animals to China, the Lao People's Democratic Republic and Viet Nam (Figure 29). These transactions have been reported as for commercial and personal purposes, and some as hunting trophies, although South Africa's CITES Management Authority has stated that the purpose code H is used by them for the export of whole bodies, not necessarily deriving from a trophy hunt (AC27 Doc. 18). While the subspecies *Panthera leo persica* (the Asiatic lion²⁴) is included in CITES Appendix I, the African lion is included in CITES Appendix II, so that commercial trade in bones is permissible, unlike the other big cats considered in this review.

This is of concern for several reasons. Illegal trade in lion body parts for medicinal purposes is considered a threat to African lion populations (according to the regional lion conservation strategies: IUCN 2006a,b) as well as to the small population in India's Gir forest (IUCN Cat SG in litt. 2014). Legal international trade in bone reported as from captive-bred lions could serve as a cover for illegally wild-sourced lion parts. Secondly, it is very difficult to distinguish whole lion bones from tiger bones (Nowell 2000), and particularly if the bones are processed into some form of derivative product (e.g., laboratory tests commissioned by TRAFFIC of the Bugu wine shown in Figure 28 recovered DNA too fragmented by processing for identification as to species: Nowell and Xu 2007, although it should be tested again with new techniques including NGS and metabarcoding). This look-alike issue presents a significant challenge for government authorities seeking to enforce CITES restrictions on commercial trade in tiger bone and other Asian big cats listed in CITES Appendix I. Finally, the use of lion bone perpetuates the consumption of big cats for tonic or medicinal purposes, and potentially endangers consumers suffering from ailments which would otherwise benefit from appropriate medical attention.

²⁴ The 27th meeting of the CITES Animals Committee recommended that is Nomenclature expert review possible changes in the nomenclature of the lion (AC27 WG8 Doc. 1); the African Lion Working Group has recommended that lions of west and central Africa be grouped with the Asiatic lion (IUCN Cat SG in litt. 2014).

Figure 28. China government permission labels for medicinal wines made from lion bone, although the wine is suggestively packaged and marketed as being made from tiger, and DNA testing could not verify species content (Nowell and Xu 2007). These permit numbers did not work in the government’s China National Wildlife Mark (CNWM) database in April 2014.



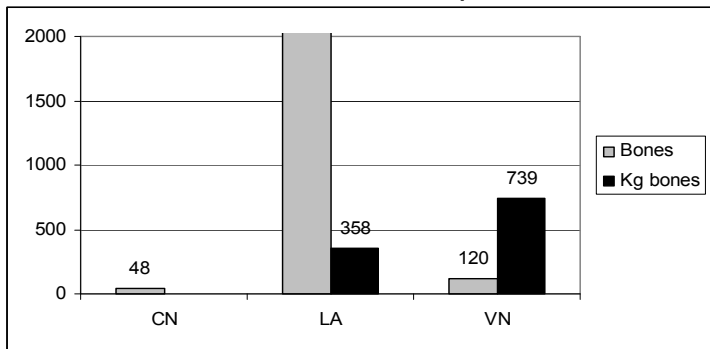
China’s Xiongshen tiger farm received permission to produce 400,000 bottles of Bugu wine in 2004 (SFA Notification No. 6 2004); its government label indicates it is the 20,162 bottle in the series (Nowell and Xu 2007)

China’s Heilongjiang Siberian Tiger Park farm received its production permit for two different wines in 2008 (one for “Forest Beast” single ingredient, and “Fufang” for multiple ingredient: SFA Notification No. 8 2007); this bottle was photographed in 2012 (EIA 2013a). The B indicates bred-in-captivity.



Bottles of Bugu wine (the tiger’s head is the bottle’s cap, and screws off) at the Xiongshen gift shop, photographed in 2009 (Nowell et al 2011)

Figure 29. Imports of lion bone by China, the Lao People’s Democratic Republic and Viet Nam from South Africa, 2009-2012 (CITES Trade Database)



In another example of new forms of demand, photos posted in 2012 on a safari website show hunters in South Africa posing with non-native species trophies (a tiger and a jaguar *Panthera onca*) (Figure 30). Captive-bred tigers are not uncommon in South Africa’s tourist-oriented “predator parks,” and hunting regulations pertinent to native cats would not appear to apply to non-native species (Annamiticus 2012). The CITES Trade Database

shows 65 reported exports of tiger trophies from 2000-2012, with the largest exporter being South Africa (23 or 35% of total). The purpose codes included personal, hunting trophy and commercial. The source codes are generally captive (although there are a few coded wild, presumably because the captive-bred tiger was free-ranging). Approximately a dozen additional tiger skins were also exported from South Africa during this period, and South Africa also exports a relatively large number of live captive-bred tigers. While hunting of captive-bred tigers is not a direct threat to the species in the wild, there is the potential for noncommercial trophy trade to be exploited for commercial trade, as has been reported for South African white rhinos (Milliken and Shaw 2012). The trophy code could also serve as a potential laundering mechanism for international trade in tiger parts.

Figure 30. New forms of demand: trophy hunts of exotic captive-bred cats (a jaguar and a tiger in South Africa: Wildlife Extra 2013)



5.6. Prevention of illegal trade in parts and derivatives from captive facilities

The Resolution urges “those Parties and non-Parties on whose territories tigers and other Asian big cat species are bred in captivity to ensure that adequate management practices and controls are in place to prevent parts and derivatives from entering illegal trade from or through such facilities.” However, it seems evident that captive-derived parts and derivatives are increasingly entering the market. As discussed in section 4.2.1, seizures of live tigers and frozen tiger parts have risen sharply in recent years, and given that such seizures are generally made far from protected areas (Stoner and Pervushina 2013), it is more likely they originate from controlled captive conditions rather than from wild tropical habitat, as has also been noted by INTERPOL (2014). While only limited forensic testing has been undertaken so far, DNA profiling of some live tigers seized in Southeast Asia were demonstrated to be of the Amur tiger subspecies (*P.t. altaica*), which is common in captivity, rare in the wild and restricted largely to the Russian Far East (COP15 Com II Rec. 7 [Rev. 1]). TRAFFIC has been monitoring tiger trade records dating well back to the early 1980s, when the trade was known to largely consist of wild tigers, and only recently have frozen tiger parts or live animals been observed or interdicted in any number (Mills and Jackson 1994, Nowell 2000, Verheij et al 2010, Stoner and Pervushina 2013). Finally, there are now far more tigers in captivity around the world (probably numbering in the tens of thousands, with many in China and South-east Asia) than in the wild (3,000, with most in India) (IUCN Cat SG in litt. 2014).

5.6.1. Best practices: policies designed to prevent trade in parts and derivatives from captive breeding operations, captive cat DNA databases for law enforcement

The CITES Management and Scientific Authority of Pakistan developed comprehensive guidelines for the management of felids in captivity, highlighted here as a case study for best practices (Pakistan CITES MA in litt. 2014). The guidelines were “developed with the purpose to control illegal trade of big cats and unjustified acquisition of animals for zoo exhibits overlooking the higher objectives of conservation and education,” and apply to all zoo and privately held felids. Owners who acquired their cats prior to the issuance of the guidelines are granted a period of time to come into compliance. All mortalities must be disposed of *“in a manner (e.g. incineration) that its body parts do not come under any trade whether national or international. None of the body parts can be sold. The pelt or any other part with educational or research value can be used for educational purposes at zoos or donated to reputed educational / research institutions. The body parts should be used to enhance the awareness and highlight conservation issues relevant to the species and felids in general.”*

The TRACE Network, an international organization devoted to the development, dissemination and implementation of forensic tools to help tackle wildlife crime, has recently initiated TigerBase, a pilot project to assist ASEAN governments to implement DNA-based captive tiger registration schemes (TRACE Network in litt. 2014). The database will allow governments to identify parentage and match individual samples using DNA profiling. The objectives of the project include to “provide intelligence information to local enforcement officers where there is a suspicion of illegal activity relating to tigers or their parts, and to increase capacity for forensic investigation for prosecution”. The project also aims to develop a framework for the data to be shared between countries for law enforcement purposes, and to incorporate samples from wild tigers as well.

5.6.2. Continuing challenge: identifying the source and legality of captive-origin tiger parts and derivatives

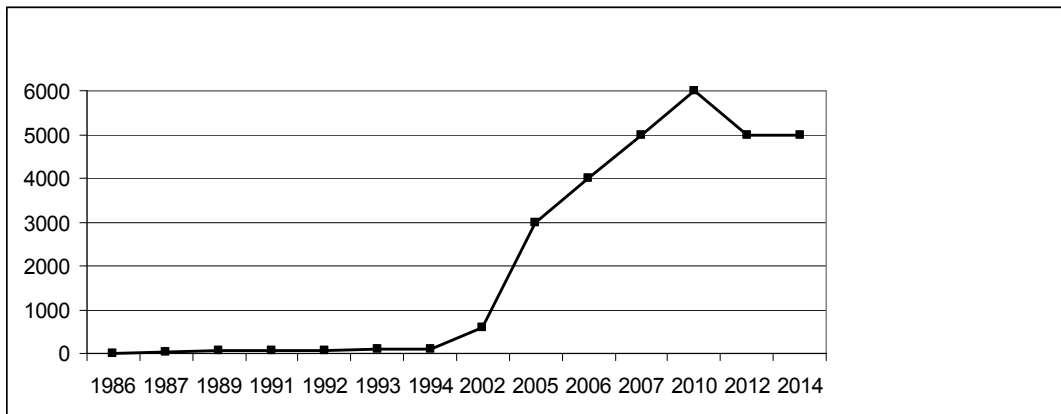
Tiger specimen seizures, especially including live animals and frozen bodies, have risen in South-east Asia in recent years (Stoner and Pervushina 2014). For example, of 61 live tigers seized from 2010-2012, 74% were confiscated in three South-east Asian countries – the Lao People’s Democratic Republic, Thailand and Viet Nam. The small numbers of wild tigers in these countries (probably altogether fewer than 300: Thailand CITES MA and IUCN Cat SG in litt. 2014) combined with the presence of tiger breeding facilities inevitably causes questions to be raised with respect to the source of tigers in trade. Some are confirmed to have been of wild-origin (e.g. Malaysia: TRAFFIC in litt. 2014), but many are suspected to have been bred in captivity.

In Thailand a total of 27 zoos are permitted to possess and breed tigers and leopards (Thailand CITES MA in litt. 2014). Thailand provided the names of these facilities and the number of tigers to CoP15 (CoP15 Inf. 4); as of 2009 the largest facility was Sriracha Tiger Zoo with 424 tigers. There are several known large facilities in the Lao People’s Democratic Republic (Nowell 2012, Stoner and Pervushina 2013), while Viet Nam currently has 10 registered tiger breeding facilities with a total of 107 tigers (Vietnam CITES MA in litt. 2014). Reportedly, however, there are additional captive facilities in Viet Nameese villages just across the border with China (TRAFFIC in litt. 2014), and a supply route to China is indicated by the recent seizure of a slaughtered tiger said to have come from Viet Nam (He 2014).

It is also possible that captive animals illegally enter trade in Indonesia, where seizures are rising, with the equivalent of 50 tigers seized from 2010-2012. Possible captive origin of some illegal trade is indicated by the presence of a lion (non-native to Indonesia) among a large July 2012 seizure of Asian big cat stuffed specimens including 14 tigers, two leopards and one clouded leopard (Stoner and Pervushina 2013, TRAFFIC in litt. 2014).

China is well known for having the largest reported captive population of tigers, which has grown strongly over the past decade (Figure 31) to a recently reported “over 5,000 individuals that are mainly in two facilities” (China CITES MA in litt. 2014) and an unknown number of additional facilities. In 2010 China reported to the 15th Conference of the Parties to CITES that “the Chinese government has informed the major tiger farms about the Decision 14.69. The major tiger farms are considering or have already taken the relevant measures and the growth of their captive tiger population has slowed down” (CoP15 Inf. 10).

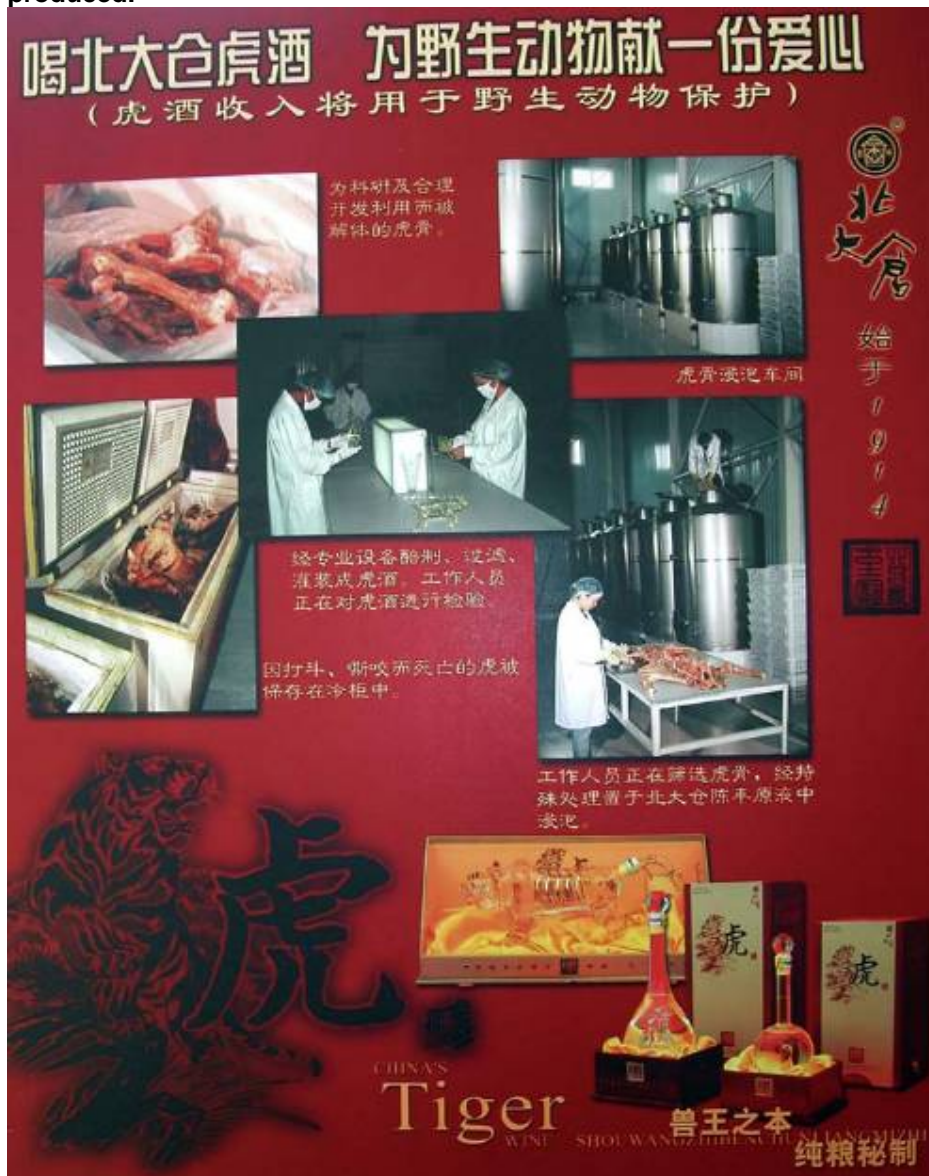
Figure 31. Growth of captive tiger population in two major facilities in China, according to publicly available information (Nowell and Xu 2007, EIA 2013c, CoP16 Doc 50 [Rev. 1] Annex 3b, China CITES MA in litt. 2013)



As previously discussed in Section 5.1.2, China has permitted some internal trade in big cat parts and derivatives originating from captive animals. However, other items have been observed in trade from businesses which do not appear to have been approved by SFA Notifications. For example, wines claiming to contain tiger bone (example in Figure 32) have been observed for sale originating from captive facilities other than the two major tiger farms (Nowell and Xu 2007, Nowell et al 2011, EIA 2013a). Another examples is the Hunan Sanhong Biotechnology Company, which has captive tigers as well as a taxidermy workshop on site, produces a variety of “Real Tiger” wines priced from USD320-480 (EIA 2013b), and whose website features a photo montage including images of tigers and the Space Shuttle lifting off on its rocket launcher.²⁵ Company documents and statements of its representatives claim that their production of wine containing tiger bone has been permitted by an unpublished government notification in 2005 with the stipulation that tiger bone cannot be listed on the product label as an ingredient (EIA 2013b).

²⁵ (accessed April 2014: <http://www.qzhu.cn/>)

Figure 32. Poster advertising Beidacang tiger bone wine photographed near Beijing, China in 2005. The poster claims the wine is made from captive tigers that have died from fight wounds, and that income from the wine will go toward wildlife conservation (Nowell and Xu 2007). It is not clear whether this wine (which continues to be advertised online: EIA 2013a) is being legally produced.



5.7. Management of government and privately-held stocks of parts and derivatives

The Resolution calls upon “those Parties and non-Parties on whose territories there exist stocks of parts and derivatives of tiger and other Asian big cat species (such as tiger bone stocks), but not including pre-Convention specimens, to consolidate and ensure adequate control of such stocks, and where possible destroy the same, with the exception of those used for educational and scientific purposes.”

Generally speaking there are two kinds of stocks: storage of parts and derivatives confiscated by authorities, which are the property of the State (unless otherwise adjudicated), and stocks of specimens held by private entities. The latter type typically consists of pre-Convention or pre-national trade ban items which had been acquired at a

time when such acquisition was permitted, and management of such stocks is not addressed in the Resolution nor discussed here. Those interested in the subject of how pre-Convention stocks held by commercial enterprises may be dealt with can find relevant material in

the 1999 CITES Tiger Technical Mission report, concerning Japan's oversight measures on the final disposition of stocks held by manufacturers of tiger derivatives in that country after the imposition of an internal trade ban (SC42 Doc. 10.4). China reported in 2000 that a number of provincial agencies continued to hold pre-trade ban stocks (Figure 33).

Figure 33. Pre-trade ban (1993) government stocks of tiger bone in China (Nowell and Xu 2007)

Sealed stockpiles of Tiger bone in China, according to records of the CITES Management Authority of China

Province	Tiger bone (kg)	Date of sealing	Responsible agency
Beijing	80.4	25-01-1994	Forestry Bureau of Beijing, Forestry Bureau of Beijing
Tianjin	13.319	27-11-1993	Medicine Bureau of Tianjin, Agri-Forestry Bureau of Tianjin
Shanghai	41.6	11-01-1994	Medicine Bureau of Shanghai, Agriculture Bureau of Shanghai
Guangdong	49.7	17-01-1994	Medicine Bureau of Guangdong, Forestry Department of Guangdong
Sichuan	150.80	20-11-1993	Medicine Bureau of Sichuan, Forestry Department of Sichuan
Hubei	151.61	01-02-1994	Medicine Bureau of Hubei, Forestry Department of Hubei
Heilongjiang	138.0	25-01-1994	Medicine Bureau of Heilongjiang, Forestry Department of Heilongjiang
TOTAL	625.429		

Source: Meng and Zhai (2000)

It is rare for governments to permit continued private stockpiling of protected species parts and derivatives subsequent to enactment of legal protections. One such example is South Africa, where landowners with privately-held free roaming rhinos are accumulating horns, which may be traded within the country with appropriate permits (Milliken and Shaw 2012). In terms of Asian big cats, only China has publicly stated that the continued stockpiling of post-Convention/internal trade ban tiger parts and derivatives by private entities (its large tiger breeding facilities) is being permitted.

5.7.1. Best practice: destruction of stocks

Confiscated big cat parts and derivatives should be retained by government authorities only as necessary for prosecutorial action. Otherwise, such stocks can be expensive and burdensome to maintain and administer, and once adjudicated are of not useful except perhaps for education and research. They can be at risk for theft, either by outsiders or officials, such as the two in China who were prosecuted in 2004 for the theft of 13 kg of

tiger bone from sealed government pre-Convention stocks (Nowell and Xu 2007). Several Parties contributing information for this review stated that such stocks are not kept (CITES MAs of Pakistan and UK in litt. 2014). Nepal indicated the existence of two national stocks and that the parts therein had become infested with pests; stocks were last destroyed in 1996 (Nepal CITES MA in litt. 2014). Malaysia and Thailand reported that national stocks are held in several secure facilities of their parks departments, and that destruction has not been employed (CITES MAs of Malaysia and Thailand in litt. 2013). Destruction of government-held stockpiles has been previously reported in Indonesia and the Lao People's Democratic Republic (Nowell 2007).

Viet Nam, which has had the highest number of tiger seizures recently of any range State, and particularly of perishable parts like carcasses and bone, has recently reported that most such confiscated stocks are destroyed (Viet Nam CITES MA in litt. 2014), and announced that it was considering doing the same for its stocks of rhino horn and ivory (WCS in litt. 2014). TRAFFIC reported that most seized wildlife specimens in Viet Nam are held at the district and provincial level across the country with no system of inventory, and will now be consolidated, with Viet Nam's new Directive requiring agencies to transfer CITES-listed seized specimens to the Viet Nam CITES MA (TRAFFIC 2014a). Viet Nam has also stated that captive mortalities at registered facilities must be disposed of according to regulations (Viet Nam CITES MA in litt. 2013), suggesting that no private stockpiles should be accumulating in that country.

The Environmental Investigation Agency contributed the following analysis of India's policies for destruction of both government and privately-held Asian big cat bodies, parts and derivatives (in litt. 2014):

"India does not have any stockpiles of Asian big cat specimens. India has adopted meaningful best practices for disposal of carcasses of confiscated specimens. The National Tiger Conservation Authority of India (NTCA) has issued a Standard Operating Procedure for Disposing Tiger/Leopard Carcass/Body Parts which requires that seized tiger and leopard specimens that are not required for court purposes must be destroyed in the presence of specified authorities.²⁶ The prescribed standards include that every zoo shall ensure that the carcasses of the animals is disposed by burying or burning provided that carcasses of large cats shall be disposed by burning in the presence of the Director of the zoo or any officer in the next rank to him and authorized by him in this behalf.²⁷ Further, the Guidelines for Disposing Carcass of Animals In Zoos (issued to Director/curators of Large/Medium/Small Zoos vide Central Zoo Authority letter No.24-2/95-CZA dated 24.1.1996) specifically provides that special care has to be taken in respect of carcasses of leopards, lions and tigers. These should be disposed of by burning in the presence of zoo directors themselves, so that the possibilities of skeleton/trophies being smuggled into illegal trade can totally be ruled out.²⁸

The transparent and routine destruction of carcasses from captive and seized sources ensures that such specimens cannot enter trade and reinforces applicable laws that prohibit commercial trade and strengthens enforcement efforts. It also sends a clear message that big cat specimens are not available for commercial purposes."

²⁶http://www.projecttiger.nic.in/whatsnew/SOP_carcass-disposa25Feb2013.pdf.

²⁷ <http://cza.nic.in/RZR.%202009.pdf>

²⁸ <http://www.cza.nic.in/guidelines1.html>

5.7.2. Continuing challenge: growing privately-held stocks at tiger captive breeding facilities in China

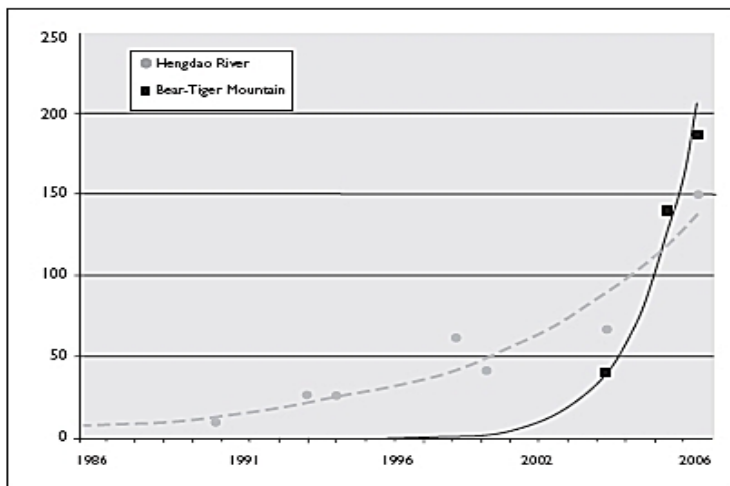
There are several known privately-held stocks of tiger parts in China. In 1999, the CITES Tiger Technical Missions that year visited the Tong Ren Tang company, one of China's largest and most famous traditional medicine manufacturers of tiger bone wine, and were shown a stockpile of tiger bone, which had been ordered sealed by the government following imposition of its 1993 internal trade ban. The mission reported that "many of the tiger bones were in a very poor state and seemed to be rotting" (SC42 Doc. 10.4: 36).

Two others are held at China's two large captive facilities which reportedly hold some 5,000 tigers (one in the southern province of Guangxi, known as Xionsen or Bear-Tiger Mountain, and the other in the northeastern province of Heilongjiang, known as HengDao River or the Siberian Tiger Park). In 2007 the Chinese government invited Parties and other specialists to tour the Guangxi facility, which is privately owned but reportedly has been the previous recipient of government financial support (Nowell and Xu 2007). The tour included a viewing of the stocks held in the facility's freezer (Figure 34). China reported several times to CITES that "in order to supervise the dead body of captive bred tigers, two operations in Guangxi and Heilongjiang are requested, under the supervision of local forestry departments, to dismember the frozen carcass in standardized methods, seal the tiger bones, labeled the tiger skins and destroy other tiger parts" (SC61 Doc. 41 Annex 2, COP16 Doc 50 Annex 3). China re-stated this in its contribution to this review, and then added the following sentence that "during the period, actions of destroying stockpile of Asian big cat parts and their products have been carried out several times" (China CITES MA in litt. 2013). It is not clear which stockpiles were destroyed. The most recent available information dates to 2006, when the two facilities reportedly had approximately 350 frozen bodies. If the growth trend indicated in Figure 35 continued, if not destroyed these stocks could be expected to now be quite large.

Figure 34. Photograph (WPSI in litt) of tiger parts stockpiled in the freezer of the Guilin Xionsen tiger farm in 2007



Figure 35. Growth of reported stocks of tiger bodies held in China’s two large tiger breeding facilities from 1986 to 2006 (Nowell and Xu 2007)



The rising number of frozen and whole tiger bodies seized in trade suggests that many of these animals originated from captive facilities. Freezing is not an ideal way to store bones over periods of more than a year (according to, for example, US Department of Agriculture guidelines on freezer storage of perishables), and especially if they could be intended for human consumption. It appears possible that tiger facilities are actually using or selling their tiger parts rather than holding them indefinitely and then periodically destroying them. Another indication that China’s oversight of privately-held stocks in captive facilities may not sufficient to guarantee their security are the public statements made by people associated with such facilities that they desire to trade in tiger products (e.g., COP14 Doc. 52 Annex 8: “The Current Situation of Tiger Breeding and the Facing Difficulties of the Guilin Xionsen Tiger and Bears Mountain Village”), and reports of journalists and NGO observers that facility personnel are marketing their wines and other products as being made from tiger (e.g., Leavenworth 2014).²⁹

5.8. Recent meetings relevant to Asian big cat conservation and trade control

Decision 16.70 paragraph a) direct the CITES Secretariat to “arrange national seminars in Appendix-I Asian big cat range States, involving all relevant enforcement agencies, to promote a multi-disciplinary approach that will facilitate improved coordination and cooperation in the detection, investigation and prosecution of wildlife crime offences.” This recent year has seen a number of important meetings relevant to implementation of the Resolution. A list, based on information available to the authors, is shown in Table 15 (references for further information on each of these meetings are included as a table in the References section of this review). Indication is given whether multiple government agencies were involved (as opposed to single agency meetings), as well as the private sector.

²⁹ “On a Feb. 16 tour of the Harbin Siberian Tiger Park, glass cases of bone wine could be seen on display, including bottles that had an image of tigers on them. None explicitly were labeled “tiger bone,” [but] a subsequent phone call to the gift shop was answered by an employee who offered assurance the wine was indeed made from tiger bone. He said it was produced by Hengdaohezi Siberian Tiger Liquor Co., which is listed as having its plant in Mudanjiang, a city 208 miles southeast of Harbin. A half-kilogram of the top-shelf product, he said, could be purchased for US\$466.” (Leavenworth 2014)

Table 15. Recent meetings relevant to Asian big cat conservation and trade control since CoP16 (table continues on next page)

Date	Title	Location	Govt: Multi-agency	Private sector	Total Attend
Nov-13	Monthlong wildlife crime prevention training for forest rangers	BH			150
Jun-13	Workshop on protecting endangered species with high medicinal value in traditional Chinese and Tibetan medicine	CN		X	
Jul-13	Wildlife crime training prevention for transport companies	CN	X	X	60
Sep-13	Wildlife crime training prevention for e-commerce and logistics companies	CN	X	X	13
Sep-13	International Workshop for Transboundary Conservation of Tigers & Other Endangered Species & the Strategy to Combat Illegal Trade in Wildlife	CN	X	X	
Dec-13	Wildlife law enforcement in Xinjiang Autonomous Region	CN	X		120
Feb-14	Workshop on China's Wildlife Protection Law	CN		X	
13-Jun	Wildlife law enforcement in Guangxi province	CN	X		
13-Jun	Customs training for endangered species trafficking	CN			30
Jul-13	INTERPOL/SAWEN: Integrated Investigative Capacity Development and Operational Planning Meeting	IN	X		
Nov-13	Workshop: strengthening regional cooperation to combat wildlife crime in West Asia	KW	X		
Oct-13	International Snow Leopard Forum	KG	X	X	
Jun-14	GSLEP National Focal Points Action Planning, Leadership & Capacity Development workshop	KG	X	X	
Jan-13	Wildlife law enforcement training course	LA	X		59
Jul-13	2d Bilateral meeting between Lao PDR and Thailand on wildlife crime enforcement	LA	X		
Feb-14	Training of Trainers (TOT) Course on CITES Policies and Species Identification	MY	X		
Dec-13	Arabian leopard conference	OM		X	
Dec-13	2d Asian judges symposium on the environment	PH	X		
13-Jan	Arabian leopard ecology & conservation workshop	SA		X	
Jun-13	8th Annual ASEAN-WEN Meeting	TH	X		
Jul-13	Interpol Project Predator: Capacity Development and Needs Assessment for Investigative Wildlife Operations in Southeast Asia	TH	X		
Oct-13	Wildlife trafficking training course	TH	X		43
Oct-13	PROTECT Tactics course in Thailand's Eastern Forest Complex	TH	X		30
Oct-13	8-week training for King of Tigers national anti-poaching unit	TH			
14-Mar	<i>Wildlife Friendly Skies</i> training for airport personnel	TH		X	56
14-Mar	Cross-border investigation training course – Lao PDR and Thailand	TH			26

14-Mar	Protected-area Operational and Tactical Environment Conservation Training	TH			18
Sep-13	Wildlife forensics training course for Asian countries	US			
Jul-13	Wildlife Consumption in Vietnam: Reforming policies and Practices to Strengthen Biodiversity	VN	X	X	
Mar-14	Roundtable on addressing transnational wildlife crime	VN	X		

Recommendations

For background information, actions taken by the CITES Standing Committee since 2008 and subsequent outcomes are presented in Table 16.

Table 16. Recent actions by the CITES Standing Committee concerning Asian big cats

Year	Actions	Outcomes
SC57 (2008)	Established a working group to clarify how the implementation of Decision 14.69 might best be reported to the Committee	China submitted a report to SC58 on implementation of the Decision (SC58 Doc 33 Annex 1)
SC58 (2009)	Directed CITES Secretariat to issue a Notification calling upon Asian big cat range States to submit reports on compliance with Decisions 14.65 and 14.69 in 90 days. Agreed that it would be best for a Party to propose amendments to Resolution Conf. 12.5 (not the Secretariat)	Notification 2009/029 issued. Six range States submitted reports to CoP15; CoP15 adopted amendments to Resolution Conf. 12.5.
SC61 (2011)	Adopted Secretariat's suggestion that the Senior Experts Group of the ICCWC should undertake the review required by Decision 15.70 (updating Annexes 1-3 of Resolution Conf. 12.5)	Annexes 1-3 deleted from Resolution Conf. 12.6 at CoP16; ICCWC review still in process.
SC62 (2012)	Agreed for the CITES Secretariat to issue a Notification reminding Parties of their reporting requirements, stressing that information is needed for all ABCs, and stressing the need for information on compliance with Decision 14.69. This should include requesting full implementation of the Decision in respect of the number of breeding operations and also the total number of tigers, and the declaration of stockpiles of captive-bred or confiscated tiger body parts and derivatives, and actions taken or planned to consolidate or destroy them.	Notification 2012/054 issued. Three range states submitted reports to CoP16.

The following recommendations are offered on the basis of this review:

Legislative and regulatory measures

Parties should be encouraged to conduct reviews of all relevant national legislation to ensure that national measures restricting internal and international trade in Asian big cat parts and derivatives are comprehensive, and include parts and derivatives obtained from specimens bred in captivity.

China should be requested to clarify whether its permitted internal trade in Asian big cat parts and derivatives is for non-commercial purposes, report the species and trade volume involved, and describe how such trade is monitored and enforced. Recognizing that China

has the sovereign right to govern its internal ABC trade, this information would allow a more complete assessment of implementation of the Resolution. Illegal import of derivatives represents a challenge for other Parties seeking to enforce their own CITES protections, and China should also indicate what measures it is taking to prevent illegal exports.

National law enforcement

There is a growing appreciation that much of the illegal trade in Asian big cat parts and derivatives now takes place on the basis of online advertisements. Parties are encouraged to adopt China's "Zero Tolerance" approach to online advertising for protected species products, working closely with major e-commerce trading site companies and non-governmental organizations. China's ban on auctions of pre-Convention/pre-national trade ban items derived from protected species is also recommended to Parties as a best enforcement practice.

Tiger range States are encouraged to take note of the recommendations of INTERPOL's 2014 assessment of enforcement responses to tiger crime. This is particularly urgent for Indonesia, which has seen recent increases in seizure volume, and accounted for 20% of all range State tiger seizures from 2010-2012.

Myanmar serves as a major wildlife trading hub, with Asian big cat parts and derivatives, and those of other endangered species, intended for consumption by visiting Chinese and other tourists from neighboring countries, creating a major enforcement challenge for Chinese and Thai border authorities. Further information should be sought from Myanmar on how it plans to address major wildlife consumption destination markets along its borders with China and Thailand, and particularly in the towns of Mong La, Golden Rock, and Three Pagodas Pass.

Further information should be sought from Viet Nam as to its strategy to counter the illegal movement of tigers of suspected captive origin across its border with China.

International cooperation for conservation and enforcement

Action should be taken to further a key recommendation of INTERPOL's 2014 assessment of enforcement responses to tiger crime: that an international network of intelligence analysts from tiger and other Asian big cat range States be established, and work toward development of a single international reporting system for sensitive law enforcement information on tiger and other Asian big cat incidents.

Establishment of appropriate international monitoring mechanism(s) for regular reporting, review and analysis of information on Asian big cat conservation and trade control should be explored by the range States in cooperation with relevant intergovernmental and nongovernmental organizations.

Recording, availability and analysis of information

Asian big cat range States are recommended to develop, in partnership with relevant organizations, publicly available databases on poaching and seizures, along the lines of India's TigerNet model, with transparent data collection standards.

All Parties are encouraged to develop secure data management platforms to improve intelligence-led enforcement.

Demand reduction, education and awareness

The growing use of tiger parts and derivatives as luxury items needs to be addressed as a matter of urgency through targeted behavioural change interventions to reduce consumer demand. This need is particularly evident in China and Viet Nam, and it is recommended that current efforts to develop appropriate strategies be strengthened.

Prevention of illegal trade in parts and derivatives from captive facilities

Parties are recommended to develop comprehensive legal frameworks for captive big cat facilities to prevent illegal trade, which should include oversight of any international trade to ensure non-commercial purposes, and monitored destruction of the bodies of captive mortalities.

Specimens of suspected captive origin are increasingly evident in seizures in range States. Parties developing DNA registration databases of captive Asian big cats are encouraged to make this information available outside national borders to assist forensic determination of the origin of seized specimens. Parties that have yet to establish national registries for Asian big cats held by at least their larger captive facilities are encouraged to do so.

Further information should be sought from the Lao People's Democratic Republic, Thailand and Viet Nam as to the measures in place to prevent illegal trade from captive facilities. These three countries have few wild tigers and high seizures of suspected captive-origin specimens. The Lao Peoples Democratic Republic and Viet Nam should also be requested to clarify the purpose for recent sizeable imports of lion bone from South Africa. Since the lion is listed in Appendix II, and given the forensic difficulty of distinguishing lion from other Appendix I-listed big cats especially once processed into derivative form, this development represents a substantial enforcement challenge as a potential laundering mechanism.

Management of national and privately-held stocks of parts and derivatives

Clarification should be sought from China as to the measures it is taking to guarantee the security of growing privately-held stocks of captive-origin tiger parts. China should be requested to declare the size and location of privately-held stocks, in accordance with previous agreements of the Committee on this issue (SC62 Summary Record), as well as provide more details to clarify its recent statement that stocks have been periodically destroyed.

Leopards

Leopard seizures are comparable with those of tigers in many Asian range States, and outside Asia in terms of derivative seizures. A detailed study of leopard trade should be conducted, including its impacts on the wild population in Asia, where conservation concern for the species is increasing.

References

AC27 Doc 18. 2014. An assessment of conservation impacts of legal and illegal trade in cheetahs *Acinonyx jubatus*. Report to the 27th meeting of the CITES Animals Committee.

Annamiticus. 2012. <http://annamiticus.com/2012/06/20/concern-grows-around-south-africas-tiger-trade/>

Anon. 2014. Ruler of Sharjah launches Arabian leopard program. <http://www.breitbart.com/system/wire/upi20140206-180519-5671>

Anon. 2011. <http://www.dailymail.co.uk/news/article-2016812/Leopard-attack-India-Big-cat-knifed-beaten-village-rampage.html>

Anon. (2010). Understanding the motivations: the first step toward influencing China's unsustainable wildlife consumption. TRAFFIC report.

ARREST 2013 and 2014. Blog of the Asia's Regional Response to Endangered Species Trafficking programme.

Breitenmoser U. 2013. The Persian leopard at risk. Cat News 59 editorial.

CITES. 2013. Decisions of the Conference of the Parties to CITES superseded after its 16th meeting (Bangkok, 2013), but not deleted. <http://cites.org/sites/default/files/eng/dec/valid16/CoP15-Dec-remaining-after-CoP16.pdf>

Coghlan ML et al. 2012. Deep sequencing of Plant and Animal DNA Contained within Traditional Chinese Medicines Reveals Legality Issues and Health Safety Concerns. <http://www.plosgenetics.org/article/info%3Adoi%2F10.1371%2Fjournal.pgen.1002657>

CoP14 Doc 52 Annex 1. 2007. Report on implementing Resolution Conf 12.5 of CITES. Report to CITES COP14 by China CITES Management Authority.

EAS. 2013. Chairman's statement: East Asia Summit. <http://www.mofa.go.jp/mofaj/files/000016962.pdf>

EIA. 2013a. Hidden in plain sight: China's clandestine tiger trade. Environmental Investigation Agency report.

EIA. 2013b. Briefing on the manufacture of tiger bone wine in China. Environmental Investigation Agency report, July.

EIA. 2013c. Summary of tiger farming timeline. <http://eia-international.org/wp-content/uploads/EIA-Tiger-Farming-Timeline-Feb-27-2013.pdf>

EIA. 2006. Skinning the cat: crime and politics of the big cat skin trade. Environmental Investigation Agency report.

ENV. 2013. Hanoi police confiscate dead leopard painted like a tiger. <http://envietnam.org/index.php/topic/news/254-please-confiscate-dead-leopard-painted-like-tiger-in-hanoi>

Eyes on the Forest. 2013. SMG/APP deforestation and deadly human-tiger conflict. Report by coalition of Sumatra-based NGOs. [http://www.eyesontheforest.or.id/attach/EoF%20\(10Jan13\)%20SMG%20APP%20deforestation%20and%20deadly%20human%20tiger%20conflict_FINAL.pdf](http://www.eyesontheforest.or.id/attach/EoF%20(10Jan13)%20SMG%20APP%20deforestation%20and%20deadly%20human%20tiger%20conflict_FINAL.pdf)

Finch, S. 2014. Burma's 'wild east'. Time, 9 Mar. <http://time.com/17651/burmas-wild-east-is-a-debauched-land-of-drugs-and-vice-that-reforms-forgot/>

Govt. of China. 2011. GTRP implementation priorities in 2011. National activities: China. Report to the Global Tiger Recovery Program implementation conference, New Delhi, India. http://www.globaltigerinitiative.org/download/New_Delhi/110329-National_To_Do_List-China.pdf

Govt. of India. 2014. Steep Increase in Penalties for Contravention of Wildlife Protection Act. <http://pib.nic.in/newsite/erelease.aspx?relid=55535>

Govt. of US. 2013. Executive Order: Combating Wildlife Trafficking. Presidential Executive Order of 1 July. <http://www.whitehouse.gov/the-press-office/2013/07/01/executive-order-combating-wildlife-trafficking>

GSLEP. 2013. Snow Leopard Working Secretariat. Global Snow Leopard and Ecosystem Protection Program. 2013-2020. Adopted by Governments of twelve Snow Leopard Range Countries at the global Snow Leopard Forum, Bishkek, Kyrgyz Republic, October 2013.

GTRP. 2010. Global Tiger Recovery Program 2010-2022. Adopted by Governments of thirteen Tiger Range Countries at the Heads of State Tiger Summit St. Petersburg, Russia, November 2010.

He, H. 2014. Arrested gang believed to have slaughtered more than 10 wild tigers. South China Morning Post, 26 Mar. <http://www.scmp.com/news/china/article/1457848/arrested-gang-believed-have-slaughtered-more-10-wild-tigers>

Heng, N. Stronger prosecution needed to deter wildlife crime. <http://www.thestar.com.my/Lifestyle/Features/2013/03/12/Stronger-prosecution-needed-to-deter-wildlife-crime.aspx/>

IFAW. 2012a. Making a killing: a 2011 survey of ivory markets in China. <http://www.ifaw.org/sites/default/files/Making%20a%20Killing.pdf>

IFAW. 2012b. Going going gone. International Fund for Animal Welfare briefing report.

INTERPOL. 2014. Assessment of enforcement responses to tiger crime.

IUCN. 2006a. Conservation strategy for the lion in West and Central Africa.

IUCN. 2006b. Conservation strategy for the lion in Eastern and Southern Africa.

IWTCT 2013. Kunming consensus on transboundary conservation and combating illegal wildlife trade. <http://transworkshop2013.weebly.com/outcomes.html>

Jacobs, A. 2014. A border city on the edge of the law. New York Times, 24 Feb. http://www.nytimes.com/2014/02/25/world/asia/a-border-city-on-the-edge-of-the-law.html?_r=0

Johnson MF and Wingard JR. 2010. Wild fauna trade in Afghanistan. WCS report.

Leavenworth, S. 2014. China's tiger parks under fire from conservationists, animal cruelty experts. McClatchy News Service, 3 April. <http://www.mcclatchydc.com/2014/04/03/223355/chinas-tiger-parks-under-fire.html>

Milliken, T. and Shaw, J. (2012). The South Africa – Viet Nam Rhino Horn Trade Nexus: A deadly combination of institutional lapses, corrupt wildlife industry professionals and Asian crime syndicates. TRAFFIC report.

Mills J and Jackson P (1994). Killed for a cure: A review of the worldwide trade in Tiger bone. TRAFFIC International, Cambridge.

Moqanaki E et al. 2013. Persian leopards in the Iranian Caucasus: a sinking 'source' population? Cat News 59, IUCN SSC Cat Specialist Group.

Neme, L. 2014. Nepal goes full year with zero poaching. <http://paxonbothhouses.blogspot.mx/2014/03/nepal-goes-full-year-with-zero-poaching.html>

Nowell, K. 2012. Wildlife Crime Scorecard: Assessing compliance with and enforcement of CITES commitments for tigers, rhinos and elephants. WWF Global Wildlife Trade Campaign, Switzerland.

Nowell, K., Compton, J. and Verheij, P. 2011. Eliminating illicit demand for tiger parts and products in China: recommendations for the Government of China on how it can deliver on its trade related National Tiger Recovery Priorities. TRAFFIC International, unpublished report.

- Nowell, K. 2007. Asian big cat conservation and trade control in selected range states: evaluating implementation and effectiveness of CITES Recommendations. TRAFFIC International, Cambridge, UK.
- Nowell, K. and Xu, Ling. 2007. Taming the Tiger Trade: China's Markets for Wild and Captive Tiger Products Since its 1993 Domestic Trade Ban. TRAFFIC East Asia, Hong Kong.
- Nowell, K. 2000. Far from a Cure: the Tiger Trade Revisited. TRAFFIC International Species in Danger report.
- Oswell, A H. (2010). The Big Cat. Trade in Myanmar and Thailand. TRAFFIC report.
- ProFauna. 2009. The illegal trade of tiger parts and ivory tusks in Sumatra, Indonesia.
- Raza, R.H.; Chauhan, D.S; Pasha, M.K.S & Sinha, S. (2012). Illuminating the blind spot: A study on illegal trade in Leopard parts in India (2001-2010). TRAFFIC report.
- Roberton, S. 2012. Corruption along the Vietnam-China border permits massive smuggling of endangered animals. WCS blog <http://www.policyinnovations.org/ideas/briefings/data/000260>
- Sajeva, M., Augugliaro, C., Smith, M.J., Oddo, E. (2013). Regulating Internet Trade in CITES Species. Society for Conservation Biology.
- Sanei A. et al. 2012. Assessment of the Persian leopard mortality rate in Iran. Paper presented to the 11th Annual Symposium on Sustainability Science and Management, Malaysia.
- Schaedla W. 2013. Regional Transformation Requires a Consistent Strategy on Commerce in Wild Plants and Animals.
http://wwf.panda.org/about_our_earth/species/problems/illegal_trade/wildlife_trade_campaign/wildlife_trade_blog/?209056/Whither-Wildlife
- SFA. Nd. Approval Guidelines for the Sale, Purchase and Utilization of Terrestrial Wildlife under First Class Protection or the Products Derived thereof. Regulations of China's State Forestry Administration.
<http://www.forestry.gov.cn/XxgkQuickPathPortalAction.do?dispatch=getWorkDetail&scope=bszn&serverid=20>
- SFA. 2014. Notification 1. <http://www.cnwm.org.cn/news.aspx?newsid=914&page=1>
- SFA. 2007a. Notification 8. <http://www.cnwm.org.cn/news.aspx?newsid=92>
- SFA. 2007b. Notification 6. <http://eia-international.org/wp-content/uploads/SFA-marking-notification-2007-No-8.pdf>
- SFA. 2004. Notification 4. http://www.forestry.gov.cn/portal/main/govfile/13/govfile_1082.html
- Shepherd CR and Magnus, N. 2004. Nowhere to Hide: The Trade in Sumatran Tiger. TRAFFIC report.
- Stoner, S. 2014. Tigers: exploring the threat from illegal online trade. TRAFFIC Bulletin 26(1): 26-30.
- Stoner, S.S. and Pervushina, N.N. 2013. Reduced to skin and bones revisited: an updated analysis of tiger seizures from 12 range countries (2000-2012). TRAFFIC.
- Theile, S. (2003). Fading Footsteps: the Killing and Trade of. Snow Leopards. TRAFFIC report.
- Toumi, H. 2014. Man kills leopard, 'unaware its nearly extinct.' Gulf News, 25 Feb.
<http://gulfnews.com/news/gulf/saudi-arabia/man-kills-leopard-unaware-it-s-nearly-extinct-1.1295799>
- TRAFFIC. 2014a. Vietnam prime minister orders action on wildlife crime.
<http://www.traffic.org/home/2014/3/4/viet-nam-prime-minister-orders-action-on-wildlife-crime.html>
- TRAFFIC. 2014b. UK launches new programme to reduce demand for tiger parts.
<http://www.traffic.org/home/2014/2/12/uk-launches-new-programme-to-reduce-demand-for-tiger-parts.html>

TRAFFIC. 2013a. Combating illegal trade in snow leopards. TRAFFIC presentation to the Global Snow Leopard Forum, Bishkek, Kyrgyzstan, October.

TRAFFIC. 2013b. Japan and Russia increase penalties for wildlife crimes. <http://www.traffic.org/home/2013/4/19/japan-and-russia-increase-penalties-for-wildlife-crimes.html>

TRAFFIC. 2013c. Government, business and NGOs map strategies to reduce demand for illegal wildlife in China. <http://www.traffic.org/home/2013/2/7/government-business-and-ngos-map-strategies-to-reduce-demand.html>

TRAFFIC. 2012. Creative Experts' Meeting On Messaging to Reduce Consumer Demand for Tigers and Other Endangered Wildlife Species in Vietnam and China', Meeting Report, Hong Kong, 22-23 November.

TRAFFIC (2008). What's driving the wildlife trade? A review of expert opinion on economic and social drivers of wildlife trade and trade control efforts in Cambodia, Indonesia, Lao PDR, and Viet Nam. Washington DC: East Asia and Pacific Region Sustainable Development Department, World Bank.

TRAFFIC/WWF (2002). A CITES Priority: Conservation of Tigers and other Asian big cats. CoP12 briefing document. http://www.traffic.org/cop12/ABC_CoP12.pdf

UNODC. 2010. The globalization of crime: a transnational organized crime threat assessment. https://www.unodc.org/documents/data-and-analysis/tocta/TOCTA_Report_2010_low_res.pdf

UNODC. 2013. Transnational organized crime in East Asia and the Pacific: a threat assessment. http://www.unodc.org/documents/southeastasiaandpacific//Publications/2013/TOCTA_EAP_web.pdf

Verheij, P.M., Foley, K.E. and Engel, K. 2010. Reduced to Skin and Bones: An Analysis of Tiger Seizures from 11 Tiger Range Countries. TRAFFIC report.

Wildlife Extra. 2013. Tiger hunting and sales in South Africa. <http://www.wildlifeextra.com/go/news/tiger-shoot.html#cr>

WildTeam. 2013. Village tiger response teams. <http://www.wild-team.org/content/poachers-protectors#sthash.IJaNggjJ.dpuf>

WWF. 2013. China Customs Authority wildlife detector dog team ready for action. http://www.wwf.org.uk/what_we_do/press_centre/?unewsid=6772

Xinhua. 2014. China to jail eaters of rare wild animals. 24 April. http://news.xinhuanet.com/english/china/2014-04/24/c_133287821.htm

Zain, S. 2012. Behavior change we can believe in: toward a global demand reduction strategy for tigers. TRAFFIC, January 2012.

References for Table 15

Title	Reference
Monthlong wildlife crime prevention training for forest rangers	http://www.ifaw.org/united-states/news/bhutanese-wildlife-rangers-are-proud-and-committed-warriors-wild
Workshop on protecting endangered species with high medicinal value in traditional Chinese and Tibetan medicine	http://www.traffic.org/home/2013/6/19/traditional-medicine-industry-strengthens-commitment-to-prot.html
Wildlife crime training prevention for transport companies	http://www.traffic.org/home/2013/7/8/logistics-companies-learn-how-to-avoid-transporting-illegal.html
Wildlife crime training prevention for e-commerce and logistics companies	http://www.traffic.org/home/2013/9/2/e-commerce-logistics-firms-commit-to-protect-endangered-spec.html
International Workshop for Transboundary Conservation of Tigers and Other Endangered Species and the Strategy to Combat Illegal Trade in Wildlife	http://transworkshop2013.weebly.com/
Wildlife law enforcement in Xinjiang Autonomous Resion	http://arrestblog.wordpress.com/page/2/
workshop on China's Wildlife Protection Law	http://arrestblog.wordpress.com/
Wildlife law enforcement in Guangxi province	http://www.traffic.org/home/2013/6/6/anti-smuggling-focus-on-wildlife-crime-enhanced-in-chinas-gu.html
Customs training for endangered species trafficking	http://www.ifaw.org/united-states/news/china-customs-and-ifaw-joined-hands-combat-wildlife-trafficking
INTERPOL/SAWEN: Integrated Investigative Capacity Development and Operational Planning Meeting	http://www.interpol.int/News-and-media/News/2013/N20130705
Workshop on strengthening regional cooperation to combat wildlife crime in West Asia	http://www.cites.org/eng/news/sundry/2013/20131111_west-asia_cooperation.php
International Snow Leopard Forum	http://www.snowleopardnetwork.org/sln/BishkekDeclaration.php
GSLEP National Focal Points Action Planning, Leadership and Capacity Development Workshop	GLSF Secretariat in litt. 2014
Wildlife law enforcement training course	http://www.traffic.org/home/2013/1/23/enforcement-officers-focus-on-wildlife-trade-in-lao-pdr.html
2d Bilateral meeting between Lao PDR and Thailand on wildlife crime enforcement	http://arrestblog.wordpress.com/2013/09/13/thai-lao-task-forces-twinning-strengthens-sub-regional-commitments-on-wildlife-law-enforcement/
Training of Trainers (TOT) Course on CITES Policies and Species Identification	http://www.traffic.org/home/2014/2/18/over-1000-frontline-officers-benefit-from-traffics-training.html
Arabian leopard conference	http://main.omanobserver.om/?p=35636
2d Asian judges symposium on the environment	http://arrestblog.wordpress.com/page/2/
Arabian leopard ecology and conservation workshop	http://capeleopard.org.za/news-and-media/news/story/475/arabian-leopard-ecology-and-conservation-workshop

8th Annual ASEAN-WEN Meeting	http://arrestblog.wordpress.com/2013/07/30/asean-wen-charts-course-for-sustainability/
Interpol Project Predator: Capacity Development and Needs Assessment Meeting for Investigative Wildlife Operations in Southeast Asia	http://www.interpol.int/News-and-media/News/2013/N20130712bis
wildlife trafficking training course	http://arrestblog.wordpress.com/page/2/
PROTECT Tactics course in Thailand's Eastern Forest Complex,	http://arrestblog.wordpress.com/page/3/
8-week training for King of Tigers national anti-poaching unit	http://arrestblog.wordpress.com/page/3/
Wildlife Friendly Skies training for airport personnel	http://arrestblog.wordpress.com/
Cross-border investigation training course – Lao PDR and Thailand	http://arrestblog.wordpress.com/
Protected-area Operational and Tactical Environment Conservation Training	http://arrestblog.wordpress.com/
Wildlife forensics training course for Asian countries	http://arrestblog.wordpress.com/page/4/
Wildlife Consumption in Viet Nam: Reforming policies and Practices to Strengthen Biodiversity	http://arrestblog.wordpress.com/page/5/
Roundtable on addressing transnational wildlife crime	http://www.wcs.org/press/press-releases/vietnam-transnational-wildlife-crime.aspx