



PILLS, POWDERS, VIALS AND FLAKES:

The Bear Bile Trade
in Asia

Kaitlyn-Elizabeth Foley
Carrie J. Stengel
Chris R. Shepherd



TRAFFIC
the wildlife trade monitoring network

Published by TRAFFIC Southeast Asia,
Petaling Jaya, Selangor, Malaysia

© 2011 TRAFFIC Southeast Asia
All rights reserved.

All material appearing in this publication is copyrighted and may be reproduced with permission. Any reproduction in full or in part of this publication must credit TRAFFIC Southeast Asia as the copyright owner.

The views of the author expressed in this publication do not necessarily reflect those of the TRAFFIC network, WWF or IUCN.

The designations of geographical entities in this publication, and the presentation of the material, do not imply the expression of any opinion whatsoever on the part of TRAFFIC or its supporting organizations concerning the legal status of any country, territory, or area, or its authorities, or concerning the delimitation of its frontiers or boundaries.

The TRAFFIC symbol copyright and Registered Trademark ownership is held by WWF. TRAFFIC is a joint programme of WWF and IUCN.

Suggested citation: Foley, K.E., Stengel, C.J. and Shepherd, C.R. (2011). *Pills, Powders, Vials and Flakes: the bear bile trade in Asia*. TRAFFIC Southeast Asia, Petaling Jaya, Selangor, Malaysia.

ISBN 978-983-3393-33-6

Cover: Composite image created by Olivier S. Caillabet

Photos from top to bottom:

- 1) Bear cub observed on farm in Hanoi, Viet Nam
- 2) Vials of bear bile observed on farm in Viet Nam
- 3) Alleged bear gall bladder observed for sale in Singapore
- 4) Pills claimed to contain bear bile for sale in Malaysia

Photograph credits:

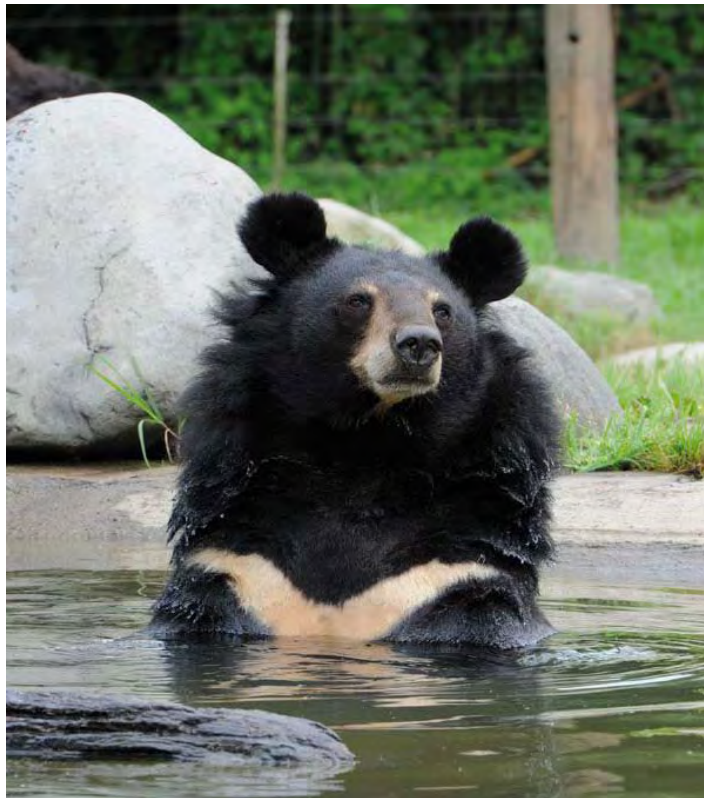
M. Silverberg/TRAFFIC Southeast Asia (1,2)
C. Yeong/TRAFFIC Southeast Asia (3,4)

Pills, Powders, Vials and Flakes: the bear bile trade in Asia

Kaitlyn-Elizabeth Foley

Carrie J. Stengel

Chris R. Shepherd



Asiatic Black Bear at China Bear Rescue Centre, Chengdu.
© Animals Asia

CONTENTS

Abbreviations and acronyms	<i>ii</i>
Definition of terms	<i>iii</i>
Acknowledgements	<i>iv</i>
Executive summary	v
Introduction	1
Species	1
Asiatic Black Bear	2
Sun Bear	3
Brown Bear	4
Bear bile	5
Bear farms	6
Bear trade	7
Trade routes	7
CITES	8
Methods	10
Field surveys	10
Seizure and CITES trade data analysis	11
Cambodia	12
Mainland China	15
Hong Kong SAR	18
Macao SAR	20
Taiwan	21
Japan	23
Republic of Korea	26
Lao PDR	29
Malaysia	32
Myanmar	36
Singapore	38
Thailand	41
Viet Nam (chapter authored in partnership with ENV)	43
General discussion	47
Bear bile products	47
Bear gall bladder	47
Bear bile pills	49
Bear bile product origins	50
Domestic vs. cross-border origin	51
Cross-border-sourced products	53
Legalities of bear bile trade	54
Bear farming	55
Enforcement and seizure data	56
Conclusion	59
Recommendations	60
General recommendations	60
Country-specific recommendations	61
References	62

ABBREVIATIONS AND ACROYNMS

ACRES	Animal Concerns Research and Education Society
ASEAN-WEN	Association of Southeast Asian Nations' Wildlife Enforcement Network
AVA	Agri-Food and Veterinary Authority (Singapore)
cm³	cubic centimetres
CIA	Central Intelligence Agency (of the US Government)
CITES	Convention on International Trade of Endangered Species of Wild Fauna and Flora
CNY	Chinese Yuan Renminbi
CoP	meeting of the Conference of the Parties to CITES
CPM	Chinese Proprietary Medicines; for the purposes of this report, synonymous with TM and TCM
DPR Korea	Democratic People's Republic of Korea (also known as North Korea)
ENV	Education for Nature Vietnam
ETIS	Elephant Trade Information System
FPD	Forest Protection Department (Viet Nam)
g	gramme
GKU	Green Korea United
ICCWC	International Consortium on Combating Wildlife Crime
IES	International Endangered Species of Wild Fauna and Flora (Japan)
INTERPOL	International Criminal Police Organization
IUCN	International Union for Conservation of Nature
kg	kilogramme
LCES	Law for the Conservation of Endangered Species of Wild Fauna and Flora (Japan)
MARD	Ministry of Agriculture and Rural Development (Viet Nam)
ml	millilitre
MYR	Malaysian Ringgit
TWD	New Taiwan Dollar
SAR	Special Administrative Region
SFA	State Forestry Administration (China)
SGD	Singapore Dollar
STOC	Singapore TCM Organizations Committee
TCM	Traditional Chinese Medicine; for the purposes of this report, synonymous with CPM and TM
THB	Thai Baht
TM	Traditional Medicine; for the purposes of this report, synonymous with CPM and TCM
UDCA	Ursodeoxycholic acid
UNEP-WCMC	United Nations Environmental Programme - World Conservation Monitoring Centre
USD	United States Dollar
VNAT	Viet Nam National Administration of Tourism
WAR	Wildlife at Risk
WRRT	Wildlife Rapid Rescue Team, Cambodia
WSPA	World Society for the Protection of Animals

DEFINITION OF TERMS

Bear farm:	Privately or publicly owned facility of any size, where wild-sourced and/or captive-bred bears are kept for the primary purpose of extracting bile and/or the whole gall bladder. This term does not imply that animals are maintained in appropriate conditions or that captive breeding occurs. Bear farms should not be confused with zoological parks or other facilities where bears are kept in the absence of bear bile or gall bladder collection being carried out. Bears on farms are sometimes referred to as ‘bile bears’ or ‘battery bears’.
Bile:	Also known as gall; a fluid produced by the liver and stored in the gall bladder that aids in the digestion of lipids in the small intestine. In the context of this report ‘bile’ refers specifically to the liquid extracted from bear gall bladder.
Borneol:	A compound derived from Borneo Camphor <i>Dryobalanops aromatica</i> teak trees, sometimes used in TM.
Cinnabaris:	A naturally occurring mercury compound, also known as red mercuric sulphide sometimes used in TM.
Consumer:	For the purposes of this report: countries/territories were considered consumers when a significant amount of bear bile products were readily available in the country/territory.
Cross-border:	For the purposes of this report: a term used in reference to trade that moves across international and territory boundary lines (e.g. Russia to China or China to Hong Kong SAR) and does not include in-country/territory borders (e.g. provincial boundaries).
Flakes:	For the purposes of this report; small pieces of dried bile or dried gall bladder, sometimes also described as crystals or chips. Flakes, crystals and chips were all considered ‘flakes’.
Gall bladder:	A small organ, present in most vertebrates that stores bile produced in the liver. In the context of this report ‘gall bladder’ refers specifically to bear gall bladder sold by the gramme, piece or whole form.
Musk:	A substance obtained from the musk gland of male musk deer <i>Moschus</i> spp. The main chemical component, muscone, is a commonly used ingredient in TM products. All musk deer are listed as CITES Appendix I or II.
Ointment:	For the purposes of this report: a salve containing bear bile, typically used for the treatment of sores or haemorrhoids.
Pills:	For the purposes of this report: capsules or compound pills containing bear bile and/or bear gall bladder.
Powder:	For the purposes of this report: dried bear gall bladder pieces or bear bile which has been ground into powder and sold in either pure form or compounded with other products.
Producer:	For the purposes of this report: countries/territories are defined as producers when raw materials for the manufacturer of bear bile products come from these areas and/or these areas manufacture bear bile products often seen in other countries/territories.
Stalactitum:	Also known as a stalactite, a rock formation containing high levels of calcium carbonate and other minerals sometimes used in TM.
Succinum:	A substance derived from tree sap, also known as amber sometimes used in TM.
TM outlets:	For the purposes of this report, areas where bear bile products were sold including TM shops and open markets.

ACKNOWLEDGEMENTS

The authors would like to especially thank Animals Asia Foundation, Maria Norbury Foundation, Stephen and Wendie Ryter, and the Hauser Bear Foundation for making this research and report possible.

A special thanks to Education for Nature Vietnam, who agreed to partner with TRAFFIC Southeast Asia on the Viet Nam section of this report.

Thanks go as well to the following specific people and organizations who contributed time and energy to help make this report a success: Jill Robinson, Juanita Tom, Toby Zhang and Tuan Bendixsen of Animals Asia Foundation; Doug Hendrie of Education for Nature Vietnam; Christopher Servheen; Chris Gee of World Society for the Protection of Animals; Matt Hunt of Free the Bears Fund; Louis Ng of ACRES; Lye Fong Keng of AVA; Siew Te Wong of the Bornean Sun Bear Conservation Centre; Lesley Perlman of Wildlife Alliance (Cambodia); Gabriella Fredriksson; Kim Miyoungh of Green Korea United; Kim Yooree; Gina Moon of Moonbears.org; Eric Busch; Wildlife At Risk; and Nirmal Ghosh.

Thanks also to our dedicated consultants who made the research component of this project possible: Mark Silverberg, Adam Oswell, Charlene Yeong Yen-feng and Gail Jun of Korean Animal Welfare Association.

Many thanks to TRAFFIC colleagues who contributed their time including Noorainie Awang Anak, Nurul Bariyah Binti Babu, Claire Beastall, Olivier Caillabet, James Compton, Julie Gray, Akiko Ishihara, Elizabeth John, Kahoru Kanari, Kanitha Krishnasamy, Sean Lam, Xu Ling, William Schaedla and Joyce Wu.

Portions of the production of this report were made possible by contributions from the Rufford Foundation.

Maps used in this report were designed by Carrie J. Stengel; with the exception of the map in Figure 23, designed by Olivier Caillabet.

EXECUTIVE SUMMARY

The trade of bear gall bladders and bear bile is a serious threat to the conservation of Asian bear species (Phillips and Wilson, 2002). Although the use of bear bile is legal within some Asian countries, cross-border trade of bear bile products is prohibited by the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES) and yet still occurs throughout the region. Furthermore, the commercial production of bear bile from bear farming has turned bile from purely a traditional medicinal (TM) ingredient to a commodity with bile now being found in non-TM products like cough drops, shampoo and soft drinks.

In order to assess the current trade of bear bile medicines in Asia, surveys were conducted in TM outlets in the countries and territories of Cambodia, mainland China, Hong Kong Special Administrative Region (SAR), Japan, Republic of Korea, Lao People's Democratic Republic (PDR), Macao SAR, Malaysia, Myanmar, Singapore, Taiwan, Thailand and Viet Nam. Bear farms were also surveyed in Lao PDR, Myanmar and Viet Nam and information about farms gathered from various sources for mainland China, Japan and the Republic of Korea. Although during this research products from DPR Korea and Russia were observed, these countries were not surveyed.

TM shops in the 13 countries/territories surveyed sold bear bile products, with the exception of those in Macao SAR. Products were most frequently observed in mainland China, Hong Kong SAR, Malaysia, Myanmar and Viet Nam, where they were seen at over 50% of the total TM shops surveyed. Products were observed at over 30% of surveyed TM shops in Japan, the Republic of Korea, Taiwan and Thailand. Products were seen at less than 30% of surveyed TM shops in Cambodia, Lao PDR and Singapore.

All of the countries/territories surveyed were observed to have a significant amount (22% to 100%) of bear bile products originating in other countries/territories for sale. Mainland China was the most commonly reported place of origin for bear bile products across the region. In addition to this overall observation, there were notable market-specific observations for Myanmar, Hong Kong SAR and the Republic of Korea among others. In Myanmar, cross-border-sourced gall bladders were reported to be entirely from Lao PDR. In Hong Kong SAR, 100% of pills (where origin could be determined) were reported to have originated in Japan. In the Republic of Korea, 60% of bear bile products were reported to have been produced from wild bear populations in Russia; in Russia hunting and trade of Brown Bears is legal.

The products most frequently observed were gall bladders (by the gramme and in whole form) and pills. The prices for these products ranged dramatically depending on the country/territory surveyed. Prices for whole gall bladders were as low as USD51.11 (Myanmar) and as high as USD2000 (Hong Kong SAR). For gall bladder by the gramme, the least expensive was USD0.11 per gramme (Thailand) and the highest was USD109.70 per gramme (Japan). Pill prices ranged from as low as USD0.38 per pill (Malaysia) to USD3.83 per pill (Thailand).

Four farms were visited in Lao PDR, housing a total of 98 Asiatic Black Bears and four Sun Bears. No captive breeding was reported at these facilities and all of the farms were foreign owned. Two farms were visited in Myanmar, housing a total of 52 Asiatic Black Bears and three Sun Bears; all of which were reported to be wild caught from mainland China, Lao PDR and Myanmar. In Viet Nam, a total of 34 farms were visited housing a total of 677+ bears (671 Asiatic Black Bears, 6 Sun Bears). TRAFFIC surveys found that farm size in Viet Nam varied dramatically, housing from two to 60 individuals. Only four farms stated they had captive breeding programs. In Japan, a total of four bear parks were visited. Most parks stated that bears were incinerated upon death and only one of the four sold bear products however they were said to contain derivatives from wild bears, not the bears at the park.

The results from TRAFFIC's recent surveys indicate that the presence of bear farms in a country is clearly correlated with a country being both a producer and a consumer of bear bile products with the exception of the Republic of Korea, where it is only correlated with being a consumer. This is because recent surveys in the Republic of Korea did not observe a large amount of domestically sourced products (7%) or any products from the Republic of Korea in other countries/territories. Overall it would appear that bear farms in Asia do not fulfil any kind of conservation role as pressures on wild

populations and a steady demand for bear bile persists throughout the region.

The scale of the bear bile trade in Asia is large, with several countries playing dual roles as producers and consumers. This research suggests mainland China, Japan, Malaysia, Myanmar and Viet Nam are producers of bear bile products in Asia. Cambodia, Lao PDR and Myanmar are also considered source-countries of wild bears for the trade, although the extent of this wild-sourcing is unknown. In addition Lao PDR and Myanmar may be emerging markets for bear farms, especially as pressures increase in China and Viet Nam to end bear farming. Nine of the 13 countries/territories can be considered consumers to differing degrees: mainland China, Hong Kong SAR, Taiwan, Japan, Republic of Korea, Lao PDR, Malaysia, Thailand and Viet Nam.

The majority of the trade in bear bile is illegal, violating national laws in most countries/territories and legislation concerning imports and exports in all of them. An analysis of the origin of bear bile products found during the course of this survey makes it clear that import and export regulations are commonly flouted. CITES is clearly being ignored and national regulations are largely not enforced as raw bile, manufactured bile products and live bears are being commonly traded across country/territory borders.

Combating the illegal trade of bear bile products in Asia is essential for the conservation of wild bear populations. Even with strong national legislation in place, many factors such as corruption, poor legislation and ineffective enforcement often allow illegal wildlife trade to occur. Enforcement efforts to combat the illegal trade in bear bile products in Asia is of paramount importance to ensure that trade dynamics do not threaten the survival of bears in the region. To evaluate enforcement efforts and trade trends, TRAFFIC analysed bear bile related seizures. Information on a total of 506 bear bile product related seizures from 2000 to 2010 were obtained from various sources including the United Nations Environmental Programme World Conservation Monitoring Centre (UNEP-WCMC) CITES trade database. From these collected data, a minimum of 7044 g of bile and 10 100 unspecified bear bile products have reportedly been seized since 2000. Approximately 409 of 506 seizures had a stated origin, purported to be China in 98% of cases. It should be noted these data are likely an under-representation of total seizure-activity during this time period. Seizures are sometimes not reported and a portion of illegal international trade often goes undetected.

The overall results of this study indicate there is a substantial amount of bear bile trade in Asia, much of which is illegal. In order to combat the illegal trade of bear bile products in Asia and support the conservation of wild bear populations, TRAFFIC recommends the following:

- TM outlets selling illegal bear parts and derivatives need to be penalized or closed down and illegal products confiscated. Individuals caught collecting, selling, buying transporting or keeping illegal bear parts and derivatives, in violation of national laws or CITES, must be prosecuted. Penalties should be severe enough to serve as a deterrent to individuals in the future.
- Better enforcement could appropriately be undertaken not only by CITES Authorities, police and Customs authorities who are already empowered by national government to initiate such efforts, but also by collaborative inter-governmental efforts, including through the Association of Southeast Asian Nations Wildlife Enforcement Network (ASEAN-WEN) and the partner members of the International Consortium on Combating Wildlife Crime (ICWC – which links the CITES Secretariat, INTERPOL, the United Nations Office on Drugs and Crime, the World Customs Organization and the World Bank).
- Illegal bear farms should be closed down permanently by relevant authorities in each country. Facilities where bears cannot be immediately removed should be closely monitored by a combination of government, international and civil society specialists to ensure harvesting of bile does not continue, new bears are not acquired and bear farms are not a source of illegal trade. Violations should be punished to the full extent of the law.
- Legal bear farms should be regularly monitored by designated authorities who monitor the wildlife trade to

ensure they are adhering to regulations. Where violations occur; bear farm owners should be punished to the full extent of the law.

- The CITES Secretariat/Standing Committee and/or individual Parties to CITES should take steps to ensure that countries abide by the text of the Convention in regards to the international commercial trade in bears, their parts and derivatives. Findings of this report should be raised by TRAFFIC and the IUCN SSC Bear Specialist Group at the next meeting of the Conference of the Parties (CoP 16, Bangkok, Thailand, 2013).
- Campaigns by local and international civil society actors in collaboration with relevant government agencies to tackle illegal consumption of bear bile products should be carried out in all consumer countries. Campaigns should also focus on raising awareness amongst enforcement agencies so as to increase motivation and capacity to tackle the illegal trade in bears, their parts and derivatives. Campaigns should also be carried out in bear range States to raise the profile of bears and the need to protect them. Local communities should be encouraged not only to protect bears but also to work with enforcement agencies to take action against bear poachers and traders.
- All countries experiencing illegal wildlife trade should ensure anonymous wildlife crime hotlines are in place and known to the public. The public should be encouraged to report all instances of illegal hunting and trade of bears and bear products.
- In the interest of national accountability, TRAFFIC suggests that all cases pertaining to bears be tracked and reported internationally via a centralized database. Such reporting of seizures, arrests and prosecutions is done for elephants via the Elephant Trade Information System (ETIS) and moves are afoot to monitor Tiger cases in a similar fashion. A system to manage and maintain a central database for bear-related seizures in order to monitor trends and analyse bear trade should take into account the lessons learned from similar databases established for other species. Information generated from this database should be provided in a timely manner to relevant enforcement agencies.

Country-specific recommendations

- Current domestic legislation in China should be amended to up-list the Asiatic Black Bear from Category 2 to Category 1, as the species is considered Vulnerable with a globally declining population trend (IUCN, 2011).
- In mainland China, close all unlicensed bear farms as well as those farms which have licences but do not adhere to current regulations. In addition, farm owners who contravene CITES regulations by illegally exporting bile should have their bear farm licences revoked and be prosecuted to the fullest extent of the law.
- As stated in Ishihara (2005), it is recommended that Japanese legislation be amended to include Japanese domestic bears and bear gall bladders under the *Law for the Conservation of Endangered Species of Wild Fauna and Flora*.
- The Republic of Korea should end the practice of bear farming in order to remove any confusion on the legality of products in the country and to eliminate threats to wild bears.
- In Lao PDR and Myanmar, steps need to be taken to assist both countries to achieve Category 1 CITES implementing legislation status. In absence of Category 1 status, punitive measures should be taken to mitigate illegal trade in and from these countries.
- In Lao PDR, the trade of parts and derivatives from second generation captive-bred bears is permitted under the *Wildlife and Aquatic Law* (2007) with proper approval. However as bears are protected in the country,

obtaining parent stock from the wild is illegal. As it seems to be highly unlikely that bears are being bred on farms and in the absence of monitoring systems to accurately determine whether the animals derive from wild or captive sources; farms should be closed down to avoid abuse of this loophole. In addition, legislation should be amended to close these loopholes and to more fully protect wildlife.

- In Malaysia, authorities should investigate shops and manufacturers selling and producing both real and purported bear bile medicines and prosecute them accordingly.
- In Myanmar fines for violation of the *Protection of Wild Life and Wild Plants and Conservation of Natural Areas Law* (1994) should be increased to deter poaching and trade.
- In Myanmar, the Asiatic Black Bear should be up-listed to Totally Protected on the list of *Wildlife Protected* from the Forest Department.
- Research on the role Russia plays in the bear bile trade should be conducted as the results from these recent surveys indicate that Russia is an important source of bear gall bladders in China, Republic of Korea and Viet Nam and the proportion of illegal trade is unknown.
- In Viet Nam, authorities should enforce national legislation; bear farms should be closed down in Viet Nam to prevent violations of national legislation and CITES commitments as there is evidence that these farms illegally extract and sell bear bile to local and foreign consumers.
- Legislation in Viet Nam should be amended and clarified: 1) to cover the import, export and transit of species which are CITES-listed but of domestic or unclear origin as these are not included under the current law, 2) to cover bear cubs born in captivity under the *Regulation of Bear Management Decision 95/2008/QD-BNN* (2008), and 3) to clearly define what constitutes the ‘possession’ or ‘keeping’ of bears.

INTRODUCTION

Across South-east and East Asia there is a significant and largely illegal trade in Asian bear species for the live animal trade, meat trade and Traditional Medicine (TM) trade. Bear gall bladder and bile are valuable and sought-after TM ingredients widely available in many countries. The TM trade encourages illegal poaching of bear populations and is therefore a significant threat to the survival of wild bears in Asia (Kemf *et al.*, 1999; Williamson, 2007). The numerous illegal aspects of the trade uncovered by this survey show a blatant disregard for national and international laws.

TRAFFIC aims to describe current trade dynamics by identifying key consumer and producer countries, primary source countries, the flow of products between countries and the illegalities of bear bile trade. This is done with the purpose to better understand Asia's bear bile trade so as to make recommendations for stakeholders from governments to NGOs, in the hope that illegal trade can be mitigated and Asian bears can be effectively protected.

Species

Bears Ursidae are a widespread family comprising eight species inhabiting a variety of ecosystems across four continents: Asia, Europe, North America and South America. Of the eight species, four are endemic to Asia: the Asiatic Black Bear *Ursus thibetanus*, Sun Bear *Helarctos malayanus*, Sloth Bear *Melursus ursinus* and Giant Panda *Ailuopoda melanoleuca* (Table. 1). Two others occur in Asia but are not endemic, the Brown Bear *Ursus arctos* and the Polar Bear *Ursus maritimus*, however the Polar Bear is only found in the Arctic region of Siberia. Three bears are specifically targeted for the bear bile trade (Table 1).

Table 1

Primary bear species found in bear bile trade in Southeast Asia

Species	Asiatic Black Bear	Sun Bear	Brown Bear
			
	<i>Ursus thibetanus</i>	<i>Helarctos malayanus</i>	<i>Ursus arctos</i>
IUCN	Vulnerable	Vulnerable	Least Concern
CITES	Appendix I	Appendix I	Appendix I and II

Sources: IUCN, CITES Photos: C. Beastall/TRAFFIC Southeast Asia, G. Fredriksson, H. Jungius/WWF-Canon

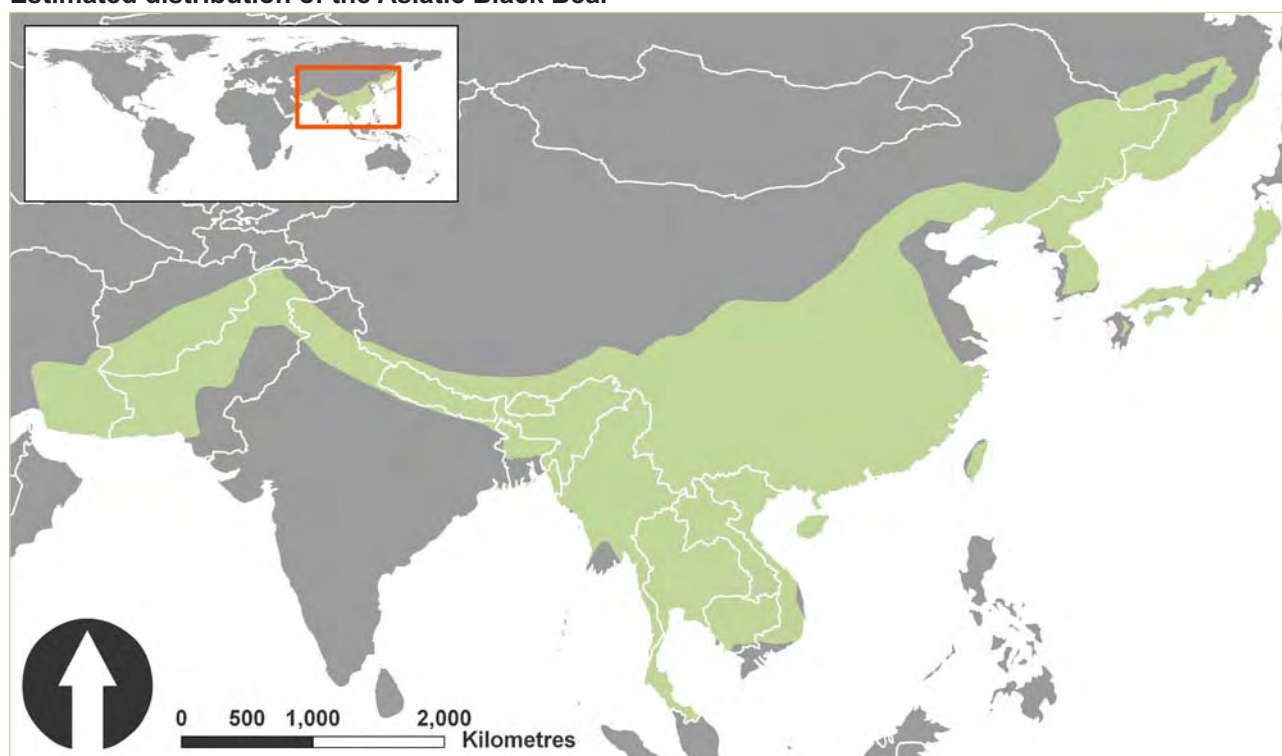
Asiatic Black Bear

The Asiatic Black Bear, sometimes referred to as the Moon Bear, is a medium-sized species first described by Cuvier in 1823. These bears can be most easily identified by the ears which appear disproportionately large in comparison to the rest of the head. They have a distinct v-shaped chest patch, which is cream/lemon in colour and often have a cream/lemon colour on the chin.

The species has a patchy distribution across 18 countries and overlaps the distribution of Sun Bears in South-east Asia as far south as Thailand (Figure 1) (Garshelis, 2002). Asiatic Black Bears have been classified as Vulnerable with a decreasing population trend by the International Union for Conservation of Nature (IUCN) Red List since 1990. Although no rigorous population assessments have been carried out, worst-case figures suggest there could be as few as 25 000 Asiatic Black Bears left in the wild. More optimistic estimates place populations at under 100 000 (MacGregor, 2010). In 2003 China gave an official government country estimate of about 28 000 however this has not been substantiated by further scientific research (Garshelis and Steinmetz, 2008).

Figure 1

Estimated distribution of the Asiatic Black Bear



Source: IUCN

The type and extent of threats to the Asiatic Black Bear vary across its range. Habitat loss and degradation affect bears in parts of their range where annual rates of forest loss are high. However, the major threat to the species in China and South-east Asia is the commercial trade in live bears and their parts. The demand for bear products has increased over the past several years and is very likely to be unsustainable, causing populations to decline (Kemf *et al.*, 1999; Garshelis and Steinmetz, 2005; Garshelis and Steinmetz, 2008). Asiatic Black Bears are nationally protected in many range countries as well as internationally protected by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) which has listed the species in Appendix I since 1979. The IUCN Red List has identified the most beneficial conservation action for Asiatic Black Bears to be a substantially reduced level of commercial demand for bear products (Garshelis and Steinmetz, 2008).

Sun Bear

The Sun Bear, also known as the Malayan Sun Bear or Honey Bear, is the smallest member of the bear family. First described by Raffles in 1821, Sun Bears are currently split into two subspecies: the Bornean Sun Bear *H. m. euryspilus* and the Sumatran Sun Bear *H. m. malayanus* (Meijaard, 2004). The species has a distinctive appearance with short dark sleek fur, long curved claws and a bright u-shaped orange blaze across its chest.

The Sun Bear is native to 11 Asian countries and is regionally extinct in Singapore (Figure 2) (Fredriksson *et al.*, 2008). The IUCN classifies the Sun Bear as Vulnerable with a decreasing population trend. It is suspected that Sun Bear populations have declined by more than 30% over the past 30 years, due to massive deforestation and uncontrolled exploitation for trade. Commercial poaching is a significant threat despite the fact that killing bears is illegal in all range countries (Kemf *et al.*, 1999; Fuller *et al.* 2004; Meijaard *et al.* 2005; Tumbelaka and Fredriksson 2006; Wong 2006; Shepherd and Shepherd, 2010).

Figure 2

Estimated distribution of the Sun Bear



Source: IUCN

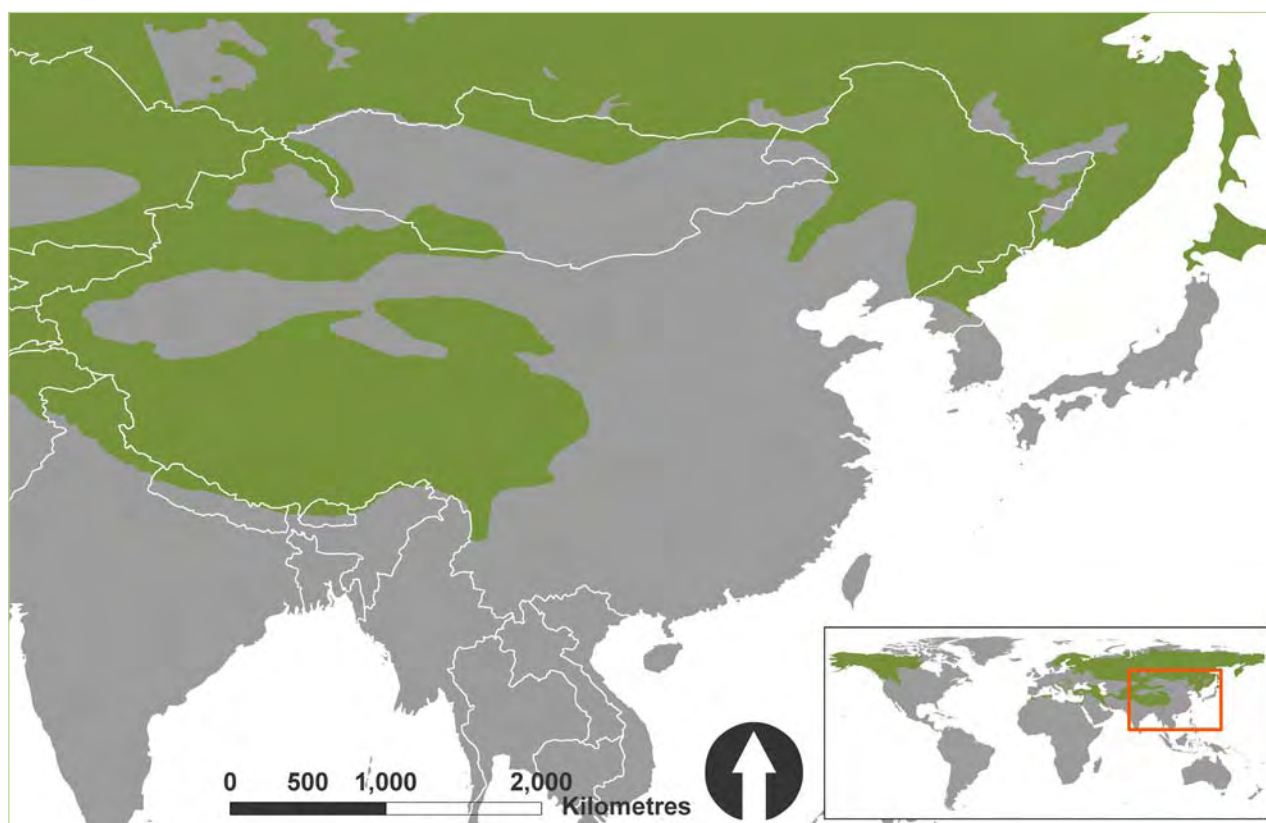
Conservation action varies by country however no range States have established specific priorities for Sun Bears. Reducing the trade in bear parts has been highlighted by the IUCN Red List as a highly beneficial measure for the survival of species populations (Fredriksson *et al.*, 2008). Sun Bears have been listed in Appendix I of CITES since 1979 and international commercial trade in them or their parts and derivatives is therefore illegal.

Brown Bear

Described by Linnaeus in 1758, the Brown Bear is the largest member of the bear family and can vary significantly in size and colour across its broad distribution. The species is found in at least 45 countries around the world (Figure 3); however the natural distribution was larger in the past. Brown Bears are possibly extinct in Bhutan, and are considered extinct in the wild in 15 other range States (Garshelis, 2002; McLellan *et al.*, 2008). While some populations of Brown Bears are well known, the dynamics of others remain poorly understood.

Figure 3

Estimated distribution of Brown Bears



Source: IUCN

The Brown Bear is considered to be of Least Concern by the IUCN Red List with a stable population trend; however this assessment is heavily influenced by healthy North American and European populations. Summing various estimates results in a rough estimate of a total world population of 200 000 plus bears (Servheen *et al.*, 1999; Swenson *et al.*, 2000). This number can be misleading as in Asia little is known about Brown Bear density or habitat connectivity apart from the fact that populations are thought to be sparse and fragmented (Garshelis, 2002; McLellan *et al.*, 2008). Several small populations in Asia are threatened due to low numbers and frequent contact with humans. Bears living near human settlements are sometimes killed inadvertently or poached for their parts. The removal of even a few bears from small populations can adversely affect population growth (Wakkinen and Kasworm, 2004; McLellan *et al.*, 2008).

Current conservation action varies between regions and range states. Many populations are legally protected by national laws, but enforcement efforts and effectiveness varies depending on the country. Brown Bears from Bhutan, China, Mexico and Mongolia are listed in CITES Appendix I, thus prohibiting international commercial trade, but all other populations are listed in CITES Appendix II which allows controlled international trade under a permit system.

Bear bile



Bear bile from a farm in Viet Nam
© M. Silverberg/TRAFFIC Southeast Asia

Bile is a liquid substance produced by the liver and aids in the digestion of lipids in the small intestine in many vertebrate species including humans. It is composed of over 97% water with small amounts of bile salts, cholesterol, lecithin, electrolytes and fatty acids (Busch, 2008). The acids are formed from cholesterol and include primarily colic acid, chenodeoxycholic acid and ursodeoxycholic acid (UDCA) in low concentrations. UDCA is found in several mammals however it is most concentrated in bear bile, specifically in Polar Bears, Brown Bears and Black Bears where UDCA makes up to 15% to 39% of bile compared to 5% in humans (Hagey *et al.* 1993). UDCA appears to be the only therapeutic component of bile and no other acids have been shown to have beneficial effects for humans. Pharmaceutical grade UDCA is produced from cows and other species, not including bears, often as a by-product of slaughter. It was introduced into modern medicine in the early 20th century and is currently used in gastric bypass surgery and to treat liver diseases (Maas, 2000; Busch, 2008). Several pharmaceutical

companies produce synthetic UDCA and it is currently manufactured under several trade names including: Actigall, Deursil, Ursosan, Ursofalk, Urso and UrsoForte (Roberts and Perry, 2000).

China, Japan and the Republic of Korea are known to consume over half the world's annual production/supply of pharmaceutical UDCA (Mills *et al.*, 1995; Togawa and Sakamoto, 2002). However despite the availability of this low-cost, concentrated UDCA product, bear bile from farmed and wild bears is still widely available in Asia. Due to their synthetic origins, pharmaceutical products like Actigall are considered an unacceptable substitute by many TM practitioners (Macartney, 2006).

Bear bile use in TM is historically documented however it is difficult to quantify how important or widely available it has been in the past. The first published record of the medical use of bear bile is in the *Materia Medica*, from the Tang Dynasty in 659 AD (Feng *et al.*, 2009). Bear bile is traditionally used to treat sore throats, sores, haemorrhoids, sprains, bruising, muscle ailments, epilepsy and to 'clear' the liver (Busch, 2008; Vu, 2010). It is sold in various forms including: whole gall bladders, raw bile, pills, powder, flakes and ointment. There are over 54 varieties of herbal substitutes for bile listed in Chinese pharmacopeia, however a demand for bear bile remains and bears are farmed to meet this demand (Still, 2003; WSPA, 2005). With the introduction of commercialized bear farming and a resultant surplus production of bile, many non-essential and non-traditional TM products are increasingly being produced and bile can now be found in everyday commodities including wine, tea, and shampoo (Richards and Wang, 2006).



Bear bile packaging tray
© M. Silverberg/TRAFFIC Southeast Asia

There are several health issues associated with farmed bears which potentially affect bile potency. Farmed bears often have an inflamed and thickened gall bladder, recurrent abdominal infections and a high rate of liver cancer (Busch, 2008). In addition, unsanitary conditions and methods employed during extraction and processing can result in contamination of bile products with pus, debris, skin and impurities as well as toxic materials (Cochrane, 2003; Loeffler *et al.*, 2007; Busch, 2008; Loeffler *et al.*, 2009). Perhaps it is due in part to these concerns that products using wild-sourced bile are often thought of as superior medicines to farmed products.

In addition to removing the intact gall bladder from a bear, there are four methods used to extract bile from living animals (Maas, 2000; Loeffler *et al.*, 2007; Feng *et al.*, 2009; Loeffler *et al.*, 2009):

1. The catheter-free fistulae method was developed in China; a permanent incision in the abdomen and gall bladder is made which allows the farmer to puncture the same location to extract bile.
2. The metal catheter method uses a permanently implanted metal tube to access bile.
3. The full-jacket method uses a permanent catheter tube to extract bile which is collected in a plastic bag located in a metal box worn by the bear.
4. The ultrasound method uses an ultrasound machine to locate the gall bladder, then the bear is punctured and bile removed.



Bear bile packaging in a farm in Ha Noi, Viet Nam
© M. Silverberg/TRAFFIC Southeast Asia

Bear farms



Bear bile farm in Viet Nam
© M. Silverberg/TRAFFIC Southeast Asia

In the past, bear bile was taken from intact gall bladders collected from bears killed in the wild. This method failed to provide a steady bile supply to practitioners of TM, making bear bile medicines very expensive. In the late 1970s, a ‘technology’ was developed in the Democratic People’s Republic of Korea (DPR Korea) for obtaining bile from live bears, and hence ‘bear farming’ began (Li, 2004). By 1984, bear farming in China had been sanctioned by the government as a conservation measure to preserve bears in the wild (Wang *et al.*, 1994). By 1989 over 8000 Asiatic Black Bears and Brown Bears were being commercially farmed for bile in China (Mills and Servheen, 1991), within six years that number had increased to 10 000 (Mills *et al.*, 1995). Currently the majority of farmed

bears are Asiatic Black Bears. As of April 2010, 20 provinces in China have outlawed bear farms; however an estimated 97 farms housing 7000 to 10 000 bears remain in operation (Animals Asia, 2010; MacGregor, 2010). It should be noted the term ‘bear farm’ is used broadly in this report to include facilities that have wild-sourced and/or captive bred bears, but does not imply that captive breeding commonly occurs in these facilities. Bear farms are currently legal in the Republic of Korea and certain provinces in mainland China (Loeffler *et al.*, 2009); they commonly occur in Viet Nam and to a smaller extent in Lao People’s Democratic Republic (PDR) and Myanmar. In Asia, a minimum of 12 000 bears are currently estimated to be housed in both illegal and legal bear farms (WSPA, 2010).

The establishment and existence of bear farms has not been proven to alleviate pressures on wild populations. The average productive life span of a farmed bear is only five years (Mills *et al.*, 1995; Peppin *et al.*, 2008). As captive bears become less productive, they are replaced and there have been numerous accounts of farms using wild bears to replenish their aging stock. Some studies indicate that bear farming and bear trade have reduced populations of Asiatic Black Bears. A study by Feng *et al.* 2009, suggested that poaching in Sichuan province caused wild bear populations to decline despite bear farms being abundant in this part of China. In a 2000 report by the World Society for the Protection of Animals (WSPA), nearly all of 44 farms surveyed admitted to harvesting from the wild in order to ‘top-up’ stocks. In 2006, a

bear farmer in Viet Nam told Animals Asia that farms paid rural villagers to trap 12 wild bear cubs per year in order to supplement farm stocks (Robinson *et al.*, 2006). In Viet Nam, forests are becoming devoid of bears due to illegal hunting and habitat loss causing hundreds of bears to be internationally trafficked from neighbouring countries (Nguyen, 2007). Research has shown bears are regularly sourced from countries such as Cambodia and Lao PDR, where cubs destined for bear farms in Viet Nam can be sold for around USD100 (Nguyen, 2007; Burbach, 2009; MacGregor, 2010).

As previous research suggests, bears are regularly sourced from the wild to re-stock bear farms and for their bile, as it is often preferred to that of farmed bears. The surplus of farm-produced bile has led to the use of bear bile in more products, thereby potentially generating more consumers and increasing demand. Farming has resulted in the perception that bears and bear products are a readily available and acceptable commodity (Richards and Wang, 2006; Loeffler *et al.*, 2009).

Bear trade

The trade in bears and bear products is a major threat to the survival of wild bear populations in Asia (Phillips and Wilson, 2002). Live bears and their parts and derivatives are openly sold in TM outlets, TM shops, privately through dealers, from bear farms and through a variety of other sources. The open and often international trade highlights the fact that enforcement efforts to control trade have so far been inadequate (Shepherd, 2006). Although precise population numbers for Asian bears are unknown, it is likely that the massive scale of commercial trade is directly responsible for population declines (Williamson, 2007; Fredriksson *et al.*, 2008; Garshelis and Steinmetz, 2008).



Bear claws for sale in Myanmar
© C. Shepherd/TRAFFIC Southeast Asia

Bear parts and derivatives are heavily traded. These include the paws, skin, claws, canine teeth, skulls and most prized of all: the gall bladder and bile. In just a 12 day period, researchers in Myanmar found bear parts representing a minimum of 215 bears being openly traded in border markets near China and Thailand (Shepherd and Nijman, 2007). Bear bile is a heavily traded and often costly derivative with consumers often willing to pay high prices for bile sourced from wild bears (Kang and Phipps 2003).

Of the Asian bears, Asiatic Black Bears are the most heavily traded and are relied upon predominantly to produce farmed bile, especially in mainland China and Viet Nam (Huang and Li, 2007; Shepherd and Nijman, 2007). Sun Bears are less present in farming operations but are commonly poached from the wild in Cambodia, Lao PDR, Malaysia, Myanmar, Thailand and Viet Nam (Shepherd and Nijman, 2007; Fredriksson *et al.*, 2008). Brown Bears are not commonly farmed, but they are frequently seen in mainland Chinese bear farms. Brown Bear parts have also been found in the Chinese trade (Jill Robinson, Animals Asia, *in litt.* to TRAFFIC Southeast Asia, April 2011) which may be due to the fact that Brown Bears are legally hunted in Russia.

Trade routes

Consumer demand for bear bile products has fuelled the growth of complex cross-border trade networks in Asia. Although bear farming may be legal in some places in China and the Republic of Korea, the trafficking of products from these farms across borders is completely illegal under CITES regulations.

Surveys of border markets have demonstrated there is a frequent and large scale illegal trade in bear products. In 2006 TRAFFIC surveyed three border markets, Tachilek and Three Pagoda Pass on the Myanmar-Thailand border and Mong La on the Myanmar-China border. Parts representing a minimum of 143 bears were found openly for sale in these markets, with buyers moving items across borders with little to no problem (Shepherd, 2007). Past investigations by TRAFFIC found bile for sale at the Sichuan and Shanghai international airports (Mills *et al.*, 1995).

Bear bile from farms in mainland China primarily and to a lesser extent in Lao PDR, Myanmar and Viet Nam are suspected to supply the black market trade. Several studies have found products in one country labelled as originating in a foreign

country, in obvious violation of CITES. Findings in a study by Ng and Tan (2006) found that bear bile products for sale in Singapore were often sourced from China but also from Russia, Thailand, India, DPR Korea, Malaysia and Indonesia.

Live bears used to supplement farm stock are also traded internationally as well as domestically. Farms in mainland China and Viet Nam have been accused of purchasing bears from poachers operating in Myanmar, Cambodia and Lao PDR (Watkins and Hsieh, 2000; Corlett, 2007; Robinson *et al.*, 2007). A trade route through Ruili in Yunnan Province, on the China-Myanmar border has been identified as a hub where bears from Myanmar and Laos are smuggled to Chinese farms (Robinson *et al.*, 2006).

CITES

CITES Parties are required to adhere to the Convention to curtail illegal international trade and to monitor any legal trade of bears, their parts and derivatives. In addition to international regulations, most countries have established adequate national legislation to protect bears (Shepherd, 2006). In spite of these legislative efforts, illegal hunting and trade continues to occur throughout Asia.

CITES Parties are required to be able to implement the Convention through their own national legislation. Each Party's legislation is assessed and has been assigned a category under the CITES National Legislation Project (Table 2). Categories are based on a Party's ability to effectively implement CITES and are defined as:

Category 1: Legislation which meets all the requirements for implementing CITES.

Category 2: Legislation which meets some, but not all, of the requirements for implementing CITES.

Category 3: Legislation which does not meet any of the requirements for implementing CITES.

Resolution Conference 10.8 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. This states that 'the continued illegal trade in parts and derivatives of bear species undermines the effectiveness of the Convention. Furthermore, poaching may cause declines of wild bears that could lead to the extirpation of certain populations or even species'. Parties are urged to 'take immediate action in order to demonstrably reduce the illegal trade in bear parts and derivatives' (CITES *Res. Conf 10.8, CoP10*).

In 2000, at the 11th meeting of the Conference of the Parties to CITES (CoP 11) *Decision 11.43* was made to address the trade in bears. *Decision 11.43* states that Parties are required to report to the Secretariat any actions taken to implement *Resolution Conf. 10.8* (or any revisions) including (a) national legislation in place to control the trade in bear parts/derivatives and (b) enforcement efforts and penalties for violating laws pertaining to bear parts/derivatives.

During the 12th meeting of the Conference of the Parties (CoP 12) in 2002, two decisions were made relating to the trade of bears and bear products. *Decision 12.27* states Parties that had failed to report to the Secretariat in 2001 (as required in *Decision 11.43*) and that were listed as Parties who were believed to be large consumer and producer States for bear parts and derivatives. These included the following South-east Asian countries: Cambodia, Republic of Korea, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam. *Decision 12.28* established that the Standing Committee would address the international trade in bear parts and derivatives at its 50th meeting (2004) with specific focus on enforcement and legislative problems in regards to stopping illegal trade.

Table 2

CITES National Legislation Project categories

Country/Territory	Category
Cambodia	1
China	1
Hong Kong SAR*	1
Japan	1
Lao PDR	3
Macao SAR	2
Malaysia	2
Myanmar	3
Republic of Korea	1
Singapore	1
Thailand	1
Viet Nam	1

Source: CITES SC59 Doc.11 (2010)
 *Hong Kong SAR and Macao SAR, included as 'Dependent Territories' of China by the CITES National Legislation Project, have separate legislative instruments to implement CITES.

At the 2004 meeting, the Standing Committee identified that the major problem for many Parties was distinguishing the gall bladders of bears from those of other animals. The Secretariat addressed this issue by advising the use of forensic analysis and further stated that such analysis could also differentiate between wild-caught and captive-bred bear parts/derivatives. The Secretariat also stated that due to the lack of intelligence information from the Parties, it was difficult for the Secretariat to provide proper counsel on effectively combating the illegal trade of bear parts/derivatives (SC50 Doc. 17).

In 2007, *Resolution Conf. 10.8* was revised at the 14th meeting of the Conference of the Parties (CoP 14). This revision urged Parties to increase CITES enforcement and establish or improve national legislation to control the import and export of bear parts and derivatives.

Currently all of the study countries/territories in Asia have domestic legislation protecting wild bears with a few exceptions:

1. Myanmar lists Asiatic Black Bears as Protected, but they can be hunted with a permit, the Sun Bear is Totally Protected.
2. In Japan bear hunting of Asiatic Black Bears and Brown Bears is permitted in designated areas, during specific hunting seasons with a licence.

METHODS

TRAFFIC conducted research on the bear bile trade in Asia between June 2010 and April 2011. In order to thoroughly assess current trade dynamics, a variety of methods were used, including field surveys of bear farms and TM shops, an analysis of the CITES trade data held by the United Nations Environmental Programme World Conservation Monitoring Centre (UNEP-WCMC), seizure data analysis and comprehensive legislative reviews. All monetary values in this report are presented in United States Dollars (USD), based on conversion rates from OANDA Forex Trading and Currency Exchange Rates Service online in February 2011 (<http://www.oanda.com>).

Field surveys

Surveys of TM shops were conducted from August 2010 to February 2011 in the countries and territories of Cambodia, mainland China, Hong Kong SAR, Japan, Republic of Korea, Lao PDR, Macao SAR, Malaysia, Myanmar, Singapore, Taiwan, Thailand and Viet Nam. Bear farms and parks (Japan) were surveyed from September 2010 to February 2011 in Lao PDR, Myanmar, Japan and Viet Nam. Information from TM establishments and bear farms was gathered using standardized survey forms. Major cities in each focus area were chosen, based on the localities of farms and high density areas of TM shops (Table 3). Russia was not included in these surveys, however bear gall bladders reportedly sourced from Russia were observed.

Table 3

Areas surveyed

Country/Territory	Locations
Cambodia	Bavet, Phnom Penh, Sre Khlong, Takeo, Ti Prammuoy
mainland China	Guangzhou, Shanghai, Harbin, Chengdu, Beijing, Anguo
Hong Kong SAR	Hong Kong SAR
Japan	Osaka, Tokyo
Republic of Korea	Seoul, Sungnam, Daegu
Lao PDR	Boten, Lak Xao, Luang Namtha, Luang Prabang, Pakse, Thakhek, Vientiane
Macao SAR	Macao SAR
Malaysia	Ipoh, Kota Bharu, Kota Kinabalu, Kuala Lumpur, Kuching, Melaka, Miri, Penang, Sibu
Myanmar	Kentung, Mandalay, Mong La, Mong Sat, Phangshan, Sop Lwe, Tachilek
Singapore	Singapore
Taiwan	Taipei, Kaohsiung, Taichung
Thailand	Bangkok, Chiang Mai, Hat Yai, Kanchanaburi, Nakhon Sawan, Nong Khai
Viet Nam	Moc Bai, Cu Chi, Dien Chau, My Tho, Ha Noi, Ha Long, Ho Chi Minh City, Quynh Luu, Vinh

Farm surveys were not conducted in mainland China and the Republic of Korea because it is prohibitively difficult for researchers to access bear farms in both countries. Additionally in the Republic of Korea, the spread of foot-and-mouth disease during the time of research made it impossible to survey farms. Therefore, information on farmed bears and farming operations for these countries was obtained from other sources (Mills *et al.*, 1991; Mills and Servheen, 1991; Wang *et al.*, 1994; Frances, 2009; Animals Asia, 2010; MacGregor, 2010; Sudworth, 2010; WSPA, 2010; Ministry of Environment, Republic of Korea, 2011). Information obtained on bear farms was compiled into tables highlighting the geographic locations of farms, the presence or absence of captive breeding, death rates, origin and sources of bears, prices of bile, and marketplace destinations.

TM outlet surveys were conducted by researchers in local or appropriate language for the country/territory being surveyed or in the company of a translator. No effort was made to determine between real and fake products. It should be noted, however, that some products purported to be from bears were likely fake as it is very difficult to verify product authenticity in the field. In the context of this study CITES definitions were followed, therefore products claiming to contain bear bile or gall bladder were considered such. Survey data from TM shops were compiled and the products observed were categorized as gall bladder, bile, pills, powder, flakes, ointment and other. Data on display, origin, price, manufacturer, customer demand and customer preferences as well as anecdotal information were recorded whenever possible. The data were analysed to show the number of shops selling each product, percentage that were openly displayed, percentage of comparative geographic origin, price range and average price. Data were compared across the countries at the level of a single unit (gramme, pill, and millilitre).

Seizures and CITES trade data analysis

Seizure data of confiscated bear gall and bile products from 2000 to 2010 were compiled and analysed. This information came from various sources. Information from the UNEP-WCMC CITES trade database from 2000 to 2009 only was analysed, since data for 2010 to 2011 was not yet available. This database compiles all records of import export and re-export of listed species as reported to the CITES Secretariat by the Parties and was used to look at data for the trade in the three bear species (Asiatic Black Bear, Sun Bear and Brown Bear) and the 13 countries/territories covered in this report.

Seizure records were requested and received from several sources, specifically: local and international news, HM Revenue and Customs (United Kingdom), the UNEP-WCMC CITES trade database, TRAFFIC bulletins and reports, ACRES, ENV, Wildlife Alliance, Agri-food and Veterinary Authority (AVA), Taichung Customs Official website, the Forest Bureau as well as Bureau of Foreign Trade, the designated points of contact for CITES in Taiwan, and the Agriculture, Fisheries and Conservation Department Hong Kong SAR (Hong Kong SAR CITES Management Authority). A number of other agencies/organizations were contacted, but either did not have data or did not respond to data request inquiries. When available, data collection included: country where the seizure took place, date of seizure, seized items, origin, route, enforcement agency, prosecution/sentencing and references. It was not possible to estimate the minimum and maximum number of bears represented by the seizure data, since it was only possible to determine the number of bears when seizure data referred to whole gall bladders.

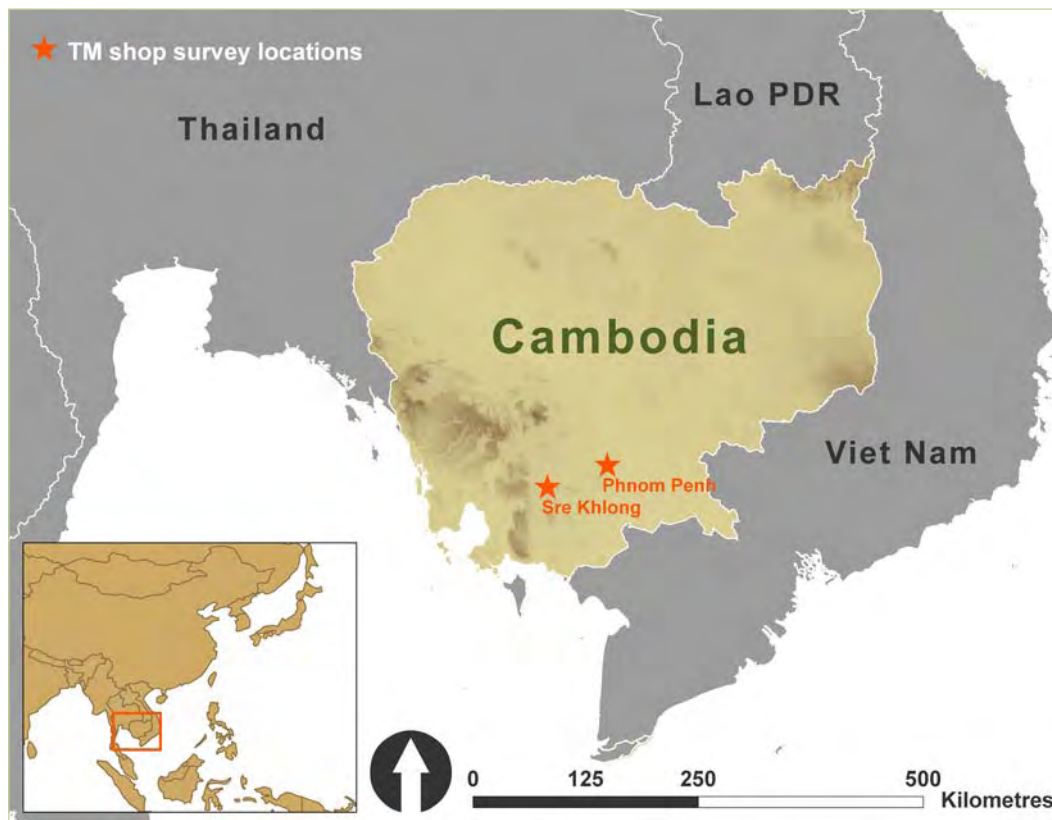
It should be noted that seizure data are often incomplete and inconsistent. For example Customs, police and other authorities may have made seizures and not reported them. Also, many shipments pass through check-points undetected. Therefore, the seizure data collected for this report represent only a proportion of the total trade in live bear, bear parts and derivatives. Although the reported trade is not representative of the total trade, it is possible to gain insight into trade dynamics by using seizure data in conjunction with survey data from TM shops and farm surveys.

CAMBODIA

Cambodia is bordered by the Gulf of Thailand, Lao PDR, Thailand and Viet Nam (Figure 4). The total land area of 181 035 km² is dominated by flat plains with mountain ranges in the north and south west. The largest city and centre of political and industrial activity is Phnom Penh, the nation's capital. The total population of Cambodia is over 14.7 million people, 31% of whom live below the poverty line (CIA, 2011).

Figure 4

Cambodia in relation to other areas of the study region



Cambodia became a Party to CITES in 1997. The CITES National Legislation Project has assessed Cambodia's national legislation as Category I, meaning that it is considered adequate to effectively implement CITES regulations. The Ministry of Agriculture, Forestry and Fisheries serves as the CITES Management Authority and the Deputy Director General of the Forestry Administration serves as the Scientific Authority.

There are two species of bears in Cambodia: the Asiatic Black Bear and Sun Bear. There is no official information on the distribution or population size of either species in Cambodia, though trade is considered a serious threat (Nea and Nong, 2006). Bears are hunted and traded in Cambodia for their parts, which are used widely for food and medicine (Suon, 1999). There are no known bear farms in Cambodia.

National legislation

Under the *Law on Forestry* of Cambodia, it is prohibited to possess, process, transport, import and engage in trade of listed species or their parts and derivatives ('specimens'). Article 48 of Cambodia's *Law on Forestry* (2003), states that 'all kinds of wildlife species in the Kingdom of Cambodia are state property and the component of forest resources'. Violation of this law can result in fines of up to five years imprisonment. The Asiatic Black Bear is listed as 'endangered' and the Sun Bear is listed as 'rare' on Cambodia's *Protected Species List* (2007).

Results

In October 2010, 17 TM shops were surveyed in Cambodia for bear bile products. Of these; four were found to be selling bear derivatives in gall bladder, raw bile and flake forms (Figure 4, Table 4). A total of five gall bladders were seen in two of the four shops. Raw bile sold for USD7 per 5g vial, averaging USD1.40 per gramme and manufactured by Songgao (Chinese company). Flakes were priced slightly higher at USD12.50 per 5g vial and averaging USD2.50 per gramme and were manufactured by Yicheng (Chinese company).

Table 4

Bear bile products observed in TM shops in Cambodia

Available Product	# Shops Selling Product	Open Display % of Shops	Product Origin	Sold In (Form)	Price Range (USD)	Average Price (USD)/Unit
Gall bladder	2	0%	Cambodia	whole	50.00-1200.00	625.00/whole
Raw bile	1	0%	China	vial	7.00	1.40/g
Flakes	1	0%	China	vial	12.50	2.50/g

Discussion

Current research suggests bear bile products are available on a small but persistent scale in Cambodia. Since none of the bear products observed were openly displayed, it is reasonable to assume that traders are aware that the trade in these is illegal. The presence of products from China in TM shops suggests that these have been imported into Cambodia in contravention of CITES.

Both shops selling Cambodian-sourced gall bladders stated they had a steady customer demand for the product. One shop owner, who has been selling bear gall bladder for over 10 years, said customers preferred wild gall bladder. Gall bladders at this shop were relatively inexpensive at USD50 per whole gall bladder. This contrasted dramatically with the second shop surveyed

where the product cost USD1200. The reported price difference could be due to the size of the gall bladders for sale, the source of the gall bladders or the fact that the Cambodian survey was conducted by a foreigner.

Previous research suggests there is a high monetary incentive to trade in wild bear gall bladder. In a survey of Cambodian hunters in 2008, hunters received between USD150 to USD250 for a gall bladder, which were then sold on by traders for USD500 to USD700 (Dutton, 2010).

As no bear farms are known to exist in Cambodia, products reported to be of Cambodian origin, such as the five gall bladders observed in TM shops, are likely sourced from wild bears. Wild bears from Cambodia are also used to replenish captive bear stocks on farms in neighbouring countries such as China and Viet Nam (Robinson *et al.*, 2007). Due to the reported customer preference for wild gall bladder and a high economic incentive to hunt wild bears in Cambodia it is reasonable to suggest that wild populations may be threatened by the bear bile trade.



Yicheng Medicine from China observed at TM shop in Phnom Penh

© M. Silverberg/TRAFFIC Southeast Asia



Bear bile from China observed from in downtown Phnom Penh

© M. Silverberg/TRAFFIC Southeast Asia

In 2001, a government enforcement team for wildlife trade known as the Wildlife Rapid Rescue Team (WRRT) was established with technical and financial support from Wildlife Alliance. This has greatly reduced both cross-border and internal trade of wildlife in Cambodia (Shelton, 2008). The WRRT confiscated a total of 77 live Sun Bears and 31 live Asiatic Black Bears from 2001 to 2010 (WRRT seizure data). Estimated averages of 10-15 bears are seized each year; however this is thought to represent only a small portion of those actually traded and numbers do not appear to be decreasing (Shelton, 2008).

Overall, Cambodia would appear to have a comparatively small role in the bear bile trade as products were not widely available and it does not appear to be a major source country. However this small-scale, persistent illegal trade in bear bile products is a concern, especially as Cambodia may be a source country of wild bears for bear farms in neighbouring countries.

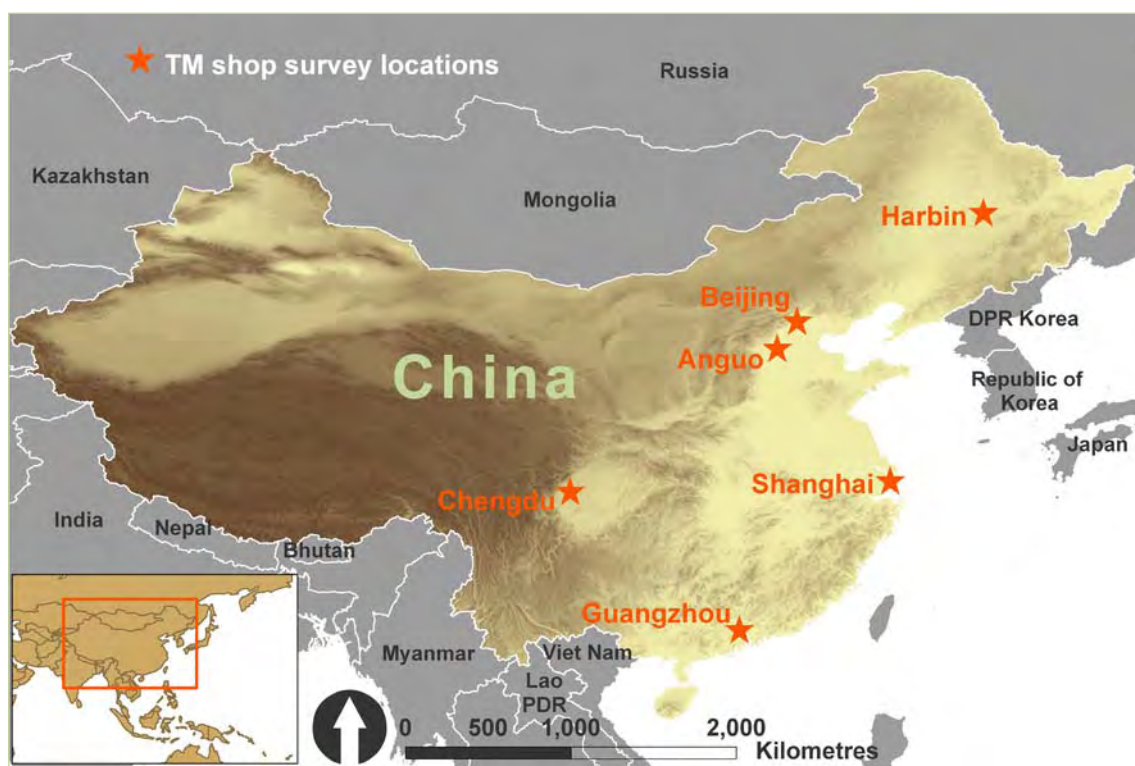
MAINLAND CHINA

The People's Republic of China is the third largest country in the world with a total area of over 9.5 million km² and over 1.3 billion inhabitants, 2.8% of which live below the poverty line (CIA, 2011). The diverse geography of this country includes plains, deserts and vast mountain ranges (Figure 5). In 1981, China became a Party to CITES and has Category I legislation as assessed by the CITES National Legislation Project. The Endangered Species Import and Export Management office of the State Forestry Administration (SFA) serves as the Management Authority and the Endangered Species Scientific Commission of the Institute of Zoology, Chinese Academy of Science serves as the Scientific Authority for CITES.

There are four species of bears in China: the Asiatic Black Bear, Brown Bear, Giant Panda and Sun Bear. Illegal hunting and trade is a threat to all bear species in China.

Figure 5

Mainland China in relation to **other areas of** the study region



National legislation

Domestic trade of bear bile is legal in mainland China (Loeffler *et al.*, 2009; Phillips and Wilson, 2002). The Asiatic Black Bear is the only species allowed for bear farming, and animals are supposed to originate only from captive bred stocks (Robinson *et al.*, 2007). As of April 2010; 20 of the 31 provinces in mainland China have committed to be bear farm free (Animals Asia, 2010).

In China, only those bear bile products with specific Government approval can be legally sold in the market. Such approval is denoted by a special label indicating that the bile is from a legal source under government management. This approval system is managed by the Wildlife Special Mark Centre of the State Forestry Administration (SFA). The trade of whole gall bladders in China is totally prohibited as these are known to be smuggled from the Russian Far East or poached from the wild in China. Since 1989, it has been illegal to hunt bears or capture them from the wild for farming under the *Chinese Wild Animal Protection Law*. Chapter Four of the *Regulations for the Implementation of the People's Republic of China on the Protection of Terrestrial Wildlife* (1992) discusses information regarding the breeding of protected wildlife.

Article 22 states that protected wildlife may be bred in a domestic environment for commercial purposes with appropriate licences and breeding records. In Article 26 it states the commercial breeding of non-protected wildlife also requires a licence and is given a limitation quota established by the forestry department of the relevant province. Violation of a breeding licence will result in the confiscation of the licence, animals and the imposition of fine of up to CNY3000 (USD456) (Article 39).

Results

Of 194 TM shops surveyed in six cities in mainland China in January and February 2011, 119 shops sold bear bile products (Figure 5). Shops were found selling gall bladder, raw bile, powder, pills, flakes, ointment, eye drops and suppositories (Table 5).



Special label indicating the bear bile within the product is legally sourced.

© TRAFFIC East Asia

Table 5

Bear bile products observed in TM shops in mainland China

Available Product	# Shops Selling Product	Open Display % of Shops	Product Origin	Sold In (Form)	Price Range (USD)	Average Price (USD)/Unit
Gall bladder	5	40%	China Russia	gramme	-	2.37/g
Raw bile	11	100%	China	5ml-15ml	1.21-8.36/ml	0.28/ml
Powder	95	65%	China	bulk, gramme	0.22-15.00/g	3.05/g
Pills	47	89%	China	packet	0.07-17.98	1.14/pill
Flakes	12	100%	China	packet, box	1.21-26.50	0.38/flake
Ointment	9	100%	China	tube	2.58-4.10	0.28/g
Eye drops	2	100%	China	10ml	1.29	0.13/ml
Suppository	2	100%	China	packet	3.36	0.28/g

Discussion

The most common item observed for sale was bear bile powder which was available in nearly 80% of the shops found selling bile products during the survey. Powder was available in bulk and by the gramme, typically it was packaged in a bottle or set of bottles, over 22 different manufacturers of powder were recorded. Sometimes bile powder was blended with other ingredients, with those products containing a greater proportion of bile tending to be more expensive. It was present most often in shops in Guangdong (34) and Heilongjiang (29) and to a lesser extent in Beijing (12), Hebei (11), Sichuan (9) and Shanghai (1) provinces or municipal cities. Over half of the shops surveyed sold powdered bile in bulk.

Gall bladders were found for sale in Guangdong, Hebei, Heilongjiang and Sichuan provinces. Four of the five shops selling gall bladder reported a steady customer demand and two of the shops said their customers would not consider alternative medicines. One shop in Anguo, Hebei Province sold whole bear gall bladders said to be smuggled in from Russia and cost USD3.80 per gramme, compared to the average USD2.37 per gramme for gall bladder from China. All

11 shops selling raw bile were located in Guangdong province. The bile brands observed were Daiyao, Hei Bao, Dianye and Kerui.



Bear bile medicine in China
© C. Shepherd/TRAFFIC Southeast Asia

Pills were available in different volumes at 45 TM shops and sold in packets of 12 to 100 pills, with over 15 manufacturing companies recorded. Over 20% (11 of 45) of the shops selling pills sold these in bulk, 32% (15 of 45) reported a steady demand, and nearly 50% (23 of 45) said their customers would not consider bear bile alternatives.

Flakes were available at a number of stores, primarily in Heilongjiang province. Boxes of flakes often contained two or more ingredients in addition to bear bile. Stores reported a steady demand but stated that customers would consider bear bile alternatives to these products. Four different brands of ointment, all from China, were available at nine stores in Guangdong province; however vendors reported that customers would not consider alternatives to this product. Two less common bear bile products, eye drops and suppositories were also recorded during the surveys, further emphasizing the wide variety of bear bile products available in China.

The majority of products (99%) observed for sale in mainland China were labelled or stated to be domestically produced. These products were said to be most often produced from the bile of farmed bears.

The bear farming industry in mainland China was sanctioned by the government in the 1980s as a conservation measure (Feng *et al.*, 2009). Since the introduction of commercial bear farming, the industry and market for bear bile products has steadily increased. Presently an estimated 97 farms housing 7000 to 10 000 bears in 11 provinces remain in China (Animals Asia 2010; MacGregor, 2010). Twenty provinces do not have bear farms; however pharmaceutical companies do manufacture bear bile products in some of these provinces.

Bile production in China is estimated to be between 6000 kg per year (Lau, 2003) and 30 000 kg per year (Jill Robinson, Animals Asia, *in litt.* to TRAFFIC Southeast Asia, April 2011). Large scale commercial farming of bears has generated bile surpluses exceeding China's domestic consumer demand. For example, in 1998, China produced 6357 kg of bear bile, consuming only 4209 kg (Fan, 2000). Surpluses have led to a significant and illegal export business. Products made in China were consistently observed throughout the study region in Cambodia, Lao PDR, Japan, Republic of Korea, Malaysia, Singapore, Taiwan, Thailand and Viet Nam. According to recent research conducted by Animals Asia, there are currently 242 bear bile products and 49 UDCA products approved by the Chinese Government. In addition, 96 different unregistered bear bile products have been observed for sale in China (Animals Asia, 2011).

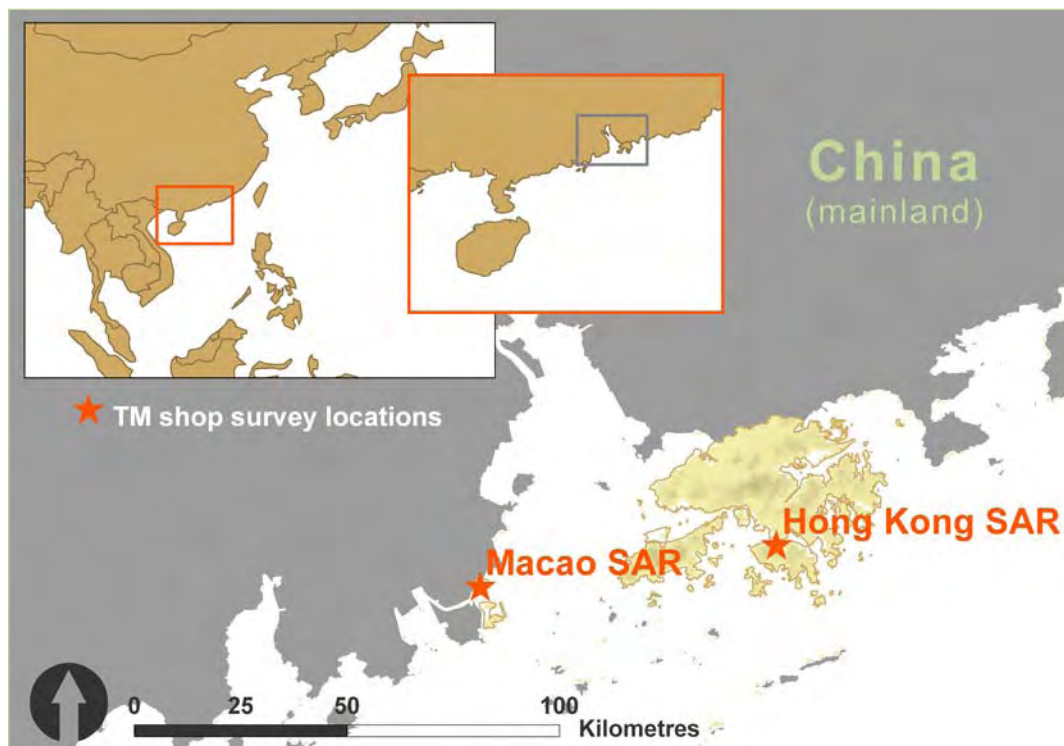
China plays a significant role in the bear bile trade as both a major producer and consumer of bile products. A majority of the trade is domestic and legal under Chinese law. Therefore, from a legal perspective, China's role as a major consumer is less of a concern than its potential role as the biggest illegal source of bear bile products to countries around the world exported in clear violation of international agreements. China's legislation is considered Category I under the CITES National Legislation Project; therefore current laws regulating export should be sufficient to prevent the illegal export of bear bile products.

HONG KONG SAR

Hong Kong, a Special Administrative Region (SAR) of the People's Republic of China, is made up of three main areas: Hong Kong SAR Island, Kowloon Peninsula and the New Territories, totalling 260 islands and a total land mass of 1104 km². The population is over 7 million (CIA, 2011). It lies southeast of the Peoples Republic of China and 60 km east of Macao SAR (Figure 6). The terrain of Hong Kong SAR Island is mountainous with lowlands to the north. Hong Kong SAR's legislation is considered Category I under the CITES National Legislation Project, meaning current legislation is considered adequate to effectively implement CITES regulations. The Agriculture, Fisheries and Conservation Department (AFCD) Hong Kong SAR serves as the Management Authority for CITES in Hong Kong SAR. The Scientific Authority is the Endangered Species Scientific Commission for the People's Republic of China, Institute of Zoology in Beijing.

Figure 6

Hong Kong SAR and Macao SAR in relation to other areas of the study region



Legislation

The *Protection of Endangered Species of Animals and Plants Ordinance (the Ordinance)* is the domestic legislation which implements CITES in Hong Kong SAR. It replaced the *Animals and Plants (Protection of Endangered Species) Ordinance* in December 2006.

Part 2 and Part 3 of *the Ordinance* provide for the regulation of endangered species within the CITES Appendices. Generally, a Licence issued by the AFCD is required for the import, export, re-export or possession of a specimen of scheduled species, including its parts and derivatives, unless otherwise provided in *the Ordinance*. Part 4 of *the Ordinance* outlines the circumstances under which dealing in scheduled species without a licence is permitted. Specifically, no licence is required for the possession of 1) pre-Convention specimens and 2) specimens of Appendix II species which is not a live animal or plant of wild origin.

The Ordinance further put medicines containing bear derivatives under control, as the concerned species are specified in either Appendix I or Appendix II. Existing stock was registered in 2006 and allowed to be traded under licence.

The Hong Kong SAR gall bladder registration scheme requires that all gall bladders in TM outlets be registered and licenced. The export, import, sale and possession of bear bile/gall bladders has been prohibited without a licence since 1994 (Mills *et al.*, 1995).

Results

A total of 20 shops were surveyed in Hong Kong SAR in January, 2011. Of these, 13 were observed selling bear bile products, specifically gall bladders and pills (Table 6). Three shops were found selling gall bladders and a total of nine gall bladders were recorded. Only one shop reported a steady demand for the product and one shop said customers would consider alternative medicines.

Table 6

Bear bile products observed in TM shops in Hong Kong SAR

Available Product	# Shops Selling Product	Open Display % of Shops	Product Origin	Sold In (Form)	Price Range (USD)	Average Price (USD)/Unit
Gall bladder	3	67%	unclear	whole	2000/whole	
				gramme	41-48/gramme	44.50/g
Pills	12	100%	Japan	box	0.34-0.91/pill	0.54/pill

Pills were the most prevalent bear bile product found in Hong Kong SAR and these were generally sold in boxes of 50, 100 or 200. One high-priced exception was Japan Golden Ki-O pills which were sold at USD36 for a packet containing two pills. Thirteen shops (93%) reported a steady demand and ten shops (71%) said that their customers would consider alternative products.

Discussion

Bear gall bladders on sale in Hong Kong SAR were significantly more expensive than those observed in mainland China; an average of USD44.50 per gramme compared to USD2.37 per gramme in mainland China. Previous research in 1995 found four of 61 TM shops sold gall bladders with prices ranging from USD20 to USD45 per gramme (Mills *et al.*, 1995). Prior to this in 1991, surveys recorded more than 100 gall bladders for sale in 20 TM shops in Hong Kong SAR. Comparing this information with the current dataset indicates although the trade in bear gall bladders has shrunk over time, a small high-priced market persists in Hong Kong SAR.

Pills were the most commonly observed bear bile product in Hong Kong SAR and sold at an average USD0.59 per pill, which is comparatively cheaper than pills sold in mainland China. Most pills were openly displayed and, where origin could be determined, were purportedly produced by Japanese manufacturers. Pills were mostly sold in packets of 50 to 200 pills. The product name of the pills nearly all contained the words 'heart tonic', suggesting that these medicines are thought to be good for the heart, an area of the body which is not commonly associated with bear bile use. Some medicines of purported Japanese origin that are sold in Hong Kong SAR, such as 'Kyushin', have replaced bear bile with other animal bile (such as pig) in the active ingredients. It is possible that TM shop owners stated a product contained bear bile when in fact it contains other (non-protected) animal bile.

Since 2000, the UNEP-WCMC CITES trade database records a total of 1302.8 kg of wild-sourced gall and gall bladder from Brown Bears has been imported to Hong Kong SAR for commercial trade exported by, or reported to originate from, Russia. The legality of the products observed in Hong Kong SAR during these surveys could not be determined, however it should be noted that all cross-border trade without proper import/export permits is an infraction of CITES trade regulation agreements; therefore any bear bile found for commercial sale in Hong Kong SAR that was imported without proper documentation is illegal. A small niche market for bear bile remains in Hong Kong SAR. In the context of the region it would appear Hong Kong SAR plays a role as an importer of bear bile medicines for domestic consumption.

MACAO SAR

Macao, a Special Administrative Region of the People's Republic of China, is a small area with a total land mass of 28.2km² and over 500 000 inhabitants (CIA, 2011). It is located south of Guangdong province at the mouths of the Zhujang and Xijiang rivers (Figure 6). The narrow peninsula is primarily flat, with some steep hills. Macao SAR's economy is heavily reliant on tourism and gambling. Macao SAR's legislation has been assessed as Category II under the CITES National Legislation Project indicating that it is not considered to meet all the requirements for proper implementation of CITES. The Foreign Trade Management Department Economic Services of the People's Republic of China Macao SAR Special Administrative Region serves as the Management Authority for CITES. The Scientific Authority is the Endangered Species Scientific Commission for the People's Republic of China, Institute of Zoology in Beijing.

Legislation

Macao SAR has independent domestic legislation regarding the implementation and enforcement of CITES. Appropriate CITES documents are required to accompany shipments of CITES-listed species between Macao SAR and mainland China and Hong Kong SAR.

Results

Of the 10 TM shops surveyed in Macao SAR in February, 2011, none were observed to offer bear gall bladder or bile products for sale. No bear farms were surveyed in Macao SAR as none are currently known to exist.

Discussion

The findings of this research contrast sharply with previous research conducted in Macao SAR. In 1995 TRAFFIC researchers visited 43 TM shops and found that 34 stocked bear gall bladder and powder with a broad price range of less than USD1 to nearly USD70 dollars per gramme (Mills *et al.*, 1995). These findings indicated a shift in trends in the mid-1990s with Macao SAR having more bear bile products than Hong Kong SAR, possibly due to the application of less restrictive laws in Macao SAR at the time.

During recent surveys, six of the 10 shops stated it was illegal to sell bear bile medicines in Macao SAR. One shop offered heart tonic pills containing ox and pig bile as an alternative. Two shops directed the surveyor to go to mainland China or Hong Kong SAR to purchase bear bile medicines.

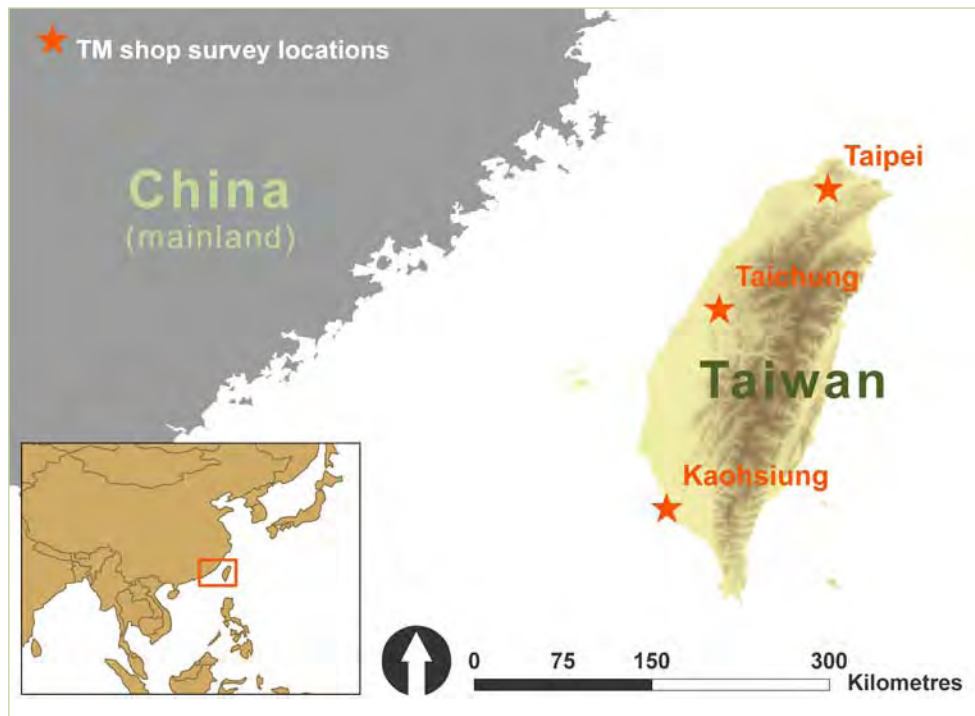
Current survey data would indicate that Macao SAR's role in bear bile trade has diminished significantly in recent years; however it is difficult to determine if the level of trade has declined from a lack of consumer demand or an increase in the effectiveness of enforcement.

TAIWAN

Taiwan is an island of 35 980 km² and over 23 million people, 1.16% of which live below the poverty line (CIA, 2011). It is located off the south coast of mainland China in the western Pacific Ocean (Figure 7). The terrain comprises mountain ranges from the north to south, surrounded by hills and large coastal plains. Taipei is the island's capital.

Figure 7

Taiwan in relation to **other areas of the study region**



Legislation

The *Wildlife Conservation Act of Taiwan* (1994) describes legislation pertaining to the protection of wildlife. Article 16 states that protected species and their products should not be traded, abused, killed, displayed, bred or raised, nor imported or exported; unless under special circumstances recognized in that or related legislation¹. Prior approval from the National Principal Authority is required in order to import or export products containing protected wildlife. Furthermore, if labels of merchandise are falsely labelled to hide the containment of protected wildlife, a fine of TWD150 000 to TWD750 000 (USD5071 to USD25 355) can be incurred. All bear species, including the Asiatic Black Bear, are listed as Protected Species. Therefore the import, export, trade, possession or public display to sell Asiatic Black Bear gall bladders is prohibited (Mills *et al.*, 1995). The import and export of CITES-listed species between Taiwan and mainland China is also regulated and appropriate documents are required to accompany shipments.

Results

Of the 64 TM shops surveyed in January and February 2011, 26 sold bear bile products (40%). These shops were concentrated in Kaohsiung (10) and Taichung (10) and to a lesser extent in Taipei (6). The only product observed in Taiwan's TM shops was bear bile powder which could be mixed and compounded into pill form (Table 7).

¹ Although Taiwan is not a Party to CITES, it has legislation to implement the Convention, and designated competent authorities to handle CITES-related issues.

Table 7

Bear bile products observed in TM shops in Taiwan

Available Product	# Shops Selling Product	Open Display % of Shops	Product Origin	Sold In (Form)	Price Range (USD)	Average Price (USD)/Unit
Powder	26	23%	mainland China Hong Kong SAR undeclared	gramme	2.25-18.00	0.08/g

Discussion

Powder was often sold as a compound medicine combined with other powders commonly including: pearl, amber (succinum), musk, stalactum, cinnabar and borneol. Recommendations for the best composition mixture varied between shops. The trade name for this product is 'Wu Bao San' meaning 'five treasure powder'. Prices varied according to the perceived quality of the bear bile powder. Powder was sold in units of 100 to 150 g as well as in bottles of 'qian' (3.75 g) and 'liang' (37.5 g). Two shops also offered alternatives: a form of Wu Bao San without bear bile or snake bile as a substitute.

A majority of the shops had been open for more than two decades and nearly all (77%) reported a steady demand for bear bile. All powder was said to be from mainland China, Hong Kong SAR or an undeclared source.

In a 2002 survey of TM shops in Taiwan, 30% of the 201 shops visited either sold or claimed that they could acquire bear bile products (Chen *et al.*, 2002). Products observed during these surveys included gall bladder, powder and other manufactured products containing bile. Comparing this survey with the situation found during the current survey indicates the variety of bear bile medicines available in Taiwan has decreased, however the proportion of shops selling may have increased.

Overall, Taiwan continues to play a role in bear bile trade as a consumer of bear bile products. The availability of bear bile products from mainland China should be taken seriously by the relevant authorities, including the Taiwanese enforcement agencies and judiciary.

JAPAN

The archipelago of Japan covers a total land area of over 370 000 km² with a population of over 26 million, 15.7% of which are below the poverty line (CIA, 2011). Japan is located south-east of the Russian Far East and north-east of China (Figure 8). The major islands are Hokkaido, Honshu, Shikoku and Kyushu. The capital city Tokyo is located on the east of the island of Honshu. Japan became a Party to CITES in 1980. The country's legislation has been assessed as Category I under the CITES National Legislation Project. The Trade and Economic Cooperation Bureau Ministry of Economy, Trade and Industry is the CITES Management Authority. The Wildlife Division of the Ministry of the Environment is the CITES Scientific Authority.

Two species of bears are native to Japan: the Asiatic Black Bear and the Brown Bear. The Brown Bear is restricted to the northern island of Hokkaido (Mano, 2006) and the Asiatic Black Bear is found on the islands of Kyushu, Shikoku and Honshu (Hazumi, 1999), though it is very likely extinct on Kyushu Island (Ishii, 2007). Bear parts, including gall bladders, meat, fat and fur are utilized in Japan, although only the gall bladders are considered to have economic importance (Ishihara, 2006).

Figure 8

Japan in relation to **other areas** of the study region



National legislation

CITES Appendix I-listed species including both Asiatic Black Bears and Brown Bears are listed as International Endangered Species of Wild Fauna and Flora (IES) in the *Law for Conservation of Endangered Species of Wild Fauna and Flora* (1992), also known as LCES. This listing was established in accordance with CITES to regulate trade. The law and the *Cabinet Order for the Implementation of the LCES* require persons trading in fur or skin products to register these as 'organ' and 'processed article' of IES. Bear gall bladders are not defined as 'parts and products' under the *Cabinet Order*, therefore trade in these is not regulated. Further, bears legally taken within Japan are also excluded under the *Implementation Ordinance of the LCES*. Domestic trade of bear gall bladders is regulated only by the *Pharmaceutical*

Affairs Law, established to ensure the quality of medicinal products. Article 24 of this legislation states it is against the law to sell or store bear gall bladders to persons unauthorized by the Ministry of Health, Labour and Welfare (Ishii, 2005).

According to the *Wildlife Protection and Hunting Law* (2002) and related legislation, Asiatic Black Bears and Brown Bears may be legally hunted during specific hunting seasons in specified locations with a licence. Hunting season for the Brown Bear is October 1 to January 31 and November 15 to February 15 for Asiatic Black Bears. There is no limit on the number of or age of bears that can be hunted and parts of harvested bears may legally be sold with limited reporting requirements (Ishii, 2005; Kusakari and Mano, 2006; Mano and Ishii, 2008; Moll, 2001). An estimated 2000 bears are hunted annually (Mano and Ishii, 2008). Hunting is banned in western Honshu, Shikoku and Kyushu islands because the populations are threatened.

Results

In February 2011, 67 TM shops were surveyed in Japan. Of these, 21 were found selling bear bile products in Osaka (11) and Tokyo (10). Products included: bear gall bladder, powder, pills and flakes (Table 8).

Table 8

Bear bile products observed in TM shops in Japan

Available Product	# Shops Selling Product	Open Display % of Shops	Product Origin	Sold In (Form)	Price Range (USD)	Average Price (USD)/Unit
Gall bladder	4	25%	Japan unclear	gramme	76.83-121.96/g	109.70/g
Powder	6	33%	China Japan	gramme	61.46-268.30/g	153.09/g
Pills	12	90%	China Japan	packet box	0.43-9.15/pill	3.43/pill
Flakes	6	0%	China Japan	gramme	36.59-181.80	135.00/g

Discussion

Nearly one third of the stores found to be selling bear bile products during the survey had been doing so for at least a decade. From the survey, it was not established whether shop owners were able to supply bear bile products in bulk and only one shop reported a steady customer demand. Five shops said that customers consider bear bile alternatives and several shops recommended alternatives because bear bile products are relatively expensive in Japan. Two shops told visitors that the clientele interested in bear bile were mostly elderly and people with a special interest in TM.

The most expensive products observed were powder and flakes, reportedly originating from Japan and China, while the least expensive products were bear bile pills. The brand ‘Seiju’ was the highest priced at USD91.50 for a 10-pill pack. The second most expensive was ‘Yuujin-Gan’ at around USD60 per pack, followed by ‘Rokushin-Gan’ at USD25 per pack and ‘Taan’ at USD13.32 for an 18 pill-pack. There was no stated origin for any of these products with the exception of the Rokushin-Gan pills, which reportedly came from Japan.

Few gall bladders were observed openly on sale; however several stores said it was possible to place a special order for the product. Prices for gall bladders were high and one shop owner confirmed gall bladder has been an expensive commodity for a long time. Two shops reported their gall bladders were domestically sourced in Japan.

There are no bear farms producing bear bile in Japan. Japan does have a number of bear parks which function in a similar capacity as zoos or circuses. Legislation regulating the disposal or use of parts from deceased bears at bear park facilities

is unclear. In the early 1990s, five bear parks surveyed in Japan stated they sold bear gall, however these locations did not all sell products sourced from resident bears (Mills and Servheen, 1991). In August 1999, bear parks contacted during a telephone survey stated that they do not sell bear bile products (Ishihara, 2005).

In February and March of 2011, four Japanese ‘bear park’ facilities were visited. One of these contained 99 Hokkaido Brown Bears *Ursus arctos yesoensis* and one Asiatic Black Bear. This facility was similar to a zoo; it was open to the public, captive breeding took place, the facility worked with local universities and deceased bears were incinerated. The second facility housed 80 Hokkaido Brown Bears all of which were reportedly captive-bred. Similar to the first facility, all bears are reportedly incinerated post mortem. The third facility housed a variety of wild and domestic animals. This facility advertised the presence of 250 individuals of nine different bear sub-species declared to be: European Brown Bear *Ursus arctos arctos*, Grizzly Bear *Ursus arctos horribilis*, Himalayan Black Bear *Selenarctos thibetanus laniger*, Kodiak Bear *Ursus arctos middendorffii*, Polar Bear, Sloth Bear, and Tibetan Bear *Ursus arctos pruinosus*. This park reported that its bears produced between three to six cubs per year and stated that these were on display to the public. The fourth facility housed around 100 individuals and was the only location that reportedly sold bear products. Products said to contain bear bile were found on sale and included ‘bear oil cream’ sold for USD12 per 20 grams and a ‘bear energy drink’ USD3.70 per 100ml. Shop workers stated that the energy drink on sale contained bear bile extracts, but said that the bear products on sale in the shop were produced from wild animals rather than from the bears on the premises.

Similar to previous market surveys (Ishii, 2005), current research suggests a decreasing level of trade but a continued market for bear bile products in Japan. Decreasing demand is likely attributed to high product cost and an abundance of cheaper alternative medicines. Japan plays a dual role as both consumer and producer of bear bile products. As discussed in other chapters within this report, many products purported to be from Japan were observed in TM shops outside that country. If such products have been exported from Japan without appropriate permits, this would indicate the presence of an illegal cross-border trade of bear bile products out of the country in violation of CITES.

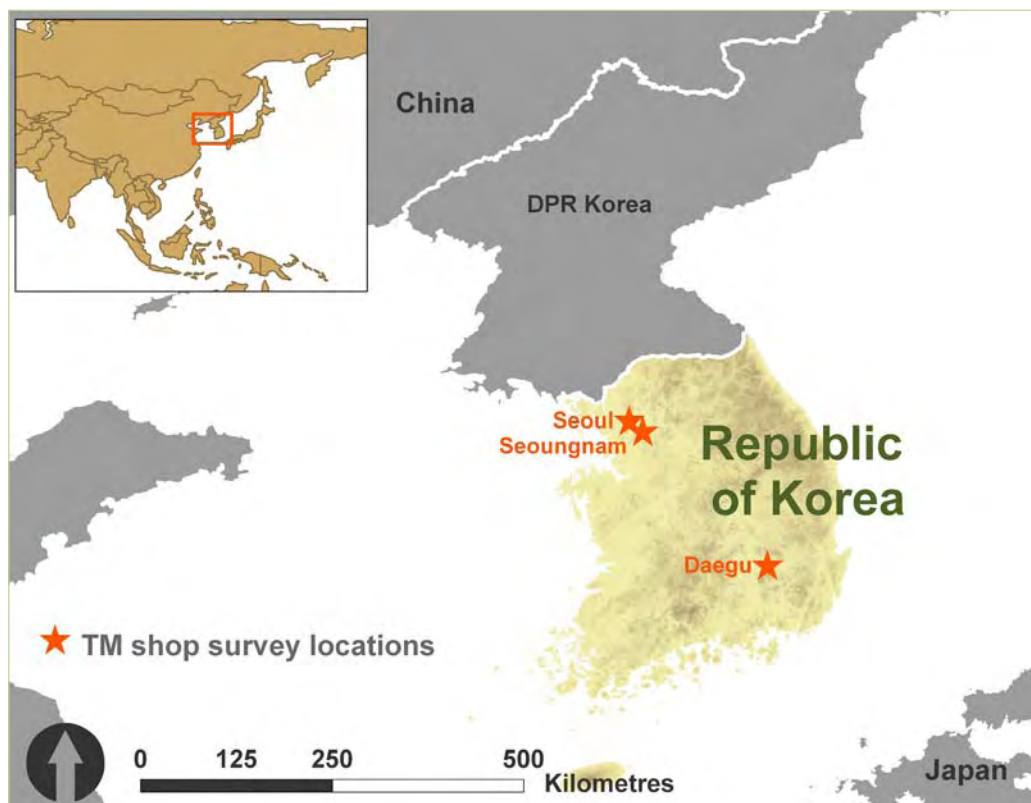
REPUBLIC OF KOREA

The Republic of Korea is located on the southern half of the Korean peninsula bordered by DPR Korea, the Sea of Japan and the Yellow Sea (Figure 9). The total country covers an area of 99 720 km², with a population of over 48 million, 15% of whom live below the poverty line (CIA, 2011). The terrain is made up of mostly hills and mountains with wide coastal plains in the west and southern regions. Seoul, the nation's capital, is the largest city. In 1993, the Republic of Korea became a Party to CITES. Their legislation meets the requirements for the implementation of CITES and has been assessed as Category I in the CITES National Legislation Project. The Global Environment Division of the Ministry of Environment serves as the CITES Management Authority. The Vertebrates Research Division of the National Institute of Biological Resources serves as the CITES Scientific Authority.

Two species of bear; the Asiatic Black Bear and the Brown Bear, are native to the Republic of Korea. However, due to intense hunting and habitat loss, both are seriously threatened with extinction (Han, 2006). While the Republic of Korea has over 1000 bears on farms, less than 20 individuals are estimated to survive in the wild (Frances, 2009; Sudworth, 2010; WSPA, 2010).

Figure 9

The Republic of Korea in relation to other areas of the study region



National legislation

The Republic of Korea lists the Asiatic Black Bear in Category I in the list of *Endangered Species of Wild Fauna and Flora* (*Protection of Wild Fauna and Flora Act* (2005); Ministry of Environment Republic of Korea, 2008). Category I includes species facing extinction due to human and natural factors. Penalties for the illegal poaching and capture of listed species include fines of up to KRW3 million (USD2752) and/or imprisonment for up to five years. The *Law of Natural Environment Conservation* covers the conservation of biodiversity and categorises both protected areas and species.

Bear farming is currently legal under present legislation. The *Bear Farm Administration Index* (2005), published by the Ministry of Environment, contains guidelines on a variety of topics including: management, inspection, registration of bears, and husbandry guidelines. The extraction of bile from live bears has been prohibited in the Republic of Korea since

1992. Bears on farms can be slaughtered for their parts once they reach a minimum of 10 years of age.

Recently in September 2010, the Ministry of the Environment met with national and international NGOs (including: WSPA and Green Korea United (GKU)) to discuss the phasing out of bear farms. This initiative has resulted in the presentation of a bill to Parliament. With adequate support of this bill, a policy to end bear farming is thought to be a likely possibility, however as of March 2011, no decision on this bill had been made.

Results

In February 2011, TM shops were surveyed in the Republic of Korea. Of the 61 shops surveyed in Daegu, Seoul and Seoungnam, 26 sold bear bile, primarily in whole gall bladder form (Table 9).

Table 9

Bear bile products observed in TM shops in the Republic of Korea

Available Product	# Shops Selling Product	Open Display % of Shops	Product Origin	Sold In (Form)	Price Range (USD)	Average Price (USD)/Unit
Gall bladder	25	0%	China Rep. Korea Russia	whole gramme	whole: 480.00-3600.00 gramme: 9.00-240.00	1856.00/whole 55.38/g
Flakes	2	0%	China Russia	bottle	96.00-160.00	128/bottle

Over 50% of the gall bladders found in Korean TM shops were claimed to be of Russian origin; 38% were claimed to be from China and 7% were claimed to be domestically sourced. Ten of the 26 shops (38%) reported a steady demand for bear bile and the majority of shops (77%) said that their customers would not consider alternative products.

Discussion

Results suggest that bear products are a highly priced commodity in the Republic of Korea, especially in comparison to other countries in the region. In Seoul, gall bladders from both wild-caught bears from Russia and captive-bred bears from China were offered for sale, with prices ranging from USD16 to USD160 per gramme. In addition, one shop also sold bear bile flakes that were purportedly from China and Russia and cost USD96 per bottle. Four of five shops in Seoungnam stated they could order bear gall bladder with reported prices ranging from USD1200 to USD3600. Sixteen of 23 shops surveyed in Daegu sold gall bladder, however shop owners stated it was difficult to find domestic gall bladder; therefore stock was often sourced from Russia and China. Prices for gall bladders ranged from USD9 to USD24 per gramme and from USD480 to USD1200 for a whole gall bladder. Flakes from China were also observed and these sold for USD160 per bottle.

Conversations with shop owners revealed that many were aware that selling imported bear bile products without CITES permits was illegal. They reported that products could easily be ordered in advance from a dealer and a few even recommended making a pre-order for wild caught bears in an effort to guarantee authenticity. Concerns over authenticity were reported by many shop owners, and some stated they would not sell bear gall bladder because it was too difficult to distinguish it from other species. Issues with authenticity and the practice of ordering products through dealers may be a factor in the broad and expensive price range documented in the Republic of Korea.

There appeared to be preference for wild-sourced bears from Russia as Chinese medicines were thought to be 'unreliable' or of lesser quality; possibly explaining why other products such as pills or powder were not observed in TM shops. One shop owner reported that sales of wild Russian gall bladder for USD42 per gramme are permitted in a single import by the Ministry of Health and Welfare; however this statement has not been confirmed.

As of February 2011, there were 59 bear farms in the Republic of Korea housing 1066 bears, according to the Ministry of the Environment. Of these, there were 992 Asiatic Black Bears, 57 American Black Bears *Ursus americanus* and 17 Brown Bears. It is illegal to extract the bile from captive bears or to kill and remove the gall bladders from bears under 10 years of age. No domestic Korean bear bile products were observed in this survey in the Republic of Korea or the other countries/territories surveyed in this report. This raises the question that if these farms do not produce bile, why do they persist in the Republic of Korea? The answer to this question is not apparent; however a likely possibility is that bile is illegally extracted and sold directly through the farms, giving buyers the guarantee of authenticity clearly prioritized by Koreans consumers (Chris Gee, WSPA, *in litt.* to TRAFFIC Southeast Asia, April 2011). In a 2007 survey of Korean bear farmers conducted by Green Korea United, 80% of farmers agreed to abolish bear farms if the government agreed to purchase their bears and compensate farmers for their business at an average price of USD11 350 per farm .

Korean tourists in China and Viet Nam are known to be major consumers of bear bile medicines. Hundreds of Korean tourists are said to visit bear farms in Ha Long Bay and Quang Ninh, Viet Nam, alone; tasting and purchasing bile products to take home (ENV 2008; ENV 2010; Vu, 2010). In addition, Korean consumers have been known to frequent farms in Jilin, China (Jill Robinson, Animals Asia, *in litt.* to TRAFFIC Southeast Asia, April 2011). The Republic of Korea appears to play a significant role as a consumer of predominantly wild bear gall bladder in East Asia.

LAO PDR

Lao Peoples Democratic Republic is a landlocked country of 236 800 km² with a population over 6 million, 26% of whom live below the poverty line (CIA, 2011). It is located in the centre of Indochina bordered by Cambodia, China, Myanmar, Thailand and Viet Nam (Figure 10). The terrain is heavily mountainous with the majority of the western border delineated by the Mekong River. The Mekong serves as a major transportation route. Due to the country's strategic location, it is a key crossway for trade between the neighbouring countries. Lao PDR became a Party to CITES in 2004, the country's legislation has been assessed through the CITES National Legislation Project as being Category III meaning that it does not meet the requirements necessary to implement CITES properly. The Ministry of Agriculture and Forestry serves as the CITES Management Authority and the role of the CITES Scientific Authority is conducted by the National Science and Technology Agency Research Institute of Science.

There are two species of bears in Lao PDR: the Asiatic Black Bear and the Sun Bear.

Figure 10

Lao PDR in relation to **other areas** of the study region



National legislation

The *Wildlife and Aquatic Law* (2007) allows for the trade of wildlife and aquatic life from second generation animals with proper approval and permission. This law defines products as 'extracted parts of wildlife and aquatic life for producing like medicine for healing illness, ornamental and other utilization purposes'.

Results

Six of 37 TM shops surveyed in September and October 2010 were observed selling bear bile products including gall bladder, raw bile and pills (Table 10).

Table 10

Bear bile products observed in TM shops in Lao PDR

Available Product	# Shops Selling Product	Open Display % of Shops	Product Origin	Sold In (Form)	Price Range (USD)	Average Price (USD)/Unit
Gall bladder	1	0%	China	ground	-	-
Raw bile	1	0%	Viet Nam	1ml vial	6.24/ml	6.24/ml
Pills	4	100%	China	single packets	-	1.50/pill

A total of 102 bears on four farms were observed in Lao PDR from September to November 2010. Of these, there were 98 Asiatic Black Bears and four Sun Bears (Table 11). Three of four farms surveyed sold bear bile in powdered gall bladder form, with prices averaging USD16.60 per millilitre.

Table 11

Data from bear farms surveyed in Lao PDR

Farm	Location	# of Asiatic Black Bears	# of Sun Bears	Product	Price (USD)
1	Boten*	19	1	raw bile	6.64/bottle
2	Vientiane	21	3	raw bile	16.60/ml
3	Luang Prabang	8	-	raw bile	16.60/ml
4	North of Thakhek	50	-	-	-

*Subsequent surveys found 16 Asiatic Black Bears and 0 Sun Bears at this location (Louis Ng, ACRES, in litt. to TRAFFIC Southeast Asia, April 2011).

Discussion

Pills were the most commonly sold product, openly displayed and purportedly from China, manufactured under the trade names Xiong Tan Tieh Ta Wan and Thonghua Dieda Wan. Gall bladders from China were sold either by the piece, which could be compounded into medicine, or as a whole. Raw bile from the Truong Son Coecco Tourist Company in Viet Nam was available by cubic centimetres (cm³) at one location. All shops selling bear bile products reported a steady customer demand for these products. It is interesting to note that all products observed in TM shops were cross-border-sourced, in violation of international trade agreements, despite the fact that Lao PDR has its own bear farms which produce raw bile.



Asiatic Black Bear on a bear farm in Luang Prabang, Lao PDR

© A. Oswell/TRAFFIC Southeast Asia

None of the four farms surveyed were reportedly owned by a Laotian; three were allegedly owned by Vietnamese and one by a Chinese. Three of the four farms also housed other wildlife including tigers, lions, gibbons and macaques. None of the facilities had captive breeding programs and one farmer reported high death rates due to disease. Therefore it can be reasonably assumed that replacement stock is sourced from the wild. Boten, the location of one farm surveyed, is a Special Economic Zone bordering China and is a known trade hub for wildlife export from Lao PDR to China (Allen, 2009; Ghosh, 2010). This small city is known to have many TM shops selling bear bile and other protected wildlife products; including tiger parts and ivory (Ghosh, 2010). Many of the farms found in Lao PDR are currently owned by foreigners in areas such as Boten. The country may be a burgeoning location

for the establishment of bear farms; especially as pressure to close farms in China and Viet Nam increases.

Wild-caught bears from Lao PDR have been used to replenish farm stocks in neighbouring countries (Hunt, 2009; MacGregor, 2010). Although bear farming in Lao PDR takes place on a smaller-scale than in China, the Republic of Korea and Viet Nam; a small number of farms have been established in the country over the last decade. This trend is cause for concern as laws regulating bear farming and bear bile trade are relatively lax in Lao PDR, making the country an attractive potential location for future bear farms.

Lao PDR plays a burgeoning role in the bear bile trade as both a consumer and producer of bear bile products.

Steady local demand for bear bile products encourages an illegal import trade from nearby countries such as China and Viet Nam. Lax wildlife trade laws in the country make bear farming extremely difficult to regulate and discourage.



Bear farm advertisement in Luang Prabang, Lao PDR

© A. Oswell/TRAFFIC Southeast Asia.

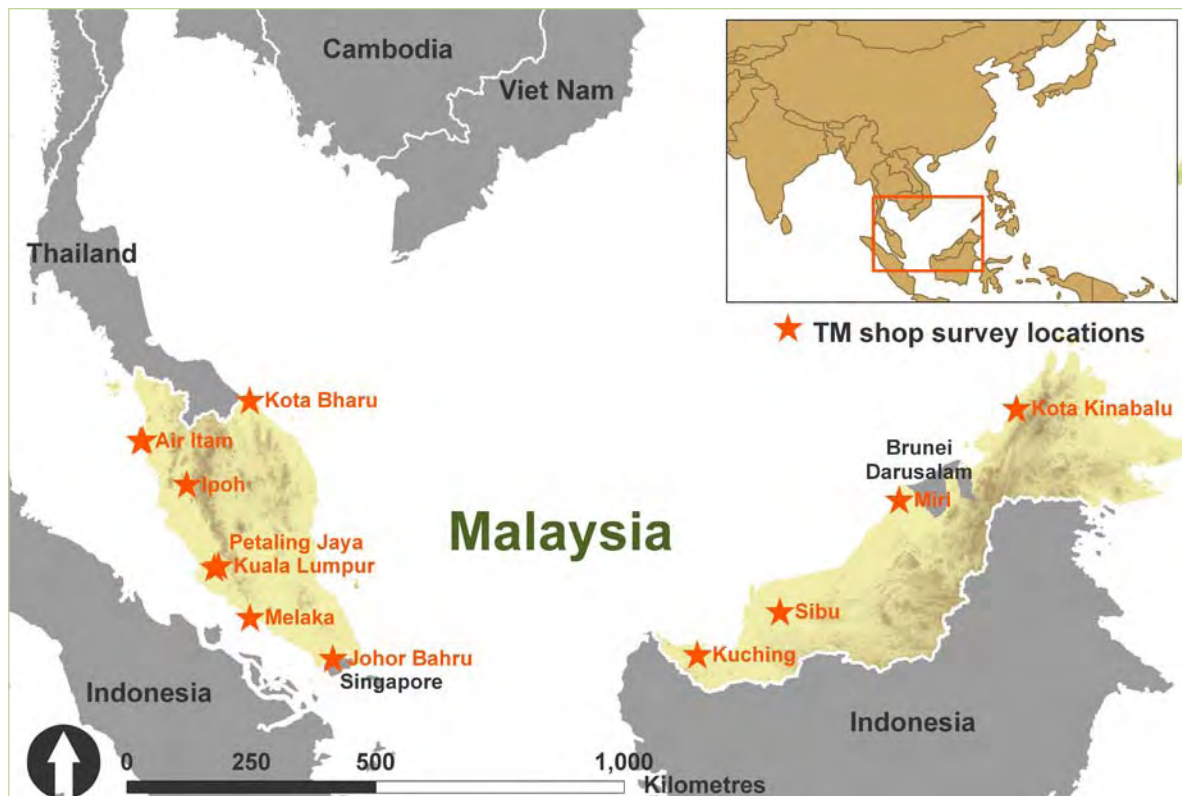
MALAYSIA

Malaysia's total land area covers over 329 500 km² with a population of over 28.7 million, 5.1% of which are below the poverty line (CIA, 2011). The country is split between two distinct land masses, Peninsular and East Malaysia. Peninsular Malaysia is located to the south of Thailand and north of Singapore, whilst the eastern States of Sabah and Sarawak lie across the South China Sea on the northern part of Borneo Island. In 1978; Malaysia became the first South-east Asian country to become Party to CITES. The country's national legislation has been categorised as Category 2 under the CITES National Legislation Project, however recently there have been revisions to the wildlife legislation. The Ministry of Natural Resources and Environment (NRE), Forestry Development Division, serves as both the CITES Management and Scientific Authorities. It should be noted that Peninsular Malaysia and the East Malaysian States of Sabah and Sarawak each have their own wildlife legislation.

Only one species of bear, the Sun Bear, is native to Malaysia.

Figure 11

Malaysia in relation to **other areas** of the study region



National legislation

Peninsular Malaysia

The Wildlife Conservation Act (2010) was recently passed, replacing the previous Wildlife Protection Act (1972). The 2010 Act includes all bear species as Totally Protected animals. Species which are listed as Totally Protected may only be traded for non-commercial purposes, pending Ministry permission and approval. The new act also imposes harsher penalties; with those found hunting or keeping protected females or young animals of a totally protected species being liable to a fine of up to MYR100 000 (USD32 905) and/or a maximum jail sentence of up to five years. Penalties for those who hunt or keep protected male animals may incur fines of up to MYR50 000 (USD16 452) and/or a maximum jail sentence of up to two years.

The International Trade in Endangered Species Act (2008) was created to allow full implementation of CITES in Malaysia.

The import or export of any species listed in the schedules requires valid permits, and registration for the breeding of such species is also required. Fines for the possession of CITES-listed species are up to MYR100 000 (USD32 905).

Sabah

The Sun Bear is listed as a Totally Protected species in Section 25(1) of the Sabah Wildlife Conservation Enactment (1997). No person is to hunt any animal species listed in Part I Schedule I. No person is to possess Part I of Schedule I animals or their products without written permission. The purchase, sale, import and export of protected animal species and/or their products is prohibited. Fines for possession of Totally Protected species include up to MYR50 000 (USD16 452) and/or imprisonment of up to five years.

Sarawak

Sun Bears are listed as Protected Animals under the Wild Life Protection Ordinance (1998). This list covers all species listed in Appendices I and II of CITES. Part 4, section 29(2) states that it is forbidden for any person to hunt, kill, capture or sell any protected animal, their parts or derivatives, unless in accordance with a special licence.

Results

Peninsular Malaysia



In November and December of 2010, 137 TM shops were surveyed in Penang, Perak, Johor, Kelantan, Selangor and Kuala Lumpur. A total of 101 shops were found to be selling bear bile products in various forms including gall bladders, pills, flakes and ointments (Table 12).

Vials of bear bile powder observed for sale in Johor Bahru, Malaysia

© C. Yeong/TRAFFIC Southeast Asia

Table 12

Bear bile products observed in TM shops in Peninsular Malaysia

Available Product	# Shops Selling Product	Open Display % of Shops	Product Origin	Sold In	Price Range (USD)	Average Price (USD)/Unit
Gall bladder	14	0%	Malaysia Indonesia China Thailand Viet Nam Nepal	whole gramme	163.21-261.31/whole 0.33-13.09/gramme	212.26/whole 4.78/g
Pills	87	25%	China Malaysia Singapore	packet	0.10-1.96/pill	0.56/pill
Flakes	6	17%	China	bottle	6.55-29.00/bottle	17.87/bottle
Ointment	1	0%	China	tube	-	0.15/g

Sabah

Twenty-one shops were surveyed in Kota Kinabalu in December 2010. Eight of these sold bear bile products in gall bladder and pill form (Table 13).

Table 13

Bear bile products observed in TM shops in Sabah, Malaysia

Available Product	# Shops Selling Product	Open Display % of Shops	Product Origin	Sold In (Form)	Price Range (USD)	Average Price (USD)/Unit
Gall bladder	3	0%	Sabah	gramme piece	148.00/piece	5.25/g
Pills	5	40%	Malaysia China	pill	0.16-0.32	0.26/pill

Sarawak



Of 54 TM shops surveyed in Miri, Kuching and Sibu in December 2010, 15 shops sold bear bile products including gall bladder, pills, flakes and ointment (Table 14).

Haemorrhoid ointment containing bear bile. Manufactured in China, for sale in Penang, Malaysia
© C. Yeong/TRAFFIC Southeast Asia

Table 14

Bear bile products observed in TM shops in Sarawak, Malaysia

Available Product	# Shops Selling Product	Open Display % of Shops	Product Origin	Sold In (Form)	Price Range (USD)	Average Price (USD)/Unit
Gall bladder	12	8%	Sarawak	whole piece	16.00-222.84/whole 12.45-16.38/piece	89.00/whole 13.86/piece
Pills	1	100%	Malaysia	box	-	0.32/pill
Flakes	1	100%	China	bottle	-	13.10/bottle
Ointment	1	100%	China	bottle	-	8.19/bottle

Discussion

Of the total shops surveyed in Peninsular Malaysia, 77% sold bear bile products. Over 30 gall bladders were seen across four States: Johor, Penang, Selangor and Kelantan. Interviews with TM shop staff revealed that a majority of the gall bladders were wild-sourced. Four shops surveyed claimed that gall bladders were sourced from Indonesia, a country of origin not reported in any other surveyed location. Pills were the most commonly observed item and were sold in packets of 10 to 400 pills, with the bear bile sometimes mixed with other ingredients, such as pearl. In addition, flakes and ointment were seen in small quantities. Many of the shop owners and staff were aware that selling bear bile products was illegal.

Bear bile pills and gall bladders were the only products observed in TM shops in Sabah. A total of 15 gall bladders were observed in three TM shops, all of which were dried. Two shops said their current stock was several years old. One shop owner reported that their customer base used to be primarily Korean and Japanese individuals; however in recent years these had been replaced by local Chinese. The pills on sale were nearly all manufactured by a pharmaceutical company said to be in Selangor, Malaysia. Sarawak had the highest proportion of gall bladders observed in Malaysia at a total of 115. All of the gall bladders were dried and a majority, if not all, were several years old; some were reported to be 10 to 12 years old. Discussions with TM shop staff indicated that customers had a strong preference for wild bear products and noted that gall bladders are more difficult to obtain now than in the past. One shop also commented that their past customer base was mostly Taiwanese and Korean. At one shop in Miri, the shop owners stated they usually had whole dried bear gall bladders on display and foreigners, particularly Koreans and Taiwanese, were their main customers.



Gallbladders purported to be from Sun Bears in a TM shop in Kota Kinabalu, Sabah, Malaysia

© C.Yeong/TRAFFIC Southeast Asia

In surveys conducted in 2002; nearly 78% of TM shops surveyed in Malaysia sold bear bile products in the form of gall bladders, powder and pills (Pereira et al., 2002). Of this, 72% of the products were said to be from China. Results from the 2010 survey confirm a similar proportion of shops selling bear bile, but with relatively fewer (55%) of those products being from China. There appears to be a substantial percentage of products available which are reportedly of Malaysian origin (28%).



Bear bile product from China observed for sale in Melaka, Malaysia.

© C. Yeong/TRAFFIC Southeast Asia

Due to the reported preference for wild-sourced gall bladder as well as a significant presence of domestically sourced gall bladders in Sabah and Sarawak, consumer demand for wild gall bladders may be a concern. However, much of the stock observed was several years old and some shop owners reported a shift in clientele away from international customers. Therefore, while this trend is a concern, it is difficult to estimate the potential impact on wild populations without knowing stock turnover rates.

In general, the hunting of bears in Malaysia is a concern as there appears to be a consumer demand for many kinds of wild bear products including but not limited to, bear bile. From 2005 to 2009, 11 seizures of bear parts representing a minimum of 33 Sun Bears were made in Peninsular Malaysia alone (Shepherd and Shepherd, 2010).

Malaysia plays a dual role in the bear bile trade as a consumer as well as a producer. The high percentage of shops openly selling bear products indicates a market demand and little enforcement effort to discourage shops from providing the product. Malaysia's role as a producer may be changing in recent years from the small-scale provision of products to East Asian tourists, to a potentially commercialized production business.

MYANMAR

Myanmar is the largest country in mainland South-east Asia with a total land area of over 676 500km² and a population of nearly 54 million, 32.7% of which live under the poverty line. It is bordered by China, Bangladesh, India, Lao PDR and Thailand (Figure 12). The capital city, Yangon, is located in the south. The terrain is made up of central lowlands surrounded by steep mountains. Today, vast forested areas that house potentially large populations of both Asiatic Black Bears and Sun Bears still remain (Servheen et al., 1999). Myanmar became a Party to CITES in 1997. Current legislation has been rated as Category III by the CITES National Legislation Project meaning it is not considered to meet the requirements necessary to properly implement CITES. The Director General of the Forest Department, Ministry of Forestry serves as the CITES Management Authority and the Director of Nature and Wildlife Conservation Division, Forest Department serves as the CITES Scientific Authority.

There are two species, the Asiatic Black Bear and the Sun Bear, native to Myanmar.

National legislation

The Protection of Wild Life and Wild Plants and Conservation of Natural Areas Law (1994) prohibits the hunting and killing of protected animals without permission. Possession, selling, transport or transfer of wildlife and wildlife parts is prohibited along with commercial transactions. Violations of these laws include imprisonment of up to three years (for Asiatic Black Bear) or seven years (for Sun Bear) or fines up to USD450 (Asiatic Black Bear) or USD1490 (Sun Bear). The List of Wildlife Protected from the Forest Department lists the Sun Bear under Totally Protected Wild Animals and the Asiatic Black Bear under Protected Wild Animals.

Results

In September and November 2010, 42 market stalls were surveyed in Mong La and Tachilek markets, 30 of which sold bear gall bladder (Table 15). All were openly displayed and sold in whole form with price dependent on weight.

Table 15

Bear bile products observed in Mong La and Tachilek markets in Myanmar

Market	Available Product	# Stalls Selling Product	# of Gall bladders Observed	Product Origin	Price Range (USD)	Average Price (USD)
Mong La	Gall bladder	13	60	Lao PDR Myanmar	26.61-59.88	47.73
Tachilek	Gall bladder	17	45	Lao PDR Myanmar	39.92-59.88	54.49

Figure 12

Myanmar in relation to other areas of the study region



Two farms in Myanmar, one in Mong La and one in Pangshan city were surveyed in October 2010 (Table 16). A total of 43 Asiatic Black Bears and three Sun Bears were observed at the first farm in Mong La, the second farm housed a total of nine Asiatic Black Bears.

Table 16

Data from bear farms surveyed in Myanmar

Farm	Location	Est.	# of Asiatic Black Bears	# of Sun Bears	Product	Price (USD)
1	Mong La	1999	43	3	Bile tonic Raw bile Dried bear Pills	bile tonic: 22.65/bottle raw bile: 166.08/200ml - pills: 18.12/box
2	Pangshan City	2005	9		Raw bile	-

Discussion

Mong La and Tachilek are wildlife trade hubs strategically placed along the Chinese and Thai borders, respectively. As both locations are known to be trade hubs it is likely that products, including bear parts, from these markets are crossing borders (Shepherd and Nijman, 2008). All gall bladders observed during the shop surveys were allegedly from Lao PDR and Myanmar. The average price per gall bladder was slightly higher in Tachilek than in Mong La. Each stall stocked between one and 11 gall bladders, with an average of 3.5 gall bladders per stall. A majority of the gall bladders observed were likely wild-sourced, as is much of the other wildlife products found in these two markets (Shepherd and Nijman, 2008; Oswell, 2010). It is possible some of these gall bladders said to be from bears, were in fact those of pigs (Feng et al., 2009).

Neither of the farms surveyed stated they had captive breeding programs; all bears were reportedly wild caught from China, Lao PDR and Myanmar. Both facilities were Chinese owned. One farm was located in Mong La, on the border between China and Myanmar. The second in Pangshan, Wa State, informed surveyors of high mortality and turnover rates at the facility. Bile products sold at the farms included an alcoholic bile tonic priced at USD22.65 per bottle, raw bile for USD0.83 per millilitre and capsules costing USD18.12 per box. Farm staff from the Pangkham facility stated bile products were often ordered and supplied to customers from China and Thailand.



Animal gall bladders at Tachilek
© TRAFFIC Southeast Asia

Our market survey results represent a minimum of 105 bears, with expected high turnover rates. Both farms housed a total of 55 bears. With high turnover rates at these facilities, restocking from the wild is almost a certainty. It is likely therefore, that the trade of bear products in Myanmar puts an unsustainable pressure on wild populations both in Myanmar and surrounding countries.

Myanmar plays a critical role as a producer of bear bile products and a transit for illegal trade through wildlife trade hubs such as Mong La and Tachilek. It is also a concern that foreigners may continue to establish bear farms in Myanmar, especially in light of increasing pressure on China and Viet Nam to stop bear farming.

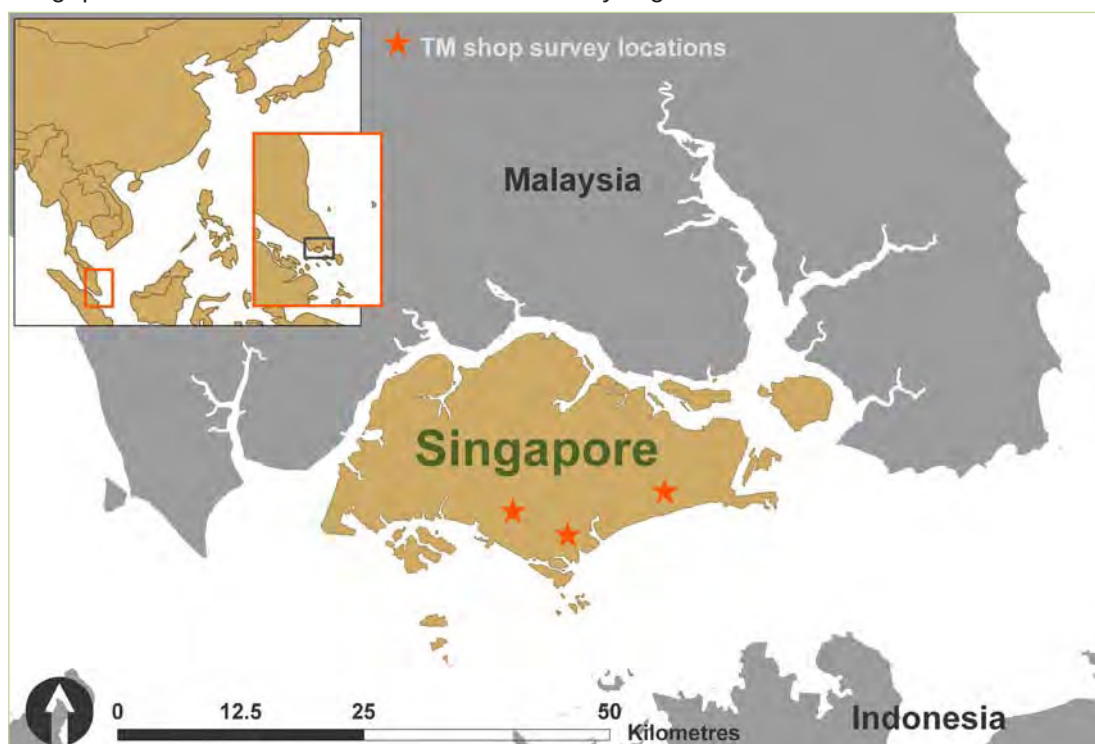
SINGAPORE

Singapore is located on the southern tip of the Malaysian Peninsula just one degree north of the equator (Figure 13). This small country of 697 km² has a population of over 4.7 million (CIA, 2011). It is heavily urbanized and the majority of the island is no more than 15 meters above sea level. The Republic of Singapore is the 4th leading financial centre in the world with an important role in international trade. In 1987, Singapore became a Party to CITES. Singapore's legislation is Category I of the CITES National Legislation Project and considered to meet all the requirements to properly implement CITES regulations. The Agri-food and Veterinary Authority (AVA) serves as both the CITES Management and Scientific Authority.

Singapore has no existing wild bear populations.

Figure 13

Singapore in relation to **other areas of** the study region



National legislation

According to the Animals and Birds Act (2002), it is forbidden to import or export any animal without a licence. The main purpose of this act is to prevent cruelty to animals and disease transmission (Animals and Birds Act Chapter 7, 2002). The Wild Animals and Birds Act (Chapter 351) prohibits the import of wild animals, alive or dead or any part thereof, into Singapore without special authorization by the Director General of AVA.

The Endangered Species (Import and Export) Act was first established in 1989 to implement CITES by controlling the import and export of those plants and animal species listed in the CITES Appendices. By this law, it is illegal to possess, sell, offer or publicly display any listed species that have been imported without a permit. If violated, fines of up to SGD5000 (USD3982) and/or a prison sentence of up to 12 months can be levied.

The Endangered Species (Import and Export) Act 2006 was revised to replace and re-enact with additional amendments to the previous Endangered Species (Import and Export) Act. This Act was amended to extend legal coverage to the derivatives of scheduled animals and plants, including fake specimens purported to be from CITES-listed species. The Act was further extended to criminalize the advertising of scheduled species and covers scheduled animals and plants in transit through Singapore.

The Endangered Species (Import and Export) Act 2006 empowers the AVA to grant permits for import and export of CITES-listed species and conduct investigations on cases of suspected illegal wildlife trade. Revised penalties include a fine of SGD50 000 (USD39 820) per scheduled species (but not to exceed SGD500 000) and/or a jail term of up to two years.

The Medicines Act (Chapter 176) came into effect September 1999. This requires that all Chinese Proprietary Medicines (CPM) be labelled in English with all relevant information including brand name, expiry date, ingredients and origin. Any outlets selling CPM (referred to as TM in this report) without appropriate labels and any medicines containing bear derivatives are acting in violation of the law (Govind and Ho, 2001).

Results

A total of 50 shops were surveyed in Singapore in October, 2010. Of these; three reportedly sold bear bile products in the form of gall bladders and pills (Table 17). Pills were the most commonly observed product and were sold individually or in units of 80 or 100.

Table 17

Bear bile products observed in TM shops in Singapore

Available Product	# Shops Selling Product	Open Display % of Shops	Product Origin	Sold In (Form)	Price Range/Unit	Average Price (USD)/Unit
Gall bladder	1	0%	-	whole	-	-
Pills	3	0%	China Singapore	individual packet	0.93-2.29/pill	1.58/pill

Discussion

Only 6% of the TM shops surveyed in Singapore were observed selling alleged bear bile products. This contrasts sharply with previous surveys conducted in 2001 of 68 TM shops where 50 shops (74%) were found selling purported bear bile medicines, primarily in pill, gall bladder, flake, powder and ointment forms (Govind and Ho, 2001) and another survey carried out in 2006 of 115 TM shops where 23 shops (20%) were found to be selling bear bile products (Ng and Tan, 2006). It would appear there has been a dramatic decrease in the amount of TM shops selling bear bile products. The regular surveillance and monitoring of TM shops, the high penalties imposed on offenders and public outreach efforts have contributed to the decrease in the illegal domestic bear bile trade.

Of the products that were recently available in Singapore; most if not all seemed to come from China. Three shops stated that the pills on sale were manufactured from farmed bears in China and the only shop selling gall bladder reported that bear bile could be ordered in bulk from China and then compounded into pills on site. None of the shops openly displayed bear products and none of the pill containers were labelled.

Other possible reasons for the decline in bear bile products found in Singapore's TM shops could be a decrease in domestic demand. Alternatively, shop owners may have been apprehensive to discuss and potentially sell illegal wildlife products to non-regular customers. Another explanation could be that recent work by NGOs on this issue has had significant effects. In 2007, ACRES, Animals Asia and the Singapore TCM Organizations Committee (STOC) created the 'ACRES and STOC Endangered Species-Friendly Labelling Scheme'. Over 300 TM shops have participated in this scheme by committing to not sell protected wildlife.

Current research suggests that Singapore plays a very small role as a consumer of bear bile products and has little to no presence in the market as a producer. Despite this, Singapore should still be regarded as a strategic player in the bear

bile trade in Asia. Due to its strategic location at the tip of Peninsular Malaysia, Singapore is a major shipping port and is thought to be among the world's top 10 wildlife trade hubs (Lim, 2010). As bear bile medicines produced in China are readily available in many countries around the world, it is conceivable that shipments of bear bile products transit through Singapore.

THAILAND

Thailand lies in South-east Asia with coasts on the Andaman Sea and the Gulf of Thailand. It borders Myanmar to the north-west, Lao PDR to the north east, Cambodia to the south-east and Malaysia to the south (Figure 14). Thailand has a total land mass of over 513 000 km² and a population of over 66.7 million, 9.6% of which live below the poverty line (CIA, 2011). It is characterized by mountain ranges in the north and along the Myanmar border, with central plains. In 1983, Thailand became a Party to CITES and its legislation has been assessed as Category I by the CITES National Legislation Project. The CITES office of the National Parks, Wildlife and Plant Conservation Department serves as both the Management and Scientific Authority.

Two species of bears, the Asiatic Black Bear and the Sun Bear, are native to Thailand.

National legislation

The CITES Species List Thai Government Announcement and the Protected Species List of Thailand both list the Asiatic Black Bear, Brown Bear and Sun Bear as protected. These lists are used as a reference of protected species in accordance with the Wild Animal Reservation and Protection Act (1992).

According to the Wild Animal Reservation and Protection Act, the possession and trade of protected wild animals and their carcasses is prohibited, unless listed in Section 17 (sections 19, 20). Section 17 lists 29 protected wildlife species that can be bred; however this list does not include bears. Violation of the Act is punishable by a fine of up to THB40 000 (USD1313) and/or up to 4 years in prison.

Results

In August and September 2010, 78 TM shops were surveyed in Bangkok, Thailand. Of these, 33 were found to be selling bear bile products in the form of pills, bile and gall bladders (Table 18).

Figure 14

Thailand in relation to other areas of the study region

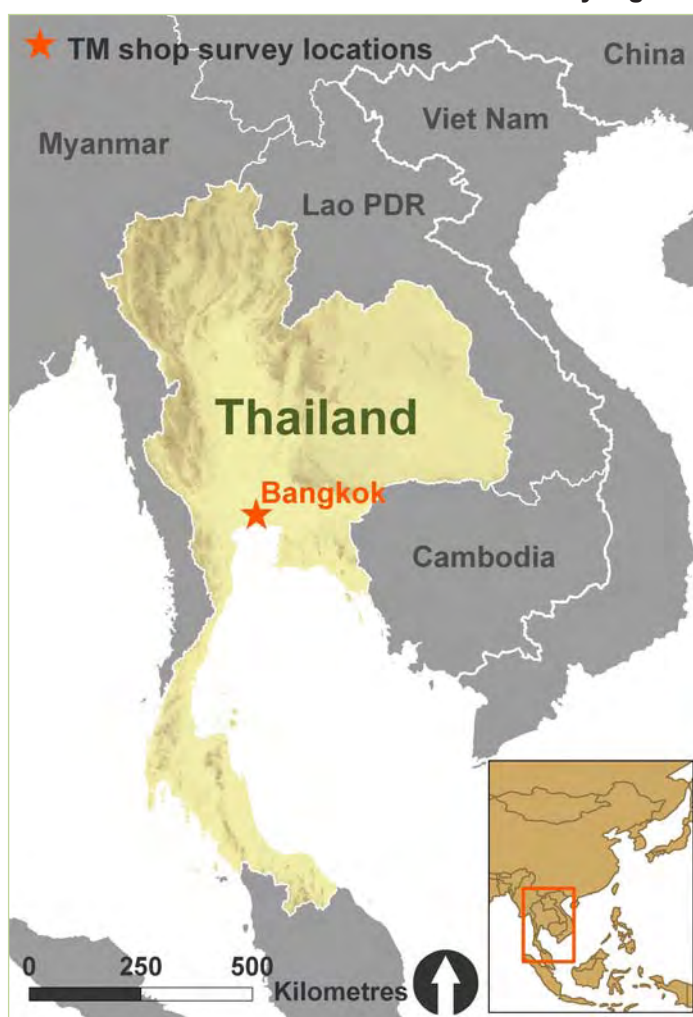


Table 18

Bear bile products observed for sale in TM shops in Thailand

Available Product	# Shops Selling Product	Open Display % of Shops	Product Origin	Sold In (Form)	Price Range (USD)	Average Price (USD)/Unit
Gall bladder	2	0%	China	whole	-	116.09/whole
			Taiwan	gramme		0.11/g
Bile	9	44%	China	gramme	0.33-6.63/g	3.48/g
			Lao PDR	bottle		
			Myanmar	capsule		
Pills	31	52%	China	individual	1.33-16.58/pill	3.83/pill
			Lao PDR			
			Myanmar			
			Taiwan			
			Thailand			

Discussion

Slightly less than half (42%) of the TM shops surveyed in Thailand were found to be selling bear bile products. Pills were most frequently observed (94%) and were openly displayed in half of the shops that carried them. Bile was observed in nearly a third (27%) of the shops and was openly displayed nearly half of the time. Gall bladders were seen in only two shops (6%) and were not openly displayed. Over 90% of the shops reported a steady customer demand for bear bile products, but stated that customers were sometimes interested in alternative products.

Several TM shops sold products from more than one country/territory. Overall, 95% of shops selling bear bile reported products came from China. Small amounts were also reported from Lao PDR (13%), Taiwan (5%), Myanmar (3%) and domestically sourced (5%). Although our research shows only a small percentage of trade moving from Myanmar to Thailand, the trade of bear gall bladder across the border has been previously documented. Interviews conducted with traders in 2006 in Tachilek and Three Pagodas Pass, two major markets on the Thai-Myanmar border, stated that the majority of their products, including bear parts, were purchased by Chinese and Thai buyers (Shepherd, 2007).

Nine shops stated they sold bile from farmed bears in China. However 13 of 33 shops (39%) claimed that their products were from wild bears and many stated a customer preference for wild-sourced bile. Both shops selling gall bladders claimed these had come from wild bears in China.

Thailand's role in the bear bile trade seems to be primarily that of a consumer. Products sourced from countries bordering Thailand were consistently observed during market surveys, indicating a significant cross-border trade of bear products into the country. As nearly every shop reported a steady demand for bear bile and products are not produced domestically; it can be reasonably assumed there is a substantial level of illegal cross-border trade carrying products into Thailand.

VIET NAM

This country profile was authored in partnership with Education for Nature Vietnam (ENV).

Viet Nam is located on the Indochinese Peninsula, bordered to the south and east by the South China Sea, Gulf of Tonkin and Gulf of Thailand and to the north and west by China, Lao PDR and Cambodia (Figure 15). The nation has a land mass of approximately 331 000 km² and a population of over 90.5 million, 10.6% of whom live below the poverty line (CIA, 2011). It is made up of hills, tropical lowlands and densely forested highlands. Major rivers are the Red River Delta in the north and the Mekong River Delta in the south. Viet Nam became a Party to CITES in 1994. Viet Nam's national legislation is considered Category I under the CITES National Legislation Project, meaning that it meets the requirements to properly implement CITES regulations. The Forest Protection Department (FPD) in the Ministry of Agriculture and Rural Development (MARD) serves as the CITES Management Authority. The Institute of Ecology and Biological Resource (IEBR) of the Viet Nam Academy of Sciences and Technology (VAST), the Forestry Sciences Institute of Viet Nam (of MARD) serve as CITES Scientific Authorities for the country.

There are two species of bears, Asiatic Black Bears and Sun Bears, native to Viet Nam.

National legislation

Decree 32/2006/ND-CP lists the Asiatic Black Bear and the Sun Bear in Group 1B affording both species full protection from commercial exploitation of any kind. This legislation prohibits all trade, advertising, hunting and transit.

Governmental Decree No 82/2006/ND-CP Appendix I states that wild animals, plant species, and processed parts listed in treaties to which Viet Nam is a Party, are nationally banned for exploitation and use. This wording covers the import, export and transit of CITES-listed species that are brought into Viet Nam or are leaving the country; however it does not cover domestic species or specimens of unclear origin.

In 2004, Viet Nam enacted the National Action Plan to Strengthen Control of Trade in Wild Fauna and Flora. In order to monitor numbers of captive bears on bile farms, all farm bears were micro-chipped with the intent of keeping wild bears from entering the farmed bile trade (Nguyen, 2007).

Decision 02/2005/QĐ-BNN was established to manage what appeared to be the growing development of bear farming in Viet Nam. MARD issued management regulations which required owners to register their bears, setting a cut-off date in February 2006. Since then, all unregistered bears have been subject to confiscation and bear owners are subject to punishment. All bears are currently considered government property. However owners of micro-chipped bears are

Figure 15

Viet Nam in relation to other areas of the study region



permitted to keep them, but the extraction of bear bile from these animals is illegal.

The Regulation of Bear Management Decision 95/2008/QD-BNN (2008) replaced Decision 02/2005/QD-BNN. However the new legislation is weaker as it does not mention bear cubs born in captivity. This has opened up a loophole for farmers, allowing them to claim that new cubs on farms have been born in captivity when they may in fact be wild-sourced.

Results

A total of 31 shops were surveyed in Viet Nam from September to October 2010. Of these 20 were observed selling bear derivatives in the forms of bile, gall bladder, powder, flakes and ointment (Table 19).

Table 19

Bear bile products observed in TM shops in Viet Nam

Available Product	# Shops Selling Product	Open Display % of Shops	Product Origin	Sold In (Form)	Price Range (USD)	Average Price (USD)/Unit
Gall bladder	6	0%	Lao PDR Russia Viet Nam	whole gramme	128.20-615.00/whole 4.00-18.40/g	371.60/whole 11.72/g
Raw bile	9	22%	Viet Nam	vial	2.05-11.79	5.03/ml
Powder	4	25%	China DPR Korea Viet Nam	vial	0.42-5.12/g	2.56/g
Flakes	3	0%	China	vial	3.00/g	3.00/g
Ointment	1	-	Viet Nam	vial	1.48/vial	1.48/vial

Surveys of bear farms in Viet Nam took place in September and October 2010. There are estimated to be 750 bear farms in Viet Nam, housing around 3000 bears (ENV, 2011). At least 677 bears on 34 farms were observed during this survey. Of these were a minimum of 671 Asiatic Black Bears and at least six Sun Bears. Bear farms varied in size from two to 60 individuals; however the average farm contained less than 10 bears, housed on residential property.

Discussion

TM shop surveys

Of the TM shops surveyed in Viet Nam, 65% sold bear bile products. The most commonly observed product (45%) was raw bile sold in 1cm³ vials. The second most common product was bear gall bladder, present at a third of shops found carrying bear products and in total, 21 gall bladders were observed between six TM shops. Powdered bear bile was found in 20% of the TM shops, followed by flakes (15%) and ointment (5%). Only 17% of the shops openly displayed their products for sale. Many Vietnamese products were labelled in Chinese; possibly to increase the perceived value of the product or to market it to Chinese tourists. These products are thought to be either 1) produced in Viet Nam with false labelling to deceive the buyer and increase retail sales or 2) produced in Viet Nam for export to China; however some are retained for sale on the local market. Over half (58%) of all bear bile products



Bear gall powder from DPR Korea
© M. Silverberg/TRAFFIC Southeast Asia.

observed in TM shops were said to be of domestic origin. All raw bile was reportedly from farmed bears in Viet Nam with one exception; where a shop sold bile alleged to be from bears in DPR Korea. This product cost considerably more at USD11.79 per vial compared to an average of USD4.19 per vial for Vietnamese bile. Powdered bile came from domestic and international sources in China and DPR Korea. Prices for Chinese powder were similar to those for Vietnamese powder; however the DPR Korean powder was significantly more expensive at USD20.50 per vial. In previous surveys; Animals Asia found Chinese bear bile from Sichuan to be widely available in TM shops in Hanoi (Jill Robinson, Animals Asia, *in litt.* to TRAFFIC Southeast Asia, April 2011).

Gall bladders observed for sale were reported to be primarily from Lao PDR and Russia, a few from Viet Nam and one from DPR Korea. Prices varied dramatically for gall bladder based on alleged origin. The more expensive products were from Russia at USD18 per gramme and from Lao PDR, costing between USD9 to USD18.40 per gramme. Shop owners reported the price range for gall bladders sourced from Lao PDR related to whether these came from captive-bred or wild-caught bears. Gall bladders from DPR Korea were surprisingly less expensive at USD9.40 per gramme, while the least expensive was domestic gall bladder at USD4 per gramme. A wide price range existed between the two shops selling whole domestic gall bladders from USD128.20 to USD615 however it is difficult to conclusively say why this is. It is possible that the less expensive gall bladders were fakes.

In a recent survey conducted by ENV, 22% of people surveyed in Viet Nam stated that they have used bear bile products with the highest concentration of users being in Hanoi (Vu, 2010). Respondents from this study primarily used bear bile to treat specific health related illness, while others also stated they used bile for overall general health and entertainment purposes (Vu, 2010).

Farm surveys

Starting in the 1990s, the bear bile industry steadily increased in size, corresponding to an improved economy and higher living standards (Vu, 2010). Limiting controls were introduced in 2006 when bear bile trade was banned and the government implemented a micro-chipping scheme to register captive bears. This process was intended to limit wild-sourced bears from entering the bear farm trade and as registered bears died, bear farms would be slowly phased out.

Overall, micro-chipping in tandem with increased law enforcement efforts have led to significant reductions in the numbers of farmed bears in Viet Nam. However farms apparently still illegally house high proportions of un-chipped bears among micro-chipped bears to maintain

bile extraction. A recent report states that authorities have been known to allow some farmers to register and keep illegal bears rather than confiscate them in accordance with the law (Vu, 2010). This may be due to a broad interpretation of the current laws as to what constitutes the 'possession' or 'keeping' of bears.

Despite tremendous efforts by the Vietnam Bear Task Force (which includes Animals Asia, ENV, Free the Bears, Wildlife at Risk (WAR) and WSPA) to increase public awareness and to work with law enforcement; bear farming and bear bile trade has yet to be effectively controlled. The total number of bears on farms in Viet Nam is estimated to be less than 3000 according to the latest figures from the National Forest Protection Department (ENV, 2011).

Bear farm surveys were carried out in Viet Nam from September to October 2010. Due to time constraints and the large number of bear farms in the country, only around 22% of the estimated total of bears on farms were counted. Overall a minimum total of 667 bears were observed on 34 farms, 99% of which were Asiatic Black Bears. Eleven of the 34 farms



Bear farm near Ha Long Bay, Viet Nam

© M. Silverberg/TRAFFIC Southeast Asia

visited stated that bile produced was for local consumption. Fourteen farms told surveyors they extracted bile using the ultrasound method and sold bile from USD0.77-8.16 per 1cm³ vial.

Bear farms in Viet Nam are not typically large scale commercial enterprises such as those located in China, however, this survey specifically targeted the larger bear farms thought to provide for the foreign tourist demand for bile in Hanoi and Ho Chi Minh City.

The larger farms in Viet Nam are known to openly sell bear bile to Korean tourists (ENV 2008; ENV 2010). Two of the farms surveyed, housing over 65 bears, were Korean-managed. Investigations by Korean TV (KBS) and ENV found a high density of illegal bear farming in the area around Ha Long Bay. Recent surveys of this area observed more than 189 bears on four farms, three of which were open to the public. In addition, signage at one of the facilities was in Korean and English, suggesting that this facility catered to foreign customers. Monitoring conducted by Animals Asia in the Ha Long Bay area from September 1-5 2010, found that over 600 foreign tourists visited one of the largest bear farms in the area, the majority being Korean. In addition to farms around Ha Long Bay, farms in Quang Ninh sold bile; openly targeting



Bear cub at a farm in Hanoi

© M. Silverberg/TRAFFIC Southeast Asia

Korean tour groups. As of March 2011, the Viet Nam National Administration of Tourism (VNAT) has called on all provincial Departments of Sports, Culture and Tourism to prohibit all travel companies that organize tours to take tourists to bear farms where bears are illegally kept and bear bile is extracted. In the case of serious violations VNAT will consider withdrawing the company's International Travel Business Licence (WSPA, 2011).

In Phuc Tho district in Ha Noi, bear farmers openly advertised and sold bear bile. In 16 farms visited with ENV, a total of 149 bears were observed. At one farm, juveniles and a cub were observed, their presence clearly violating the ban on new bears entering trade. The Wildlife Crime Unit of ENV notified authorities of this specific case but the cub had been removed from the premises by the time officials inspected the site (Vu, 2010). According to the Wildlife Crime Unit, 26 live bear cubs and six adult bears have been seized in Viet Nam since 2007. The prevalence of cubs and bears entering the farmed trade reiterates concerns about the potential amount of wild-sourced bears on farms in Viet Nam. From 2005-2011, ENV has recorded a total of 807 bear-related crimes including: advertising, hunting, possession, trade operations, smuggling and selling. According to ENV, since the 2005 ban on new bears entering trade; a total of 239 potentially illegal bears, comprising 66 specific cases, have been documented. Since 2007, 31 live cubs have been confiscated in trade, the majority of which were known to be sourced from Lao PDR. In addition, investigations of 52 farms in Nghe An in November 2010 discovered a number of potentially illegal bears. ENV is currently working with provincial authorities to determine the legality of the bears at these sites. TRAFFIC surveys from 2010 and previous research by ENV and other NGOs indicates the domestic illegal trade of bear bile products in Viet Nam is not only flourishing, but has a significant illegal cross-border component as many bile products are purchased by primarily Korean tourists and carried across borders (ENV, 2008; ENV 2010).

Today Viet Nam plays a significant dual role as both a producer and consumer of bear bile products. Information collected in recent surveys, as well as previous research by ENV suggests that there is an illegal cross-border trade in bear bile products out of Viet Nam. Although bear bile medicine is illegal, domestic consumption is high and some products are cross-border-sourced.

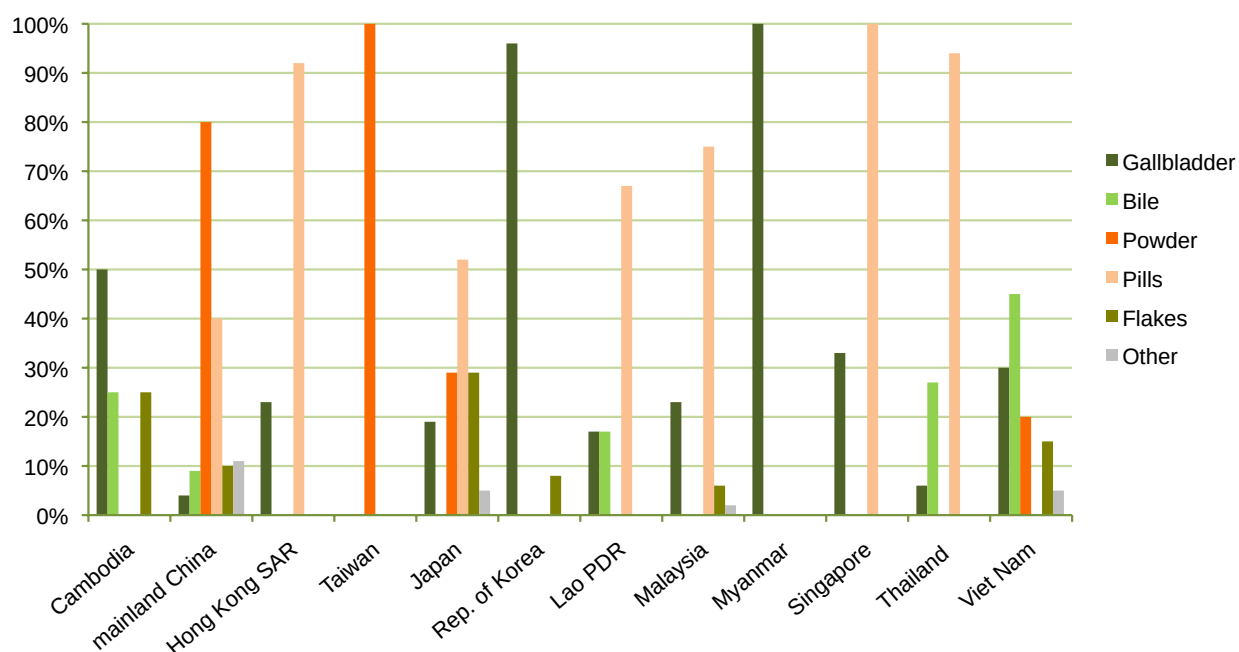
GENERAL DISCUSSION

Bear bile products

There was a significant degree of variation in the types of products available in the study countries/territories (Figure 16). Some surveys found little variety; for example in Myanmar only gall bladders were observed, while in Taiwan the only product found was powder. Locations, such as China, Japan, Malaysia and Viet Nam, had a greater variety of products for sale. These regional differences may be attributed to the dynamics of a particular country/territory's consumer demand, frequency of medicinal bear bile use and/or role as a source/exporter.

Figure 16

Percentage availability of bear bile products found in surveyed TM outlets that reportedly sold bear bile products for each country/territory



The products most frequently observed across the study countries/territories were gall bladders and pills, both of which were observed in over half of the countries/territories surveyed. Average price per product for each country/territory were compared for gall bladder (whole and by the gramme) and pills to describe current economic trends in the bear bile trade and establish a context for the trade activity observed in the region.

Bear gall bladder

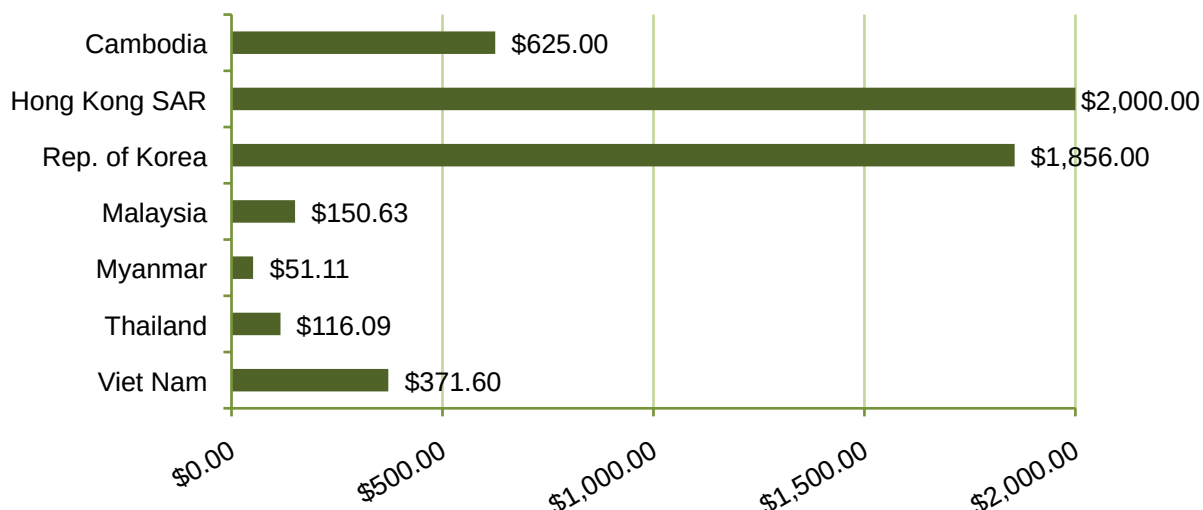
Gall bladders (claimed to be from bears by TM outlet staff) were the most commonly seen product, present in 11 of the 13 countries/territories where bear bile products were found. It should be noted that all gall bladders were believed to be real (not fake) and from bears if the seller asserted thus; therefore there is some margin for error regarding identification which could not be amended without proper forensic analysis. In addition to Myanmar where they were the only product seen in market surveys (other forms were seen on farms), the Republic of Korea had a significantly high proportion as well. Gall bladders were sold by the gramme or in whole form. There was often a broad price range for the product within each country/territory as well as between countries/territories. Comparing average prices between the countries/territories illustrates how gall bladder can either be relatively inexpensive or a highly priced commodity depending on the country/territory. Low prices also point to there being a substantial amount of fake gall bladders from pigs and other animals for sale in markets and TM shops.

Gall bladder: prices per whole

Whole gall bladders were observed for sale in Cambodia, Hong Kong SAR, the Republic of Korea, Malaysia, Myanmar, Thailand and Viet Nam (Figure 17). Prices varied significantly from less than USD100 to USD2000.

Figure 17

Average price (USD) per whole gall bladder in each country/territory where whole gall bladders were observed for sale.



Whole gall bladders were least expensive in Myanmar. Prices may have been lowest here because it was the only product for sale and also widely available. Prices were also relatively low in Thailand, where one shop owner said gall bladders were wild-sourced and supplied by a Thai agent. In Malaysia, gall bladders were primarily seen in the east Malaysian states of Sabah and Sarawak where many shop owners described their stock as several years old. This may indicate a low turnover, which may also explain the lower prices seen.

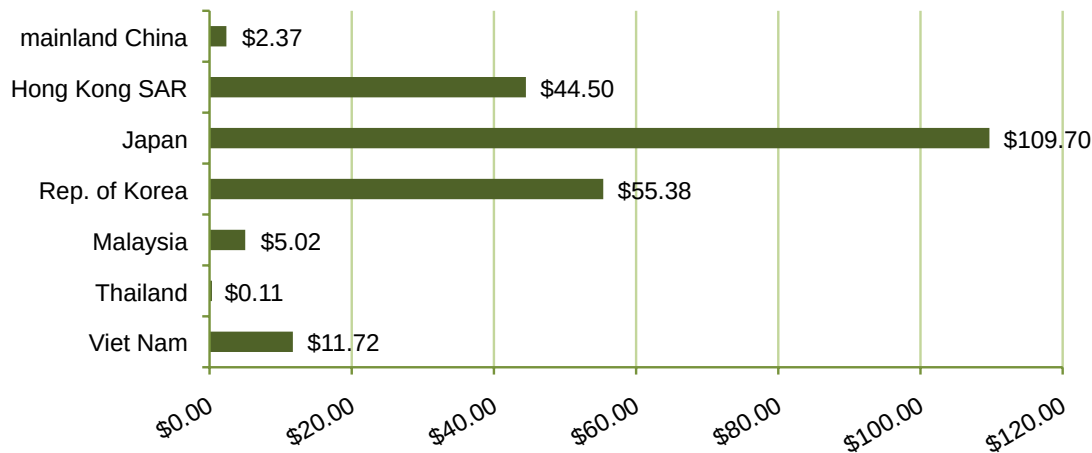
Prices for whole gall bladders exceeded USD600 in Cambodia. The product was found in two TM shops, both of which claimed that their stock had been wild-sourced from Cambodia; a possible explanation for the high price. Whole gall bladders were exorbitantly more expensive in the Republic of Korea and Hong Kong SAR where prices reached up to USD2000. The high prices in both places could be due to the fact that most of the whole gall bladders for sale were foreign-sourced, there is limited supply, persistent demand, and a comparatively wealthy market base willing to pay high prices. In Hong Kong SAR, prices have appeared to be steadily increasing. This may be due to the fact previous surveys on gall bladder prices in Hong Kong were conducted over 15 years ago when regulation/enforcement may have had an impact at the time which may not have been sustained since then (Mills and Servheen, 1994; Mills *et al.*, 1995).

Gall bladder: prices per gramme

Gall bladders were observed for sale by the gramme in China, Hong Kong SAR, Japan, the Republic of Korea, Malaysia, Thailand and Viet Nam (Figure 18). As with gall bladders sold in whole form, there were significant price variations between countries/territories.

Figure 18

Average price (USD) per gramme of gall bladder in each country/territory where gramme of gall bladder were observed for sale



Survey results indicated gall bladder per gramme cost the least in Thailand. However this was from a single TM shop and it is possible the product was not authentic; as gall bladders from other animals, such as pigs, are sometimes sold as authentic bear products (Mills *et al.*, 1995; Shepherd and Nijman, 2008). Apart from Thailand, prices per gramme were lowest in China, Malaysia and Viet Nam. This may be because gall bladders are more readily available in these countries.

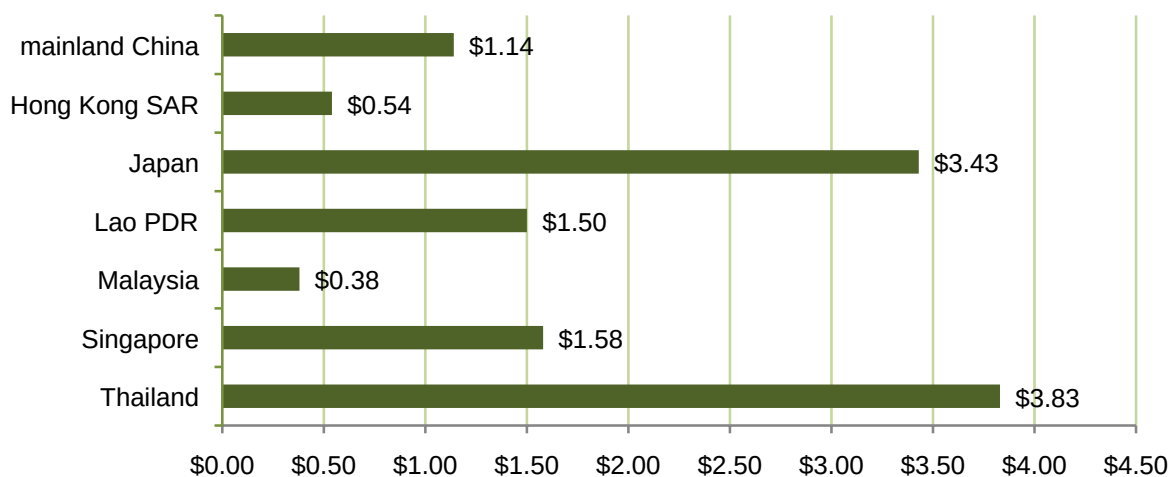
Similar to whole gall bladders, gall bladder sold by the gramme was considerably more expensive in Hong Kong SAR and the Republic of Korea. Japan had the highest prices; about double those seen in any other country/territory surveyed. In Japan, two of the four TM shops selling bear gall bladders claimed their stock was of Japanese origin and that prices had been high for several years. Previous surveys documented by Ishihara (2005) found an average price of USD55 per gramme, indicating prices have doubled over the past five years since then.

Bear bile pills

Bear bile pills were sold in many different forms and packages. There was a broad price range for pills within each country/territory relative to the pill's composition and the volume purchased (Figure 19).

Figure 19

Average price (USD) per pill in each country/territory where pills were observed for sale.



The price of pills may be lower in Malaysia because they are sometimes mixed with other products, such as pearl for example. In addition, nearly thirty percent of the pills observed were manufactured domestically in Malaysia, which may be another contributing factor to their low cost. TM shops in Hong Kong SAR also sold relatively inexpensive pills, possibly due to there being a small proportion of bile amongst other ingredients. As bear bile is a high-value TM ingredient, the quantity of bear bile within a product directly influences the price. It is possible the pills available in both Malaysia and Hong Kong SAR were either not derived from authentic bear bile or were a UDCA substitute being sold as ‘bear bile’.

Overall, prices for bear bile products varied significantly across the region. Across the price data, products in Malaysia were consistently less expensive. Products in Japan and the Republic of Korea were comparatively much more expensive. Prices in China were consistently low to mid-range which may be attributed to the availability, high frequency of use and legality of these products.

Bear bile product origins

Different types of bear bile products were found in surveyed TM outlets in 12 of the 13 countries/territories; with the exception of Macao SAR (Figure 16). The relative percentage of shops selling bear bile products was determined to compare the availability of bear bile products across the study countries/territories (Figure 20). It should be noted that the legality of bear bile trade in a country/territory may be related to the percentage of TM outlets found there that sold bear bile products.

Figure 20

**Percentages of TM outlets that sold bear bile products;
(*) surveys conducted in wildlife markets**

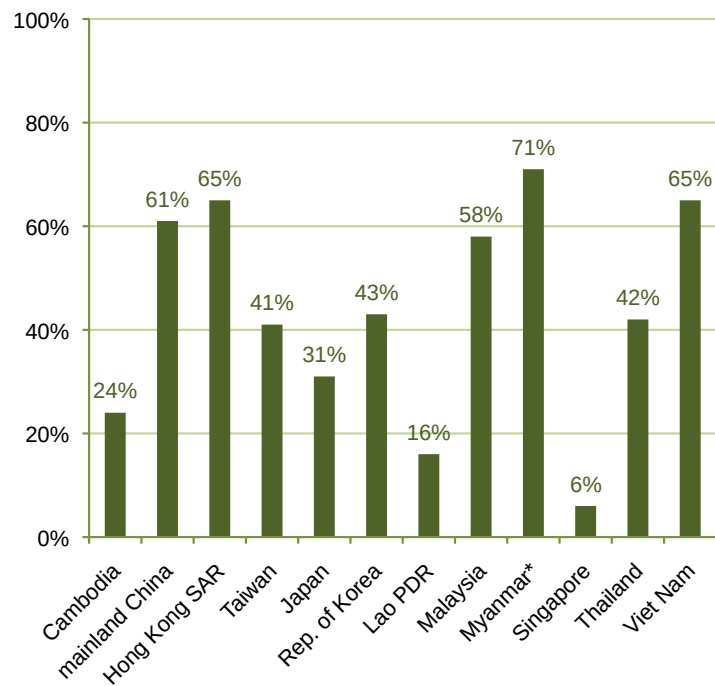


Table 20

Total number of TM outlets surveyed and number of outlets where bear bile products were found per country/territory

Country/ Territory	# Outlets	# with Bear Bile
Cambodia	17	4
China	194	119
Hong Kong	20	13
Japan	67	21
Lao PDR	37	6
Macao	10	0
Malaysia	212	124
Myanmar	42	30
Singapore	50	3
Rep. of Korea	61	26
Taiwan	64	26
Thailand	78	33
Viet Nam	31	20

Products were most prevalent in mainland China, Hong Kong SAR, Malaysia, Myanmar and Viet Nam where they were seen at over 50% of TM shops surveyed. Products were slightly less prevalent but still readily available at over 30% of TM shops in Japan, the Republic of Korea, Taiwan and Thailand. Products were less easy to find in Cambodia (24%), Lao PDR (16%) and Singapore (6%).

Bear bile products, specifically gall bladders as described above, were most available in Myanmar (71%) at Tachilek and Mong La markets near the Chinese and Thai borders. These markets sell many species in large quantities, nearly all of which are sourced from the wild. Previous survey work in the area has documented that buyers move items from one country to another with little to no problem (Shepherd, 2006). These data appear to support previous findings that indicate the existence of a thriving and illegal trans-border trade in Myanmar (Shepherd and Nijman, 2007; Shepherd and Nijman, 2008).

Products were seen the second-most often in Hong Kong SAR and Viet Nam (65%). Despite being illegal, bear bile products are widely available in Viet Nam where bear bile use is often not viewed negatively because it is perceived to have a medicinal value, rooted in tradition (Vu, 2010). In Hong Kong SAR, product prevalence may have increased in recent years. Surveys in 1991 found a 95% product prevalence, however this dropped to 6% four years later following a large government seizure and the implementation of a licensing and registration scheme (Mills et al., 1995). It would appear that since this low point of availability, products have made their way back into the Hong Kong SAR market (Mills et al., 1995). Unsurprisingly, bear bile was quite prevalent in each of the provinces surveyed in China as well (61%); probably because bear farms and bear bile products are legal. These results are comparable to previous surveys from 1995 where products were consistently observed throughout the country (Mills et al., 1995).

In Malaysia more than half (58%) of the TM shops surveyed sold bear bile. These results would indicate the existence of significant consumer demand, and is comparable to the findings of previous surveys conducted in 1991 where nine out of 13 TM shops carried products. Malaysia's population is 23.7% ethnically Chinese (CIA, 2011) and there is an established TM trade in the country. The poaching of wildlife; including bears, to supply TM consumers and the exotic meat trades in Malaysia has been previously documented (Shepherd and Shepherd, 2010).

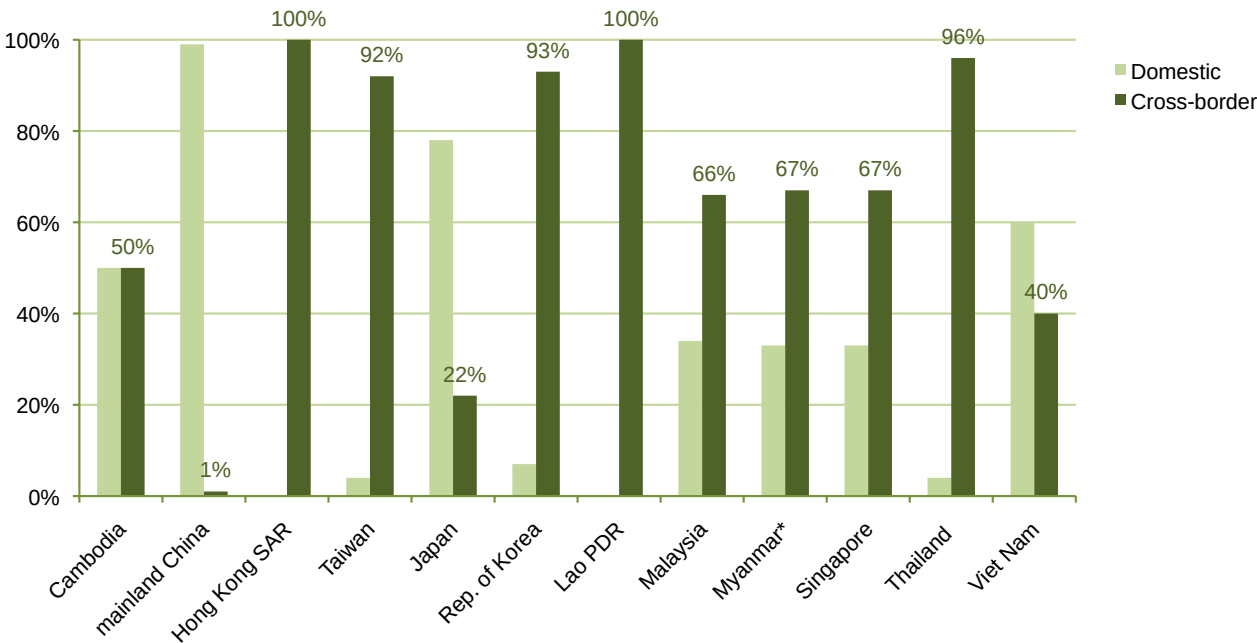
Compared to previous research, current data show some significant changes in product availability in Asia, especially in Singapore and Macao SAR where few to no bear bile products were observed. Surveys in Singapore in 2001 found 75% of shops sold products, meaning that if these results are indicative of overall market trends, there has been a significant reduction in availability (Govind and Ho, 2001). Similarly in 1995, 79% of shops surveyed in Macao SAR had bear bile (Mills et al., 1995), however recent surveys did not find the product available.

Domestic vs. cross-border origin

There were significant differences between the countries/territories in the percentage of products which were domestically sourced versus those claimed to be sourced from cross-border origins (Figure 21). In Cambodia, Hong Kong SAR, the Republic of Korea, Lao PDR, Malaysia, Myanmar, Singapore, Taiwan and Thailand; 50% or more of the products surveyed originated in another country/territory. Products found in China and Japan were mostly domestic with 22% or less reportedly coming from a cross-border source.

Figure 21

Relative proportions of domestically or cross-border-sourced products in TM shops, where product origin was stated. Product origin was unclear in some cases and is not represented in this figure. (*) surveys were conducted in known wildlife markets, not TM shops



Data on product origins were more available in some countries/territories than others; it was most noticeably under-reported from surveys conducted in Japan where the data were not forthcoming from TM shop owners (Table 21). In instances where product origin was stated, almost all (99%) of the products found in China were domestic. This is likely to be because China is able to produce large amounts of bile from legal, commercialized bear farms that operate within the country. These farms are thought to exceed the levels of national annual consumption (Robinson, 2009). Where origin was stated, the majority of bear bile in Taiwan (96%) was reportedly cross-border sourced from mainland China.

Where product origin was stated in Japan, bear bile was also largely domestic (78%), and products are known to enter the market in several ways; by legal and illegal hunting, wildlife control actions and possibly bear parks. Previous research from 1997 indicates that some products made by pharmaceutical companies in Japan used bile sourced from China, Canada, Russia and Nepal (Ishihara, 2005). This is worth noting as products that may be made in Japan and therefore thought to be domestic, may in fact contain bile from outside Japan. This scenario may be applicable to other countries/territories as well.

A majority of the study countries/territories had cross-border-sourced bear bile. One hundred percent of products with stated origins in Hong Kong SAR were purported to be from Japan, however this is surprising given Hong Kong SAR's proximity and relationship with mainland China, where large amounts of bear bile are produced. Similarly, surveys found 100% of products from Lao PDR were cross-border sourced. Previous publications have described Lao PDR as a source country for wild bears, however no domestic products were recently observed even though bear farms are present, perhaps indicating that products from Lao PDR are all exported to other countries (Robinson et al., 2006; MacGregor, 2010)

Table 21

Percent of surveyed TM outlets selling bear bile products of unclear origin

Country/Territory	% of TM outlets selling products of unclear origin
Cambodia	0%
mainland China	13%
Hong Kong SAR	30%
Taiwan	4%
Japan	71%
Republic of Korea	15%
Lao PDR	0%
Malaysia	8%
Myanmar	0%
Singapore	0%
Thailand	3%
Viet Nam	0%

In addition to Lao PDR, Myanmar and Thailand both had large amounts of cross-border products (where product origin was stated), possibly because of the close proximity of these three countries to one another and the existence of well established trade routes and markets that connect individual merchants and trading companies.

Where origin was reported, TM shops in Malaysia had a large proportion (66%) of stock from outside Malaysia. There were significant differences between Peninsular Malaysia and the east Malaysian States of Sabah and Sarawak. The percentage of cross-border-sourced products found in Sabah and Sarawak was only 13%; as a majority of the products observed were domestic Sun Bear gall bladders. TM shops in Peninsular Malaysia, however, had a much larger proportion (57%) of cross-border-sourced products for sale.

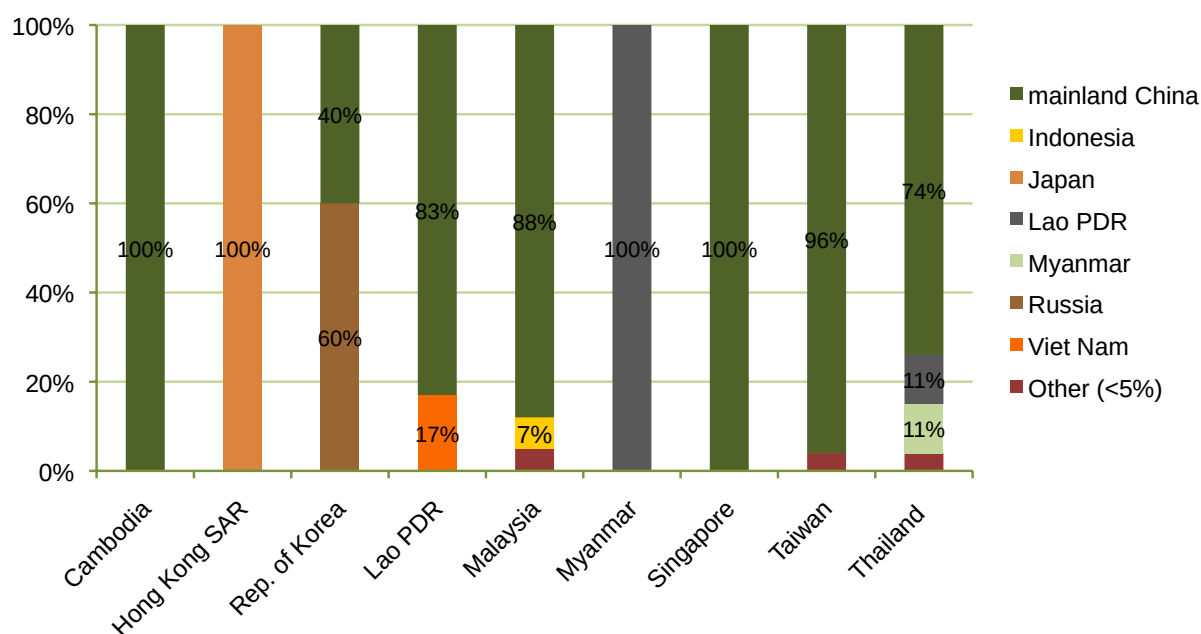
Despite the presence of bear farms in the Republic of Korea, 93% of the products observed with a stated origin were cross-border-sourced from China and Russia. This may be because a higher value seemed to be associated with foreign, wild-sourced products. In the Republic of Korea, gall bladder from China (averaging USD29.60 per gramme) cost less than that from Russia (USD65.62 per gramme), possibly attributed to gall bladder being more readily available from China and/or the likelihood that gall bladder sourced from Russia was wild-caught and therefore deemed to be of a higher quality.

Cross-border-sourced products

Cross-border product origin was analysed for the countries/territories where TM shops maintained stocks of 50% or greater cross-border origin (Figure 22).

Figure 22

Relative percentages of purported product origin for market locations where TM stock was 50% or more cross-border-sourced.



A significant amount of cross-border-sourced products came from mainland China. This was particularly true for Cambodia, Lao PDR, Malaysia, Singapore and Thailand where 70% to 100% of the products for sale were reported to be from mainland China. In the Republic of Korea, a majority of cross-border products (60%) came from Russia, where bears were said to be wild-sourced. One hundred percent of the cross-border-sourced gall bladders found in Myanmar were stated to be from Lao PDR where sourcing from wild bear populations is known to occur. In Malaysia, a small percentage of products (6%) were reportedly from Indonesia. In addition, less than 5% of products were said to be from Thailand, Viet Nam, Nepal and Singapore. Thailand also had small percentages of bear bile from Taiwan.

Overall, these data re-affirm previous research conducted on the trade in bear bile. These studies indicate that bear bile products are widely available in many Asian countries and that a majority of these manufactured products originate from mainland China, despite such trade being in complete violation of CITES trade regulations (Mills et al., 1995; Watkins and Hsieh, 2000; Yi, 2000; Phillips and Wilson, 2002).

Legalities of bear bile trade

Depending on national legislation, domestic bear bile trade can be legal (such as in China and Japan) or illegal (Cambodia, Malaysia, Myanmar, Singapore and Thailand). Regardless of the legality of trade within a country, all cross-border trade without proper import/export permits is an infraction of CITES trade regulation agreements. All of the countries/territories covered in this report are Party to, or subject to CITES.

With the exception of Macao SAR, all of the countries/territories surveyed in this report had an availability of bear bile products with the stated origin of manufacture coming from outside political jurisdictions. A model of illegal cross-border trade is represented in Figure 23 where each arrow represents both illegal export (arrow end) and illegal import (arrow point).

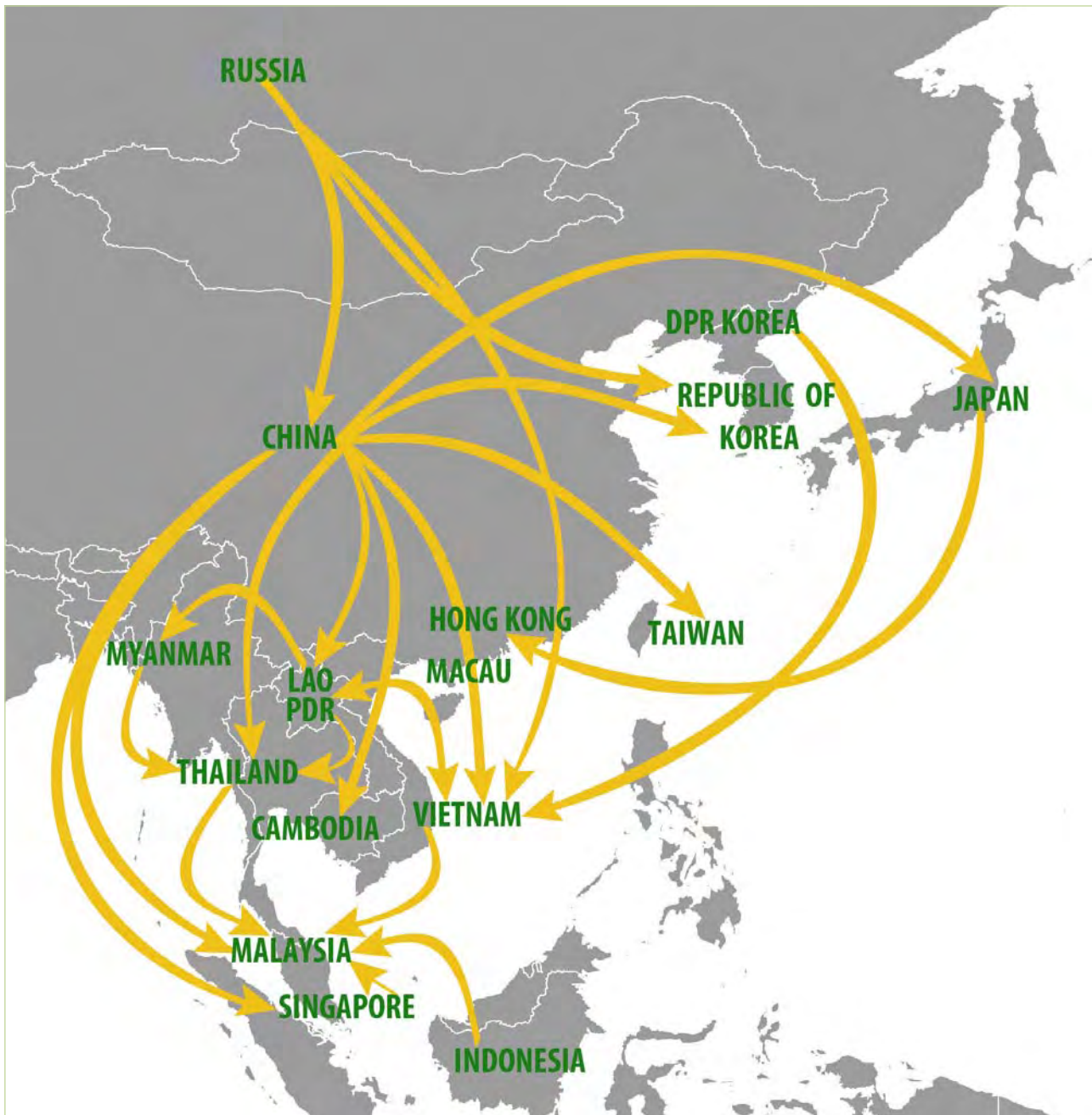
Malaysia imported bear bile from the greatest number of countries: China, Indonesia, Singapore, Thailand and Viet Nam. Thailand and Viet Nam also had imported bear bile from at least four different countries/territories (Figure 23). China imported the least bear bile, but Chinese branded products were traded without CITES documents to most countries/territories: Cambodia, Lao PDR, Japan, the Republic of Korea, Malaysia, Singapore, Taiwan, Thailand and Viet Nam. None of these exports are legal under CITES protocols. No imported products from Cambodia, Hong Kong SAR, the Republic of Korea and Malaysia were observed in other countries.

Another interesting aspect of this analysis is the depiction of Russia as a significant source country for China, the largest exporter, as well as for the Republic of Korea and Viet Nam, two significant consumer countries. The hunting and trade of Brown Bears is legal in Russia; however since 1992 the legal export/import of bears and bear products has required CITES permits. From 2001, the UNEP-WCMC CITES trade database records Brown Bear gall and/or gall bladder(s) were sent to Hong Kong (6 records; over 1223.158 kg), Republic of Korea (4 records; 15.963 kg) and Japan (1 record; 0.048 kg).

In a 1998 study, dealers were reported to come directly from China, Japan and Viet Nam to buy gall bladders in Russia and from there smuggle them out of the country (Chestin, 1998). Another study noted that demand and trade incentive during the mid-1990s was so high that there was a significant amount of counterfeit bear gall bladder in trade, including some from such nefarious sources as human morgues (Chestin and Poyarkov, 1995). The current extent of trade in bear bile products and the proportion which involves counterfeit items is unknown.

Figure 23

Illegal cross-border trade connections based on purported product origins in TRAFFIC surveys of TM outlets, 2010/2011¹.



Map designed by Olivier S. Caillabet.

¹Although not depicted in this map, previous research has indicated that trade occurs from Myanmar to China as well as from Russia to Japan (Chestin, 1998; Shepherd and Nijman, 2008)

Bear farming

Bear farms are known to occur in China, Lao PDR, Myanmar, the Republic of Korea and Viet Nam. There is some argument that bear farms help conserve wild bears by alleviating hunting pressures (Yi, 2000; Haikui and Zhi, 2007). However, this has not been proven conclusively, and there is evidence that farming may in fact be detrimental to the conservation of wild populations. Bears are thought to be consistently sourced from the wild to re-stock farms because of high mortality rates and the absence of captive breeding; as well as because prices for bear gall bladder or bile from wild-caught bears remains higher than for farmed products.

Previous research, as well as the information presented in this report, indicates there is a significant preference for wild bear bile products (Robinson, 2009). If this preference remains high, pressures on wild populations will remain high, regardless of the quantity of farmed bile or UCDA alternatives available. Farms themselves may put direct pressure on wild populations. Many farms reported high mortality rates. As bears die off, stocks need to be replenished in order to maintain profitable levels of bile output. Although captive breeding may occur on some farms, it is likely that the husbandry conditions and practices in many are not conducive to the successful production and rearing of cubs. Farmed bears are often kept as captive individuals, rather than in groups, with little or no space provided for animals to socialise or mate in other areas. In places where captive breeding does not occur, it is likely that farms re-stock from the wild. During the data collection for this report, farms in Lao PDR and Myanmar confirmed to TRAFFIC surveyors that they sourced bears from the wild. Only four of the farms surveyed in Viet Nam stated they had captive breeding programs.

The non-existent or potentially negative impact of ‘farming’ on wild populations has been documented previously for species other than bears. A case study on the use of porcupine farming in Viet Nam as a conservation measure for wild populations found the practice had a negative effect on wild porcupine populations (Brooks et al., 2010). Wild-caught porcupines were consistently preferred over the farmed alternative and the overall increase in availability created a commodity demand for the species.

Recent surveys conducted by TRAFFIC and others indicate the presence of a significant number of bear farms, some of which operate and sell bile illegally. In Viet Nam, many farms continue to sell bear bile to local and foreign buyers despite such commerce being illegal since 2005. Information was obtained on legal bear farms which maintain substantial numbers of bears in the Republic of Korea, however no products from the Republic of Korea were observed in other countries/territories. It is possible that recent survey results are not indicative of the current situation in that country. However, if they are, then these results raise questions about why bear farms still exist in the Republic of Korea. Presence of bear farms was positively correlated with high product prevalence in TM shops and significant amounts of illegally-sourced bile. All countries with bear farms, with the exception of the Republic of Korea, were found to play dual roles as both consumer and producer countries/territories in the bear bile trade. This indicates that bear farms have little to no effect in decreasing the volume of the bear bile trade or the movement of illegal products; and in fact may be used as a cover for illegal cross-border trade.

Enforcement and seizure data

Improving enforcement in order to combat the illegal trade of bear bile products in Asia is critical. Even with good national legislation in place, many factors such as corruption, poor legislation and ineffective enforcement often allow illegal wildlife trade to occur. Despite the potential effects of these factors, enforcement action specifically involving gall bladder and bear bile product seizures has occurred in many of the study areas covered in this report. Due to the limited information available on seizures from 2000 to 2010, (totalling 506), it was not possible to draw firm conclusions about trade levels and country/territory-specific enforcement efforts. However, some findings do reflect enforcement and seizure trends.

Seizure sizes varied dramatically, ranging from large, such as the 16 gall bladders seized in Ba Dinh district, Viet Nam in 2009 (Anon., 2009), to small, such as the 33 capsules of bear bile seized in the UK en route from China in 2000 (HM Customs and Exercise CITES Seizures Report, 2000). From the limited seizure data available, it is clear that significant amounts of unspecified bear bile products in all forms have been seized since 2000 (Table 21). Although these data are likely to represent only a small proportion of total trade, they clearly illustrate a high volume of bear bile trade both from and through Asia.

Table 22

**Bear bile gall bladders and bile products
seized from 2000 to 2010**

Seized item	Quantity (inc. WCMC)
Whole gall bladder	143 (9)+
Gall bladder (gram)	4456 (40)+
Bile (gram)	7044 (1870)+
Powder (gram)	3812+
Capsules	122+
Unspecified products	10 100+

Amount in () denotes stated amounts in the
UNEP-WCMC CITES trade database



Whole gall bladder and pills purported to be from bears
© C. Yeong/TRAFFIC Southeast Asia

Of the total seizure cases, 81% (409 of 506) had a stated place of origin. Of those with a stated origin, the estimated majority (98%) were from China. A side by side comparison of the total information gathered, versus what was available from the UNEP-WCMC CITES trade database is given to 1) show where any overlap in information gathering may have occurred and 2) highlight that the UNEP-WCMC data are often incomplete. This is illustrated particularly in the case of Japan (Table 22). There was a substantially larger amount of seizure data available for Japan as the trade in bear gall bladder was the subject of a recent TRAFFIC East Asia report (Ishihara, 2005). The significantly larger figure for this country, compared to the other countries, reflects a more thorough documentation of seizures up to 2004 in Japan. It is likely that numbers of seizures reported by other countries are under-reported or undocumented. Table 22 should be seen as an indication of seizure levels but also highlights the incompleteness of seizure data collection and reporting, especially by the Parties to the Secretariat for the UNEP-WCMC CITES trade database.

Table 23

Asiatic Black Bear, Sun Bear and Brown Bear seizures by country/territory from 2000 to 2010

Country/Territory	Total # of In-Country Seizures	Total # of WCMC Reported Seizures	# of Seizures Where Products Originated From	# Country-Origin Information From WCMC
Cambodia	2	-	-	-
China	2	-	401 ³	-
India	1	-	1	-
Germany	1	1	-	-
Hong Kong SAR	13	-	1	-
Japan ²	403	-	-	-
Lao PDR	-	-	1	1
Malaysia	1 ¹	-	-	-
Myanmar	1	-	2	-
New Zealand	3	3	-	-
Singapore	38	-	-	-
Taiwan	7	-	-	-
Thailand	-	-	2	-
United Kingdom	15	-	-	-
United States	11	10	-	-
Viet Nam	8	-	1	-

¹ Malaysia's single seizure entry was a campaign where a total of 43 gall bladders from several shops were seized.

² Seizure data for Japan was much more complete as an extensive report compiled in 2004 supplemented other collected seizure data (Ishihara, 2005).

³ Ishihara (2005) states 608 of 647 (94%) seizures 1995-2004, were of products that originated in China. As this report focuses on seizures since 2000, the same percentage (94%) has been applied to the total since 2000 (403) to generate an approximate number (379).

It is important to note that, although beyond the scope of this research, the trade in bears, their parts and derivatives extends far beyond the trade in bear bile. Illegal trade in bear parts and derivatives other than gall and bile is common in Asia and known to occur on a large scale (Mills and Servheen, 1991; Shepherd and Nijman, 2008; Shepherd and Shepherd, 2010). For example in June 2009, 25 hind legs and 22 paws from Sun Bears, presumably for the wild meat trade, were seized in Kuantan, Malaysia (Shepherd and Shepherd, 2010). In Cambodia from 2001 to 2010, 108 live bears, seven dead bears and 23 skins were seized (Wildlife Alliance, 2011).

In addition to examining information on reported seizures in the UNEP-WCMC CITES trade database, TRAFFIC examined all bear trade reported regardless of its stated purpose, source and types of specimens and units. In these records there were no recorded exports for Macao SAR, South Korea or Taiwan. Additionally, there were no recorded imports for Cambodia, Macao SAR, Malaysia, Myanmar, South Korea and Taiwan. Trade records for all three species from 2000 to 2009 totalled a wild-sourced sum of 98 kg of gall and 1240 kg of gall bladders, all from the Asiatic Black Bear and 72 live bears (49 Asiatic Black Bear, 18 Brown Bear, five Sun Bear). It is important to emphasize that these totals are miniscule compared to the total trade of bear bile products and bear derivatives.

CONCLUSION

Illegal harvesting and trade of wild bears, their parts and derivatives, continues across Asia on a large scale, often openly in violation of national laws and CITES protocols. Many of the countries/territories were observed to play a significant role as consumer markets in the bear bile trade. Availability of products was observed to be highest in Myanmar, Hong Kong SAR, Viet Nam and China; where more than 60% of shops sold bear bile products. Consumer demand was also observed to be high in a large percentage of shops in Malaysia, Republic of Korea, Thailand and Taiwan where 40% or more of shops surveyed sold bear bile products. Although shops were also observed to sell bear bile products in Cambodia, Japan, Lao PDR, and Singapore; consumer demand appears to be less as bear bile was observed less frequently in comparison to that found in other countries/territories.

Many of the surveyed countries/territories also produced bear bile. China appeared to be the largest producer, as seven countries/territories were observed selling significant amounts of products purported to originate from China. As Chinese products are widely available, it would appear bear products are being smuggled despite regulatory and law enforcement efforts. In Lao PDR, Myanmar and Thailand, survey data indicated the existence of significant cross-border trade. TRAFFIC survey data show that outside Viet Nam, products of purported Vietnamese origin were only observed in Malaysia. Nonetheless, it should be noted that Vietnamese products have been observed in other countries during previous surveys conducted by Animals Asia (Jill Robinson, Animals Asia, in litt. to TRAFFIC Southeast Asia, April 2011). Although this current survey results do not confirm Viet Nam as a major producer of bear bile products, previous research indicates that Viet Nam does play a producer role in the international bear bile trade with some domestic TM outlets specifically targeting foreign tourists.

Clearly, CITES Parties are failing to curtail illegal bear bile trade and, ultimately, to protect bears from exploitation. As all bear species are protected to varying degrees under CITES, there is an obvious need for better follow-through on CITES commitments. Unbridled illegal trade in bears and bear parts continues to undermine what could be, and should be, the world's most powerful tool to regulate cross-border wildlife trade. As the Convention is legally binding, it must be supported by complementary national laws; CITES Parties are required to have adequate legislation to effectively implement and enforce CITES regulations. However many countries have yet to follow through on this obligation. The true value of CITES ultimately rests on the co-operation of the Parties, which is vital to the protection and conservation of threatened species (Cheung, 1995). Inadequate, or in some cases near total absence of enforcement, allows illegal harvest and trade to continue as a leading threat to the survival of Asian bears. Ultimately, whether CITES is effective in eliminating the illicit trade in Appendix I-listed species depends on the will of the Parties to make compliance with the Convention a priority (Cheung, 1995).

In addition to the implementation and enforcement of CITES to control international trade, enforcement of domestic laws protecting bears at national levels is absolutely vital. The findings of this report suggest that national laws are not being enforced to their full extent and that efforts to close down the illegal trade in bears, bear parts and derivatives are sorely inadequate. Furthermore, many of the products observed during this study were wild-sourced, and therefore refute arguments about the efficacy of bear farming practices as a conservation measure to alleviate pressure on wild bear populations. To address the large scale illegal trade in bear bile products and to aid in bear conservation efforts, TRAFFIC makes the following recommendations:

RECOMMENDATIONS

- TM outlets selling illegal bear parts and derivatives need to be penalized or closed down and illegal products confiscated. Individuals caught collecting, selling, buying transporting or keeping illegal bear parts and derivatives, in violation of national laws or CITES, must be prosecuted. Penalties should be severe enough to serve as a deterrent to individuals in the future.
- Better enforcement could appropriately be undertaken not only by CITES Authorities, police and Customs authorities who are already empowered by national government to initiate such efforts, but also by collaborative inter-governmental efforts, including through the Association of Southeast Asian Nations Wildlife Enforcement Network (ASEAN-WEN) and the partner members of the International Consortium on Combating Wildlife Crime (ICWC – which links the CITES Secretariat, INTERPOL, the United Nations Office on Drugs and Crime, the World Customs Organization and the World Bank).
- Illegal bear farms should be closed down permanently by relevant authorities in each country. Facilities where bears cannot be immediately removed should be closely monitored by a combination of government, international and civil society specialists to ensure harvesting of bile does not continue, new bears are not acquired and bear farms are not a source of illegal trade. Violations should be punished to the full extent of the law.
- Legal bear farms should be regularly monitored by designated authorities who monitor the wildlife trade to ensure they are adhering to regulations. Where violations occur; bear farm owners should be punished to the full extent of the law.
- The CITES Secretariat/Standing Committee and/or individual Parties to CITES should take steps to ensure that countries abide by the text of the Convention in regards to the international commercial trade in bears, their parts and derivatives. Findings of this report should be raised by TRAFFIC and the IUCN SSC Bear Specialist Group at the next meeting of the Conference of the Parties (CoP 16, Bangkok, Thailand, 2013).
- Campaigns by local and international civil society actors in collaboration with relevant government agencies to tackle illegal consumption of bear bile products should be carried out in all consumer countries. Campaigns should also focus on raising awareness amongst enforcement agencies so as to increase motivation and capacity to tackle the illegal trade in bears, their parts and derivatives. Campaigns should also be carried out in bear range States to raise the profile of bears and the need to protect them. Local communities should be encouraged not only to protect bears but also to work with enforcement agencies to take action against bear poachers and traders.
- All countries experiencing illegal wildlife trade should ensure anonymous wildlife crime hotlines are in place and known to the public. The public should be encouraged to report all instances of illegal hunting and trade of bears and bear products.
- In the interest of national accountability, TRAFFIC suggests that all cases pertaining to bears be tracked and reported internationally via a centralized database. Such reporting of seizures, arrests and prosecutions is done for elephants via the Elephant Trade Information System (ETIS) and moves are afoot to monitor Tiger cases in a similar fashion. A system to manage and maintain a central database for bear-related seizures in order to monitor trends and analyse bear trade should take into account the lessons learned from similar databases established for other species. Information generated from this database should be provided in a timely manner to relevant enforcement agencies.

Country-specific recommendations

- Current domestic legislation in China should be amended to up-list the Asiatic Black Bear from Category 2 to Category 1, as the species is considered Vulnerable with a globally declining population trend (IUCN, 2011).
- In mainland China, close all unlicensed bear farms as well as those farms which have licences but do not adhere to current regulations. In addition, farm owners who contravene CITES regulations by illegally exporting bile should have their bear farm licences revoked and be prosecuted to the fullest extent of the law.
- As stated in Ishihara (2005), it is recommended that Japanese legislation be amended to include Japanese domestic bears and bear gall bladders under the Law for the Conservation of Endangered Species of Wild Fauna and Flora.
- The Republic of Korea should end the practice of bear farming in order to remove any confusion on the legality of products in the country and to eliminate threats to wild bears.
- In Lao PDR and Myanmar, steps need to be taken to assist both countries to achieve Category 1 CITES implementing legislation status. In absence of Category 1 status, punitive measures should be taken to mitigate illegal trade in and from these countries.
- In Lao PDR, the trade of parts and derivatives from second generation captive-bred bears is permitted under the Wildlife and Aquatic Law (2007) with proper approval. However as bears are protected in the country, obtaining parent stock from the wild is illegal. As it seems to be highly unlikely that bears are being bred on farms and in the absence of monitoring systems to accurately determine whether the animals derive from wild or captive sources; farms should be closed down to avoid abuse of this loophole. In addition, legislation should be amended to close these loopholes and to more fully protect wildlife.
- In Malaysia, authorities should investigate shops and manufacturers selling and producing both real and purported bear bile medicines and prosecute them accordingly.
- In Myanmar fines for violation of the Protection of Wild Life and Wild Plants and Conservation of Natural Areas Law (1994) should be increased to deter poaching and trade.
- In Myanmar, the Asiatic Black Bear should be up-listed to Totally Protected on the list of Wildlife Protected from the Forest Department.
- Research on the role Russia plays in the bear bile trade should be conducted as the results from these recent surveys indicate that Russia is an important source of bear gall bladders in China, Republic of Korea and Viet Nam and the proportion of illegal trade is unknown.
- In Viet Nam, authorities should enforce national legislation; bear farms should be closed down in Viet Nam to prevent violations of national legislation and CITES commitments as there is evidence that these farms illegally extract and sell bear bile to local and foreign consumers.
- Legislation in Viet Nam should be amended and clarified: 1) to cover the import, export and transit of species which are CITES-listed but of domestic or unclear origin as these are not included under the current law, 2) to cover bear cubs born in captivity under the Regulation of Bear Management Decision 95/2008/QĐ-BNN (2008), and 3) to clearly define what constitutes the ‘possession’ or ‘keeping’ of bears.

REFERENCES

- Allen, D. (2009). China in Laos: Counting the cost of progress. Asia Times Online. http://www.atimes.com/atimes/Southeast_Asia/KI19Ae01.html. Viewed 12 November 2010.
- Animals Asia (2011). Information of Bear Farming Industry in China. Animals Asia Foundation report, China.
- Animals Asia (2011). Statement from Animals Asia: Public listing application by bear farm owners. <http://www.animalsasia.org/index.php?UID=P7VNRMKMQU0>. Viewed 18 February 2011.
- Animals Asia (2010). 20 Chinese provinces now bear-farm free after Animals Asia's dramatic rescue. <http://www.animalsasia.org/index.php?UID=P4NVQ4Q3QVM>. Viewed 14 July 2010.
- Anon. (2001). HM Customs and Excise CITES seizure reports 1999-2001. Defra, London, UK. <http://www.defra.gov.uk/wildlife-pets/wildlife/trade-crime/documents/custom-seizure1999-2001.pdf>. Viewed 17 September 2010.
- Anon. (2009). TRAFFIC Bulletin 22(2):31-82.
- Azfar, O., Lee, Y., and Swamy, A. (2001). The causes and consequences of corruption. *Annals of the American Academy of Political and Social Science* 573:42-56.
- Brooks, E., Robertson, S. and Bell, D. (2010). The conservation impact of commercial wildlife farming of porcupines in Vietnam. *Biological Conservation* 143(11):2808-2814.
- Bulte, E.H. and Damania, R. (2005). An economic assessment of wildlife farming and conservation. *Conservation Biology* 19:1222-1233.
- Burbach, S. (2009). The Asiatic Black Bear Caged For Its Bile. *Traversing the Orient Magazine*. <http://www.ttoasia.net/the-asiatic-black-bear-caged-for-its-bile/>. Viewed 5 October.
- Busch, E. (2008). Bear bile...fact and science. PowerPoint presentation, New Orleans, USA.
- Chen, YM., Wu, S., and Bhiksu, WH. (2002). A summary of the findings of: A Study on the Trade in Bear Products in Taiwan. Environment & Animal Society of Taiwan (EAST) In: Phillips, T. and P. (2002) The bear bile business: the global trade in bear products from China to Asia and beyond. WSPA Report, London, UK.
- Chestin, I. (1998). Trade in Brown Bear Gall Bladders in Russia. *Ursus* 10:161-166.
- Chestin, I. and Poyarkov, A.D. (1995). Preliminary data on the illegal wildlife trade in Russia. In: Bissonette, J.A. and Krausman, P.R. Integrating people and wildlife for a sustainable future. Proceedings of the First International Wildlife Management Congress. The Wildlife Society of Bethesda, Md.
- Cheung, J. (1995). Implementation and enforcement of CITES: An assessment of tiger and rhinoceros conservation policy in Asia. *Pacific Rim Law and Policy Journal* 5(1):125-159.
- CITES (1997). CITES. 10th meeting of the Conference of the Parties Conservation of and trade in bears. Conf. 10.8 (Rev. CoP 14). <http://www.cites.org/eng/res/10/10-08R14.shtml>. Viewed 19 September 2010.
- CITES (2002) CITES. Parties Decisions of the Conference to the Parties to CITES in effect after the 12th meeting. <http://www.cites.org/eng/dec/valid12/index.shtml>. Viewed 19 September 2010.
- CITES (2004). CITES. 50th meeting of the Standing Committee Interpretation and Implementation of the Convention: Bears. Summary Record. SC50 Doc. 17. <http://www.cites.org/eng/com/sc/50/index.shtml>. Viewed 19 September 2010.
- CITES (2010). Appendices I, II and III: Valid from 14 October 2010. <http://www.cites.org/eng/app/index.shtml>. Viewed

19 October 2010.

Cochrane, G. (2003). Problems associated with the 'Free-dripping Fistula Technique' as a method of bile extraction from Asiatic Black Bear. Animals Asia report, Hong Kong SAR.

Corlett, T. (2007). The impact of hunting on the Mammalian Fauna of Tropical Asia Forests. *Biotropica Journal* 39(3): 292-303.

Dutton, A. (2011). 'Examining when and why farming might sate demand for wildlife products' DPhil thesis, University of Oxford. Oxford, United Kingdom.

ENV (2008). QuangNinh Bear Investigation Reveals Flagrant Disregard for the Law. *ENV Wildlife Crime Bulletin*, July 2008.

ENV (2010). *Bear Tourism in QuangNinh* - KBS film. ENV Channel. www.youtube.com/user/EducationforNatureVN#p/a/u/0/wSVKNjEE9PI. Viewed 15 December 2010.

Frances, K. (2009). *Only 16 bears remain in the Korean wild, 1400 bears live in agony on bear bile farms*. <http://bearnecessitykorea.com>. Viewed 11 January 2011.

Fan, Z. (2000). Bear Farming, Asian Bear Conservation, and the Role of IBA. *International Bear News* 9(3): 5-7.

Fan, ZY. And Song, L. (2003). *The problem analysis of Chinese bear breeding development. Strategy study on the conservation of endangered wild species as medicine in China*. Chinese Science and Technology Information Institute, Beijing.

Feng, Y., Siu, K., Wang, N., Ming Ng, K., Wah Tsao, S. Nagamatsu, T., Tong, Y. (2009). Bear Bile: dilemma of traditional medicinal use and animal protection. *Journal of Ethnobiology and Ethnomedicine* 5(2)

Foster, P. (2011). *Chinese bear-bile backlash*. The Telegraph. <http://www.telegraph.co.uk/earth/wildlife/8325679/Chinese-bear-bile-backlash.html>. Viewed 18 February 2011.

Fredriksson, G., Steinmetz, R., Wong, S. And Garshelis, D.L. (2008). In: IUCN 2010, IUCN Red List of Threatened Species Version 2010.4 www.iucnredlist.org. Viewed 12 February 2011.

Francis, K. (2010). *Jirisan Restoration Update- 19 bears in the wild*. <http://bearnecessitykorea.com/news/jirisan-restoration-update/>. Viewed 12 February.

Garshelis, D. (2002). Misconceptions, ironies, and uncertainties regarding trends in bear populations. *Ursus* 13: 321-334.

Garshelis, D.L. & Steinmetz, R. (2005). Issues and conservation priorities from the Asiatic black bear expert team. *International Bear News* 14(2):9-12.

Garshelis, D.L. & Steinmetz, R. (2008). *Ursus thibetanus*. In: IUCN 2010. IUCN Red List of Threatened Species Version 2010.4. www.iucnredlist.org. Viewed 3 November 2010.

Ghosh, N. (2010). *North of Eden*. The Straits Times Blogs. <http://www.blog.straitstimes.com/2010/20/1/north-of-edén>. Viewed 9 November 2010.

Govind, V. and Ho, S. (2001). *The trade in Bear gall bladder and bile products in Singapore*. ACRES, Singapore.

Green Korea United (2007). *The Survey Report on the Actual Condition of Korean Bear Farming*. Green Korea United Report, Republic of Korea.

Hagey, L.R., Crombie, D.L., Espinosa, E., Carey, M.C., Igimi, H. and Hofmann, A.F. (1993). Ursodeoxycholic acid in the

Ursidae: biliary bile acids of bears, pandas, and related carnivores. *Journal of Lipid Research* 34:1911-1917.

Haikui, H. and Zhi, L. (2007). Bear farming and bear conservation in China. In: Williamson, D. (2007) *4th International Symposium on the Trade in Bear Parts*. TRAFFIC East Asia, Japan.

Han, Sang-Hoon. (2006). The status of bears and restoration projects on the Korean Peninsula. In: Japan Bear Network (comp.) (2006). *Understanding Asian bears to secure their future*. Japan Bear Network, Ibaraki, Japan.

Hazumi, T. (1999). Status and management of the Asiatic Black Bear in Japan. In: Servheen, C., Herrero, S. and Peyton, B. (compilers) (1999). *Bears. Status, survey and conservation action plan*. IUCN/SSC Bear and Polar Bear Specialist Groups. IUCN, Gland, Switzerland and Cambridge, UK. pp207-211.

Holden, J. (1998). *By Hook or by Crook: A reference manual on illegal wildlife trade and prosecutions in the United Kingdom*. The Royal Society for the Protection of Birds. UK.

Huang, H. And Li, Z. (2007). Bear farming and bear conservation in China. In: Williamson, D. (2007) *4th International Symposium on the Trade in Bear Parts*. TRAFFIC East Asia, Japan.

Hunt, M. (2009). *The illegal trade in live bears throughout Indochina: options for handling the results of increased law enforcement efforts*. Free The Bears, Southeast Asia.

Ishihara, A. (2005). *Bear gall bladder trade in Japan*. TRAFFIC East Asia, Japan

Ishihara, A. (2006). Bear gall bladder use and trade in Japan. In: Japan Bear Network (comp.) (2006). *Understanding Asian bears to secure their future*. Japan Bear Network, Ibaraki, Japan. p 135-137.

Ishii, N. (2007). Management of bears and utilization of bear bile in Japan. In: Williamson, D. (2007) *4th International Symposium on the Trade in Bear Parts*. TRAFFIC East Asia, Japan.

IUCN (2010). *IUCN Red List of Threatened Species Version 2010*. 1.<http://www.iucnredlist.org>. Viewed 19 October 2010.

JWCS (2002). *Japan's Illegal Trade in Bear Products a threat to Bears worldwide*. Japan Wildlife Conservation Society, Japan.

Kang, S. and Phipps, M.J. (2003). *A Question of Attitude: South Korea's Traditional Medicine Practitioners and Wildlife Conservation*. TRAFFIC East Asia, Hong Kong SAR.

Kemf, E., Wilson, A. and Servheen, C. (1999). *Wanted Alive! Bears in the Wild – A WWF Species Status Report*. World Wide Fund for Nature, Gland, Switzerland.

Kusakari, H. and Mano, T. (2006). *Conservation management laws and system p. 34*. In: *Understanding Asian bears to secure their future*. Japan Bear Network, Ibaraki, Japan.

Li, P. J. (2004). China's Bear Farming and Long-Term Solutions. *Journal of applied Animal Welfare Science* 7(1): 71–80.

Lau, Y. (2003). *The suffering on bear bile farms*. Mayway https://www.mayway.com/store/herbal_news_farms.jsp. Viewed 20 September 2010.

Loeffler, K., Robinson, J. and Cochrane, G. (2007). *Compromised health and welfare of bears in China's bear bile farming industry, with special reference to the free-dripping bile extraction technique*. Animals Asia Report, Hong Kong SAR.

Loeffler, IK., Robinson, J. and Cochrane, G. (2009). Compromised health and welfare of bears farmed for bile in China. *Animal Welfare* 18:225-235.

Macartney, J. (2006). *Siphoning bear bile for medicine is painless, says China*. The Times. <http://www.timesonline.co.uk/>

tol/news/world/asia/article1081920.ece. Viewed 13 March 2011.

Mano, T. (ed) (2006). The status of Brown Bears in Japan. In: Japan Bear Network (comp.) (2006). *Understanding Asian bears to secure their future*. Japan Bear Network, Ibaraki, Japan. Pp 111-121.

Mano, T. and Ishii, N. (2008). Bear gall bladder trade issues and a framework for bear management in Japan. *Ursus* 19(2): 122-129.

Mass, B. (2000). *The veterinary, behavioural and welfare implications of bear farming in Asia*. WSPA Report, United Kingdom.

McLellan, B.N., Servheen, C. & Huber, D. (2008). *Ursus arctos*. In: IUCN 2010. IUCN Red List of Threatened Species. Version 2010.4. www.iucnredlist.org. Viewed on 04 May 2011.

Mills, J., Chan, S. and Ishihara, A. (1995). *The Bear Facts: The East Asian Market for Bear Gall Bladder*. A TRAFFIC Network Report. TRAFFIC East Asia.

Mills, J. and Servheen, C. (1991). *The Asian Trade in Bears and Bear Parts*. World Wildlife Fund, USA.

Mills, J. and Servheen, C. (1994). *The Asian Trade in Bears and Bear Parts: Impacts and Conservation Recommendations*. Int. Conf. Bear Res. and Manage. 9(1):161-167.

Ministry of Environment, Republic of Korea (2011). The Republic of Korea bear farm data. Requested from the Ministry of Environment via online inquiry. Viewed 3 February 2011.

Ministry of Environment Republic of Korea (2008). *Endangered Wild Animals and Plants*. http://eng.me.go.kr/content.do?method=moveContent&menuCode=pol_nat_pol_wil_endangered. Viewed on 11 January 2011.

Moll, J. (2001). Hunting culture and the value of a bear in Hokkaido, Japan. p. 127-133. In: Williamson, D.F. and Phipps, M.J., editors. *Proceedings of the third international symposium on the trade in bear parts*. TRAFFIC East Asia, Hong Kong SAR.

Nea, C. and Nong, D. (2006). The conservation of bears in Cambodia. In: Japan Bear Network (comp.) (2006). *Understanding Asian bears to secure their future*. Japan Bear Network, Ibaraki, Japan. 145pp.

Ng, L. and Tan, C. (2006). An investigation into the illegal trade in bear products in Singapore. ACRES. Singapore.

Nguyen, X.D. (2007). Bear parts trade in Vietnam and measures for its control. In: Williamson, D. (2007) *4th International Symposium on the Trade in Bear Parts*. TRAFFIC East Asia, Japan.

Nguyen, X.D. (2006). *The current status and conservation of bears in Vietnam*. In: Japan Bear Network (Comp.). *Understanding Asian Bears to secure their future*. Japan Bear network, Ibaraki, Japan, p. 61-66.

Nobou, I. (2007). Management of bears and utilization of bear bile in Japan. In: Williamson, D. (ed.) (2007) *Proceedings of the Fourth International Symposium on Trade of Bear Parts*. TRAFFIC East Asia-Japan, Tokyo.)

Nowell, K. (2000). *Far From a Cure: The Tiger Trade Revisited*. TRAFFIC Southeast Asia, Malaysia

Nuwer, R. (2010). *Porcupines Expose Pitfalls of Wildlife Farming*. Scienceline. <http://www.scienceline.org/2010/12/porcupines-expose-pitfalls-of-wildlife-farming/>. Viewed on 13 January 2011.

Oswell, A. (2010). *The big cat trade in Myanmar and Thailand*. TRAFFIC Southeast Asia, Malaysia.

Peppin, L., McEwing, R., Webster, S., Rogers, A., Nicholls, D. and Ogden, R. (2008). Development of a field test for the detection of illegal bear products. *Endangered Species Research* 9: 263-270.

- Pereira, D., Loh, R., and Bjorkenstam Bonfiglio, M. (2002). The Bear Gall Bladder And Bear Bile Trade In Traditional Chinese Medicine Shops In Malaysia. In: Phillips, T. and Wilson, P. (2002). *The bear bile business: the global trade in bear products from China to Asia and beyond*. WSPA Report, London, UK.
- Phillips, T. and Wilson, P. (2002). *The bear bile business: the global trade in bear products from China to Asia and beyond*. WSPA Report, London, UK.
- Richards, N. And Wang, Z. (2006). A bitter pill. *Journal of Chinese Medicine* 82:49-51.
- Robert, A.M. and Perry, N. (2000). Throwing Caution to the Wind: The Global Bear Parts Trade. *Animal Law* 6:129-150.
- Robinson, J. (2009). *Healing without harm: working to replace the use of animals in traditional Chinese medicine*. http://www.animalsasia.org/images/en/download/PositionPaper-TCM_26Mar09.pdf. Viewed 11 March.
- Robinson, J., Cochrane, G. and Loeffler, K. (2007). Discussion regarding the impacts of bear bile farming on wild bears in China and Vietnam. In: Williamson, D. (2007) *4th International Symposium on the Trade in Bear Parts*. TRAFFIC East Asia, Japan.
- Rosen, G.E. and Smith, K.F. (2010). Summarizing the Evidence on the International Trade in Illegal Wildlife. *Ecohealth* 7: 24-32.
- Shelton, T. (2008). *Bear trade thrives despite efforts to end smuggling*. Phnom Penh Post. <http://www.wildlife1.org/illegal-bear-trade.php>. Viewed 18 January 2011.
- Shepherd, C. (2007). Bear trade in Southeast Asia: The status of protection for Southeast Asia's bears. In: Williamson, D. (ed.) (2007) *Proceedings of the Fourth International Symposium on Trade of Bear Parts*. TRAFFIC East Asia-Japan, Tokyo.
- Shepherd, C. R. and Nijman, V. (2008). *The wild cat trade in Myanmar*. TRAFFIC Southeast Asia, Petaling Jaya, Malaysia.
- Shepherd, C. and Shepherd, L. (2010). The Poaching and Trade of Malayan Sun Bears in Peninsular Malaysia. *TRAFFIC Bulletin* 23(1): 49-52.
- Shepherd, C. and Nijman, V. (2008). The trade in bear parts from Myanmar: an illustration of the ineffectiveness of enforcement on international wildlife trade regulations. *Biodiversity Conservation* 17:35-42.
- Smith, R. J. and Walpole, M.J. (2005). Should conservationists pay more attention to corruption? *Oryx* 39(3):251-256.
- Sodhi, N.S., Koh L.P., Brook P.W., Ng P.K.L. (2004). South East Asia Biodiversity: an impending disaster. *Trends in Ecology & Evolution* 19:654-660.
- Still, J. (2003). Use of animal products in traditional Chinese medicines: environmental impacts and health hazards. *Complementary Therapies in Medicine* 11:118-122.
- Suon, P. (1999). Trade in bears and bear parts in Cambodia. In: In: Williamson, D.F. and Phipps, M.J. (eds) (1999). *International symposium on the trade in bear parts*. TRAFFIC East Asia, Republic of Korea. Pp. 68-72.
- Sudworth, J. (2010). *S Korea Activists use G20 to highlight bear farms*. BBC News Asia-Pacific. <http://www.bbc.co.uk/news/world-asia-pacific-11705543>. Viewed 29 November 2010.
- Togawa, K. and Sakamoto, M. (2002). *Japan's illegal trade in bear products: A threat to bears worldwide*. Japan Wildlife Conservation Society (JWCS), Japan.
- Tuoiitrenews.vn (2010). *Man caught smuggling bear paws at HCMC airport*. <http://www.tuoiitrenews.vn/cmmlink/tuoiitrenews/society/man-caught-smuggling-bear-paws-at-hcmc-airport-1.13089>. Viewed 15 October 2010.

- Vu, Quyen Thi (2010). *An analysis of attitudes and bear bile use in Vietnam*. Education for Nature – Vietnam (ENV), Hanoi.
- Wang, F., Ma, Y. and Wang X. (1994). *On the Historical Change of Bear Resources in North China*. Third East Asiatic Bear Conference.
- Watkins, V. and Hseih, Y. (2000). *Chinese Bear Farming*. World Society for the Protection of Animals. London, UK.
- Wijnstekers, W. (2005). *The Evolution of CITES: A reference to the Convention on International Trade in Endangered Species of Wild Fauna and Flora*. CITES Secretariat. Geneva, Switzerland.
- Williamson, D. (2007). 4th International Symposium on the Trade in Bear Parts. TRAFFIC East Asia, Japan.
- WSPA (2005). *Finding Herbal Alternatives to bear bile*. WSPA Report. Seattle, WA.
- WSPA (2010). *Help end bear farming in Asia*. www.endbearfarming.org/en. Viewed 29 November 2010.
- WSPA (2011). *WSPA Partner provokes Vietnamese crackdown on bear bile tourism*. www.wspa-international.org/latestnews/2011/vietnamese-crackdown-bear-bile-tourism.aspx. Viewed 11 April 2011.
- Yi, H. (2000). *From Cage to Consumer: An Investigation into the illegal sale of Chinese bear bile and bear gall products in North America*. WSPA, North America.
- Zhu, Y.P. and Woerdenbag, J. (1995). Traditional Chinese herbal medicine. *Pharmacy World & Science* 17(4):103-112.

TRAFFIC, the wildlife trade monitoring network, works to ensure that trade in wild plants and animals is not a threat to the conservation of nature.

For further information contact:

The Director

TRAFFIC Southeast Asia

Unit 3-2, 1st Floor

Jalan SS 23/11, Taman SEA

Petaling Jaya, Selangor

Malaysia

Telephone: (603) 7880 3940

Fax: (603) 7882 0171

Email: tsea@po.jaring.my

The Executive Director

TRAFFIC International

219a Huntington Road

Cambridge CB3 0DL

United Kingdom

Telephone: (44) 1223 277427

Fax: (44) 1223 277237

Email: traffic@traffic.org



ISBN 978-983-3393-33-6

