BROUGHT TO BEAR: AN ANALYSIS OF SEIZURES ACROSS ASIA (2000–2011)

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A TRAFFIC REPORT

TRAFFIC
the wildlife trade monitoring network

Published by TRAFFIC,
Petaling Jaya, Selangor, Malaysia
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Suggested citation: Burgess. E. A., Stoner, S.S., and Foley, K.E. (2014). *Brought to Bear: An Analysis of Seizures across Asia (2000–2011).* TRAFFIC, Petaling Jaya, Selangor, Malaysia.

ISBN: 978-983-3393-40-4

Cover: Rescued bear cub Xin Xin peeks out of her feeding cage at Animals Asia's Bear Rescue Centre in Viet Nam in 2010
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A Report by

TRAFFIC

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ACKNOWLEDGEMENTS

The following individuals, government agencies and NGOs are thanked for their contribution of data, which made this report possible: Wildlife Alliance, TRAFFIC regional offices, ASEAN-WEN Program Co-ordination Unit, Education for Nature - Vietnam (ENV), CAWT, Siew Te Wong of Bornean Sun Bear Conservation Center, Abrar Ahmed, TRAFFIC personnel, Matt Hunt of Free the Bears, Jackson Zee and Chris Gee of WSPA, Forestry Administration of Cambodia, Gerald Neo of the Agri-food and Veterinary Authority (Singapore), Wan Ziming of the China Endangered Species Import and Export Administrative Office, Department of Wildlife and National Parks (Peninsular Malaysia), Macao Economic Services Foreign Trade Division, Nguyen Thi Minh Thuong of the Viet Nam CITES Management Authority Nam, Bounthanh Philanchanh and Department of Forest Inspection of Lao PDR, and in Thailand the Wildlife Checkpoint Subdivision under the Wild Fauna and Flora Protection Division and the Protection and Suppression Section, Wildlife Protection Division under the Wildlife Conservation Office.

In addition to the contribution of data, the following individuals are thanked for their comments and contributions to this report: Andrew Kitchener, Anthea De Lima, Chris R. Shepherd, Carrie Stengel, Else Poulsen, Gina Moon, James Compton, Jason Carter, Jill Robinson, Joyce Wu, Kahoru Kanari, Kira Husher, Lorraine Scotson, Matt Hunt, Nev Broadis, Nick Marx, Richard Thomas, Stephanie Pendry, Sulma Warne, Xu Ling, Alexey Vaisman and Wan Ziming.

The Zoo and Aquarium Association (ZAA) Australia and New Zealand, Auckland Zoo, Australian Museum Research Institute, Dreamworld, Hamilton Zoo, National Zoo and Aquarium, New Zealand Department of Conservation, Perth Zoo, Taronga Conservation Society Australia and Wellington Zoo Trust are thanked for supporting TRAFFIC's crime data analyst position in South-East Asia.

Last, but not least, sincere thanks to the Animals Asia Foundation for their continued support of TRAFFIC's bear conservation efforts. This research project was made possible thanks to funds entrusted to Animals Asia by The Myer Foundation and the estate of Mrs Elsie Quinn.

ABBREVIATIONS AND ACRONYMS

ASEAN-WEN	Association of Southeast Asian Nations Wildlife Enforcement Network
BSBCC	Bornean Sun Bear Conservation Centre
CAWT	Coalition against Wildlife Trafficking
CN	China
CITES	Convention on International Trade of Endangered Species of Wild Flora and Fauna
CoP	Conference of the Parties (CITES)
ENV	Education for Nature - Viet Nam
ETIS	Elephant Trade Information Systems
ID	Indonesia
IN	India
INTERPOL	International Criminal Police Organization
ICCWC	International Consortium on Combating Wildlife Crime
IUCN	International Union for the Conservation of Nature
JP	Japan
kg	kilogramme
KH	Cambodia
LA	Lao PDR
MM	Myanmar
MN	Mongolia
MY	Malaysia
NP	Nepal
RU	Russia
SAWEN	South Asia Wildlife Enforcement Network
SG	Singapore
TH	Thailand
TCM	Traditional Chinese Medicine
TW	Taiwan
USD	United States Dollar
UNEP-WCMC	United Nations Environmental Programme – World Conservation Monitoring Centre
UNODC	United Nations Office on Drugs and Crime
VN	Viet Nam
WCO	World Customs Organization

EXECUTIVE SUMMARY

At a global level, seven out of every 10 documented bear seizure involves an Asian country or territory. To better understand trade dynamics, all bear-related seizures reported in Asia between 2000 and 2011 (694 cases in total) were analysed. The vast majority of reported seizures involved Cambodia (190), China (145), Viet Nam (102), Russia (59), Malaysia (38), Thailand (29), Lao PDR (29) and India (23), and an analysis of all cases suggests that a minimum of 2801 individual bears had been traded for their parts and derivatives during that period. Of those, 69% of the trade volume (or 1934 bears) were seized in Russia and China alone, accounting for 1252 (45%) and 682 individuals (24%) respectively and therefore represents a substantial threat to the existence of wild bears. Owing to the illicit nature of this trade, the volumes of trade reported in this study are likely to represent only a fraction of the actual number of bears and bear parts being trafficked around the world.

This report highlights the multiplicity of how bears are being exploited for trade across Asia. The trade encompasses all four endemic species of bears found across Asia: Asiatic Black Bear *Ursus thibetanus*, Sun Bear *Helarctos malayanus*, Sloth Bear *Melursus ursinus*, and Brown Bear *Ursus arctos* and involves more than 17 countries/territories in the region, each with certain preferences for particular bear products. The motivations for trading bears are wide ranging, including poaching live bears to stock bile farming operations; pet or dancing bear trade; sourcing dead bears and their parts for meat consumption; skins and trophies; and/or gall bladders and bile extractions to manufacture traditional medicines. As a result, bears are traded as live or dead specimens, partitioned into trophies, skins, meat, bones, claws, teeth, gall bladders and bile derivatives.

The predominance of illegal international trade reported by non-range States suggests that source countries are failing to detect a significant proportion of bear product exports. The United States and New Zealand seized a significant number of shipments containing illegal bear items, mainly derivatives, exported from Asia (79% and 76% respectively of all their bear-related seizures). This is believed to be largely fuelled by the demand for traditional medicine products by Chinese and Vietnamese communities in these countries. Further study is necessary to understand the dynamics and potential threat from these countries, in relation to illegal trade emanating from Asia. Overall, non-Asian countries were better at reporting seizures, which typically occurred during importation. Reporting trends showed that Asian range States particularly China, Viet Nam and Russia failed to detect and/or report illegal bear exports. The bulk of such illegal exports were detected and reported by non-Asian countries at the point of import.

Analysis of trade and seizure data for this report indicates that since 2000, a disparity exists between the number of reported seizures and the calculated number of bears seized. For example, Cambodia reported the highest number of seizures (27% / 190) during the period examined but accounted for only 9% (253) of the number of bears seized in the region. Conversely, only 8% (59) of reported seizures took place in Russia, yet 45% (1252) of the total number of bears seized were recorded within these relatively few cases. The comparatively low number of seizures recorded in Russia, but with large numbers of bears involved, serves to highlight that a significant level of trade may occur undetected by law enforcement authorities.

Bears are in high demand and seizures, specifically of paws, are occurring with great and concerning regularity. During 2000-2011 over 6000 bear paws were seized, equating to at least 1500 individual bears. Over 75% of these occurred in the last five years (2006-2011). A total of 4500 bear paws were seized from Russia alone, representing a minimum of 1125 individuals. It is likely that most bear paws seized in Russia and China, especially along the border points; Heilongjiang Province, Northeast China and Primorsky Krai, originated from wild bears, since there are no breeding facilities in Russia. The fact that such significant seizures are being made in Russia and along the border with China would suggest a prolific trade in bears and their parts between the two countries. Although not of immediate conservation concern for the Russian Brown Bear population, the need to enhance existing enforcement and management efforts is the next fundamental step to tackle this specific problem.

Moreover, this issue is becoming increasingly urgent, particularly as demand continues to persist evidenced by a number of significant bear paw seizures concentrated again along the Russia-China border in 2013. It is estimated that paws originating from Russia can be sold for more than 20 times their initial buying price once smuggled into China1. The use of bear paws, along with a wide range of other animal and plant parts and derivatives, is widespread in Chinese culture either as exotic meat and/or in traditional medicine. Paws are commonly used as a ritual dish, and most often prepared as a soup.

The confiscation of live bears accounts for 15% (434 bears) of all seizures and as such is the second-most commonly seized commodity type after paws. Significant source countries for live bears include Cambodia (156) and Viet Nam (152) and are identified as having one of the highest trade volumes. Although it has been illegal for facilities in Viet Nam to acquire new bears for the industry since 2005 and the sale of bear bile is now banned, it is inferred that seized live bears were intended to stock extraction facilities. It is estimated that approximately 2400 bears are held in bile extraction facilities in Viet Nam (Llanos, 2012). Moreover, at a regional level, bear bile extraction facilities are found in China, Republic of Korea, Lao PDR, Myanmar, and Viet Nam (Li, 2004; Loeffler *et al*., 2009; WSPA, 2010) with estimates of over 13 000 bears held in captivity across Asia (Kikuchi, 2012).

In contrast to trade in whole bears, other countries/territories in the region were focused on trading bear parts and derivatives, particularly bile and bile products. Singapore, Hong Kong, Republic of Korea, Viet Nam and Japan all appear to sustain a well-developed domestic market for gall bladders and bile products. Viet Nam is known as an important consumer as well as producer of bear bile for traditional medicines (364 bile products seized) (Livingstone and Shepherd, *in prep*). In the Republic of Korea (499 bile products seized) small but important steps have been made to phase out live bile extraction there (Platt, 2012).

The production of bile in farms increases the availability of bear bile and intensifies consumer demand (Dury, 2009; Dutton *et al* 2011). The supply pressure for facilities to stock adequate numbers of bears to meet demand for bile extraction subsequently drives the poaching of bears from the wild. Proponents of "bear farming" claim it alleviates pressure on wild bear populations (Yi, 2000; Haikui and Zhi, 2007), although there has been no conclusive evidence supporting the efficacy of "bear farming" and no identified beneficial effect on wild populations (Mills *et al*., 1995; Peppin *et al*., 2008). Furthermore, this terminology is potentially misleading because "farming" typically insinuates practices where animals are bred in captivity. In reality, most bear facilities rely on sourcing bears directly from the wild to maintain their stock, since captive breeding of bears in bile extraction facilities is challenging and considered to be non-existent (Richards and Wang, 2006; Nguyen, 2007; Robinson *et al*., 2007; Loeffler *et al*., 2009; MacGregor, 2010; Vu, 2010; Livingstone and Shepherd, *in prep*). Given that bears are essentially not bred in captivity and that bear bile extraction facilities mostly source their animals from the wild, the notion of sustainably "farming" bears to supply bile and bear parts is highly flawed. It is suspected that in border provinces where a greater number of live bears were seized (such as in Cambodia; 156, Lao PDR; 26 and Thailand; 15) were potentially en-route to bear bile extraction facilities in Viet Nam and China.

Reported seizures of live bears also occurred in India (35) and Nepal (14) although it is suggested these individuals were destined for the dancing bear trade (Abrar Ahmed, *pers. comm*.). Concerted efforts have been made to address this specific trade, and in India the number of dancing bears has decreased from 400 to approximately 150 since 2005.

Undoubtedly, the Asian region presents a multifaceted trade network of source countries, consumer countries (often with product preferences), as well as manufacturing and transit countries for bears, their parts and derivatives. These findings raise concerns about the diversity and extent of the illegal bear trade throughout Asia that could negatively impact wild bear populations in the region. Overall, the results of this study indicate there is a substantial amount of bear trade in Asia, much of which is illegal and likely sourced from the wild. In order to combat the illegal trade of bears and their parts and derivatives, TRAFFIC recommends the following:

RECOMMENDATIONS

CITES Implementation

All Parties, and in particular bear range and consuming countries and territories, should take action to implement the measures outlined in *Resolution Conf. 10.8* under their commitment to CITES. This Resolution on the "Conservation of and trade in bears" was passed at the 10th meeting of the Conference of the Parties to CITES (CoP 10) in 1997. It states that "the continued illegal trade in parts and derivatives of bear species undermines the effectiveness of the Convention." Measures should also be taken to monitor and gauge the effectiveness of enforcement efforts by Parties

- All Parties included in this study should submit reports of illegal bear trade and seizures to CITES, as stated in Article VIII in the Text of the Convention and recently directed under Decision 16.43(CoP16). Parties should provide comprehensive information on administrative measures (e.g. fines, bans, suspensions) imposed for CITES-related violations; significant seizures, confiscations and forfeitures of CITES specimens; criminal prosecutions or other court actions; and disposal of confiscated specimens.
- With this in mind and considering the multi-national and diverse trade of this group of species, TRAFFIC recommends that a centralized database for collating reports of illegal bear trade be developed in order to assist with records management and the analysis of the levels and trends in illegal trade. A centralised monitoring system would enable the reliable and systematic analysis of the illegal bear trade at a regional level necessary to understand key areas of concerns and the priorization of resources to tackle this. Greater certainty in reporting efficiency and reliability, as well as data availability will allow for more effective analysis and interpretation of trends in trade and enforcement in future. This, in turn, will allow Parties to prioritize and execute efforts to combat the illegal trade in bears and their derivatives domestically, regionally and internationally.

Co-operation and Collaboration

- The IUCN/SSC Bear Specialist Group to engage key stakeholders to help reinforce the message that the illegal trade in bears and their parts is having a negative impact on populations across their range in Asia, particularly where populations are already vulnerable such as Sun Bears and Asiatic Black Bears. The Group may consider supporting the findings of this report and push for the implementation of the proposed recommendations for addressing the illegal trade in bears in a holistic manner.
- Consideration for a Memorandum of Understanding to be developed between the IUCN/SSC Bear Specialist Group and TRAFFIC for information and analytical purposes.
- INTERPOL to consider ways in which actionable information from relevant NGOs can be utilized to maximise law enforcement efforts against transboundary trade.

Law Enforcement

Improved law enforcement effort in Asia to curb the illegal bear trade is essential. This requires law enforcement agencies to proactively address illegal bear trade and investigate and convict those engaging in such activities appropriately. To catalyse this, the following should be considered:

- Government and enforcement agencies should pay particular attention to key international trade routes by air, land and sea. These include: Russia to China, Nepal to India, Lao PDR to Viet Nam and China, Myanmar to China and China and India to Singapore. Measures should be introduced to mitigate illegal trade along these routes, while also considering potential alternative routes traders may exploit.

• Countries experiencing high levels of illegal bear trade should, if they have not already done so, consider establishing a task force dedicated to addressing environmental crime at a national level. This could be modelled on the National Environmental Security Task Force (NEST) developed by INTERPOL which advocates establishing a common platform and approach worldwide for national compliance and enforcement responses. Similar collaborative efforts have recently been established in China with the formation of the National Inter-Agency CITES Enforcement Coordination Group (NICE-CG) and Provincial Inter-Agency CITES Enforcement Coordination Groups **(PICE-CG);**

• To address transnational trade and facilitate crime prevention, key countries of concern such as Russia, China, Viet Nam and Cambodia should initiate intelligence sharing through INTERPOL I-24/7network and system of international Notices and Diffusions necessary for strengthening enforcement effort. However, information sharing can only be truly effective if the agency responsible for investigating environmental crime has the mandate and resources to deal with global criminal databases;

• The highly effective collaboration between the Wildlife Rapid Rescue Team (WRRT) and the Cambodian Ministry of the Environment and Forestry Administration should be emulated in other countries experiencing high levels of illegal trade. The success of this initiative serves as an indication that continued and consistent enforcement efforts is paramount for curbing illegal trade in this region. It could therefore be considered as an effective enforcement intervention for China, Russia and Viet Nam where bears are seized at a concerning rate but would naturally have an impact upon other species in trade.

Preventative Measures

• TRAFFIC urges Viet Nam, China, Myanmar, Lao PDR and the Republic of Korea to take concerted efforts to eradicate all illegal bear trade emanating from bile facilities as per the IUCN World Conservation Congress recommendation: "WCC- 2012-Rec-139-EN Bear farming in Asia with particular reference to the conservation of wild populations", all illegal bile extraction facilities should be closed down, the industry should not be expanded in any way and no more bears from the wild should be used to stock captive facilities.

• All countries involved in the use and/or consumption of bears and/or their parts and derivatives should consider the implementation of wide scale and sustained education and awareness campaigns as a measure to help eliminate illegal trade.

• Social market research should be conducted to build on the insights and expertise gained through TRAFFIC's previous consumer behavioural change work, in order to identify the specific buyer/user/intender groups to target with a behavioural change campaign; the specific motivations for and barriers to consumption; and the most influential communication channels and people through which to deliver TRAFFIC's 'five step' approach to demand reduction. This research should be conducted in key market countries such as China, Malaysia, Viet Nam, Singapore and the Republic of Korea, in the first instance.

• Research should be conducted to identify suitable alternative substitutes for bear bile and promotion of alternatives should be communicated to bear bile purchasers and users from medical professionals.

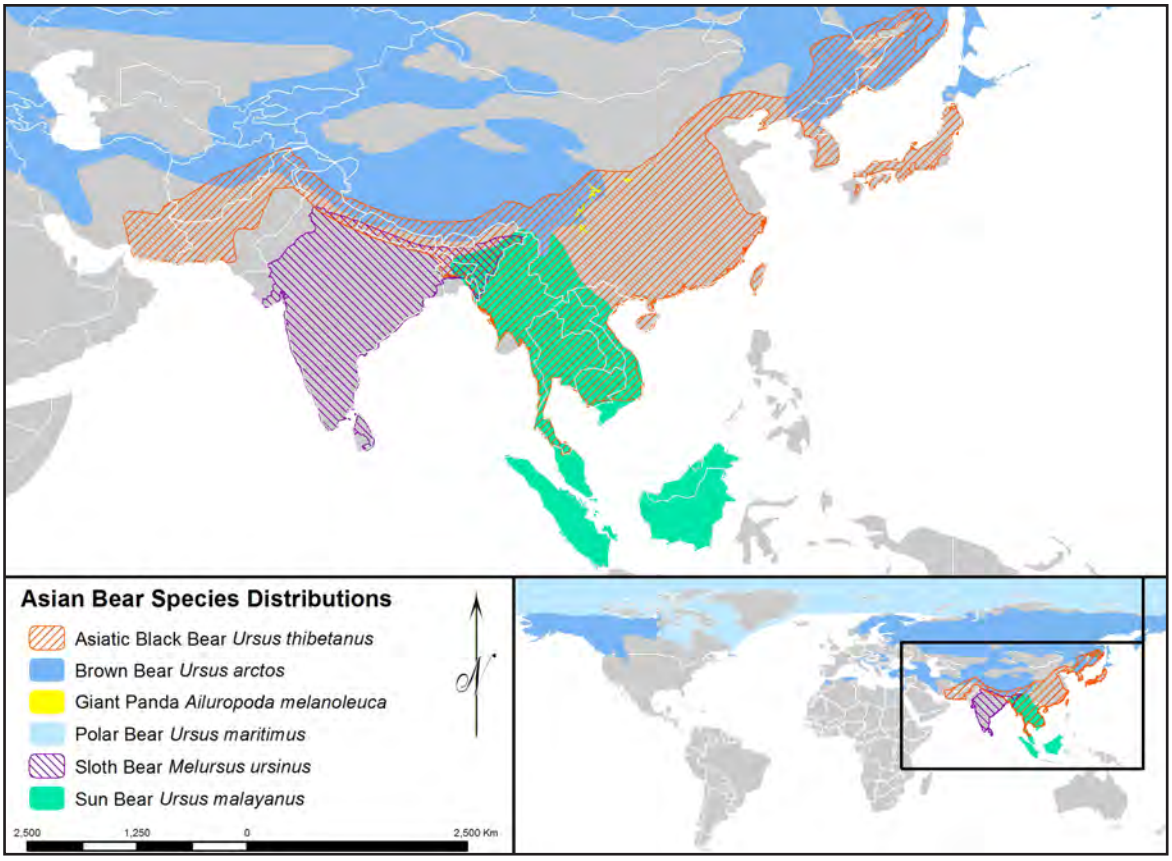
• Advocacy campaigns to be undertaken targeting TCM practitioners to ensure that bears feature on their list of prohibited species that they are not permitted to work with.

• Identified repeat locations of seizures should be subject to further examination for seeking to understand why illegal activity is more common there. This level of analysis may highlight opportunities for the implementation of crime reduction measures such as: target hardening, which can be especially pertinent at border points

INTRODUCTION

Throughout history, bears have been hunted and exploited by humans. This threat persists into the 21st century, and most bear populations are facing illegal and unsustainable hunting for trade. The family Ursidae consists of only eight extant species but is widespread in Asia, Europe, North America, and South America. Six bear species are found in Asia, including four species endemic to the region; Asiatic Black Bear *Ursus thibetanus*, Sun Bear *Helarctos malayanus*, Sloth Bear *Melursus ursinus* and Giant Panda *Ailuopoda melanoleuca*. The other two species; Brown Bear *Ursus arctos* and Polar Bear *Ursus maritimus*, are found in Asia"s Arctic Siberia (**Figure 1**).

Figure 1: Map depicting the distribution of bear species in Asia



Across Asia, deforestation, habitat degradation and human encroachment are serious threats to most wildlife species including bears, as is the continued and sustained pressure from illegal and unsustainable hunting and trade. Bear species are exploited, mostly illegally, for the commercial pet, meat, and traditional medicine (TM) trade (Kemf *et al*., 1999; Robinson *et al*., 2006; Williamson, 2007). The trade in bears, their parts and derivatives has played a major role in the decline of a number of bear species, particularly the Asiatic Black Bear, Sloth Bear, and Sun Bear (Phillips and Wilson, 2002; Williamson, 2007; Fredriksson *et al*., 2008; Garshelis and Steinmetz, 2008). These three species, along with the Brown Bear, are the most commonly targeted species by traders (Shepherd and Nijman, 2007; Fredriksson *et al*., 2008; Kikuchi, 2010; J. Robinson, Animals Asia, *in litt.,* to TRAFFIC Southeast Asia, April 2011). The Giant Panda is not exploited in the same manner as other species of bears and is therefore excluded from further study in this report.

CITES

The Asiatic Black Bear, Giant Panda, Sloth Bear and the Sun Bear are listed in Appendix I of the Convention on the International Trade of Endangered Species of Wild Fauna and Flora (CITES), which prohibits commercial international trade. Brown Bears occurring in Bhutan, China, Mexico, and Mongolia are also listed on Appendix I. All other populations of Brown Bear are listed in Appendix II, allowing regulated commercial trade, but only if permitted by national CITES Management Authorities. The Polar Bear is currently listed in Appendix II.

The domestic bear trade is permitted in China and Japan under certain regulations (Phillips and Wilson, 2002; Ishii, 2005; Mano and Ishii, 2008; Loeffler *et al.*, 2009). Regardless of national laws permitting domestic bear trade, all cross-border commercial trade of species listed in Appendix I is prohibited according to CITES.

The trade in bear parts and derivatives has been a topic of concern among CITES Parties for well over a decade, as shown by the following:

- At the 10th Conference of the Parties to CITES (CoP 10) in 1997, *Resolution Conf 10.8* was developed in response to a growing concern over the illegal bear trade specifically articulating that the *"continued illegal trade in parts and derivatives of bear species undermines the effectiveness of the Convention. Furthermore, poaching has caused declines in wild bear populations that could lead to the extirpation of certain populations or even species"*. Parties were urged to take action to reduce the illegal trade in bear parts and derivatives (CITES Res. Conf 10.8).
- At CoP11 in 2000, Decision 11.43 was formulated as a follow-up to *Resolution Conf. 10.8* to further address bear-related trade issues. This Decision stated that Parties are required to report to the Secretariat on the status of all actions taken to implement *Resolution Conf. 10.8*, including the formulation of national legislation to control the trade of bears, and enforcement efforts and penalties for violating laws pertaining to bear trade.
- At CoP12 in 2002, two further Decisions were made to address the international trade in bears. The first, *Decision 12.27*, identified Parties believed to be significant consumer and producer States for bear parts and derivatives that failed to report to CITES Secretariat in 2001 as required by *Decision 11.43*. These included the following Asian countries: Bhutan, Cambodia, India, Indonesia, the Republic of Korea, Malaysia, Mongolia, Myanmar, Pakistan, Singapore, Thailand, and Viet Nam. The second, *Decision 12.28* stated that the Standing Committee would further address the international trade of bear parts and derivatives at the 50th meeting in 2004 by focusing on additional enforcement and legislative measures to address illegal trade. During the 15th meeting of the Standing Committee (Geneva) in 2004, the Secretariat stated that due to lack of information from Parties, it was difficult to provide proper counsel on effectively combating the illegal trade of bear parts/ derivatives (SC50 Doc. 17).
- At CoP14 in 2007, *Resolution Conf. 10.8* was revised. This revision urged Parties to increase CITES enforcement and to establish or improve national legislation in order to control the import and export of bear parts and derivatives.

METHODS

DATA ACQUISITION

Records on seizures of live or dead bears, their parts and derivatives across Asia between 2000 and 2011 (12-year period) were collected and compiled. Where available, information on bear seizures included date of seizure, country or countries, location of seizure, known origin and destination of products, seized item type, quantity, and enforcement agencies involved. This report should be considered a conservative analysis of the illegal bear trade across Asia, as it is assumed that seizures analysed herein represent only a portion of the actual illegal trade since not all illegal trade is intercepted and seized and/or reported.

Formal requests for bear seizures were sent to all relevant CITES Management Authorities in the following 22 countries/territories across Asia: Bangladesh, Bhutan, Cambodia, mainland China, Hong Kong SAR, India, Indonesia, Japan, Republic of Korea, Lao PDR, Macao SAR, Malaysia, Myanmar, Mongolia, Nepal, Pakistan, Russia, Singapore, Sri Lanka, Taiwan, Thailand, and Viet Nam. Data on seizures were also obtained from other sources, including TRAFFIC seizure records, various NGOs and open access sources such as the Internet and other media. Seizure locations were mapped to help identify geographic points of interest for trade in Asia, and to inform the need for targeted action to address illegal trade. Data were analysed on a regional scale in order to better understand the extensive trade dynamics across Asia.

Parties to CITES are requested formally to submit all seizure information of CITES-listed species to the CITES Secretariat under Article VIII, 1979. The UNEP-WCMC CITES trade database collates all records of import, export and re-export of listed species as reported by Parties. Available data on seizures of Asiatic Black Bears, Sun Bears, Brown Bears and Sloth Bears between 2000–2011 were downloaded from the UNEP-WCMC CITES trade database; it should be noted that the database is limited to incidents directly reported by Parties, and therefore does not contain an exhaustive list of seizures due to lack of consistent reporting by Parties. To avoid overlap between the various sources of data analysed, all seizures compiled during this study were rigorously cross-checked to prevent duplication within the dataset.

Monetary values are reported in United States Dollars (USD), based on conversion rates from OANDA Forex Trading and Currency Exchange Rates Service in July 2012 (http://www.oanda.com).

DATA ANALYSIS

Seized bears and bear parts were converted to tallied units to allow calculation of the minimum number of individual bears involved in each recorded seizure. This rendered the data comparable between countries by providing an estimate of the number of individual bears involved in the trade. This methodology was based on similar calculations used by Nowell and Xu (2007); Shepherd and Nijman (2008), Verheij *et al.*, (2010) and Stoner and Pervushina (2013). Seized items were divided into three categories to calculate the number of bears involved in each seizure:

1. Whole or near-whole specimens (including live/dead bears) counted in seizures of full skeletons, whole carcasses, whole skins, taxidermy mounts and live animals. The minimum number of individual bears involved was calculated on the basis of a set (or close to) of "complete parts" which clearly represented one bear. Such counts were considered true estimates.

2. Quantities of body parts representing an individual counted in seizures of body parts including gall bladders, skulls, jawbones, limbs, paws, teeth, claws, and penises. The minimum number of individual bears involved was calculated by tallying body parts with reference to specific limb or organ counts pertaining to one whole bear. For example, one skull, one gall bladder, one penis, four paws per bear (**Table 1**). Seizures containing various items were considered based on the minimum number of bears. For example, three paws, one jaw, and two gall bladders represented at least two bears

3. Quantities of body parts by weight (kilogrammes) included seizure cases of meat and bones. The minimum number of individual bears was calculated by recording in kilogrammes the meat and bone portions in seizure records. Therefore, the number of bears represented in the meat and bone trade was calculated based on specimen weight (i.e. meat or bone) as a proportion of a known average whole animal weight or skeleton weight for each bear species (**Table 1**). Species-specific weight calculations were made when the particular bear species pertaining to meat and bone specimens was detailed in the seizure report. However, many seizure reports did not list the bear species involved, often only stating 'bear'. In such cases, the average body weight or skeleton weight of Asiatic Black Bear, Sun Bear and Sloth Bear were used in the calculation, since these species were the most commonly traded in Asia. Exceptions were seizures reporting 'bear' from Russia, which were more likely to be Brown Bears and therefore appropriate weights for this species were applied.

Table 1: Average body weight and skeleton weights for each bear species

Species	Body weight [a] (kg)	Skeleton weight [b] (kg)
Asiatic Black Bear	137.5	7.56
Sun Bear	40	3.25
Sloth Bear	100	5.3
Brown Bear	490	N/A

* Weights for each animal were obtained by averaging the average weight ranges of males and females for each species.

** Skeleton weights were obtained from Dr Andrew Kitchener of the National Museum, Scotland.

For products containing bear bile and derivatives (e.g. raw bile, pills, powders, ointments) it was not possible to determine the number of bears involved in the trade as multiple medicinal products can potentially be sourced from a single bear. Therefore, no minimum count was stated for these products to avoid over-calculating the number of bears represented in the trade.

Overall, the results reported in this study on the number of individual bears seized should be considered a conservative minimum and as an insightful indicator on the scale of trade.

RESULTS

SCOPE OF THE DATA

Sources of information for bear seizures involving Asian countries comprised of NGO records (277), UNEP-WCMC CITES trade data (238), government agency records (129), and media sources (50). There was only one potential duplicate case reported in both UNEP-WCMC records and media sources.

For many of the countries analysed in this study, data on seizures were not available for every year over the 12- year period analysed. The most complete datasets (i.e. data available for 5 years) were collated for Cambodia, China, India, Lao PDR, Malaysia, Thailand, and Viet Nam. No data on bear seizures were provided, found, or available for Bangladesh, Bhutan, Macao SAR, Pakistan, Sri Lanka, and subsequently, these countries/territories were omitted from the analysis. Furthermore, the CITES Management Authorities of Bangladesh, Bhutan, Cambodia, Indonesia, Republic of Korea, Myanmar, Mongolia, Pakistan, Russia, and Sri Lanka did not reply to the formal request for information on such cases.

It is important to note that the seizure data alone are insufficient to determine the full extent of illegal bear trade because enforcement and reporting efforts by each country are variable and difficult to quantify. Thus, the data may potentially be skewed due to some countries/territories having limited or incomplete seizure records. An absence or lack of data on seizures may have several causes including few seizures actually being made by the country, incomplete seizure records for the country (e.g. failing to record and report all seizures on a national and international level as per CITES requirements), and/or countries not co-operating to provide seizure data. In some cases, increases in bear seizures can potentially be indicative of several factors, often in combination, including: a heightened level of demand and trade in bears and their derivatives; an increase in enforcement efforts and effectiveness; improved reporting; and/or greater availability of and access to data. Nonetheless, valuable trends and dynamics of trade can be gleaned from an analysis of seizure data.

ILLEGAL TRADE AND SEIZURES

According to the UNEP-WCMC CITES trade database, the vast majority (70%) of documented bear seizures worldwide involved an Asian country/territory (238). This implicates the Asian region as a significant player in the international illegal trade of bears. Conversely, non-Asian countries were better at reporting illegal bear trade related seizures, which typically occurred during importation. The United States reported the highest number of seized bear imports (210), followed by New Zealand (55). Asian countries/territories were frequently the most common exporters of illegal bear consignments, with 236 cases of illegally exported of bears and bear parts. China accounted for the highest number of exported bear specimens (84) followed by Russia (45), Viet Nam (44), Republic of Korea (12), Cambodia (10), Japan (8), Lao PDR (7), Hong Kong (6), Indonesia (6), Thailand (4), Singapore (4), Taiwan (3), Malaysia (1), Mongolia (1) and Nepal (1) (Table 2). Ultimately, all range States in Asia (particularly, China, Viet Nam and Russia) are failing to apprehend and/or report the illegal trade in bears and their parts and derivatives.

Table 2: WCMC records of confiscated or seized specimens reportedly seized by countries/territories across Asia (2000-2011)

Country	Exporter (or reported country of origin)	Importer
CN	84	1
HK	6	
ID	6	
IN	1*	
JP	8	2**
KH	10	
KR	12	
LA	7	
MN	1	
MY	1	
NP	1	
RU	45	2**
SG	4	
TH	4	
TW	3	
VN	44	
Total		**238 reports**

* Duplicate case reported in both UNEP-WCMC records and media sources

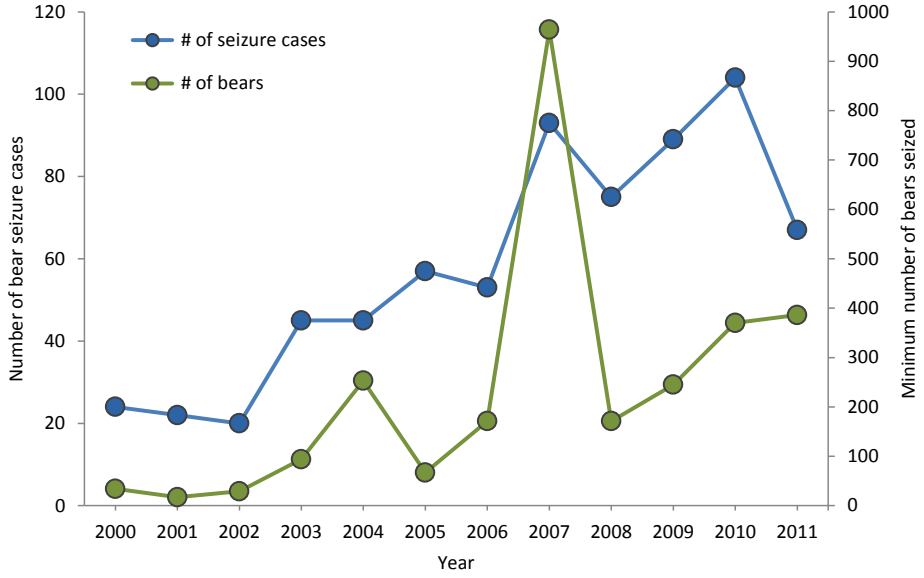
** Seizure also exported by a country in Asia

Overall, a total of 694 seizures involving bears and their parts and derivatives were recorded across Asia between 2000 and 2011 (**Table 3**). Derivative products are difficult to quantify, but these represent much of the reported bear trade. These compiled seizures represented a minimum total of 2801 individual bears (**Table 4)** based on conservative estimates. Available data suggest that an average of 58 seizures, comprising 233 bears, were reported each year across Asia. Over the 12-year period reviewed, the lowest numbers of bear seizures (~20 seizures per year) were recorded during the initial years of this study from 2000 to 2003. The total number of bear seizures more than doubled following 2003 (45–58 seizures per year from 2003 to 2006), with a further two-fold increase in seizure cases occurring from 2007 onwards (70–100 seizures per year from 2007 to 2011) (**Table 3 and Figure 2**). This trend may, in part, be due to more recent data being more readily available through open sources, especially media reports on the Internet. Since 2005, seizure records have indicated that at least six countries/territories across Asia have consistently been implicated in seizures of illegal bear specimens every year (**Table 3**).

Table 3: Annual bear seizures reported in Asia (2000–2011)

Year	CN	HK	ID	IN	JP	KH	KR	LA	MM	MN	MY	NP	RU	SG	TH	TW	VN	Total
2000	11	-	-	-	1	3	1	1	-	-	-	-	4	-	1	-	2	**24**
2001	7	-	2	-	-	9	-	-	-	-	1	-	1	1	-	1	-	**22**
2002	8	-	-	-	-	6	1	-	-	-	-	-	4	-	-	1	-	**20**
2003	7	-	-	-	2	20	-	2	-	-	8	-	5	-	1	-	-	**45**
2004	8	1	2	-	1	22	2	1	-	1	-	-	6	-	1	-	-	**45**
2005	5	-	-	-	1	33	1	4	-	-	2	-	6	1	1	1	2	**57**
2006	11	-	-	2	-	24	2	2	-	-	1	-	1	-	2	1	7	**53**
2007	26	-	1	5	1	22	1	-	-	-	2	-	12	14	2	1	6	**93**
2008	11	1	-	-	1	13	1	3	-	-	8	3	10	1	6	1	16	**75**
2009	18	2	3	3	1	18	-	7	-	-	7	-	2	2	5	1	20	**89**
2010	24	2	1	8	1	10	2	7	1	-	2	2	3	3	4	3	31	**104**
2011	9	-	2	5	-	10	1	2	1	-	7	-	5	1	6	-	18	**67**
Total	**145**	**6**	**11**	**23**	**9**	**190**	**12**	**29**	**2**	**1**	**38**	**5**	**59**	**23**	**29**	**10**	**102**	**694**
% of regional total	21%	1%	2%	3%	1%	27%	2%	4%	%	%	5%	1%	9%	3%	4%	1%	15%	

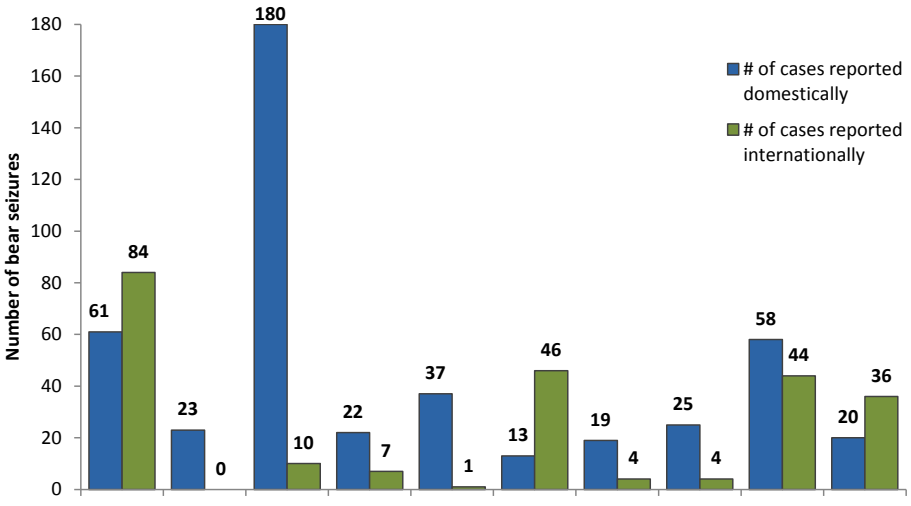
Figure 2: Total Annual number of bear seizures and estimates of minimum number of bears seized (2000–2011)



Of all the Asian countries/territories analysed, Cambodia reported the highest total number of bear seizures (190), and accounted for 27% of the total number of seizures in Asia over the 12-year period (**Table 3**). Moreover, Cambodia reported three times more seizures within its borders (180 cases seized domestically, plus a further 10 seizures reported internationally) than any other country (cf. China (61) and Viet Nam (58) reported seizures domestically) (**Figure 3**).

Mainland China recorded the next highest number of seizures (**Table 3**), however, most cases involving China were seized and reported by other countries that listed China as the country of export or origin for bear products (84 cases, **Figure 3** and **Table 2**). Overall, China was involved in 21% of seizures in the region (total of 145 seizures), followed by Viet Nam (102 / 15%), Russia (59 / 9%), Malaysia (38 / 5%), Thailand (29 / 4%), Lao PDR (29 / 4%), and India and Singapore (both with 23 / 3%) (**Table 3**). The lowest number of seizures was recorded by Myanmar (2) and Mongolia (1) (**Table 3**). Republic of Korea and Hong Kong did not report any domestic seizures of bear products, but were involved as the point of export or origin in 12 and six seizures, respectively (**Table 2**).

Figure 3: Number of bear seizures recorded domestically (i.e. reported within the country) and internationally (i.e. reported as the country of origin or export by another country (UNEP-WCMC CITES trade data) across Asia (2000–2011)



* Other countries/ territories included Hong Kong, Indonesia, Japan, Republic of Korea, Myanmar, Mongolia, Nepal, and Taiwan

Table 4: Total number seizures and estimated minimum number of bears seized for each country/territory with percentages (2000–2011)

Country	# of seizure cases	Min. # of bears	# of unquantified seizure cases	Mean # of bears per seizure
Cambodia	190	253	4	2 ± 2
China	145	682	90	13 ± 23
Hong Kong SAR	6	unknown	6	unknown
India	23	53	2	3 ± 3
Indonesia	11	13	3	2 ± 2
Japan	9	39	6	13 ± 20
Republic of Korea	12	1	10	1
Lao PDR	29	44	5	2 ± 2
Malaysia	38	98	1	3 ± 8
Mongolia	1	1		1
Myanmar	2	7		4 ± 3
Nepal	5	16		4 ± 3
Russia	59	1252	6	23 ± 55
Singapore	23	3	20	1
Taiwan	10	10	4	2 ± 1
Thailand	29	50	2	2 ± 2
Viet Nam	102	279	28	4 ± 5
Total	**694**	**2801**	**187**	**6 ± 21**

Based upon the methodology described above to count the number of bears seized in trade, Russia (>1252 bears, 45% of total number of bears seized) and China (>682 / 24%) had the highest overall seizure volumes of bear specimens than other countries (**Table 4**); although it is suggested that these quantities represent a fraction of the actual trade. High seizure volumes were also recorded by Viet Nam (>279 / 10%), Cambodia (>253 / 9%), and to a lesser extent; Malaysia (>98 / 3%), India (>53 bears, 2%), Thailand (>50 bears, 2%). The lowest number of seized bears was recorded for Singapore (3/ 0.1%), Republic of Korea (1) and Mongolia (1) (**Table 4**).

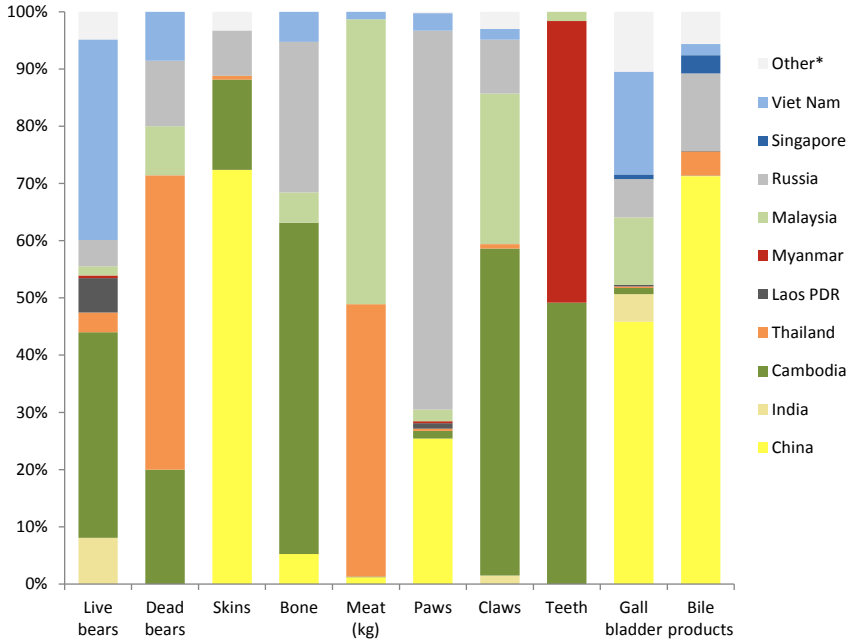
The highest estimate for the number of bears reported in seizures across Asia was recorded in 2007; i.e. the same year that a significant increase in the total number of seizures was recorded in relation to previous years (**Figure 2**). During this year, China, Russia, and Singapore all recorded their highest volume of bears seized in the trade (**Table 3**). Since 2000, both the number of seizures being reported and the number of bears being seized appears to be on the increase (**Figure 2**), although the figures show a slight decline in 2011.

The trade dynamics for each country/territory examined varied based on the frequency of seizures and the size of illegal consignments. Mainland China and Viet Nam were involved in more than 100 seizures, with a significant number of overall bears involved (>682 in China and >279 in Viet Nam) (**Table 4**). In Russia, 59 seizures (9%) were documented, but the total number of bears represented (>1252 bears) was the highest for the region and accounted for 45% of bears seized for all countries over the 12-year period (**Table 3 and 4**). The bear trade in Russia involved very large consignments (up to 250 bears involved in one seizure), with each seizure representing an average of 23 bears (**Table 4**). The relatively low number of seizures recorded in Russia, but with large numbers of bears involved, serves to highlight that a significant level of trade may occur undetected by law enforcement authorities.

In contrast to Russia, Cambodia frequently reported high seizure rates each year (highest number of seizure for the region; 190 / 27% of total), but each seized shipment represented at least only one or two bears (**Table 3 and 4**). The total number of bears (>253 bears) represented in Cambodia's seizure records was likely due to frequent seizure efforts (an average of 15 recorded seizures per year across all years analysed).

Seized specimens from the Republic of Korea and Singapore were mostly processed products containing bear derivatives (**Figure 4**), and were thus difficult to quantify in terms of the number of bears this represents (**Table 3**). Singapore has recorded moderate frequencies of bear seizures consistently over the period of analysis (Foley *et al.*, 2011) indicating a continual trade route for processed bear products.

Figure 4: Proportion of main bear items (% of total count) reportedly seized by countries/territories across Asia (2000-2011)



* Other countries/ territories included Hong Kong (bile products), Indonesia (live bears, skins, paws, teeth), Japan (gall bladders), Republic of Korea (gall bladders and bile products), Mongolia (claws), Nepal (live bears, gall bladders), and Taiwan (live bears, paws, bile products).

BEAR SPECIES INVOLVED

Consistent with the illegal trade in most wildlife species, the origin of the individual bear specimen is rarely known. In the 64 seizures where the origin of specimens was identified, at least 22% (603 bears) were known to be have been sourced from wild populations. No seizures recorded in this study claimed bears were sourced from captive-stock. Furthermore, the majority of seizure reports did not specify the species of bear, with at least 1,096 bears of unknown species represented in the trade. However, records that did report bear species identified Brown Bear (>579 bears), Asiatic Black Bear (>554 bears) and Sun Bear (>523 bears) as the most commonly seized bear parts and derivatives across Asia, followed by the Sloth Bear (>49 bears).

M. Silverberg / TRAFFIC

Bear products for sale in Viet Nam

SPECIMENS IN TRADE

Various types of specimens were seized in the bear trade across Asia, from live bears to manufactured pills containing bear bile. Highly prevalent in seizures were live bears (434 bears), paws (6624 paws, representing >1656 individual bears), and gall bladders (373 gall bladders, representing 373 individual bears) (**Table 5)**, with up to 10 countries in the region reportedly seizing each of these specimen types (**Figure 6**). These types of specimens are more easily identifiable as bear, which can facilitate and aid successful prosecutions by enforcement authorities. More refined and processed bear products such as bile medicines or indistinguishable body parts such as meat and bone are more difficult to determine which animal species is involved.

Quantities of seized items retained as near whole specimens, included 434 live bears (mostly Cambodia and Viet Nam as well as India, Lao PDR and Russia), 35 dead bears (mostly Thailand), 152 skins (mostly China), and two whole skeletons (Cambodia and Viet Nam) (**Figure 4** and **Table 6**). Bear parts seized in illegal trade included skins (mostly China), bones (mostly Russia), meat (mostly Thailand and Malaysia), paws (mostly Russia and China), claws (mostly Cambodia as well as Malaysia), teeth (mostly Cambodia and Myanmar), and gall bladders (mostly China as well as Viet Nam, Malaysia, Japan, Russia and India).

Seized items also included products containing derivatives of bear bile, with a total of 19 108 bile products of unquantifiable volume seized across Asia in the 12-year period between 2000 and 2011. Most of the bile products were seized in China, Russia as well as Thailand, Singapore, Hong Kong and Republic of Korea (**Figure 4** and **Table 6**). In addition to manufactured bile products, Viet Nam also seized 3000 cm3 of raw bear bile.

Table 5: Annual count of various items seized in the bear trade (2000-2011)

Commodity type	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Total
Near whole bears													
Live bear	29	9	24	18	15	33	34	39	58	53	90	32	434
Dead bear	-	1	-	5	-	-	-	12	3	1	2	11	35
Skeleton	-	-	-	-	1	-	-	-	-	-	-	1	2
Skins	-	2	1	6	8	7	4	110	3	7	3	1	152
Per kilogramme													
Gall (kg)	0.04	-	0.01	-	-	6	1	-	-	3.64	0.04	0.071	10.8 kg
Derivatives (kg)	0.753	0.70	2.37	0.695	0.352	-	0.025	0.114	0.006	0.267	1.725	0.175	7.2 kg
Bones (kg)	-	-	-	2.3	1.7	6.6	-	-	-	18.5	-	-	29.1 kg
Meat (kg)	-	-	-	12.7	-	32.2	12	-	90	2	3.5	-	152.4 kg
Unit quantities													
Bile (cm^3)	-	-	-	-	-	-	-	-	-	3000	-	-	3000 cm^3
Bile products (#)	1085	533	5365	404	184	337	94	1348	3881	699	4714	464	19,108
Derivatives (ml)	1820	-	-	240	-	-	-	-	12	320	2155	550	5097 ml
Gall bladders	2	-	-	46	24	-	14	134	19	40	88	6	373
Gall bladder pieces	-	-	-	-	-	-	6	11	-	-	-	-	17
Skulls	-	-	-	1	-	1	1	-	-	4	6	-	13
Teeth	-	-	-	-	2	4	20	4	1	-	-	30	61
Bones (#)	-	-	-	4	3	-	4	9	1	2	-	-	23
Claws	3	1	6	13	9	124	20	4	19	50	15	2	266
Paws	-	1	1	18	774	20	468	2269	262	519	693	1262	6624
Trophies	-	2	-	-	1	-	-	8	3	-	-	17	31
Penis	-	-	-	-	-	-	-	1	-	2	-	-	3

Table 6: Total count of various items seized in the bear trade by country/territory (2000-2011)

Commodity type	CN	HK	ID	IN	JP	KH	KR	LA	MM	MN	MY	NP	RU	SG	TH	TW	VN	Total
Near whole bears																		
Live bear			1	35		156		26	2		7	14	20		15	6	152	434
Dead bear						7					3		4		18		3	35
Skeleton						1											1	2
Skins	110		5			24							12		1			152
Per kilogramme																		
Gall (kg)	9.0							0.0									1.8	10.8 kg
Derivatives (kg)	5.3	0.1	0.0		0.1		0.1									0.0	1.6	7.2 kg
Bones (kg)						10.6											18.5	29.1 kg
Meat (kg)	1.8					0.2					75.9				72.5		2	152.4 kg
Unit quantities																		
Bile (cm^3)																	3000	3000 cm^3
Bile products (#)	13,480	624		4	98	11	499	15			2		2559	604	801	47	364	19,108
Derivatives (ml)	2880												300				1917	5097 ml
Gall bladders	171			18	36	4	1	1			44	2	25	3	1		67	373
Gall bladder pieces														11			6	17
Skulls						3									4		6	13
Teeth						30			30		1							61
Bones (#)	1					8					1		13					23
Claws			7	4			152			1	70		25		2		5	266
Paws	1598		8			85		61	20		129		4500		24	7	192	6624
Trophies													31					31
Penis	2												1					3

SEIZURE OUTCOMES

Information pertaining to post seizure outcomes of law enforcement action, including penalties applied to individuals and companies involved in seizure incidents were often lacking. Of the 694 reported bear seizures, only 51 cases (7%) had details on arrests and/or prosecutions of suspects. In total, 43 cases of bear seizures were reported to have resulted in fines imposed in four countries (China, Malaysia, Singapore and Viet Nam), with fines ranging between USD 316 and USD 6320 (average USD 1282) and totalling USD 55 135 (**Appendix I**). No details were available on arrests or prison sentences imposed. This lack of information impedes any comprehensive assessment on the spectrum of penalties given for offences relating to illegal wildlife trade and the magnitude of existing deterrents to illegal activity.

TRADE DYNAMICS WITHIN ASIAN SOURCE COUNTRIES

Most reported seizures (according to the UNEP-WCMC CITES trade database records only) took place in and/or were reported by non-range States for Asian bear species. For Asiatic Black Bear, only one seizure out of 161 occurred within the geographic distribution for this species i.e. China. The predominance of illegal international trade reported by non-range States suggests that range States are failing to detect a significant proportion of Asiatic Black Bear poaching and trade as they are being smuggled across their own borders. In particular, 37% of international seizures involved China as an exporter of Asiatic Black Bear products and 26% of cases involved Viet Nam. Most seizures were reported by the United States as importers (72%), with most of the consignments containing derivatives of Asiatic Black Bears.

For Brown Bears, the majority of illegal international trade involved countries not targeted in this report (90 seizures occurred in non-Asian countries), with most reported seizures involving trophies, skulls, teeth and claws being transported from Canada into the United States. However, 53 reported seizures of Brown Bears were illegally exported from Asia, with Russia identified as the exporting country in most cases (76%) and listed as the country of origin in a further four cases. Only four seizures of illegal Brown Bear consignments occurred within Asia, with each of these cases involving live bears between Russia and Japan. For Sun Bears, all seizures of international trade in this species were apprehended outside of Asia (non-range States) by the United States (18), New Zealand (6), UK (2), and France (1) as importing countries. Exporting countries involved in illegal Sun Bear trade included China (6), Viet Nam (6), Cambodia (4), Thailand (3), Singapore (2), Laos PDR (1), Indonesia (1), and United States (1). Only one seizure of Sloth Bear was reported in the UNEP-WCMC CITES trade database over the 12-year period. This case involved the illegal export of a live Sloth Bear from Nepal and was apprehended by the importing country, India.

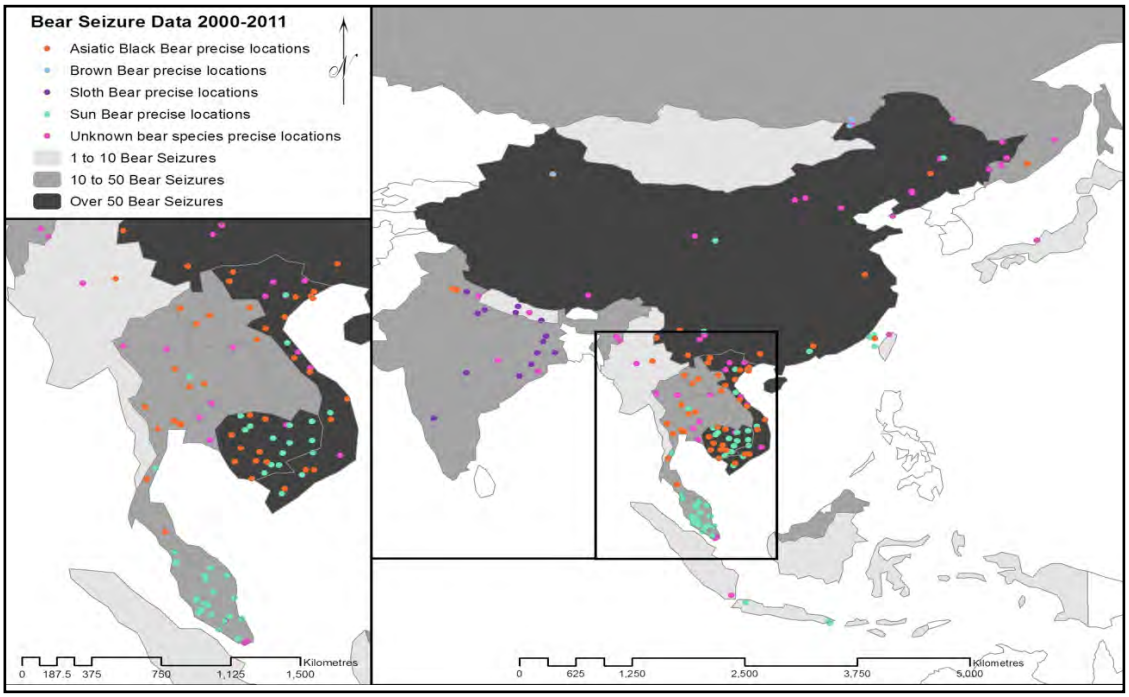
TRADE LOCATIONS

Many reported seizures provided detailed information on the exact location of where the apprehension took place (370), although some reported cases simply stated the country/territory (85). Specific locations for the reported seizures of Asiatic Black Bear, Brown Bear, Sloth Bear, Sun Bear, and unreported bear species across Asia are identified in **Figure 5**. This study identified 14 locations where seizures have occurred repeatedly across Asia (**Table 7**). These 14 localities alone accounted for a total of 123 seizures and 36% (1019) of the total number of bears seized in trade between 2000 and 2011 and likely represent significant trade nodes. Particular attention should be paid to the repeated occurrence of seizures at border provinces such as: Yunnan and Heilongjiang; China, Koh Kong and Ratanakiri; Cambodia, Bokeo; Lao PDR and Primorsky Krai; Russia. Other significant international trade routes involve Russia-Japan and India-Nepal with these countries implicated in the export and import of bear consignments between each pairing.

Table 7: Repeat locations across Asia recording more than five seizures between 2000-2011

Country	Seizure Location	Total # of seizures	Total # of bears seized
Cambodia	Ratanakiri Province	17	20
	Phnom Penh	13	16
	Koh Kong	8	12
	Siem Reap	7	10
	Battambang Province	8	11
	Stung Treng	7	8
China	Yunnan Province	9	125
	Guangdong Province	8	31
	Manzhouli	6	70
	Heilongjiang Province	5	73
Lao PDR	Luang Prabang	13	16
	Bokeo Province	5	8
Russia	Primorsky Krai Province	6	548
Viet Nam	Ha Noi	11	71
Total		**123**	**1019**

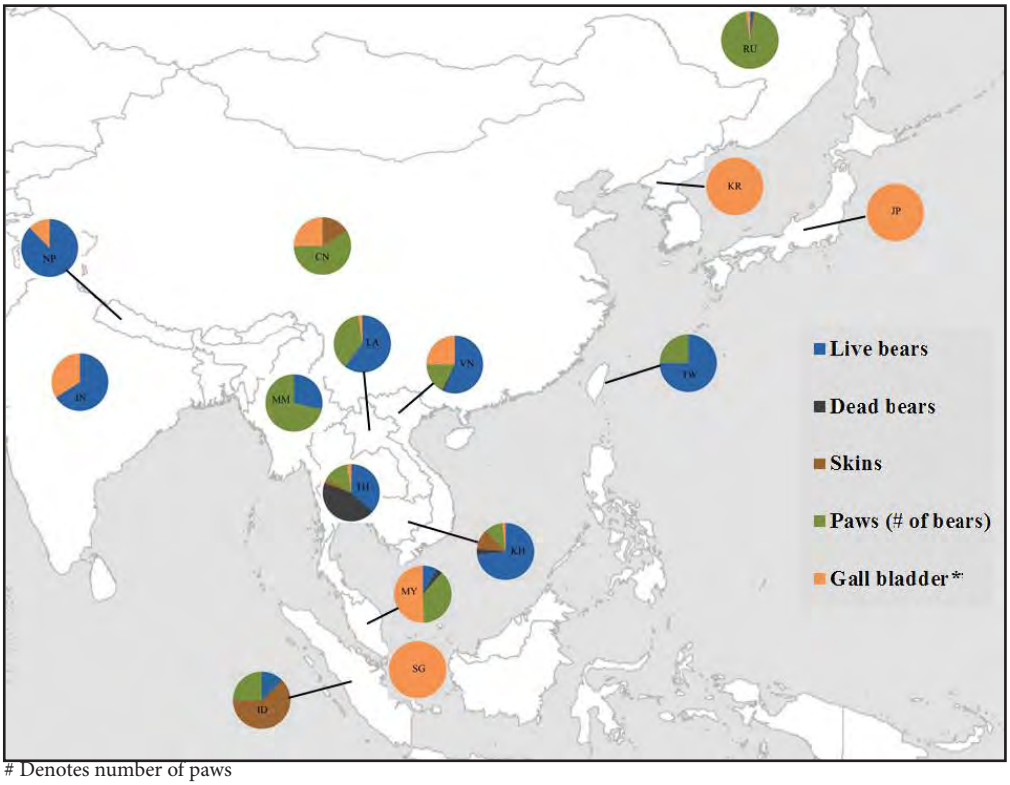
Figure 5: Map of recorded bear seizures across Asia (2000-2011)



DISCUSSION

From the seizure data compiled in this study, significant numbers of whole bears, their parts and derivatives, have been seized throughout Asia since 2000. Yet the minimum number of bears estimated from the seizure data in this study (2801) represents an uncertain proportion of the actual volume of bears illegally traded over the 12-year period examined, simply because much of the illegal bear trade goes undetected or unrecorded. Therefore, the seizures presented for countries/territories in this report are only indicative and likely an under-representation. In some cases, the intermittent records of seizures may be a reflection of the lack of available accurate data, but in other cases it may represent limited law enforcement capacity and standardized recording of information. In the same manner, high seizure rates can be explained either by effective law enforcement in these countries or by their preponderance in the bear trade chain or both (see discussion under **Law Enforcement**). From available data, countries across Asia can be characterized by tendencies towards particular bear parts (**Figure 6**), which may represent a country's involvement as a supplier, transit and/or consumer in trade dynamics

Figure 6: Types of bear trade in countries/territories across Asia, as represented from seizure records. For each country/territory, the proportion of each specimen type involved in the trade was calculated relative to the number of bears needed to obtain the parts



# Denotes number of paws

* Most countries/territories involved in the trade of bear gall bladders were also implicated in the trade of significant quantities of bear bile and/or bile products.

UNDERSTANDING TRADE ROUTES

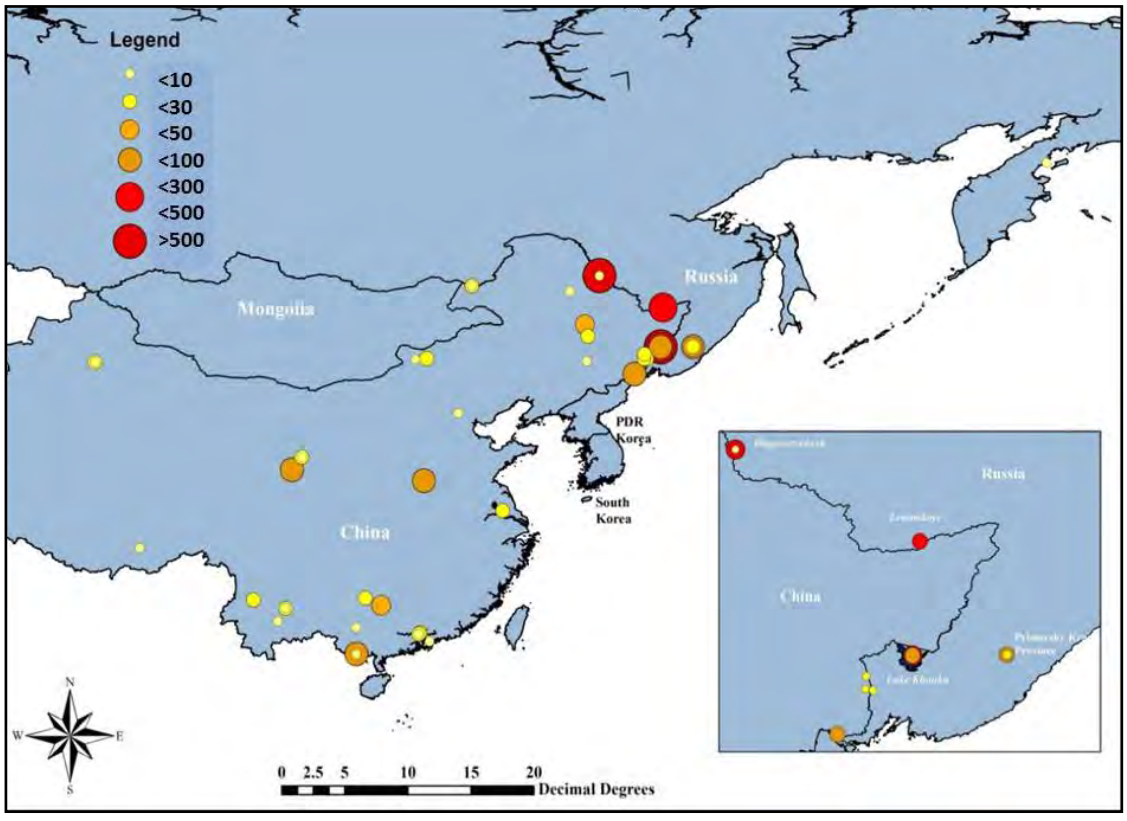
Overall, 70% of bear seizures recorded in the UNEP-WCMC CITES trade database (2000–2011) involved countries/territories in Asia, highlighting the global role of this region in bear trade. Furthermore, all four species of bears found in Asia were found in trade. Asiatic Black Bear (>554 bears) and Sun Bear (>523 bears) were the most commonly seized bear parts and derivatives across Asia, followed by Brown Bear (>329 bears) and Sloth Bear (>49 bears). Considering that more than 17 countries/territories in Asia were implicated in the bear trade, and that all four Asian bear species were targeted, it is likely that the illegal wildlife trade is threatening wild and vulnerable bear populations in the region, such as Asiatic Black Bear and Sun Bear. The illegal trade in bear species across Asia is diverse – both in terms of the variety of specimen types traded as well as the market dynamics of countries involved in the trade. Bears are traded as live and dead specimens, trophies, body parts, and as derivatives in manufactured products. From available seizure data, countries across Asia can be characterized by tendencies towards particular bear parts (**Figure 9**), which may represent a country's involvement as a supplier and/or consumer or utilized as a transit in trade dynamics. Understanding trade dynamics for each country/territory and significant border point hotspots will facilitate the most appropriate course of action needed to combat trade based on the specified problem analysed.

The number of seizures and level of trade taking place across Asia signify that the illegal bear trade within and between countries/territories presents a serious problem that needs to be addressed on a regional scale. Analysis of trade data has provided insight into broad trade route trends, with cross-border routes for bear trade including: Russia into China; Lao PDR and Myanmar into China and Viet Nam; China into Republic of Korea; Viet Nam into Japan and Singapore; Cambodia and Lao PDR into Viet Nam; Viet Nam into Republic of Korea; Indonesia into Thailand; Myanmar into China and Thailand; and between Nepal and India. The most prominent route, in terms of quantities of bears within seizures, was the chain from Russia to China. Bear parts, including paws and gall bladders, are reportedly smuggled to China on a regular basis (Chestin, 1998; Scott, 2012), most likely for the bear meat and the traditional Chinese medicine trade (Foley *et al.*, 2011). It has also been stated that many of the bear parts smuggled from Russia were reportedly derived from the Siberian population of Brown Bears, which are listed in CITES Appendix II (Kramer, 2010).

A CASE STUDY: THE PERSISTENT TRADE IN BEAR PAWS RUSSIA AS A SOURCE AND CHINA AS A CONSUMER

Seizures involving the largest number of bears occurred at border locations in Russia en route to China. Russia, harbouring the world"s largest wild Brown Bear population, is a major source country for bear parts, mostly paws. Bear paws were a major product seized from Russia (**Figure 6)**, which represents a minimum of over 1125 individual bears, with almost all these seizures occurring close to the China border (**Figure 7**). As the Brown Bear is listed as Appendix II it is likely paws were traded without the necessary CITES documentation. These results indicate the likelihood of large and organised networks operating in Russia that are trading and/or exporting shipments of bear parts on a commercial scale. **Figure 7** illustrates the concentration of seizures where a high volume of paws were seized, predominantly along the Russia-China border in the Far East. Seizures containing fewer paws are smaller in volume across China, and it is inferred that once over the border, consignments are broken down and transported to customers/consumers.

Figure 7: Bear paw Seizures in Russia and China (2000-2011)



Lake Khanka (**Figure 6**) is a transboundary freshwater body located on the border between Heilongjiang Province, Northeast China and Primorsky Krai in Russia. The "Khanka Tear" is one of the most notorious yet complicated stretches of the Sino-Russian border. Though there have only been a low number of *reported* seizures at Khanka Lake, it is surmised that this route is utilized more often to smuggle goods over the border. In 2007, it was reported Chinese traders/customers were increasingly recruiting Russian nationals to act as couriers as they were less likely to be stopped and interrogated at border points. However, documented arrests of individuals implicated in seizures have commonly been of both nationalities. The largest bear seizure ever reported occurred in Russia in 2011 when over 1000 bear paws were found individually wrapped and salted at the Russian border city of Blagoveshchensk bordering the Chinese province of Heilongjiang, and was carried out by a Chinese national.

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Seized bear paws in Manzhouli, Inner Mongolia

The threat presented by Russia and China continued into 2013 with a number of high volume bear seizures taking place. The most significant of which occurred in May 2013 when 213 bear paws were found concealed in a Russian van in Manzhouli, in China"s Inner Mongolia Autonomous Region. It is estimated that at least 54 bears were slaughtered to make up this consignment (pictured left). Moreover, the data reveal that six seizures specifically of bear paws have previously occurred there during the period reviewed. This particular location is therefore considered a significant trade hotspot that should be subject to further investigation.

It is likely that most seized bear paws within Russia originate from wild bears, since there are no breeding facilities in Russia. The fact that such significant seizures are being made in Russia and along the border with China would suggest a prolific trade in bears and their parts between the two countries. Although, not of immediate conservation concern for the Russian Brown Bear wild population (currently estimated at over 100 000 individuals), the issue points to the need to enhance enforcement and management efforts, and to stem proactively the demand from countries in Asia where bears and their parts are in demand, especially China.

China appears to be a major consumer and also a significant exporter of bear parts and derivatives, including paws for meat consumption (1598), whole gall bladders (171) and manufactured bile products (13 480 products) for use in traditional Chinese medicine. Given the significant number of paws being illegally smuggled across the border into China, it is likely that many of the exported paws originated from Russia.

Moreover, over half (58% / 84) of China's seizures occurred internationally as the country of export or origin. Given that the US was a significant destination for a large number of bear products illegally exported from China, this serves to illustrate the extent to which China is implicated in the bear trade at both a regional and international level.

TRADE IN LIVE BEARS

Cambodia and Viet Nam were identified as the two countries with the highest volumes of live bears in the region at 36% (156) and 35% (152) respectively. Given the large number of bear "farms" in Viet Nam and a continuing demand for bear bile, it is believed that these seized bears were intended to stock bear bile extraction facilities; even though it has been illegal for facilities in Viet Nam to acquire new bears for the industry since 2005 or to trade bear bile. It is also believed that the live bears seized from border provinces (such as in Cambodia, Lao PDR and Thailand) were potentially en route to bear bile extraction facilities in not only Viet Nam, but China as well.

There is estimated to be over 13 000 bears held in captivity across Asia for the purposes of bile extraction (Kikuchi, 2012). Bear parts and derivatives are sourced from wild-caught individuals or produced from facilities housing bears mostly captured from the wild (Robinson *et al*., 2006; Nguyen, 2007; Burbach, 2009; Loeffler *et al*., 2009; MacGregor 2010). Facilities housing bears for the purposes of bile extraction are commonly referred to as "bear farms". However, this terminology is potentially misleading because "farming" typically insinuates practices where the breeding of animals in captivity takes place. Most, if not all bear facilities rely on sourcing bears directly from the wild to maintain their stock, since captive breeding of bears in bile extraction facilities is difficult and considered to be non-existent (Richards and Wang, 2006; Nguyen, 2007; Robinson *et al*., 2007; Loeffler *et al*., 2009; MacGregor, 2010; Vu, 2010; Livingstone and Shepherd, *in prep*).

It is estimated that approximately 2400 bears are held in bile extraction facilities in Viet Nam (Llanos, 2012). The prevalence of live bears in seizures implicating Viet Nam potentially indicates: **1)** a need for stocks to be replaced in bear bile facilities; **2**) ongoing market demand for wild-sourced bear products; and/or **3**) increased enforcement and seizures that may have arisen from the nationwide registration and micro-chipping program that was conducted in Viet Nam in 2006 (Government of Viet Nam Decision *02/2005/QD-BNN*).

It has been proposed that the practice of bear "farming" alleviates pressure on wild bear populations (Yi, 2000; Haikui and Zhi, 2007), however, there has been no conclusive evidence for the efficacy of bear "farming" and no beneficial effect on wild populations (Mills *et al*., 1995; Peppin *et al*., 2008). Furthermore, high mortality rates and low to non-existent breeding in these bear bile extraction facilities have meant that bears are often sourced from the wild to (re-)stock these facilities (Robinson *et al*., 2006; Nguyen, 2007; Burbach, 2009; MacGregor, 2010); making it even more challenging to determine whether bear parts or products were sourced from truly captive-stock or wild-caught animals placed in these facilities.

Bear "farming" has been promoted as conservation-friendly based on assumptions that "farming" bears for bile relieves the poaching pressure on wild populations, with the theory being that this creates a more sustainable means of sourcing bear bile (Wang et al., 1994; Mills et al., 1995).

However, the establishment of bear bile extraction facilities has not catalysed the cessation of illegal hunting of wild bears, and is potentially compounding the threat to wild populations. The production of bile in farms increases the availability of bear bile and intensifies the consumer demand for bile products. The supply pressure for facilities to stock adequate numbers of bears to meet demand for bile extraction subsequently drives the poaching of bears from the wild. Given that bears are essentially not bred in captivity and that bear bile extraction facilities mostly source their animals from the wild, the notion of sustainably "farming" bears to supply bile and bear parts is highly flawed.

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Bear cub at a farm in Ha Noi.

As ample evidence exists demonstrating that increased supply of farmed bear bile has not alleviated the exploitation of wild bear populations (Dury, 2009; Dutton *et al* 2011), a motion calling for the phasing out of "bear farms" was adopted at the IUCN World Conservation Congress in Jeju, Republic of Korea (6–15 September, 2012). The motion noted that the stocking of farms with bears taken from the wild is not uncommon, and that the farming of bears and the wide-scale sale of relatively cheap bile gives the false impression that wild populations are robust, and confuses users and enforcement authorities as to the origin and legality of bear products.

In Asia, there remains a culturally strong consumer preference for wild-sourced bear products in both TCM and meat trade (Nguyen, 2007; Robinson *et al*., 2007; Burbach, 2009; MacGregor, 2010; Foley *et al*., 2011; Dutton *et al*., 2011). Ultimately, bear bile extraction facilities only serve to perpetuate the illegal trade in bears across Asia by placing products on the market. Many of these bile products are easily available to consumers, even in countries where the sale of bear products is illegal (e.g., Viet Nam; Foley *et al*., 2011).

Observations have been made in some Asian bear range States of the depletion of wild populations. In Lao PDR, according to surveys by an NGO (Free the Bears) in Bokeo Province, also highlighted as a trade hotspot (**Table 7**), villagers reported that more bears were being captured each year due to the rapid rise in price for bears and their parts (M. Hunt, Free the Bears, *in litt*., to TRAFFIC June, 2012). Dwindling populations of wild bears have been measured in studies in China (Sichuan Province), Republic of Korea, Lao PDR and Viet Nam (Kemf *et al*., 1999; Garshelis and Steinmetz, 2005; Garshelis and Steinmetz, 2008; Feng *et al*., 2009). These rapid declines are thought to be primarily the result of poaching (Garshelis, 2002).

India (35) and Nepal (14) were also significant countries implicated in the trade of live bears (**Figure 5**), but unlike China, Cambodia and Viet Nam, the trafficking of these animals was predominantly intended for the dancing bear trade (Abrar Ahmed, *pers. comm.*). Concerted efforts have been made to address this specific trade, and in India the number of dancing bears has decreased from 400 to approximately 150 since 2005. The Wildlife Trust of India (WTI) and a number of other NGOs in India continue to work with the Ministry of Environments and Forests to address the persistent poaching and trade that fuels this industry.

BEAR BILE CONSUMPTION

In contrast to trade in whole bear specimens, other countries/territories in the region were focused on trading bear parts and derivatives, particularly bile and bile products. Singapore, Hong Kong, Republic of Korea, Viet Nam and Japan all appear to sustain a well-developed domestic market for gall bladders and bile products (**Figure 5**). Certainly Viet Nam is known as an important consumer as well as producer of bear bile for traditional medicines (364 bile products seized) (Livingstone and Shepherd, *in prep*). In the Republic of Korea (499 bile products seized), small put important steps have been made to phase out live bile extraction (Platt, 2012), and the government of Viet Nam has banned bile extraction and bear bile sales and is currently working toward ending the practice of keeping bears in captivity for commercial exploitation. While the elimination of these facilities is a fundamental first step in reducing bear trade, it is also important to pre-empt other avenues by which illegal trade may persist, and to continue campaigns that raise awareness and educate consumers about the impacts of using and consuming bear products and derivatives.

The findings of a recent TRAFFIC report on bear bile trade in Asia (Foley *et al*., 2011) recommended that all seizures pertaining to bear specimens be tracked and reported internationally, as a matter of national accountability. Throughout Asia, the market for bears, bear parts and derivatives is diverse and, as with most illicit activities, the international bear trade is poorly understood. To address this lack of knowledge, TRAFFIC compiled and analysed data on bear seizures from countries/territories in Asia. The information in this report is intended to highlight trade trends and routes, comment on enforcement efforts, raise further public awareness of illegal bear trade, and recommend solutions to mitigate the illicit trade in bears, their parts and derivatives.

In the Republic of Korea, although domestic sources of bear product have declined, and it is illegal under Section 269 of the Domestic Import Tariff to bring bear bile into the country, the demand for such products continues to exist. Close attention on behalf of the government and Customs agencies especially at borders is necessary to ensure that the elimination of bear bile extraction facilities in the Republic of Korea does not encourage demand for bear products sourced from other countries such as China and Viet Nam.

Malaysia had a low level of bile products seizures (most of the *reported* bear items seized there were meat and paws) (**Figure 5**), yet it is known to have a significant market for such products (Shepherd and Shepherd, 2010; Foley *et al.*, 2011). This may suggest that Malaysian authorities are not being as vigilant as they could be with regards to the smuggling and/or the reporting of bear bile products into the country and potentially other countries.

In China, "bear farming" in some provinces and the domestic trade of bear bile are legal under specific government approval (Robinson et al., 2007; Loeffler *et al*., 2009). However, the trade of whole gall bladders and internationally-sourced bear products are totally prohibited (Foley *et al*, 2011), and this report indicates that the majority of seized items involving China were of gall bladders, paws, and bile products (**Figure 5**). The high volume of bile products seized from China (13 480) indicates that the illegal bear trade from China is almost certainly underestimated, especially as seizures are believed to represent only a small portion of actual amounts being trafficked.

The illegal bear trade also occurs outside of Asia, although these geographic locations were not the focus of this report. For example, the United States and New Zealand seized a significant number of shipments containing illegal bear items, mainly derivatives, exported from Asia (69% and 50% respectively of all their bear-related seizures). This is believed to be largely fuelled by the demand for traditional medicine products by Chinese and Vietnamese communities in these countries. Further study is necessary to understand the dynamics and potential threat from these countries, in relation to illegal trade emanating from Asia

REPORTING FOR EVIDENCE-BASED PLANNING

Effective enforcement starts with a good understanding of crime patterns to ensure targeted intervention is focused on areas deemed to be most vulnerable. The analysis conducted for this report found countries across Asia were failing to adequately report bear seizures and confiscated shipments. For example, this study found information for nine seizures involving 36 gall bladders illegally traded within Japan between 2000 and 2011. However, a more comprehensive TRAFFIC investigation focusing only on Japan's bear gall bladder trade found 402 seizures, totalling 9047 items of bear gall bladder products, between 2000 and 2004 (Ishihara, 2005). The markedly larger figures reported in the focused national study (*cf* the current multi-national study) indicates a significant level of under-reporting or undocumented bear seizures that can only be revealed with substantial research effort. Therefore, the case for Japan, as presented in this report, serves to highlight the critical need for reliable and rigorous reporting by CITES Parties, in accordance with *Resolution Conf. 10.8 (Rev. CoP14).*

All source and consumer countries should systematically record and report all available seizure information (such as seizure locations, bear species, items seized, origin and destination of seized items, and prosecution details) for all cases of wildlife trade including bears. It is clear from the data that seizure reporting is irregular and often incomplete, particularly from CITES Management Authorities submitting reports to the UNEP-WCMC CITES trade database. As a result, the majority of information collated on bear seizures for this report was sourced from NGOs, media and the Internet (66%).

CITES Article VIII (paragraphs 6 and 7) requests all Parties to maintain records of trade in specimens of CITES-listed species (such as bears), and to submit reports periodically to the CITES Secretariat to assist with implementation of the Convention (such as seizure information) (CITES 1979). Comparing seizures reported in the UNEP-WCMC database (238 cases across Asia (2000–2011)) to the more exhaustive list compiled in this study (a total of 456 cases across Asia), it is clear that all relevant seizures of bears were not submitted to the CITES Secretariat. Failure by Parties to submit all available information on illegal bear trade inhibits the ability of Parties to mount appropriate responses to combat the illegal trade effectively. Furthermore, Parties need to enhance detailed reporting of individual seizures, such as origins of bears seized (wild or captive stock), species, and enforcement outcomes (fines and/or prosecutions).

Data on bear trade should be reported from all potential avenues such as rescue centres and trade surveys from both government agencies and the conservation community to help ensure datasets are as comprehensive as possible. For example, the Bornean Sun Bear Conservation Centre in Sabah received nine Sun Bears from seizures by the Sabah Wildlife Department (BSBCC, 2010), yet these bears were not included in seizure statistics. A centralized database organized to compile all information on bear trade (including data fields on seizures, rescues, open trade observed, etc.) will allow for easy retrieval by governments and NGOs for analysis and monitoring of trade trends in the region and for evidence-based actions to combat illegal trade.

LAW ENFORCEMENT

The scale of seizures reported in this study and the documented open trade of bear products across the region (Foley *et al*., 2011) suggests that current enforcement efforts are inadequate and may be failing to deter illegal bear trade. Cambodia, however, may represent an anomaly across the region being the country with the most reported bear seizures (190), recording three times more seizures within its borders (180 cases seized domestically, plus a further 10 seizures reported internationally) than any other country (*cf*. China and Viet Nam each reported only 58 cases seized domestically) and maintaining seizure rates at higher than annual regional averages for the entire 12-year period reviewed. This high level of sustained enforcement and efficacious seizure reporting by Cambodia is most likely attributable to the Wildlife Rapid Rescue Team (WRRT), a highly effective collaboration between the Cambodian Ministry of the Environment, the Cambodian Forestry Administration, and the NGO Wildlife Alliance, responsible for apprehending and reporting 93% of bear seizures within Cambodia. Since 2002, this specialized team of law enforcement officials have responded to information from public wildlife crime hotlines to help track down poachers, sellers, and middlemen in various streams of illegal wildlife trade. The WRRT has the power to impose fines at the time of seizure that are equivalent to three times the value of whatever is confiscated (N. Marx *in litt*., to TRAFFIC, October 2012). Furthermore, a number of significant busts have been made by police and Forestry Administration officials catalysed by the WRRT. The WRRT is well recognized across Cambodia and with that comes an improved awareness of wildlife legislation due to its active, continued presence which may contribute to a deterrent effect. Similarly, there has been a marked reduction in the open availability of wildlife for sale since the WRRT has been operational, although, inevitably an element of displacement will have occurred with some trading likely driven underground (N. Marx *in litt*., to TRAFFIC, June 2014).

The high number of seizures reported in Cambodia is considered to be evidence of vigilant enforcement efforts (rather than heightened trade in this country) because the minimum estimated number of bears seized in Cambodia (253 bears) was lower than other countries in the region (on average two bears per seizure). Furthermore, Cambodia does not appear to play a significant role in the illegal bear trade globally, only accounting for 3% (10) of international bear seizures (UNEP-WCMC CITES trade data).

Significant findings of this study were the higher seizure statistics recorded from 2007 onwards (> 70 cases per year from 2007), with a two-fold increase in the number of recorded seizures from previous years (average 38 cases per year prior to 2007). During 2007, *Resolution Conf. 10.8* was revised at the 14th meeting of the Conference of the Parties (CoP14), which urged Parties to increase enforcement to control the trade of bears and their parts/derivatives. The findings of this study suggest that increased motivation for enforcement efforts may lead to increased reporting efforts by Parties, and hopefully, increased monitoring efforts and prosecutions in the illegal bear trade. Greater certainty in reporting efficiency and data availability will allow for more effective analysis and interpretation of trends in trade and enforcement. This will, in turn, allow Parties to plan better and execute efforts to combat the illegal trade in bears and their derivatives, domestically, regionally, and internationally.

Improving enforcement in order to combat the illegal trade of bears in Asia is critical. Even with national legislation to protect bears, many factors such as corruption, legislative loopholes, ineffective enforcement, and continued demand will enable and support illegal wildlife trade. Where enforcement is concerned, the WRRT in Cambodia may serve as a good example that other countries in the region can potentially emulate, tailor, and build upon for developing multi-agency partnerships to effect co-ordinated law enforcement action. Ultimately, improving the co-ordination of national law enforcement efforts will help discourage trade, but further regional and international co-operation is needed to halt the illegal and organized cross-border trade of bears. Lastly, law enforcement efforts are only part of the solution and while an initiative such as the WRRT is a catalyst to generate regular enforcement action, investment needs to be made to address the root cause.

CONCLUSION

To date, little analysis of bear-related seizures on a regional or multi-regional level has been undertaken. The demand for bears, their products and derivatives, is clearly widespread and persisting. The examination of 694 recorded seizures compiled in this study presents the largest comparative analysis of bear seizures in Asia. From the seizure data, a minimum of 2801 individual bears were involved in illegal trade across the region from 2000 to 2011. Most seizures failed to record the species of bear involved in the trade, making it challenging to assess fully the impact upon wild bear populations. This threat is further enhanced by the strong likelihood that the trade level outlined in this report is a significant under-representation.

This report highlights the multiplicity of how bears are being exploited for trade across Asia. The trade encompasses all four endemic species of bears found across Asia and involves more than 17 countries/territories in the region, each with certain preferences for particular bear products. The reasons for trading bears are wide-ranging, including poaching live bears to stock bile farming operations; pet or dancing bear trade; sourcing dead bears and their parts for meat consumption; skins and trophies; and/or gall bladders and bile extractions to manufacture traditional medicines. As a result, bears are traded as live or dead specimens, partitioned into trophies, skins, meat, bones, claws, teeth, gall bladders and bile derivatives. Undoubtedly, the Asian region presents a multifaceted trade network of source countries, consumer countries (often with product preferences), as well as manufacturing and transit countries for bears, their parts and derivatives. The results of this study raise concern about the diversity and extent of illegal bear trade throughout Asia that could negatively impact wild bear populations in the region.

Monitoring the trade in bears is difficult given the diverse range of specimens and unknown ingredients in some derived bear products. The demand for bears, their products and derivatives, is clearly prevalent. Moreover, the trade in bear derivatives and manufactured products containing bear are expected to be severely under-represented in this report, since this type of product trade is more insidious and inconspicuous than whole specimens or identifiable body parts. TRAFFIC"s study on the bear bile trade in Asia (Foley *et al.*, 2011) found large quantities of bear bile derivatives in over 50% of TM shops surveyed (in mainland China, Hong Kong SAR, Malaysia, Myanmar, and Viet Nam) and observed at over 30% of shops (in Japan, Republic of Korea, Taiwan and Thailand). These results represent the prevalence of bear derivatives in trade across Asia, although it's difficult to quantify the numbers of actual bears these products represent. The trade in bear products is compounded by the presence of legal captive bear bile "farms" in some countries, which may be facilitating the laundering of illegal bear products. In addition to habitat loss and degradation, the persistence of the commercial trade in bears and their parts is likely to be a significant contributing factor determining the fate of bears across Asia.

Immediate efforts to tackle the trade and improve access to reliable data must be taken in order to ensure the conservation of wild bear populations throughout the region. Illegal bear trade is prevalent across international borders throughout Asia, and collaborative efforts need to be implemented in order to apprehend offenders successfully and close down cross-border trade routes. There are currently a number of collaborative efforts in existence in Asian range and consumer countries, intergovernmental agencies and NGOs involved in supporting enforcement include the Association of Southeast Asian Nations Wildlife Enforcement Network (ASEAN-WEN), South Asia Wildlife Enforcement Network (SAWEN), International Consortium on Combating Wildlife Crime (ICCWC – comprising the CITES Secretariat, INTERPOL, the United Nations Office on Drugs and Crime (UNODC), the World Bank and the World Customs Organization (WCO). However, the bulk of the challenge rests at the national level with the need for more co-ordinated enforcement actions to facilitate improved efforts at a regional level. Increased national, regional and international level law enforcement efforts coupled with sustained behavioural change programmes targeting consumer demand will be essential components necessary for preventing and eradicating the illegal trade in bears and their parts and derivatives.

RECOMMENDATIONS

CITES Implementation

All Parties, and in particular bear range and consuming countries and territories, should take action to implement the measures outlined in *Resolution Conf. 10.8* under their commitment to CITES. This Resolution on the "Conservation of and trade in bears" was passed at the 10th meeting of the Conference of the Parties to CITES (CoP 10) in 1997. It states that "the continued illegal trade in parts and derivatives of bear species undermines the effectiveness of the Convention." Measures should also be taken to monitor and gauge the effectiveness of enforcement efforts by Parties

- All Parties included in this study should submit reports of illegal bear trade and seizures to CITES, as stated in Article VIII in the Text of the Convention and recently directed under Decision 16.43(CoP16). Parties should provide comprehensive information on administrative measures (e.g. fines, bans, suspensions) imposed for CITES-related violations; significant seizures, confiscations and forfeitures of CITES specimens; criminal prosecutions or other court actions; and disposal of confiscated specimens.
- With this in mind and considering the multi-national and diverse trade of this group of species, TRAFFIC recommends that a centralized database for collating reports of illegal bear trade be developed in order to assist with records management and the analysis of the levels and trends in illegal trade. A centralised monitoring system would enable the reliable and systematic analysis of the illegal bear trade at a regional level necessary to understand key areas of concerns and the priorization of resources to tackle this. Greater certainty in reporting efficiency and reliability, as well as data availability will allow for more effective analysis and interpretation of trends in trade and enforcement in future. This, in turn, will allow Parties to prioritize and execute efforts to combat the illegal trade in bears and their derivatives domestically, regionally and internationally.

Co-operation and Collaboration

- The IUCN/SSC Bear Specialist Group to engage key stakeholders to help reinforce the message that the illegal trade in bears and their parts is having a negative impact on populations across their range in Asia, particularly where populations are already vulnerable such as Sun Bears and Asiatic Black Bears. The Group may consider supporting the findings of this report and push for the implementation of the proposed recommendations for addressing the illegal trade in bears in a holistic manner.
- Consideration for a Memorandum of Understanding to be developed between the IUCN/SSC Bear Specialist Group and TRAFFIC for information and analytical purposes.
- INTERPOL to consider ways in which actionable information from relevant NGOs can be utilized to maximise law enforcement efforts against transboundary trade.

Law Enforcement

Improved law enforcement effort in Asia to curb the illegal bear trade is essential. This requires law enforcement agencies to proactively address illegal bear trade and investigate and convict those engaging in such activities appropriately. To catalyse this, the following should be considered:

- Government and enforcement agencies should pay particular attention to key international trade routes by air, land and sea. These include: Russia to China, Nepal to India, Lao PDR to Viet Nam and China, Myanmar to China and China and India to Singapore. Measures should be introduced to mitigate illegal trade along these routes, while also considering potential alternative routes traders may exploit.

• Countries experiencing high levels of illegal bear trade should, if they have not already done so, consider establishing a task force dedicated to addressing environmental crime at a national level. This could be modelled on the National Environmental Security Task Force (NEST) developed by INTERPOL which advocates establishing a common platform and approach worldwide for national compliance and enforcement responses. Similar collaborative efforts have recently been established in China with the formation of the National Inter-Agency CITES Enforcement Coordination Group (NICE-CG) and Provincial Inter-Agency CITES Enforcement Coordination Groups **(PICE-CG);**

• To address transnational trade and facilitate crime prevention, key countries of concern such as Russia, China, Viet Nam and Cambodia should initiate intelligence sharing through INTERPOL I-24/7network and system of international Notices and Diffusions necessary for strengthening enforcement effort. However, information sharing can only be truly effective if the agency responsible for investigating environmental crime has the mandate and resources to deal with global criminal databases;

• The highly effective collaboration between the Wildlife Rapid Rescue Team (WRRT) and the Cambodian Ministry of the Environment and Forestry Administration should be emulated in other countries experiencing high levels of illegal trade. The success of this initiative serves as an indication that continued and consistent enforcement efforts is paramount for curbing illegal trade in this region. It could therefore be considered as an effective enforcement intervention for China, Russia and Viet Nam where bears are seized at a concerning rate but would naturally have an impact upon other species in trade.

Preventative Measures

• TRAFFIC urges Viet Nam, China, Myanmar, Lao PDR and the Republic of Korea to take concerted efforts to eradicate all illegal bear trade emanating from bile facilities as per the IUCN World Conservation Congress recommendation: "WCC- 2012-Rec-139-EN Bear farming in Asia with particular reference to the conservation of wild populations", all illegal bile extraction facilities should be closed down, the industry should not be expanded in any way and no more bears from the wild should be used to stock captive facilities.

• All countries involved in the use and/or consumption of bears and/or their parts and derivatives should consider the implementation of wide scale and sustained education and awareness campaigns as a measure to help eliminate illegal trade.

• Social market research should be conducted to build on the insights and expertise gained through TRAFFIC's previous consumer behavioural change work, in order to identify the specific buyer/user/intender groups to target with a behavioural change campaign; the specific motivations for and barriers to consumption; and the most influential communication channels and people through which to deliver TRAFFIC's 'five step' approach to demand reduction. This research should be conducted in key market countries such as China, Malaysia, Viet Nam, Singapore and the Republic of Korea, in the first instance.

• Research should be conducted to identify suitable alternative substitutes for bear bile and promotion of alternatives should be communicated to bear bile purchasers and users from medical professionals.

• Advocacy campaigns to be undertaken targeting TCM practitioners to ensure that bears feature on their list of prohibited species that they are not permitted to work with.

• Identified repeat locations of seizures should be subject to further examination for seeking to understand why illegal activity is more common there. This level of analysis may highlight opportunities for the implementation of crime reduction measures such as: target hardening, which can be especially pertinent at border points

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APPENDIX I:

Year	Country	Seized items	Fine in USD
2008	MY	N/A	6320
2006	MY	N/A	861
2003	MY	N/A	568
2005	MY	N/A	1692
2007	CN	N/A	880
2009	VN	live (1)	480
2008	MY	N/A	615
2009	MY	N/A	880
2001	SG	bile products (1)	400
2007	SG	powder (16)	4000
2007	SG	gall bladder pcs. (10)	800
2007	SG	pills (2)	400
2007	SG	gall bladder pcs. (1) pills (2)	400
2007	SG	pills (20)	640
2007	SG	powder (8)	400
2007	SG	bile products (20)	2400
2007	SG	pills (43)	400
2007	SG	pill	400
2007	SG	pills (13)	800
2007	SG	pills (14)	400
2007	SG	pills (62)	400
2007	SG	pills (76)	400
2007	SG	pills (4)	2000
2009	SG	powder (40)	2000
2010	SG	gall bladders (1)	2000
2011	SG	pills (74)	400
2006	CN	N/A	6250
2001	MY	limbs (1)	379
2003	MY	limbs (4)	1420
2003	MY	limbs (4)	1580
2003	MY	limbs (8)	1390
2003	MY	N/A	948
2005	MY	limbs (5)	1738
2007	MY	limbs (5)	316
2008	MY	N/A	630
2009	MY	limbs (2)	474
2009	MY	N/A	1580
2009	MY	limbs (25)	948
2010	MY	N/A	790
2010	MY	gall bladders (1)	316
2011	CN	N/A	1520
2011	CN	N/A	3040
2008	VN	live (1)	880
		Total	**55 135**

TRAFFIC, the wildlife trade monitoring network, is the leading non-governmental organization working globally on trade in wild animals and plants in the context of both biodiversity conservation and sustainable development.

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ISBN 978-983-3393-40-4