

A photograph of a tiger and its cubs on a dirt mound. The tiger is in the center, looking to the left. Several cubs are around it, some looking towards the camera. The background is a dry, wooded area.

THE LION'S SHARE

South Africa's trade exacerbates demand for tiger parts and derivatives

A photograph of a pride of lions on a dirt mound. A male lion with a large mane is in the center, looking to the left. Several lionesses and cubs are around it, some looking towards the camera. The background is a dry, wooded area.

eia
environmental
investigation
agency

© Environmental Investigation Agency July 2017

This report was produced by
the Environmental Investigation Agency (EIA).

All images are © EIA unless otherwise stated.

Report design: www.designsolutions.me.uk



ENVIRONMENTAL INVESTIGATION AGENCY (EIA)

62/63 Upper Street, London N1 0NY, UK

Tel: +44 (0) 20 7354 7960

email: ukinfo@eia-international.org

www.eia-international.org

EIA US

P.O.Box 53343

Washington DC 20009 USA

Tel: +1 202 483 6621

Fax: +202 986 8626

email: usinfo@eia-international.org

www.eia-global.org

COVER IMAGES:

© www.tigersintheforest.co.uk and EIA

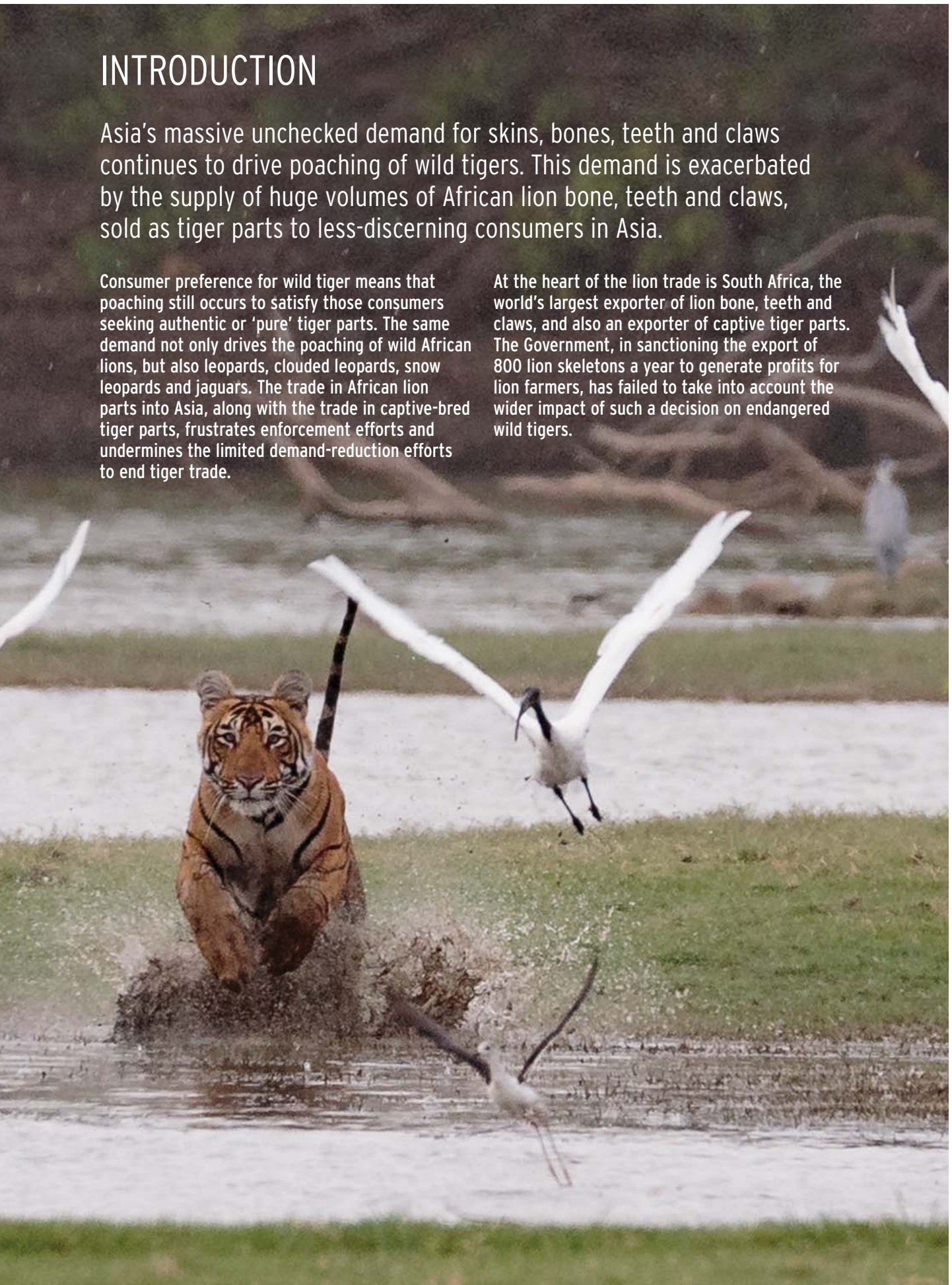


INTRODUCTION

Asia's massive unchecked demand for skins, bones, teeth and claws continues to drive poaching of wild tigers. This demand is exacerbated by the supply of huge volumes of African lion bone, teeth and claws, sold as tiger parts to less-discerning consumers in Asia.

Consumer preference for wild tiger means that poaching still occurs to satisfy those consumers seeking authentic or 'pure' tiger parts. The same demand not only drives the poaching of wild African lions, but also leopards, clouded leopards, snow leopards and jaguars. The trade in African lion parts into Asia, along with the trade in captive-bred tiger parts, frustrates enforcement efforts and undermines the limited demand-reduction efforts to end tiger trade.

At the heart of the lion trade is South Africa, the world's largest exporter of lion bone, teeth and claws, and also an exporter of captive tiger parts. The Government, in sanctioning the export of 800 lion skeletons a year to generate profits for lion farmers, has failed to take into account the wider impact of such a decision on endangered wild tigers.





ABOVE:
Tiger skins are sold in China for luxury home decor. Over 800 tiger skins have been seized globally in trade since 2000.

DOOMED FOR TRADE: TIGERS FACE A CRITICAL THREAT FROM POACHING

Tigers are under intense pressure due to poaching for illegal trade in their skins, bones and other body parts, destined primarily for markets in China, Vietnam and Lao People's Democratic Republic (hereafter referred to as Laos).¹ There are fewer than 4,000 tigers remaining in the wild,² with tigers recently becoming functionally extinct in Cambodia, Vietnam and Laos, and as few as seven wild tigers estimated in China.³ More than half of the global wild tiger population is found in India; however, in 2016 tigers in India faced the highest level of poaching in 15 years and almost a two-fold increase over the previous year.⁴

As wild tiger populations continue to experience a decreasing population trend across their range,⁵ the number of tigers in captivity and the number of facilities keeping them have drastically increased. There are now more than twice the number of tigers in captivity in Asia than in the wild. China, Thailand, Laos and Vietnam are home to approximately 7,000-8,000 captive tigers in over 200 facilities.⁶ Facilities that keep and breed tigers for commercial purposes have no conservation value and are driven by profit, emerging as a significant supply source for the tiger trade.⁷ In addition, there are at least 280 captive tigers in South Africa.⁸

Under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), tigers are listed under CITES Appendix I, prohibiting international commercial trade in tiger parts and derivatives. In addition, in 2007 CITES Parties adopted CITES Decision 14.69 which prohibits commercial trade in captive tiger parts and products, stating "*tigers should not be bred for trade in their parts and derivatives*". Significantly, Parties voted to ensure this applies to domestic trade as well.⁹

Trafficking in both wild and captive tiger parts and derivatives continues at an alarming rate – in part due to lack of international cooperation to strengthen enforcement efforts to effectively tackle transnational criminal networks, combined with a failure to effectively reduce demand in China. Since 2000, at least 1,575 live and dead tigers have been recovered from illegal trade, and since 2010 the average number of such tigers increased to 94 tigers per year.¹⁰

In recent years there has been an increase in tiger poaching and seizures in India.¹¹ Neighbouring Nepal acts as a source and transit point for tigers with tigers poached in Nepal and India being seized in Nepal.¹² In recent years, anecdotal information suggests an increase in demand for wild tiger bone in China. Tiger bone is consumed as traditional medicine, high-end 'tiger bone wine' and as a virility product.¹³

HOW SOUTH AFRICA'S LION AND TIGER EXPORTS THREATEN ENDANGERED WILD TIGERS IN ASIA

African lion populations declined by 43 per cent¹⁴ between 1993 and 2014, with a current estimated continental population of 20,000,¹⁵ including 3,490 lions in South Africa.¹⁶ African lions are listed under CITES Appendix II with an annotation meaning that some international commercial trade in wild and captive lion parts and products is allowed. South Africa has been legally exporting lion bone, claws, teeth, skulls and skeletons sourced from both wild and captive lions – the bodies and skeletons of at least 4,296 lions have been exported legally to Asian markets between 2005-15 (see Figure 1 on page 9 describing exports). In 2016, however, CITES Parties agreed to restrict this trade to specimens sourced from captive lions.

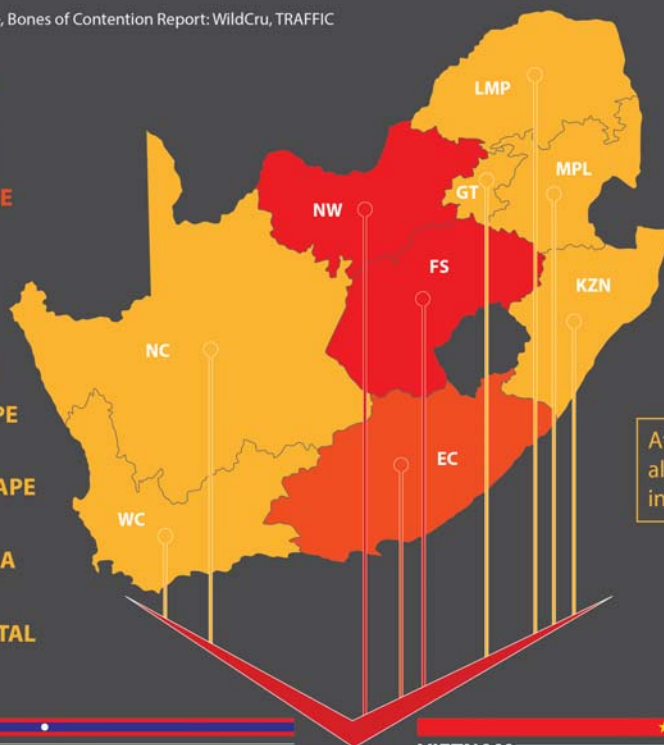
South Africa allows lion and tiger farming for commercial trade in parts and derivatives. With regard to the tiger farming operations, this contravenes CITES Decision 14.69. The country's wild lion population is dwarfed by the reported 6,000¹⁷ to 8,000¹⁸ captive lions held in up to 200 facilities.¹⁹ Both the number of captive lions and the facilities breeding and keeping them have increased,²⁰ coinciding with a dramatic increase in exports of lion bone and other lion parts, especially since 2008 (see opposite and figure 1 on page 9 describing exports).²¹ A number of these facilities are also breeding tigers; in 2015, 280 tigers were estimated to be in at least 44 facilities in South Africa.²²

The proliferation of lion and tiger farms in South Africa and the associated trade from such facilities undermines enforcement efforts to end illegal tiger trade and stimulates demand for tiger parts and derivatives. Given consumer preferences for wild-sourced tiger parts, this also sustains poaching pressure on wild tigers.²³

Number of lions and tigers in captive facilities in South Africa. Details of lion exports to consumer countries.

Source: CITES Trade Database, Bones of Contention Report: WildCru, TRAFFIC

- FS FREE STATE**
FACILITIES: 73
LIONS: 3006
- NW NORTH WEST**
FACILITIES: 70
LIONS: >2236
- EC EASTERN CAPE**
FACILITIES: 15
LIONS: >322
- LMP LIMPOPO**
FACILITIES: 6
LIONS: >414
- GT GAUTENG**
FACILITIES: >6
LIONS: >188
- WC WESTERN CAPE**
FACILITIES: 4
LIONS: >50
- NC NORTHERN CAPE**
FACILITIES: 2
LIONS: 22
- MPL MPUMALANGA**
FACILITIES: 3
LIONS: 10
- KZN KWAZULU NATAL**
FACILITIES: 1
LIONS: 10



At least 280 tigers are also kept in 44 facilities in South Africa.

LAOS

- Largest importer of lion skeletons. 2098 (61% of global imports) since 2005.
- Largest importer of lion bones. 2,215 units.
- Second largest importer of lion teeth (37.5% of total global imports).

THAILAND

- 49% of all lion imports listed for commercial purposes.
- 9th largest importer of lions and their parts.

VIETNAM

- ★ Largest importer of lion bodies, importing 706 (69% of global imports).
- ★ 1168 lion skeletons imported - second largest.
- ★ 91% of all lion imports listed for commercial purposes.

CHINA

- ★: Largest importer of lion teeth (38.33% of global exports).
- ★: Sixth largest importer of lion products.
- ★: 6 tiger skins were imported in 2015.

China is the largest destination for tiger parts and derivatives. Following increasing pressure under the CITES framework and the threat of bilateral trade suspensions from the USA in 1993, China's State Council issued an order prohibiting the sale and use of tiger bone in traditional medicine. Lion bone has no history of use in traditional Chinese medicine²⁴ and evidence of lion bones being fraudulently passed off as tiger bone surfaced in 2005.²⁵ In 2007, endangered Asiatic lions were killed by organised poachers in India to feed the international market as a substitute for tiger bone.²⁶

It appears that in response to changes in legislation prohibiting use of tiger bone and also fear of enforcement, traders have adopted a marketing ploy to sell lion bone as tiger.²⁷ Without DNA analysis, it is very difficult for law enforcement officers to distinguish

between tiger and lion bone, teeth and claws. Consequently, there is a serious risk of tiger bone, teeth and claws from South Africa being laundered and exported as legal lion specimens using CITES export permits.²⁸

Loopholes in South Africa's legislation increase the burden on enforcement authorities, both in South Africa and in importing countries. For example, since tigers are not an indigenous species to South Africa, there is either a lack of regulations or weak regulations applying to trade in these species. South African legislation allows domestic and international trade in parts and derivatives sourced from captive tigers.²⁹

Further, there is also a lack of uniformity between provincial and national legislation, with the responsibility of implementation of any legislation bestowed on several different provincial authorities.



ABOVE:
Lions are captive bred in South Africa and China.

LEGAL EXPORTS OF LION PARTS, SEIZURES & OBSERVATION IN ILLEGAL TRADE DESTINED FOR CONSUMPTION IN SOUTH

Data source: EIA, WPSI, TRAFFIC, Nijman. V, Shepherd. C, Oswell. A
 * Observations of skins only

LIONS 2008-2015

LEGAL EXPORTS



	3,402
	1,013
	218
	>800

TIGERS 2000-2017



	96.5
	>270
	959
	>1,800 KG
	383
	>800
	12,000

ASIATIC LIONS 2007-2015



	13
	9

KEY:

-  Skeletons
 -  Bodies
 -  Skins
 -  Bones
 -  Teeth
 -  Claws
 -  Bone wine
- CN - China
 LA - Laos
 TH - Thailand
 VN - Vietnam

DEMANDS* OF BIG CAT PARTS & DERIVATIVES IN SOUTH-EAST ASIA AND CHINA

1.4 KG 

821 

13 



JAGUARS
2014 - 2016

CN

>2,700 

312 KG 

18,000 

18,000 



LEOPARDS
2000-2017

(ASIA ONLY)

419 

>9 



SNOW LEOPARDS
2000-2017

VN

140 

10 



CLOUDED LEOPARDS
2000-2017

Copyright credits - images: Daryl Balfour 2007 www.darylalfour.com (lion), Steve Winter (jaguar, snow leopard), Shivaram Subramaniam/Santuary Photolibrary (Asiatic lion) www.tigersintheforest.co.uk (leopard, tiger), Rufous52/istock (clouded leopard)



EIA interviews with “bone strengthening wine” distributors in 2012 illustrate the convenience of obfuscating the truth over the ingredients used to make the wine, with manufacturers either defrauding their customers or avoiding the law.

One leading wildlife businessman in China explained how tiger bone wine is labelled as containing lion to circumvent the law.³¹

EIA 2012 Meeting with Beijing Longying Trading Ltd, Beijing, China

Trader: “Since the tiger bone trade ban in 1993, the Siberian tiger park has to find a way around it, so they claim they steep the wine with lion bones and sika deer bones. And change the name from ‘Hu gu jiu’ [meaning tiger bone wine] to ‘Zhuang gu jiu’ [meaning bone strengthening wine]. There is a Xionsen tiger bear farm in Guilin, they produce the wines in a tiger shaped bottles. They call them Zhuang gu jiu and claim they made the wine with lion and bear bones.”

EIA: But in fact they all used tiger bones?

Trader: In fact all tiger bones.



“Bone Strengthening Wine” from Harbin Siberian Tiger Park is also marketed as being made from tiger but labeled as containing lion (*Panthera leo*).

Due to these legislative and enforcement challenges, it is very easy to mix tiger with lion bones because the current approval and checking system is ineffective³⁰ and there is limited publicly available information on the number of captive tigers and extent of tiger trade in South Africa.

Online research by EIA and others indicates that large amounts of purported tiger and lion bone are also offered for sale in China and South-East Asia through online platforms such as WeChat, while analysis of seizure incidents confirms a thriving trade where lion bone is being marketed as tiger bone:

- **April 2017, China:** Chinese police arrested a trader in Nanjing, eastern China, who had purchased what he believed was tiger bone which upon DNA testing was found to be lion bone.³²

- **May 2016, Vietnam:** a suspect was arrested with 680 tiger claws brought into Vietnam from Laos; however, after DNA testing it was later concluded the claws were sourced from lions and not tigers.³³

- **July 2015, China:** police in Zhuji arrested a suspect and seized from his vehicle lion bones which he was transporting to a buyer he had deceived into thinking the bones were tiger. The buyer reportedly intended to brew tiger bone wine.³⁴

- **June 2015, China:** a trader was found to have illegally sold bones marketed as tiger bone. DNA analysis showed them to be lion bones.³⁵

- **May 2015, China:** a criminal network involved in trading ivory, tiger bones and lion bones was convicted in Beijing. It was found that the network was mixing lion bones with tiger bones and would sell them all as tiger bones.³⁶

The incidence of lion parts in the market stimulates demand for tiger products and also has an impact on trade dynamics as experienced traders and consumers request evidence that dealers have tiger skin or carcasses to satisfy themselves that the product being offered is genuine tiger bone. Traders may either go to tiger farms or tiger range countries to directly source genuine tiger parts to avoid being sold parts and products that are either lion or fake. Thus a parallel legal and illegal trade in lion bone and lion parts and derivatives exacerbates tiger poaching and trade.

SOUTH AFRICA: WORLD'S LARGEST EXPORTER OF LION BONE AND OTHER BODY PARTS

Based on publicly available data, South Africa is the world's largest exporter of lion bone, skulls, skeletons, bodies, claws and teeth, primarily destined for Laos and Vietnam.³⁷ Since 2008, there has been a marked increase in exports of lion parts, especially of lion bone, skeletons and claws.³⁸

Large volumes of lion and tiger bones, skeletons, skins, claws, teeth and other parts and derivatives have been exported to China, Vietnam and Laos, which are the key destinations for trafficking in tiger parts and derivatives. Between 2005-15, South Africa exported 27 tiger skins, seven of which were sent to China. During the same period, South Africa exported to Laos and Vietnam a total of the following lion specimens specifically for commercial purposes: 755 bodies, 2,808 bones, 587.5kg of bone (approximately equivalent to 65 lions), 54 claws, 3,125 skeletons, 67 skulls and 90 teeth.³⁹ Moreover, without DNA analysis it is unclear the extent to which the lion bone, teeth and claw exports are 100 per cent lion or include parts from tigers farmed in South Africa.

In 2016, CITES Parties decided to allow South Africa to set a quota for export of captive lion parts. In June 2017, the Government of South Africa announced an export quota of 800 skeletons (with or without skulls) obtained from captive lions in South Africa.⁴⁰ The Government's misconceived rationale for such trade is purportedly to protect the wild lion population in South Africa. The move, however, fails to take into consideration the fact that there are significant enforcement challenges in distinguishing between wild and captive lion skeletons and that its decision will also stimulate demand for big cat bone products. It also ignores the failed experiment in China, where the parallel legal trade in skins from captive tigers has not put an end to wild tiger poaching. Contrary to the assertion of pro-tiger farming and trade advocates, the legal trade in skins of captive-bred tigers in China did not flood the market with cheap alternatives and failed to take into account consumer preferences.⁴¹

South Africa's legal trade in parts and derivatives sourced from captive lions (and tigers) also raises serious concerns, particularly due to the role of organised criminal networks operating between South Africa and South-East Asia, trafficking lion and other wildlife products, including tigers. For example, the wildlife trading company Xaysavang in Laos became infamous for its activities in procuring rhino horn from pseudo hunts in South Africa;⁴² however, its earlier forays in South Africa were to procure lion bone.⁴³ Xaysavang employees procured sets of bones to export to Laos, paying \$100 in cash per set,⁴⁴ with the bones likely destined to produce 'bone strengthening wine' and 'bone glue'.⁴⁵

A Vietnamese businessman in South Africa, Chu Dang Khoa (also known as Michael Chu), was convicted in South Africa for rhino poaching and illegal possession of rhino horn.⁴⁶ His company, DKC, owns Voi Game Lodge in North West Province, which is reported to have 50 tigers, with evidence of at least one tiger being killed in November 2013.⁴⁷ Allegations have been made that bones obtained from captive tigers from this facility have been fraudulently exported as lion bones.⁴⁸

In China and South-East Asia, organised criminal networks involved in lion trade are also trading tiger and other Asian big cats. For example, a criminal network operating from Tianjin city in northern China was convicted in 2015 for trade in seven tiger skeletons, 31 lion skeletons and nearly half a tonne of ivory. The Tianjin case involved the organised transportation in convoys of skeletons over a thousand miles from Guangxi in southern China, bordering Vietnam, to Tianjin. In Vietnam in April 2017, authorities arrested Nguyen Mau Chien, the suspected leader of a major criminal network trafficking rhino horn, tigers, lion and other wildlife specimens, recovering two frozen tiger cubs and one lion skin.⁴⁹ Chien began his business in wildlife trafficking trading fake tiger bones before establishing his own tiger farm in Vietnam.⁵⁰ With an arrest history in Tanzania,⁵¹ he is just one of several Vietnamese wildlife traffickers with links to Africa.

It is clear that a legal trade in captive lion parts is unworkable and will likely have a detrimental impact, not only on wild lions⁵² but also on endangered wild tigers. The Government of South Africa must adopt urgent action to end this trade.

Đưa qua cửa khẩu về cat tại nhà riêng chờ tiếp nhân cạo đầu mới thành trạng sức.

Trần Hữu Hồng - Trưởng phòng cảnh sát môi trường Công an Nghệ An, cơ quan chức năng đang tạm giữ Cao Xuân Vũ (26 tuổi, ở xã Diên Xuân, Nghi An) để làm rõ việc buôn bán, tàng trữ móng cạo vật (ngủ là móng chân hổ).



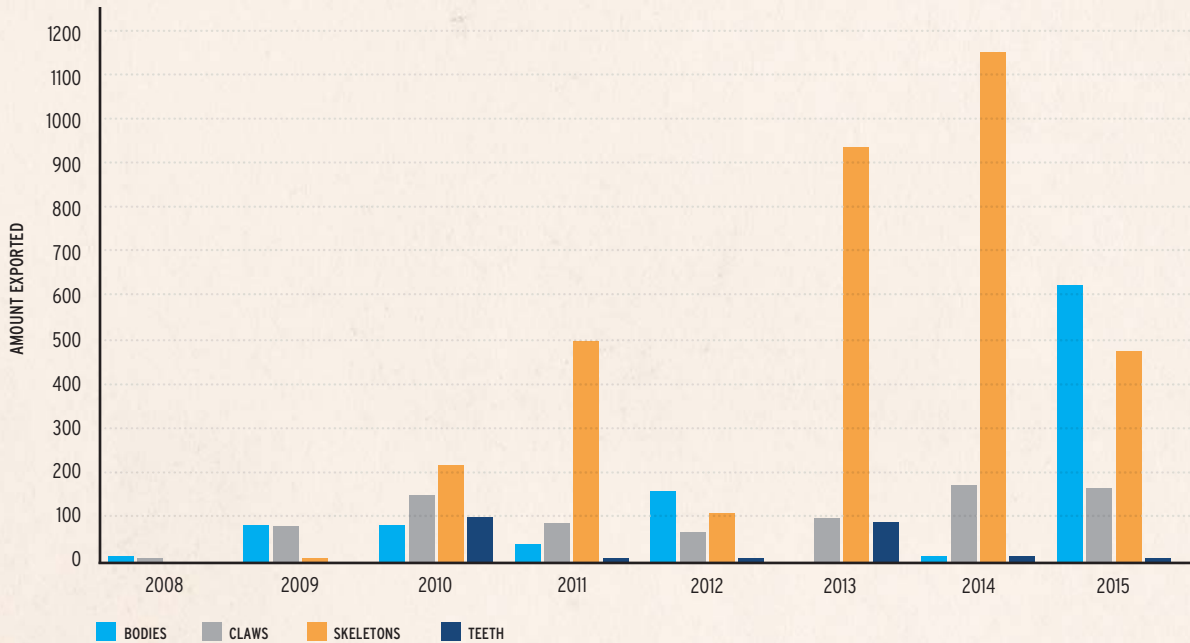
ABOVE:
680 tiger claws seized in Vietnam prove to be lion claws after testing.

BELOW:
Without DNA analysis, legal lion bone exports can provide a cover for illegal tiger bone trade.



South Africa was identified to be the largest exporter of lions, and their subsequent parts and derivatives, during the period 2005-2015. Globally, South Africa is attributed to 68.12% (22,848) of all known global exports of lion parts and derivatives. Nearly 1100kg of bones and 480kg of skeletons have been exported to Laos and Vietnam alone since 2005. In comparison the second largest exporter of lion parts and derivatives is Tanzania which over the same period exported 4.3% (1,445) of the total exports globally.

FIGURE 1:
Total exports of lion bodies, claws, skeletons and teeth from South Africa to Vietnam, Laos, China and Thailand 2008-2015.

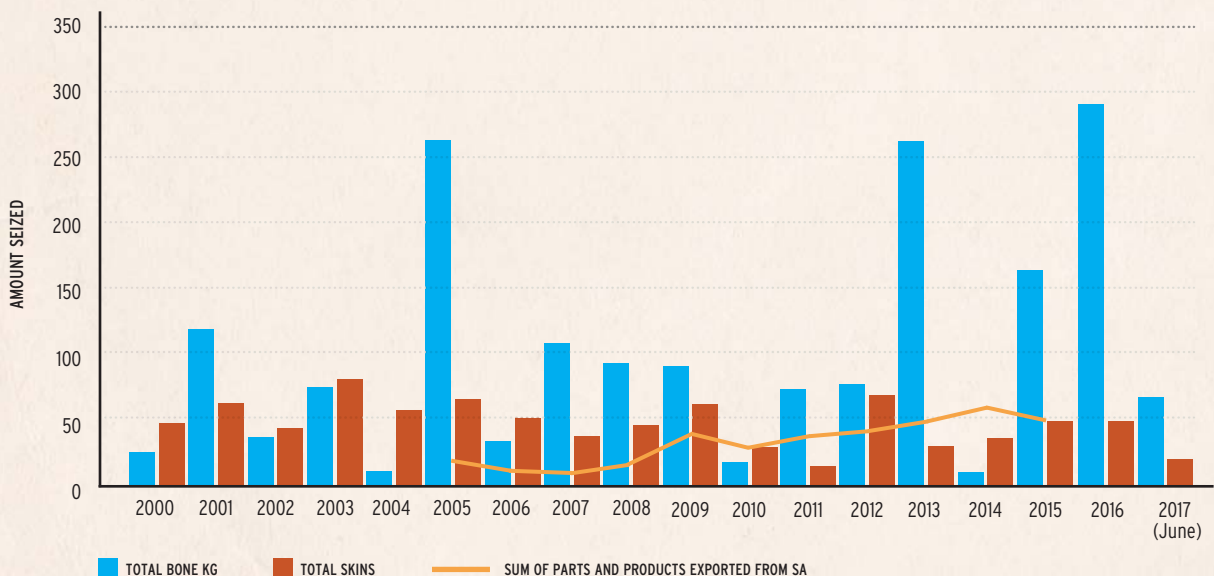


Source: CITES Trade Database

The huge influx of lion parts into countries where they are marketed as tiger has not reduced poaching and trafficking pressure on this more endangered big cat.

The amount of skins and bones of tigers seized since 2000 has peaked and troughed - an apparent decline can be followed by an increase. This trend in the tiger trade reminds the international community that we cannot be complacent.

FIGURE 2:
Comparison of tiger skins and bone (kg) seized globally 2000 - 2017 and total exports of tiger parts and products from South Africa.



Source: WPSI, EIA, CITES Trade Database

GLOBAL TRADE IN OTHER BIG CAT PARTS AND DERIVATIVES

Wild leopards, snow leopards and clouded leopards in Asia are poached for their skins, bones, teeth and claws. Studies have shown how Chinese demand for tiger parts and products drives poaching of other big cats, where bones, teeth and claws may be used as substitutes or passed off as tiger.⁵³ On occasion, EIA investigators have encountered traders trying to pass off leopard skulls and bones as “young tigers”.

In 2016, EIA identified 27 traditional Chinese medicine (TCM) products that appear to be manufactured and traded in China and for which the ingredients listed on the manufacturer website include the Chinese term for ‘leopard bone’ (豹骨 [*bao gu*]), which could refer to leopard, snow leopard, clouded leopard, Asian golden cat⁵⁴ or possibly cheetah. These products would have traditionally contained tiger bone before the 1993 ban in China on the use of tiger bone. Several products feature images of tigers on their packaging, implying to the consumer that the product contains tiger. Following DNA testing, one of these products, produced by a Beijing-based manufacturer and purchased in Australia in 2012, was revealed to contain snow leopard.⁵⁵

Jaguars in South America are also now being poached for the Asian market. Seizures of jaguar since 2014, both in China⁵⁶ and in South America from shipments destined for China,⁵⁷ have notably consisted of teeth and bones, which could be passed off as tiger.

EIA has also identified individuals with links to tiger trade in South-East Asia who also frequent South America and offer for sale parts of South American big cats.

With big cat skins being markedly different there is, of course, no risk of substituting lion or other big cats for tiger. It is the same demand for skins, used as luxury home décor and ornamentation, that is a major driver of poaching and trade in leopards, snow leopards and clouded leopards. Their skins are, however, less expensive than those of wild tigers, making them an attractive alternative to some consumers.

Increasing the availability of lion parts therefore risks feeding a market which consumes parts of all these big cats, driving poaching of multiple species while also driving demand for genuine tiger parts.

BELOW:

A TCM product which would have traditionally contained tiger was found to contain snow leopard DNA after being tested in Australia.



© Ian Musgrave/Adelaide University

EIA RECOMMENDATIONS

EIA urges South Africa to address concerns about the impact of lion trade on tigers by adopting the following measures:

- **IMPLEMENT** the CITES Appendix I listing of tigers and CITES Decision 14.69 by amending applicable legislation to prohibit both domestic and international commercial trade in tiger parts and derivatives, and to restrict the keeping and breeding of tigers for conservation purposes only
- **DECLARE** a zero quota for all commercial exports of lion parts and products sourced from captive or wild lions
- **UNDERTAKE** targeted intelligence-led enforcement operations in cooperation with China, Laos, Thailand and Vietnam to dismantle the criminal networks involved in the transnational lion and tiger trade

EIA recommends that CITES Parties:

- **ENCOURAGE** South Africa to adopt these measures
- **REQUEST** the CITES Secretariat to include South Africa in the countries subject to CITES Decision 17.229, which calls for missions to tiger farming countries with a view to developing “time-bound, country specific actions”
- **CALL FOR** listing African lions on CITES Appendix I with an annotation specifically establishing a zero annual export quota for specimens of bones, bone pieces, bone products, claws, skeletons, skulls and teeth sourced either from wild or captive lions

REFERENCES

- Dynamics of a low-density tiger population in Southeast Asia in the context of improved law enforcement; Somphot Duangchantrasiri, *et al*; Conservation Biology; Volume 30, No 3, 639 - 648; 2015
- The IUCN Red List of Threatened Species; *Panthera tigris*; <http://www.iucnredlist.org/details/full/15955/0>
- EIA, 2016, Jan 6th; <https://eia-international.org/report/ending-trade-in-tiger-parts-and-products>
- Sharon Guynup. 2017. As Asian Luxury Market Grows, A Surge in Tiger Killings in India. Jan 10. http://e360.yale.edu/features/as_chinese_luxury_market_grows_upsurge_in_tiger_poaching_india; WPSI, <http://www.wpsi-india.org/statistics/index.php>
- The IUCN Red List of Threatened Species; *Panthera tigris*; <http://www.iucnredlist.org/details/15955/0>
- EIA, 2016, <https://eia-international.org/report/ending-trade-in-tiger-parts-and-products>, Jan 6th
- SSN, EIA, WPSI, Born Free, ENV, *et al*, 2014, Caged Assets: Tiger Farming and Trade, July 29th; <https://eia-international.org/report/caged-assets-tiger-farming-and-trade-2>; Environmental Investigation Agency, <https://eia-international.org/where-are-the-tigers>
- Bones of Contention: An assessment of the South African trade in African Lion *Panthera leo* Bones and other body parts; V.Williams, D.Newton, A.Loveridge, D.Macdonald; 2015; WildCru; TRAFFIC; Joint Report
- Convention on International Trade in Endangered Species of Wild Fauna and Flora; Fourteenth meeting of the Conference of the Parties, The Hague (Netherlands) CoP14, Com 2, Rep.14 (rev.1), 2007, June 3 -15th
- Wildlife Protection Society of India - WPSI, www.wpsi-india.org (India), EIA (outside India), 2017
- Wildlife Protection Society of India - WPSI poaching and seizure statistics. www.wpsi-india.org, 2017
- Wildlife Protection Society of India - WPSI. 2016. http://www.wpsi-india.org/images/CITES_CoP17_WPSI_Poaching_&_Mortality_Stats_for_Asian_Big_Cats_September_2016.pdf; Shah, P. 2016, Kathmandu Post. Poaching still a major threat to tigers. February 12. (Available from) <http://kathmandupost.ekantipur.com/news/2016-02-12/poaching-still-a-major-threat-to-tigers.html>
- Environmental Investigation Agency, <https://eia-international.org/where-are-the-tigers>
- Report on Lion Conservation with Particular Respect to the Issue of Trophy Hunting, D.W.Macdonald *et al*, WILDCRU, University of Oxford, Nov 2016
- The IUCN Red List of Threatened Species, *Panthera leo*; <http://www.iucnredlist.org/details/15951/0>
- The Red List of Mammals of South Africa, Lesotho and Swaziland, A Conservation Assessment of *Panthera leo* - Lion, S. Miller, J.Riggio, P.Funston *et al*, 2016, South African National Biodiversity Institute and Endangered Wildlife Trust, South Africa
- Humane Society International, 2017, Jan 19th, http://www.hsi.org/news/press_releases/2017/01/south-africa-lion-skeleton-exports-011917.html
- Panthera*, 2017, <http://pantherafrica.co.za/index.php/what-we-do>
- <http://www.bloodlions.org/faqs/>; <http://pantherafrica.co.za/index.php/what-we-do>
- Bones of Contention; V.Williams *et al* 2015; WildCru; TRAFFIC; Joint Report (as ref 8)
- Protection of the African Lion: A Critical Analysis of the Current International Legal Regime, S.Watts, PER/PELJ, 2016; CITES Trade Database
- Bones of Contention V.Williams; 2015; WildCru; TRAFFIC; Joint Report (as ref 8)
- Attitudes Towards Consumption and Conservation of Tigers in China; B.Gratwicke, J. Mills, A.Dutton, G.Gabriel *et al*, 2008; PLOS ONE 3(7): e2544; Captive Tiger Farming and Demand Reduction, Save Wild Tigers, <http://www.savewildtigers.org/sites/default/files/pages/148/files/Captive%20Tiger%20Farming%20and%20Demand%20Reduction.pdf>; EIA Caged Assets (as ref 7);
- Taming the Tiger Trade: China's Market for Wild and Captive Tiger Products Since the 1993 Domestic Trade Ban; K.Nowell, X.Ling, 2007, TRAFFIC East Asia, Nowell TRAFFIC unpublished paper.
- Bones of Contention: V.Williams, *et al*; 2015; WildCru; TRAFFIC; Joint Report (as ref 8)
- EIA; 2014, Feb 6, "In Cold Blood: Combating Organised Wildlife Crime"
- Report by the CITES Secretariat on its verification and assessment mission to China 28th Mar - 7th April, 2007, CoP14 Doc. 52, Annex 7
- Bones of Contention: V.Williams, *et al*; 2015; WildCru; TRAFFIC; Joint Report (as ref 8)
- IBID
- IBID
- EIA, HPS, 2010; Nov 16th, Enforcement Not Extinction: Zero Tolerance on Tiger Trade
- Zhu, J. 2017. 文玩“发烧友”以贩养玩 全栽了 [Nanjing Daily]. Available from: <http://collection.sina.com.cn/cqyw/2017-04-14/doc-ifyeimqc361954.shtml> [Accessed April 28, 2017]; Tao, W. 2017. 出售虎骨、穿山甲等珍贵濒危动物制品 4嫌疑人被批捕. Available from: <http://news.sina.com.cn/o/2017-04-19/doc-ifyeimzx6986667.shtml> [Accessed April 28, 2017]
- ENV; Case file 9633. Available from: <http://www.thannhiennews.com/society/vietnamese-man-arrested-with-680-tiger-claws-62060.html> [Accessed May 13, 2016]. Education For Nature - Vietnam (ENV), Wildlife Crime Bulletin, September 2016. <http://thiennhien.org/images/wcb-sep-2016.pdf>
- Shi, Y. 2017. 特大贩卖野生动物案披露细节：案犯曾用狮子骨冒充虎骨 [Zhejiang Online]. Available from: http://pol.zjol.com.cn/201702/t20170224_3157342.shtml [Accessed February 24, 2017]
- Jinan Times. 2017. 山东蓝星清洗防腐公司废酸废液直排市政管网7年. Available from: http://gov.sdnews.com.cn/szyw/201706/t20170606_2250265.html [Accessed June 13, 2017]
- Li, Y. 2015. 长途贩象牙虎骨团伙8人获刑 [Beijing News]. Available from: http://mp.weixin.qq.com/s?_biz=MjM5NDAxMTcxM0==&mid=205135437&idx=1&sn=93f6057d0bf4343b927c64de7e19217f&scene=5&srcid=0517gUNIEV2q9cqa3cUwlf4#rd [Accessed May 23, 2016]
- CITES Trade Database, accessed June 21, 2017, based on exporter reported quantities for the period 2005-2015.
- Protection of the African Lion: A Critical Analysis of the Current International Legal Regime, S.Watts, PER/PELJ, 2016(19); CITES Trade Database
- V.L.Williams, AJ Loveridge, DJ Newton *et al*, (Nov. 2015), "Skulduggery": Lions Align and Their Mandibles Rock!, PLOS ONE 10(11): e0135144, (average weight of one lion skeleton); CITES Trade Database accessed on June 7, 2017. Where no unit specified in weight (i.e. in kilograms or grams), data assumed to refer to number of items. Only exporter reported quantity was analysed for this briefing
- Report by the CITES Secretariat on its verification and assessment mission to China 28th Mar - 7th April, 2007, CoP14 Doc. 52, Annex 7
- EIA, HPS, 2010; Nov 16th, Enforcement Not Extinction: Zero Tolerance on Tiger Trade; (as ref 31)
- EIA; 2014, Feb 6, "In Cold Blood: Combating Organised Wildlife Crime"; (as ref 26)
- Bones of Contention: V.Williams, *et al*; 2015; WildCru; TRAFFIC; Joint Report (as ref 8)
- Rademeyer, J. Killing for Profit. 2012. Zebra Press
- Bones of Contention: V.Williams, *et al*; 2015; WildCru; TRAFFIC; Joint Report (as ref 8)
- Tipping Point: Transnational organised crime and the "war" on poaching. Part 1 of a 2-part investigation into rhino horn trafficking in Southern Africa, J. Rademeyer, 2016, July, The Global Initiative Against Transnational Organised Crime
- IBID
- Julian Rademeyer; 2016; Missing a clear shot: The Crooks behind rhino slaughter, Traveller 24, July 15th (Available from) <http://globalinitiative.net/news-posts/missing-a-clear-shot-the-crooks-behind-rhino-slaughter/>;
- Education for Nature - Vietnam (ENV). Alleged rhino horn kingpin arrested. May 04, 2017. <http://www.envietnam.org/index.php/news-blog/829-alleged-rhino-horn-kingpin-arrested>.
- IBID
- IBID
- Peace Parks Foundation, 2017, July 7th; <http://clubofmozambique.com/news/lions-poisoned-for-bone-trade-in-mozambique-peace-parks-foundation/>
- Nowell, K. and Xu, L. 2007. Taming the Tiger Trade (as ref 24); Bones of Contention: V.Williams, *et al*; 2015; WildCru; TRAFFIC; Joint Report (as ref 8)
- Nowell, K. and Xu, L. 2007. Taming the Tiger Trade (as ref 24)
- Coghlan ML, Haile J, Houston J, Murray D, White N, Moolhuijzen P, *et al*. Deep sequencing of plant and animal DNA contained within traditional Chinese medicines reveals legality issues and health safety concerns. PLoS Genet. 2012;8:e1002657.
- Cui, H. 2014. 携带豹骨入境却谎称鹿骨 厦门海关查获美洲豹皮骨 [Xiamen News]. Available from: http://news.xmnn.cn/a/xmwx/201404/t20140418_3803649.htm; Bai, R. 2014. 进出境违禁品千奇百怪 奇葩旅客邮包中藏20条活蛇 [Xiamen News]. Available from: http://news.xmnn.cn/a/xmwx/201407/t20140704_3928154.htm; Legal Daily. 2016. 男子携美洲豹牙入境获刑. Available from: <http://news.163.com/16/0220/13/8G95M46M001404P.html>
- La Razon, 2014. Trafico de colmillos de jaguar, 15th August, Available at: http://www.la-razon.com/index.php?url=/la_gaceta_juridica/Trafico-columillos-jaguar-editorial-gaceta_0_2106989382.html Accessed 21st April 2017]; Marilyn Choque, 2015, April 20th, La Razon, Mercado negro de colmillos. Available at: http://www.la-razon.com/index.php?url=%2Fsuplementos%2Finforme%2Fmercado-negro-columillos-informe_0_2254574635.html [Accessed 21st April 2017]

EIA - LONDON

62/63 Upper Street
London N1 0NY, UK

Tel: +44 (0) 20 7354 7960

email: ukinfo@eia-international.org

www.eia-international.org

EIA - WASHINGTON, DC

PO Box 53343, Washington
DC 20009 USA

Tel: +1 202 483-6621

email: info@eia-global.org

www.eia-global.org

