environmental investigation agency

Wildlife

Smoke and Mirrors China's complicity in the global illegal pangolin trade

I' The

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ABOUT EIA

We investigate and campaign against environmental crime and abuse.

Our undercover investigations expose transnational wildlife crime, with a focus on elephants and tigers, and forest crimes such as illegal logging and deforestation for cash crops like palm oil. We work to safeguard global marine ecosystems by addressing the threats posed by plastic pollution, bycatch and commercial exploitation of whales, dolphins and porpoises. Finally, we reduce the impact of climate change by campaigning to eliminate powerful refrigerant greenhouse gases, exposing related illicit trade and improving energy efficiency in the cooling sector.

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Environmental Investigation Agency UK UK Charity Number: 1182208 Company Number: 07752350 Registered in England and Wales Above: 12.7 tonnes of pangolin scales seized by authorities in Singapore in April 2019. This was the second of two seizures in the same month totalling 25.6 tonnes. Both shipments were enroute to Vietnam from Nigeria.

The scales in the second seizure came from two pangolin species – white-bellied pangolii (*Phataginus tricuspis*) and giant ground pangolin (*Smutsia gigantea*)

Front cover ©Brent Stirton: Temminck's ground pangolin (*Smutsia temminckii*) rescued from the illegal wildlife trade in Zimbabwe by the Tikki Hywood Foundation.

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Summary

The world's eight pangolin species are experiencing catastrophic levels of poaching and trafficking to feed demand for their scales, meat and other body parts. In 2016, the global community agreed to make the international commercial trade in pangolins and their parts and derivatives illegal.

In recent years, Chinese law enforcement authorities have demonstrated the capability to disrupt the transnational trafficking of pangolin scales by organised crime groups. This progress is undermined by the fact that the Chinese Government continues to permit pharmaceutical companies and hospitals to commercially produce and sell traditional Chinese medicine (TCM) products containing pangolin scales.

While pangolins have long been traded across Africa and Asia, and in some non-range states, China is currently the main consumer market for the vast quantities of pangolin scales trafficked globally every year.

China's consumer market for pangolin scales is enabling transnational organised crime groups to **Above:** Black-bellied pangolin (*Phataginus tetradactyla*) in Dzanga-Sangha Protected Area, Central African Republic. This species is listed as Vulnerable on the IUCN Red List

profit from the illegal high-volume exploitation of pangolins. Between 2016-20, EIA conducted undercover investigations into pangolin trafficking across the Africa-to-Asia supply chain. These have uncovered criminal networks involved in the active sourcing and export of vast quantities of pangolin scales.

In this report, EIA exposes how a fundamentally flawed stockpile and TCM product certification system run by the Chinese Government is used by at least 56 pharmaceutical companies to produce a minimum of 64 commercially available medicines containing pangolin scales. We find that this regulatory system is convoluted and lacks transparency and traceability, making it highly susceptible to abuse by pangolin traffickers. We document how the 2020 edition of the TCM pharmacopoeia continues to list pangolins scales as an ingredient in eight patent medicines and that

China's national medicine insurance scheme continues to cover pangolin scale medicine.

China's Wildlife Protection Law is playing a pivotal role in ensuring the commercial trade in pangolin scales persists. This legal context legitimises the consumption of pangolin scales in medicines and stimulates consumer demand for products that are pushing pangolins towards extinction.

We make specific policy and enforcement recommendations at the end of the report, including the need for the Chinese Government to fully prohibit the acquisition, sale and possession, including for medicinal purposes, of all parts and products of pangolins and other globally threatened species, including those from captive-bred sources.

Introduction

China is the primary destination for the vast quantities of pangolin scales trafficked internationally every year from across Asia and Africa by transnational criminal networks.¹

In 2016, the global community agreed under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) that all commercial international trade in the eight pangolin species would be made illegal.² Despite this, the Chinese Government continues to permit pharmaceutical companies and hospitals to trade in traditional Chinese medicines (TCM) containing pangolin scales.

Over the past 10 years, there has been a seemingly endless and growing number of media reports on the many tonnesⁱ of pangolin scales seized from global illegal trade every year. It is estimated that the equivalent of 745,000 pangolins have been trafficked to supply all the scales seized between 2000-19.³ Eighty per cent of these scales were seized between 2016-19. In its latest World Wildlife Crime report, the UN Office for Drugs and Crime concluded that 71 per cent of pangolin scale seizures that took place between 2007-18 were destined for China.^{4, ii}

Building on recent reports documenting the growing trade in African pangolins to China,⁵ this report reveals how the Chinese Government is complicit in perpetuating global demand for pangolin scales. At the centre of this complicity is an inherently flawed regulatory system in which pharmaceutical companies can commercially produce and sell pangolin scale medicines.

The Chinese Government claims its wildlife product traceability scheme ensures pangolin scales used in approved medicines originate only from old verified stockpiles, but there is a mismatch between availability and demand. Lacking traceability and transparency, the regulatory system has pervasive opportunities for laundering pangolin scales illegally sourced from throughout Asia and Africa.

The trafficking of pangolin scales into China is devastating wild pangolin populations. All eight pangolin species are classified as being at risk of extinction on the International Union for Conservation of Nature (IUCN) Red List.^{6,7,8,9,10,11,12,13} Patchy information exists on the actual numbers of pangolins remaining in the wild, but in areas of Asia they are known to have disappeared completely.^{14,15,16} Some pangolin populations are thought to have declined by as much as 80 per cent in the 21 years between 1998 and 2019.¹⁷

In 2019, the worsening plight of pangolins was confirmed when three species – two African and one Asian – were re-classified into higher categories of extinction risk.¹⁸ The IUCN cited the growing impacts of poaching, illegal trade and habitat loss in the escalating vulnerability of pangolins. Further reductions of between 30-80 per cent are possible during the coming decades if urgent action to curb demand for pangolin products and protect their habitat is not taken.

Pangolin scales: a long history of commercial trade

Pangolins have a long history of being used for multiple purposes across Asia, Africa and America and the use of their scales for medicinal purposes has been documented in many range states.^{19,20} In China, the first record of pangolin scales being used for medicine is from a sixth century Chinese herbal medicine book ('Shen Nong's Classic of Materia Medica' - 本草經集注).

Throughout the 20th century, large volumes of Asian pangolin scales were legally and illegally traded from across South-East Asia to China for use in TCM.²¹ Asian pangolin skins were also heavily traded to make leather products such as boots in the United States, Mexico and Japan.²² This overexploitation devastated populations of the Chinese (*Manis pentadactyla*) and Sunda (*Manis javanica*) pangolins across the region and in China pangolins declined by 94 per cent between the 1960s and 2000s.²³

In the early 1990s, the domestic supply of pangolins in China had become so low that traders were increasingly sourcing large quantities from South-East Asian countries such as Laos, Vietnam and Myanmar.²⁴ A ripple of major pangolin declines ensued and between 1996 and 2014 the conservation status of both the Chinese and Sunda pangolins had moved from being Near Threatened to Critically Endangered on the IUCN Red List.^{25,26} In 2019, the Philippine pangolin (*Manis culionensis*)²⁷ was listed as Critically Endangered and now the other five species are facing a similar fate.

In 2016, after decades of concern over the levels of legal and illegal international pangolin trade, at the 17th Conference of Parties (CoP17) of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) all eight pangolin species were up-listed to Appendix I of the convention.²⁸ This entered into force in January 2017, making it illegal for pangolins and their parts and derivatives to be traded internationally for commercial purposes. A CITES Resolution adopted at CoP17 encouraged pangolin consumer states to implement measures to reduce demand for illegal pangolin specimens.²⁹



A crisis: high-volume transnational pangolin scale trafficking

Transnational pangolin trafficking is an exceptionally profitable criminal enterprise that involves sophisticated methods of operation and the territories of at least 32 countries.³⁰ While Asia was the primary source of pangolin scales throughout the 20th century and the start of the 21st century, since 2008, as Asian pangolins have become increasingly imperiled, criminal networks have shifted to heavily exploiting African pangolins.³¹

The majority of pangolin scales are trafficked to China using maritime shipping services and the top smuggling routes involve Nigeria, Cameroon, the Democratic Republic of the Congo (DR Congo), Malaysia, Singapore, Vietnam, Hong Kong.³²

Between 2016-20, EIA has conducted undercover investigations into pangolin trafficking across the Africa-to-Asia supply chain. These have uncovered criminal networks involving nationals of China, Vietnam, Nigeria, Guinea, Cote d'Ivoire and DR Congo, which are actively sourcing and exporting vast quantities of pangolin scales. Between June 2019 and August 2020 alone, EIA separately engaged 23 traffickers who together claimed to be in possession of 116 tonnes of pangolin scales, an amount comparable to the total quantity publicly reported as seized in 2019.

EIA's investigations have documented how pangolin scale buyers from China and Vietnam are connected to suppliers from African countries in networks heavily

Above: 3.6 tonnes of seized pangolin scales in the car park of the offices of Cote d'Ivoire's Transnational Crime Unit (UCT) in August 2018.

reliant on corruption. The involvement of corrupt customs officers, clearing agents, freight forwarders and transportation company staff enables pangolin scales to reach their intended destinations.

As corroborated by seizure data, EIA has found that a high proportion of pangolin sourcing activity is taking place in West and Central Africa. This involves an extensive sourcing footprint stretching across the region's tropical forests and savannas.

Pangolin scale shipments are either sent directly to the primary destination, China, usually with a transshipment location en route, or via a transit hub such as Vietnam or Hong Kong. Shipments through these transit hubs may also undergo transshipment en route from African countries. In Vietnam, shipments are broken down into smaller batches to be smuggled into China overland. EIA has documented pangolin scale traffickers who are also involved in the trafficking of other high-value illicit commodities such as elephant ivory, rhino horn, tiger parts and products as well as illegal donkey skins and timber.

Consumer markets for pangolin scales, especially in China, enable transnational organised crime groups to profit from the illegal high-volume exploitation of pangolins.³³ It is a crime that drives biodiversity loss, fuels corruption, weakens criminal justice systems, depletes the resource base of rural communities and undermines security.



International prohibitions, national authorisations

CITES and the continued trafficking of pangolins into China

Pangolins have been subject to varying levels of international trade controls under CITES since its inception as a treaty in 1975. Meaning that the tragedy of the global pangolin trafficking crisis has unfurled for almost half a century in full view of CITES Parties.

Acknowledging the risks posed to pangolins by overexploitation, in 1975 all Asian species were included on Appendix II (at the time only three Asian species were recognised) and one African species, Temminck's ground pangolin (*Smutsia temminckii*).³⁴ Reflecting concerns that Asian pangolins were experiencing high levels of international trade, they underwent Reviews of Significant Trade (RST)^w in 1988, 1992 and 1999.^{35,36,37}

While pangolin products were being imported in large volumes by various countries, including the US, Mexico and Japan, these trade reviews pointed to "very high demand" from China. Most of the demand in China was for pangolin scales to be used in TCM, while in the US and Mexico it was for pangolin skins to be made into luxury cowboy boots.

Above: At CITES CoP17 in September 2016 in Johannesburg, South Africa Parties agreed to uplist all eight pangolin species from Appendix II to I. In 2000, at CITES CoP11, a proposal for the uplisting of all Asian pangolins from Appendix II to I was rejected and instead 'zero export quotas' were established for the Asian species.^{38,39} This happened even though the RST process concluded that all Asian species met CITES criteria for listing under Appendix I. In response to proposals for the uplisting, the Chinese Government pushed back, stating it believed more information was required about Asian pangolins before any transfer to Appendix I was made.⁴⁰

In the following years, the global legal trade in Asian pangolins dropped off considerably.⁴¹ However, seizure data indicate that, despite the increasingly imperilled status of Asian pangolins, the zero-export quota was undermined by continued demand, primarily from China, where the domestic market not only persisted but was legally encouraged.^{42,43} This was while other major destination countries for legal imports pre-2000 such as the US, Mexico and Japan registered abrupt declines in legal imports and minimal seizures.^{44,46}

In the decade following the introduction of zero export quotas for the Asian species, there was limited international attention on the pangolin trade and role of demand from consumers in China, despite reports of the growing trafficking of pangolin meat and scales into China from South-East Asian countries such as Vietnam, Indonesia and Malaysia.^{46,47}



关于加强赛加羚羊、穿山甲、稀有蛇类资源保护和规范其产品 入药管理的通知

国家林业和草原局政府网 http://www.forestry.gov.cn/ 2007-11-12 来源: 各司局 【字体: 大 中 小 】 打印本页

各省、自治区、直辖市林业厅(局)、卫生厅(局)、工商行政管理局、食品药品监督管理局(药品监督管理局)、中医药管理局,内蒙古、吉林、龙江、大兴安岭森工(林业)集团公司,新疆生产建设兵团林业局: 赛加羚羊、穿山甲、蛇类均是生态、经济、科研价值极高的陆生野生动物,其产品是许多传统中医临床用药的重要原料 来源。为保护好上述物种资源,兼顾我国传统中医药的可持续发展,在各级政府的指导和关心下,各级林业、卫生、工商、 合品药品监督管理和中医药管理等部门在控制资源消耗。研究人工繁育技术。规范经营利用行为。打击违注和罪活动等方面

In 2010, the CITES Secretariat issued an alert (CITES Alert In 1987, acknowledging the worsening conservation No. 37) highlighting that illegal trade in pangolins was status of pangolins in China, the Chinese pangolin expanding. Then, in 2014, the Secretariat described the (Manis pentadactyla) was listed as a "Level II protected illegal trade in pangolins as "escalating at an alarming wild medicinal material species" under the TCM wild rate".48,49 It listed several seizures of pangolin meat and materials management regulation.⁵⁷ The listing meant scales and stated that China was reported as the final that any harvesting or hunting of pangolins from the destination for the majority of these. Meanwhile, an wild required a Government permit and export was emerging legal and illegal trade in pangolin scales from limited. Under this regulation, Level II listed species African countries to Asia was picking up pace. Heeding were those with a reduced distribution and depleted recommendations from the First Pangolin Range population. States Meeting in 2015, all eight pangolin species were eventually uplisted to Appendix I at CoP17, making their Pangolins first received formal protection in China in international commercial trade illegal.⁵⁰

Adopted at CoP17, Resolution Conf. 17.10 on the 'Conservation of and trade in pangolins' encourages consumer states to reduce demand for illegal pangolin products. As written, this fails to go far enough in calling for the closure of legal domestic pangolin markets or for traditional medicine industries to eliminate the use of pangolin parts and derivatives. Something for which there is precedent in CITES Resolutions and Decisions for wildlife experiencing high levels of illegal trade including elephants, Asian big cats, rhinos and the Tibetan antelope.^{51,52,53,54}

Laws in China permit commercial pangolin scale trade

Controls on the trade in pangolins in China date back to at least 1977 when their export was banned because it was thought a cancer cure could be derived from pangolin body parts.⁵⁵ This was at a time when many thousands of pangolins were being exported from China to Hong Kong, possibly for the skin trade to the US.⁵⁶ Pangolins first received formal protection in China in 1989 when the Chinese pangolin was listed as a species subject to second-class special state protection under the Wildlife Protection Law of 1988.^{58,59} This meant that pangolins could only be legally hunted or captured from the wild with a hunting licence.

风搜索

In 2020, the Chinese pangolin as well as Sunda (Manis *javanica*) and Indian (*Manis crassicaudata*) pangolins were listed as species subject to first-class special state protection.^{60,61} This means that breaches of the Wildlife Protection Law relating to these three species will now incur more severe penalties. The trade of species under special state protection for consumption as food has been banned in China since 2014.⁶² However, a central tenet of the original Wildlife Protection Law, as well as later amended versions passed in 2004 and 2016,63 is that protected species can be subject to commercial trade and utilisation. So, even though the Chinese pangolin was listed as a protected species, and consumption as food prohibited, exemptions in the 1988 law allowed for the commercial sale, purchase and use of pangolins and their parts for other purposes.

Above: State Forestry Administration Notice 242 from 2007 outlining how pharmaceutical companies and hospitals can produce and sell pangolin scale medicines.

In the latest 2017 version of the law, commercial use of species subject to special state protection is outlined in Article 27. This exemption gives provincial forestry departments the authority to approve the sale, purchase and utilisation of species subject to special state protection for certain uses, including TCM. This has created a regulatory environment in which possession of a protected species is not illegal and the products of pangolins and other globally threatened wildlife such as leopards, Asiatic black bears, musk deer, Saiga antelope and hawksbill turtles can be legally traded in TCM.^{64,65,66,67}

Non-native pangolins are subject to domestic protections by virtue of their CITES listing. Article 35 of the Wildlife Protection Law stipulates that CITES-listed species can be managed as species under special state protection. Earlier notifications have also conferred domestic protections upon non-native CITES-listed species.^{68,69} However, while commercial import and export of all pangolins is currently prohibited, application of the strictest domestic protections are not necessarily guaranteed. Article 35 of the Law also gives the National Forestry and Grassland Administration (NFGA, formerly the State Forestry Administration, or SFA) a mandate to 'approve', and thereby potentially alter, protections for non-native species.

In 2003, the SFA and the State Administration for Industry and Commerce (SAIC, now subsumed as part of the State Administration for Market Regulation) launched a pilot system to regulate the commercial trade and use of wildlife under special state protection and their products through a centralised body called the China Wildlife Mark Centre (CWMC).⁷⁰ The CWMC is responsible for the research, development and coordination of the commercial utilisation of wildlife in China. It set out a certification system that formalised the use and consumption of nationally protected wildlife by commercial manufacturers, such as pharmaceutical companies, through a registration and labelling scheme called the China National Wildlife Mark (CNWM) – often referred to as a 'special marking'.

In 2007, SFA notice 2007 No. 242 announced that pangolins (known as "Squama Manitis" in TCM terminology") were to be regulated under the CNWM Scheme.⁷¹ This joint notice was issued by the SFA, the Ministry of Health, the SAIC, the State Food and Drug Administration (SFDA, later renamed the National Medical Products Administration, or NMPA) and the State Administration of Traditional Medicine (SATM, later renamed the National Administration of Traditional Chinese Medicine, or NATCM).

Notice 2007 No. 242, which also covered saiga antelope horns and 'rare' snakes, stated that appointed hospitals and licensed pharmaceutical companies could legally acquire raw pangolin scales from an inventoried national stockpile as outlined in annual national and provincial quotas. The 2007 notice allows for appointed hospitals to use and prescribe raw pangolin scales, while licensed pharmaceutical companies can sell and manufacture processed 'patent'^{vi} pangolin scale medicines that are registered and packaged according to the CNWM guidelines.

Subsequent notices by the SFA, NMPA and NATCM in 2008 and NFGA pangolin scale quota announcements further outlined how licensed pharmaceutical companies can manufacture over-the-counter patent medicines based on Government-approved formulas, as well as yinpian (Figure 1).^{72,73,74,75,76,77,78,79,80}

In 2020, the NFGA published a new notice on pangolins outlining how it plans to strengthen the protection and management of pangolins.⁸¹ This notice recognises that pangolin populations are deteriorating, ends licenced pangolin hunting and makes some strong statements on their protection. These include measures to strengthen the protection of wild populations, crack down on pangolin trafficking and illegal sale and raise public awareness of pangolin conservation issues. However, it completely fails to address the existence of the legal market for pangolin scale medicine.

Figure 1: Explanation of yinpian. Image of pangolin scale yinpian obtained by EIA investigators from the social media account of a pangolin trafficker based in Asia



Yinpian are TCM ingredients that have been semi processed for manufacturing into processed medicine or cooking into a decoction.

Raw pangolin scales are washed and cleaned from impurities, and then heat-dried to make yinpian.

The NFGA guidelines state that pangolin scale yinpian can only be sold to licensed pharmaceutical companies or prescribed by appointed hospitals – yinpian cannot be sold in retail outlets.

To date, the NMPA has yet to set out a legal definition of what constitutes yinpian, leaving ambiguity over this regulation.

Though it is not clearly indicated, the 2015 Chinese pharmacopeia described pangolin scales that have been treated with heat (炮山甲), and/or those then treated with vinegar (醋山甲), as pangolin scale yinpian.



Chronic problems: continued endorsement of pangolin scale use

Removal of pangolin scales from the TCM pharmacopoeia?

In June 2020, The Health Times of the People's Daily, a Soon after the news was reported, EIA obtained a copy China Communist Party-owned newspaper, published of the 2020 TCM pharmacopoeia and established that a news story announcing that pangolins had been "pangolin" – described as the Chinese pangolin in the removed from the Chinese Governments' official TCM 2015 edition – had been removed from a section listing pharmacopoeia and would not appear in the 2020 'key TCM ingredients'. However, pangolin scales were edition of the book.⁸² It reported the reason for this as the still included as an ingredient in patent medicines.⁸⁶ "exhaustion" of wild pangolin populations. Even though Patent medicines are those which have been formally there was no official Government notice, this news was approved for commercial production by the Chinese widely reported in the international media, with some Government. interpreting it as a ban on the use of pangolin scales in TCM.83,84,88



Above: Semi-processed 'yinpian' pangolin scales available for sale in a traditional Chinese medicine outlet in Guangzhou, China in 2018

Eight patent medicine formulae listing pangolin scales as an ingredient remain in the 2020 TCM pharmacopeia.⁸⁷ These include 'Zaizao Wan', which comes in pill form and is used to help blood circulation (Figure 2), and 'Awei Huapi Gao', a treatment usedto relieve, among other things, abdominal pain (seeAppendix A for full list).

In China, legal trade in medicinal products is not always restricted to ingredients and patent medicines listed in the pharmacopoeia. EIA has identified 72 additional patent medicines containing pangolin scales on four official Government medicine lists from the Ministry of Health and NMPA (Figure 3).88,89,90,

Since patent medicines containing pangolin scales remain in official Government lists and there have been no new Government notices banning the use

Below: Examples of medicinal conditions purportedly treated by pangolin scale TCM products, as per pharmacopoeia.

Promote blood circulation and bruise recovery	本版药典(一部)未收载 2015 年版药典(一部)中的品种名单
Relieve amenorrhea and aid blood circulation in breasts (promote lactation)	768
Reduce inflammation and expel pus	马业校 大加勝 安山印 黄连羊肝丸
Promote blood circulation in the body	"Pangolins" (in red circle above) are stated to be removed on Page IX of the 2020
Relieve menstrual clots and uterine tumours	Pharmacopoeia.
Unblock milk ducts (promote lactation)	Pangolin scales (in red circle below) continue to be embedded in the ingredients required to produce the patent medicine Zaizao Wan (in blue circle) on Page 870 of the
Heal boils and skin abscesses	2020 pharmacopoeia.
Relieve rheumatism and muscle aches	事於影对照然,加甲醇制成每 [於漢] 密封. 在 10 年前 10 月前 10 月
Heal stroke-induced paralysis	附)(2)項下的供试品幣渡及上 再造丸 集型服務開始(内推)。
Relieve muscle numbness and spasms	KZ版-甲酸(85×15×2)为展 Zolzao Wan Sz
Note: Pangolin scales are used in combination with other ingredients to deliver the purported function	家乙酯=粮(85-15-12)分泌 外先灯(254m)下检视。供试 留庭的位置上:最相同颜色的 这方】新觉肉 20g 全竭 15g 好那些方在于薄楚的 方面的位置上:最相同颜色的 达着 加度的位置上:最相同颜色的 达着 加度的位置上:最相同颜色的 西藏,加度完成品色造沸。 达着 加度的位置上:最相同颜色的 西藏,加度完成品色造沸。 达着 加度的位置上:最相同颜 西藏,加度完成品色造沸。 达着 加度的位置上:最相同颜 西藏,加度完成品色造沸。 达声 10g 和母:(油麦,加度,而在的,在一个小,和和和和和和和和和和和和和和和和和和和和和和和和和和和和和和和和和和和和

Figure 3: Pangolin scales are included in five separate Chinese Government patent medicine lists

Figure 4: Legal status and medical insurance coverage of raw pangolin scales and patent pangolin medicines in China

of 'registered' pangolin scale stockpiles by licenced

2007 No. 242 still stands (Figure 4). This means that a

through the open-source research presented on page 22) and 713 hospitals can still produce and sell patent

minimum of 221 pharmaceutical companies (identified

The implication of the removal of the Chinese pangolin

from the raw ingredients section of the pharmacopoeia is not immediately clear. Although unconfirmed, it

is very likely that pangolin scale yinpian can still be

used and prescribed by licenced hospitals. A similar

situation currently exists with farmed bear bile, which is excluded from the raw ingredients section but is still

used in official patent medicines and even funded and

promoted by the Chinese Government's national medical

pharmaceutical companies and hospitals, Notice

medicines containing pangolin scales.92,93

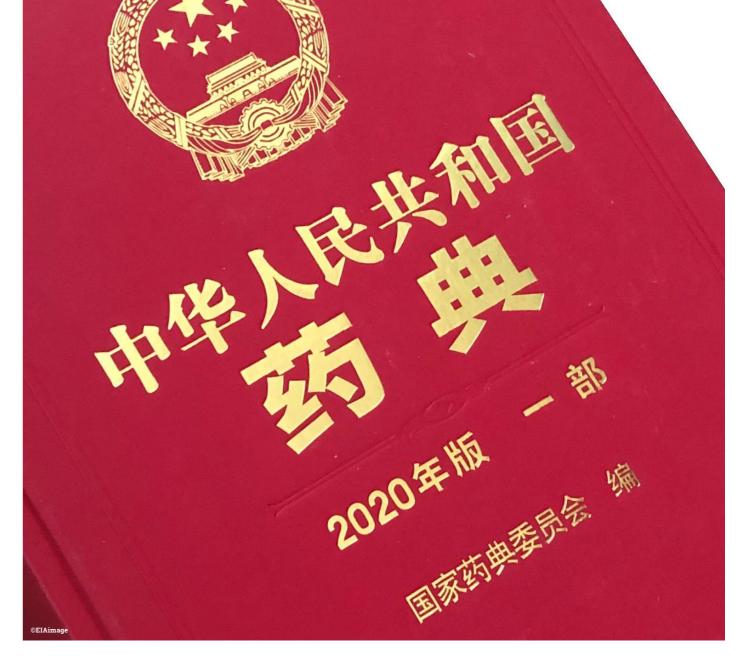
insurance scheme.94

1 pharmacopoeia

Figure 2: Pangolin scales remain in the 2020

東東,直径约 25µm(油

Source	No. of formulae containing pangolin scales			
National Standard for Chinese Patent Drugs by the Ministry of Health (卫生部药品标准中药成方制剂)	54		@EIAimage	
List of new medicines approved			Raw pangolin scales	Processed pangolin products (patented formula)
by the National Medical Products Administration (新药转正标准)	8		YES - only for pharmaceutical companies and hospitals	YES
			Although "pangolin" as a raw material has been	Out of the 80 patented TCM formulas registered:
List of processed Chinese medicine approved by the		Legal?	removed from the pharmacopeia, there has been no official Government notice banning its	• 8 are from the Pharmacopeia (see App. A)
National Medical Products Administration (国家中成药标准汇编)	6		use. Therefore, pharmaceutical companies and hospitals can continue to use pangolin scales from registered stockpile.	• 72 are from other official sources
Registered standards (注册标准)	4	Covered by	NO	YES
The Pharmacopoeia (中国药典)	8	National Insurance?	The government has removed pangolins in decoction form, i.e. yinpian. from being covered by national insurance.	5 Items are still covered by national insurance (see Appendix B).



The end of pangolin scale medical insurance? scheme actually added a patent pangolin scale medicine to its coverage list (Weiling Guci Gao, which also uses donkey-hide gelatin) and continues to cover four patent In August 2019, China's National Healthcare Security Administration and Ministry of Human Resources medicines containing pangolin scales that were on the and Social Security released a joint notice updating an 2017 list (Figure 5). These include Zaizao Wan, Ba Du existing 2017 list of medicines covered under its national Gao, Huixiang Juhe Wan and Zhi Xue Wan (Appendix medical insurance scheme.^{95,96} Initial reports stated that B). Although it is not clear why pangolin scale yinpian medicines containing pangolin scales broadly were no was removed from the insurance list and not the longer covered by national medicinal insurance.97 patent medicines, this demonstrates that the Chinese Government, by directly funding the consumption of EIA has established that in 2019, while pangolin scale pangolin scale medicines, is actively incentivising their use by TCM consumers and stimulating demand.

vinpian was removed from the list, the insurance

Figure 5: Continued cover for pangolin medicine on national medical insurance

(二) 不得纳入基金支付范围的中药饮片	再品分类代码		药品分)	۳.		编号	1
					Z	693	头痛学校囊
阿胶、白糖参、朝鲜红参(穿山甲(醋山甲、炮山甲)) 玳瑁、冬虫夏草、蜂蜜、					Z	694	肿痛交股實
时宝、龟鹿二仙胶、哈螟油、海龙、海马、股枣、酒封体放、羚羊角尖粉(羚羊角锈片	ZA15F		界血統	风剂			
、羚羊角粉)、鹿茸(鹿茸粉、鹿茸片)、马宝、玛瑙、牛黄、珊瑚、麝香、天山雪莲					- 44	695	非血清脑丸(颗粒)
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鲜石斛(铁皮石斛)、西红花(番红花)、西洋参、血竭、燕窝、野山参、移山参、	ZA156	_	社风通	15.01			
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donkey-hide gelatin (ejiao), saiga antelope antler powder and hawksbill turtle, among others.		-	+ +		Z	204	下産丸(片、設備
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and nawksbin furthe, among others.					Z	1.0	····存先(片、)
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Top: Pangolin scales are included in five separate Chinese Government patent medicine lists. The 2020 edition of the TCM pharmacopoeia contains eight different pangolin scale medicines

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However, in the same announcement, the national insurance scheme continues to cover processed medicine, such as Zaizao Wan (in blue circle), which require pangolin scales (and leopard bone) as a mandatory ingredient according to the patent formula in the pharmacopoeia 2020.

A bottomless pit: China's dubious pangolin scale stockpile management system

Over the years, EIA has documented how China's systems for regulating legal domestic trade in the parts and products of protected species are fundamentally flawed or are open to abuse, facilitating illegal trade.

This has included exposés of how the SFA/NFGA's CNWM scheme has been abused by China's wildlife trade industry to sell illegally sourced tiger products and elephant ivory.^{98,99,100,101} As tonnes of trafficked pangolin scales flow from source countries across Africa and Asia into China, the same flawed systems for regulating commercial wildlife use are being used by pharmaceutical companies to produce pangolin scale medicines (Figure 6).

Figure 6: How China fails to strictly regulate its domestic pangolin scale trade

- There is common interpretation that the Chinese government holds centralised stockpiles of pangolin scales registered in 2007 and then disburses these through quotas to pharmaceutical companies and hospitals. This is not the case, China has a decentralised system of registered stockpiles held privately by private entities.
- Provincial forestry departments have mandate under the Wildlife Protection Law (Article 27) to licence companies and hospitals to trade in pangolin scales according to certain guidelines. Using the Article 27 exemption, at least one province as recently as 2019 is approving a huge and active trade in pangolin scale stockpiles between companies.
- The NFGA's CNWM labelling scheme is purported to provide traceability around the provenance of pangolin scales traded by pharmaceutical companies. In reality, pharmaceutical companies are selling TCM medicines with pangolin scales that are listed as having an "unknown" origin. This shows the NFGA is unable to verify the origin of pangolin scales entering the legal trade. Abuse of this system has been widely documented for other species.

Far right, top: With the majority of pangolin scales seized from illegal trade destined for China, it is likely that illicit pangolin scales are being laundered into the legal supply chain.

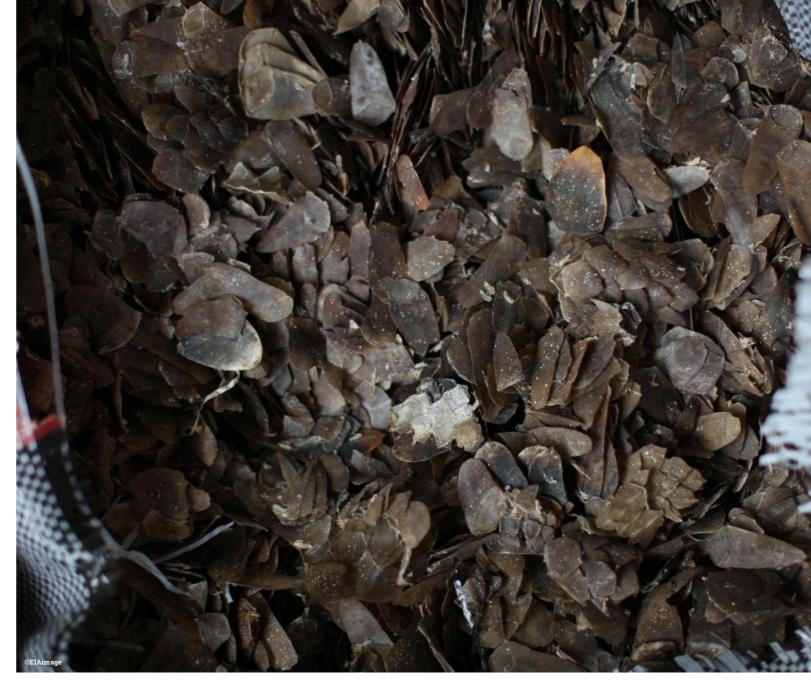
The 2006 stockpile inventory

The Chinese Government has never publicly disclosed the origins or size of its "national" pangolin scale stockpile yet at CITES CoP18, in August 2019 it claimed that it strictly regulates the use of inventoried pangolin scale stockpiles.^{102,103} The basis of this regulation is the CNWM scheme (page 10) which is purportedly intended to ensure traceability around the use of Governmentverified stockpiles.

In 2006, the SFA issued Notice No. 3 requiring all individuals and private companies with pangolin scale stockpiles to declare the quantity and time of acquisition of their stock to the relevant provincial forestry department.¹⁰⁴ Provincial forestry departments were then required to inspect and verify the privately held stockpiles and report these to the SFA. This was under a national audit of selected wildlife product stockpiles, which also included leopard bone and bear bile, as part of the CNWM scheme. Following this initial inventory, any private traders with unregistered new stocks of pangolin scales were required to submit documents as evidence of legal origin before they could "sell, process, utilise or export" them.

With pangolins thought to be commercially extinct in China from the mid-1990s,¹⁰⁵ the potential origins of the stockpiles declared during the 2006 inventory are dubious and legally questionable, especially given the lack of transparency around the stockpile management system. At the time, sources could have included legal imports under CITES, Government seizures and illicit international supply chains. CITES trade records for the period up to the national stockpile inventory in 2006 show that only a limited quantity, 7.6 tonnes of pangolin scales, were legally imported into China and these were in 1994 and 1996.¹⁰⁶

The sheer volume of documented pangolin scale trafficking into China from across South-East Asia between 2000-07¹⁰⁷ make it likely that the stockpiles registered in 2006 consisted of Asian pangolin scales sourced illicitly. If this included stocks seized by the Chinese Government, this would have been contrary to the recommendations of CITES Resolution Conf 9.10, which outlined that confiscated parts and derivatives of Appendix II species be disposed of to benefit "enforcement and administration" of the Convention.¹⁰⁸



Annual quotas

Between 2008-14, seven national-level annual pangolin scale usage quotas were issued by the SFA, totalling 186 tonnes and averaging 26.6 tonnes a year (Appendix C).¹⁰⁹ These quotas provided a limit on the amount of registered privately held pangolin scale stocks that could be approved by provincial forestry departments for transfer between private entities (such as wildlife trading and pharmaceutical companies) and to hospitals in each province.

Since 2015, no records of national pangolin scale quotas are available from any official Chinese Government online archive. Despite this, provincial forestry department documents and the ongoing sale of TCM medicines labelled as containing pangolin scales clearly show that the CNWM Scheme has continued to run.

Right: State Forestry Administration Notice 174 outlining the quantities of pangolin scales available for trade through the national stockpile for 2013-14. The national quantity made available was 25.9 tonnes.

国家林业和草原局 国家公园管理局

自然保护地管理司

合 自然保护地管理司 > 通知公告 > 审核审批

国家林业局关于下达2013-2014年度库存穿山甲片原料年度 消耗控制量的通知(林护发〔2013〕174号)

国家林业和草原局政府局 http://www.forestry.gov.cn/2016-07-06 泉源:保护司(野保力) 【字体:大中小】 打印本页

保护司子站7月6日讯

各省、自治区、直辖市林业厅(局):

为统确处理好野生动物保护和中医药事业给协调发展,确保对野生动物资源消耗控制总量的宏观调控,按照国家林 业局、卫生意、国家工商总局、国家食品局品监管局、国家中医药局(关于加强赛加助等、穿山甲、稀有低涉资源保护 和规范其产品入药管理的通知(林护发(2007)242号)要求,根据各有关编码林业主管部门上报的上年应库存穿山 甲片原材料消耗控制量执行情况、目前库存情况以及本年度需求计划,现得组织专家对各地提出的穿山甲片库存原材料 2013—2014使常乐计划进行了科学论证,确定了2013—2014年度库存穿山甲片原材料年度消耗控制量(详见财 件),现下这给你们,并获有关事项通知如下:

一、继续强化库存原材料消耗的完成管理。本次下达的2013—2014年度库存穿山甲片原材料年度消耗控制量,截 止期限为2014年6月30日。各级林业主管部门在此期间申核、审批利用上述原材料生产加工中成药、中药饮片或国家林 业局公告约定点医院瑞想医院制剂的介或许可事项申请,请严格执行下达的原材料年度消耗控制量,不得是量许可,也 不得時年度使用。下达的年度消耗量不能满足需求的,有关企业可选择依法购买合法养殖企业提供的人工养殖所获的原 材料。

二、统一安排使用专用标识、各省级林业主警部门依法批准出售、收购和利用上述原材料的有关文件须同时抄送我 周野生动植物保护与自然保护区管理司,由其安排经批准生产的中成药、规格包裹的中药饮片、医院制剂和其他重要产 品加载"中国野生动物经营利用管理专用标识"事宜。上述产品须加载标识后方可进入流通,其中中药饮片限定使用3 克、5克、6克、9克、10克5种统一规格包装,在每一规格包装的外包装上加载标识后,只能定向出售给国家林业局公

Mismatch between quotas and demand

The annual quotas allotted by the SFA represent only a fraction of the quantities requested by pharmaceutical companies. For example, the Ningbo city forestry department's 2009 annual quota announcement for individual companies stated that Zhejiang province approved the use of 364.4kg of registered pangolin scales by private entities.¹¹⁰ This was stated to represent only four per cent of the total quantity requested by companies.¹¹¹ This would put the total quantity of pangolin scales requested at over 8.6 tonnes, which was 230 per cent greater than the allotted quota. This points to a significant mismatch between the quantities of pangolin scales required to the meet production demands of pharmaceutical companies and availability through the national quota system.

Problematic provenance traceability

EIA has found images of 23 CNWM special marking labels issued between 2009-13 visible on the packaging of TCM medicines advertised online (Figure 7). As per SFA guidelines, the origin on these labels can be listed as either 'Wild', 'Farmed' or 'Unknown'. Of 12 labels that are legible, five stated the pangolin scales contained in the medicines were from a 'Wild' source and the remaining seven from an 'Unknown' source. This implies that the SFA has approved the commercial use of pangolin scale stockpiles for which it is unable to verify the provenance, a requirement clearly stated in the 2007 stockpile management guidelines. This is a clear example of the CNWM special marking scheme failing to perform its purported function in ensuring traceability and legality of pangolin scales used by pharmaceutical companies. Automation of the second sec

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国药准字Z20026353



②广誉远国药

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Figure 7: Special marking labels drawn from pangolin scale medicine products advertised by pharmaceutical companies online

Above: Examples of TCM medicines containing pangolin scales with the CNWM special marking labels



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Limited legal supplies to meet demand

There is no up-to-date information on the level of demand for pangolin scales in China but between 1990-93, one pharmaceutical company was reported to have acquired 70 tonnes of pangolin scales and, in 1991, imports of 63 tonnes of pangolin scales into China were recorded.¹¹² In 2002, it was thought that about 80-100 tonnes of pangolin scales were consumed for medicine in the country every year.^{113,114} Pangolin scale quota allocations between 2008-14 do not even come close to meeting these dated estimates of supply and demand.

Following the 2006 national inventory and guidelines set out by the SFA in the 2006 (No. 3) and 2007 (No. 242) notices, no further pangolin scale stockpile registration or usage guidelines have been published. This means it is possible that newly acquired stockpiles have continued to be registered with provincial forestry departments. Plausible sources of new pangolin scale stocks would include imports permitted through CITES,^{vii} seized stock sold or auctioned by the Government to companies and hospitals and stock sourced through illicit international supply chains.

Even though the NFGA, China TCM Association and the TCM industry have proactively promoted the captive-breeding of pangolins as an option to generate commercial supplies of pangolin scales,¹¹⁵ a scientific evaluation of its commercial viability clearly shows that it is not feasible.¹¹⁶ It is not possible that stockpiles have been harvested from pangolins bred in captivity.

In 2016, the SFA issued a draft regulation on the disposal of seized wildlife products.¹¹⁷ While it is not known whether this was ever officially issued, the regulation states that if certain conditions are met, seized wildlife products can be auctioned by the Government and the proceeds turned over to the State treasury.

SMOKE AND MIRRORS

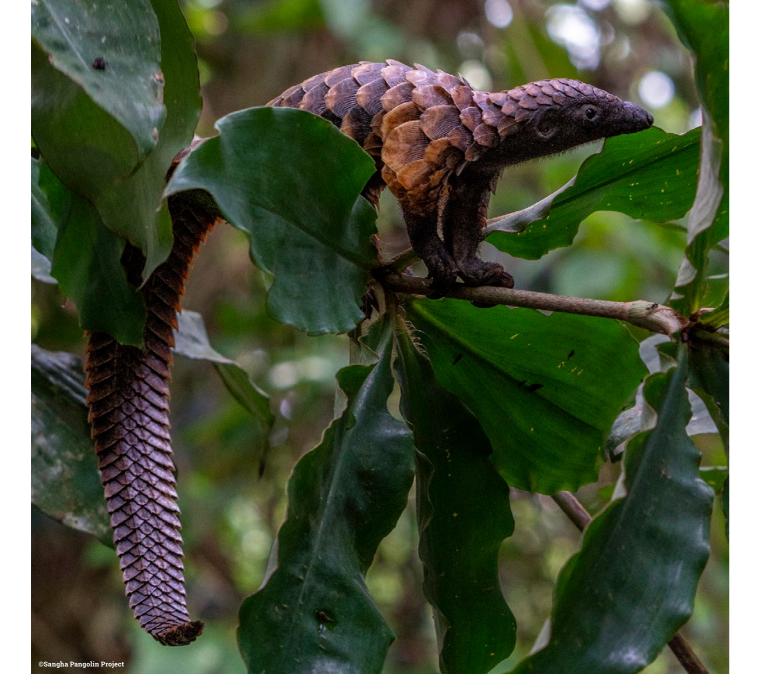
EIA is aware of one example of pangolin scales being auctioned by the Chinese Government. In 2013, Anhui provincial forestry department commissioned a company based in Anhui province to auction a stock of pangolin scales. Given the sale price of RMB 1.47 million (\$200,000), the auction likely involved a significant quantity of pangolin scales. More recent examples from Anhui provincial forestry department documents show that two pharmaceutical companies were given approvals in 2018 and 2019 to trade in "seized" and "auctioned" stock.¹¹⁸

While Government officials have publicly stated that seized pangolin scales are on occasion destroyed,¹¹⁹ these examples demonstrate that they have also entered commercial supply chains and plausibly continue to do so. The Chinese Government seized a minimum of 67.5 tonnes of pangolin scales between 2010-19¹²⁰ and there is a lack of public information as to how these have been stored or disposed of.

Any continued sale or auctioning of seized pangolin stocks by the Chinese Government would be contrary to CITES's latest recommendations on the disposal of confiscated Appendix I specimens outlined in Resolution Conf. 17.8.¹²¹

The lack of transparency around the Government's pangolin scale stockpile management system means that public scrutiny over the origins of new stocks is near impossible. With limited legitimate sourcing channels, serious questions arise as to how pharmaceutical companies and hospitals can generate the gigantic quantities of unprocessed pangolin scales required to satisfy demand.

Above: A TCM outlet in Guangzhou, China. Under the national pangolin scale guidelines, stores such as this cannot sell raw or semi-processed (yinpian) pangolin scales but many do so.



Companies sourcing scales from Africa

EIA's open-source investigations have identified examples from two Chinese provinces – Anhui and Guangdong – showing that wildlife trading companies have sourced pangolin scales through international supply chains and sold these on to pharmaceutical companies.

A CITES export permit and Air Waybill obtained through an EIA undercover investigation show that a company involved in the 2018 sale of two tonnes of pangolin scales, as detailed in an Anhui provincial forestry department document, imported multiple tonnes of pangolin scales from an African country to China two years earlier in 2016.¹²² This raises questions as to whether the scales used in the 2018 sale were those imported in 2016 or scales laundered through the company's registered stockpile. CITES trade database records show that China declared the import of 17.6 tonnes of pangolin scales between 2010-17, 15 tonnes of which originated from African countries.¹²³

Guangdong provincial forestry department awarded seven separate approvals to a wildlife trading company and one of its subsidiaries for the import of pangolin scales from African countries between 2015-17.¹²⁴ At least two of these approvals were granted soon after the CITES Appendix I uplisting was adopted in September 2016, flouting the will of the parties (Figure 8). A further two were issued after the uplisting entered force in January 2017, therefore allowing the company to import scales in violation of CITES. The documents also show that one of the wildlife trading companies sold a large quantity of pangolin scales to a pharmaceutical company based in Guangdong province, which in turn supplied the stock to a large State-owned pharmaceutical company based in Hebei province.

Above: Black-bellied pangolin (*Phataginus tetradactyla*) in Dzanga-Sangha Protected Area, Central African Republic. This species is listed as Vulnerable on the IUCN Red List

Figure 8: Guangdong provincial forestry department 2017 approval for pangolin scale imports

广东省林业局政	府信息公开	F目录	A COL	清輸入要搜	索的文件内容
Guangdong Provincial Fore	str <mark>y Department</mark> Go	overnment Informa	ation Disclosure Direc	tory	
索引 号 :			分类:农业、林业、水利		
发布机构:广东省林业厅			成文日期: 2017-01-12		
名 称:进出口中国参加的国际/	^{凌小成制进} 田口的响生野生动	初以具产品审核			
文 号:			主 题词:		
行政许可决定文书					
项目名		公约限制进出口的陆生野生	动物或具产品审核		
Approval category 审批类		red			
Licence content 许可内	容: 进口树穿山甲鳞片	Import of tree pa	angolin scales		
行政相对人名	称:				
行政相对人代	码: 统一社会信用代码	组织机构代码	工商登记码	税务登记号	居民身份证号码
法人代表纳	z .				
	期: 2017-01-12				
许可截止					
		广东省林业厅			
地方编					
当前状	态: 正常				
1	注				

Convoluted stockpile trade and laundering risks

EIA's open-source investigation into China's pangolin scale trade reveals that the Anhui provincial forestry department has authorised the use and transfer of significant volumes of pangolin scales.

NFGA national quota documents show that Anhui province was assigned only 360kg of pangolin scales, all In February 2017, a social media post by a WeChat user caught the attention of several major Chinese news in the year 2011 (Appendix C). This implies the province outlets.¹²⁵ This post criticised the Anhui provincial might not play a significant role in the pangolin trade. forestry department for approving the purchase of However, the Anhui provincial forestry department 1.5 tonnes of inventoried pangolin scales by Beijing documents show pharmaceutical companies in the Tong Ren Tang (Bozhou) Yinpian Co. Ltd from Sichuan province have purchased 13.9 tonnes of pangolin scales between 2014-19 – 39 times the province's allotted Huatang Pharmaceutical Co. Ltd, which claimed the pangolin scales came from their existing stockpile. In 2008-14 guota. Such transfers demonstrate major an article by The Beijing News, a Chinese Communist inconsistencies between the approved quantities of Party-owned newspaper, a representative of Beijing Tong pangolin scales available to pharmaceutical companies Ren Tang (Bozhou) Yinpian Co. Ltd claimed that the sale and the actual quantity involved in active trade at the of pangolin scales leftover from the allotted provincial provincial level. quota limit was an accepted and common practice amongst pharmaceutical companies.

EIA has identified 24 Anhui provincial forestry department documents shedding further light on this provincial level trade in which 12 Anhui-based companies were authorised to sell or purchase pangolin scale stocks between 2014-19.126

The Anhui documents show there has been a minimum of 24 approved transactions involving either the sale or purchase of inventoried quota stockpiles between companies in the province. These have involved 17 approvals for the purchase of stockpiles from other companies, all but one of which were based outside of Anhui province, and seven approvals for the sale of stockpiles to companies in other provinces. The documents specifically mention that the approvals were issued as permitted by Article 27 of the Wildlife Protection Law (Figure 9).

Further examination of the quantities traded under each provincial forestry department approval reveals an average pangolin scale quantity of 841.6kg per transaction. This quantity exceeds what most provinces are allotted per year. This brings into question how each pharmaceutical company can obtain such a

Below: In 2017, The Beijing News reported a story about the purchase of 1.5 tonnes of inventoried pangolin scales by Beijing Tong Ren Tang (Bozhou) Yinpian Co. Ltd from Sichuan Huatang Pharmaceutical Co. Ltd.

large quantity of inventoried pangolin scales from the national stockpile, and whether such transfers between pharmaceutical companies contradict the annual quota guidelines. These clearly state that no additional quota can be granted by provincial forestry departments, and the use of allotted pangolin scales cannot be extended into subsequent years.

Under the 2006 (No. 3) and 2007 (No. 242) notices, provincial forestry departments must verify, register and inventory stockpiles held by each pangolin scale stock owner. However, once verified, legal origin does not need to be demonstrated at any stage of trading, processing, and exporting. Given the difficulties in tracing the origins of pangolin scale stockpiles, this convoluted trade in quota stocks between private entities could very easily be exploited to launder illicitly sourced pangolin scales into the legal supply chain.

Figure 9: Anhui provincial forestry department 2018 approval for pangolin scale transfer referencing Article 27 of the Wildlife Protection Law

安徽源和堂药业股份有限公司: approved to purchase 130kg of pangolin scales from Guangzhou Zhongliang Pharmaceutical Co., Ltd. 保护法》第二十七条规定,准予你单位从广东省广州中量药业有限公司购入已封存穿山甲(*Manis pentadactyla*)片130 0公斤(共26箱,每箱50公斤,标准化封箱号:NO.000012229~12254),用于生产炮制穿山甲片125000袋(规格:10 克/袋),并按规定申请"中国野生动物经营利用管理专用标识"125000枚。 请凭此件于2019年1月5日前依法运输相关动物制品,逾期无效。 "专用标识"服务:国家林业局野生动植物研究发展中心 陈力 电话:010-62888966。

> 安徽省林业厅 2018年7月5日

Below: The regulatory system run by the Chinese Government that permits pharmaceutical companies to produce and sell pangolin scale medicines.

中药公司被曝采购3000斤穿山甲片

2月16日晚,微信公众号"原本山川"发文称,"穿山甲濒临灭绝主要因为食用和药用,不仅食用要禁止,所谓合法 药用也要禁止"。该帖子还披露安徽省林业厅批准同仁堂(亳州)饮片有限责任公司从四川省华堂药业有限公司购入已 封存的穿山甲片1500公斤。安徽省林业厅向新京报记者证实,确有此行政许可决定书。



新《野生动物保护法》第26条规定,禁止出售、收购、利用国家重点保护野生动物及其制品。图/视觉中 王

供货方称是存货;公司人员透露以每公斤18万元价格卖出;安徽省林业厅批准采购行为遭质疑 2月16日晚, 微信公众号"原本山川"发文称, "穿山甲濒临灭绝主要因为食用和药用, 不仅食用 要禁止,所谓合法药用也要禁止"。该帖子还披露安徽省林业厅批准同仁堂(亳州)饮片有限责任公司从 四川省华堂药业有限公司购入已封存的穿山甲片1500公斤。

2月17日上午,安徽省林业厅向新京报记者证实,确有此行政许可决定书。而供货的四川省华堂药 业有限公司表示,出售的穿山甲片都是以前的存货。不过,该公司并未透露穿山甲片的具体来历。

昨日下午,国家林业局新闻处相关工作人员作出回应,他表示,近期接到很多媒体关于穿山甲保护

Legal sources of pangolins National Forestry and **Grassland Administration** Allocate Submits registered stockpile amount and provincia quota uota request allowance Approves pangolin cale stockpiles sale and purchases Provincial lepartments Submit quota allowance China requests Vildlif Verifies pangolin scales/issues 'special marking' labels Centre



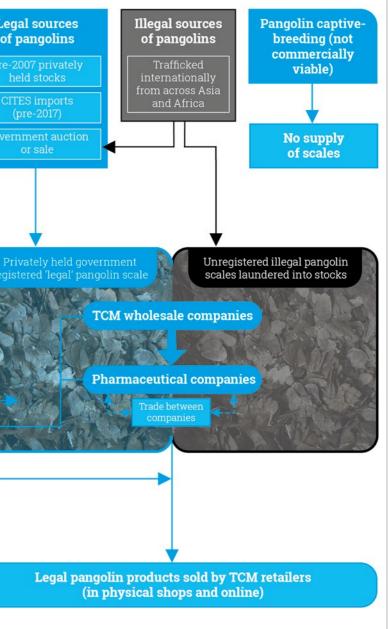


Figure 11: Eight patent traditional Chinese medicine products containing pangolin scales advertised for sale by pharmaceutical companies in China

Pangolin business: the medicines advertised online

To document the availability of legal pangolin scale medicines in China and the role of TCM pharmaceutical companies in the pangolin trade, EIA's open-source investigation focused on the products advertised by manufacturers online.

A staggering 56 pharmaceutical companies were identified to be advertising a total of 64 pangolin scale medicines. The medicines were also found to include the products of other globally threatened and Appendix I listed species including leopard bone, natural musk from musk deer and bear bile. The companies identified included China's largest TCM pharmaceutical company, Beijing Tong Ren Tang Co Ltd, which has subsidiaries across the world and whose investors include major European and US investment funds.

All companies found to be selling pangolin scale medicines were given a right to reply by EIA before publication of this report; we received no responses.

Methodology

By searching the term "pangolin" in Chinese (穿山甲, Chuan Shan Jia) – on TCM reference websites, EIA identified 80 known patent TCM formulations in official Government medical standards which contain pangolin scales as an ingredient. By searching each formulation on the National Medical Products Administration (NMPA) website (nmpa.gov.cn) we built a list of 221 pharmaceutical companies issued with approvals to produce 318 medicine products.

Each NMPA approval contains a unique identification code comprising a letter and eight numbers, which is printed on the product packaging (Figure 10). While this code demonstrates that a company has approval by the

Figure 10: Government approval information found on pangolin medicine products

China National Wildlife Mark (CNWM)

Issued by the National Forestry and Grassland Administration (formerly

the State Forestry Administration),

this label is intended to certify the

pangolin scales used in the product

special marking label

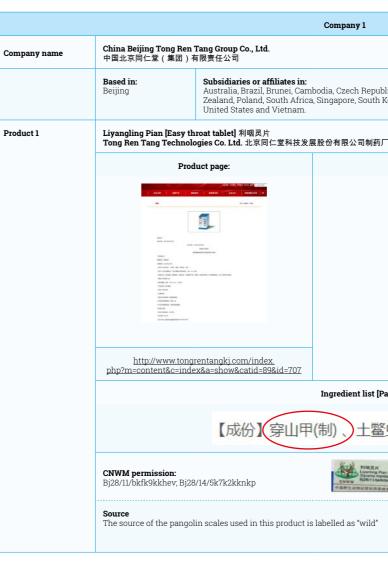
come from a legal source.

NMPA to produce and sell the medicine, it does not verify the final products produced contain legally sourced wildlife ingredients. The Government verification of the legality of the pangolin scales contained within the product is provided by the CNWM special marking label, which has a different code. Through our research, we identified 23 distinct CNWM labels (page 16).

To confirm the medicines were under production and being advertised for sale, we used web search engines to identify the websites of pharmaceutical companies with approvals to sell medicines which may, according to official standards, contain pangolin scales. Of 221 companies identified, we located 56 that were actively advertising patent pangolin scale medicines online. A total of 64 products were found on manufacturer websites and 101 products on third party sites (including hwzyjt.com, hayao.com, ypk.39.net and yao.xywy.com). The following pages list the products available from four companies: China Beijing Tong Ren Tang Group Co Ltd, Tianjin Zhongxin Pharmaceuticals Group Co Ltd, Hangzhou Zhuyangxin Pharmaceutical Co Ltd and Shenyang Dongling Pharmaceutical Co. Ltd (Figure 11). The other products found are listed in Appendix D.

Given the likelihood that additional pharmaceutical companies may well be producing and selling TCM products containing pangolin without publishing details on an easily identifiable website, the 165 products identified represent the absolute minimum number of pangolin scale TCM products available for sale in China.







SMOKE AND MIRRORS

Australia, Brazil, Brunei, Cambodia, Czech Republic, Germany, Hong Kong, Indonesia, Italy, Macau, Malaysia, Netherlands, New Zealand, Poland, South Africa, Singapore, South Korea, Sweden, Switzerland, Thailand, United Arab Emirates, United Kingdom,



Ingredient list [Pangolin circled in red]

土鳖虫、僵	置蚕、牡蛎(煅)、玄参。
TOR反片 Lighting Plan Lighting Plan Robit LightSakhay Robit LightSakhay	NMPA permission: Z11020295
"wild"	Permits ref: Permits issued by the State Forestry Administration in 2012 (permit number林护动植便字[2011]113号) and in 2014 (permit number 京绿动 植许[2014]190号)

1	
	Product image:
	of 香播核丸 Huixiang Juhe Wan
Haren and	北京同仁堂制药有限公司
st [Pangolin ci	rcled in red]:
荔枝核、盐补	补骨脂、肉桂、川楝子、醋延胡索、
、乳香 (制)	、桃仁、穿山甲(制)。
	NMPA permission: Z11020659
	Permits ref:

 M/Δ



			Company 2			
Company name	Tianjin Zhongxin Pharmaceuticals Group Co. Ltd (Darentang Pharmaceuticals Factory) 天津中新药业集团股份有限公司 (达仁堂制药厂)					
	Based in: Tianjin	Subsidiaries or affiliates in: N/A				
Product 1	Fengshi Guanjieyan War	n [Rheumatoid arthritis tablet] ,	风湿关节炎丸			
	Prod	luct page:		Product image:		
		ALCOME CONTRACTOR OF A CONTRAC				
	Ingredient list [Pangolin circled in red]:					
	【成份】马钱子(调制	別粉)、麻黄、当归、苍术、续断、	桃仁、红花、乳香(制)、没药	(制) 、千年健、地枫皮、羌活、地龙、桂枝、穿山甲(制)、木瓜、牛膝。		
	CNWM permission: Tj10/12/xk4kqkkq9j		REFRAC	NMPA permission: Z11020295		
	Source The source of the pangol	in scales used in this product is	s labelled as "unknown"	Permits ref: Permits issued by the State Forestry Administration to in 2012 (permit number林护动植便字[2012]51号)		





In the mail: the pangolin products with international shipping

EIA has found six pangolin scale medicine products manufactured in China available for purchase with international shipping on e-commerce platforms. Some of the e-commerce platforms used are the world's largest, such as eBay and Taobao (owned by Alibaba) (Figure 12).

Under CITES, the international trade in these pangolin medicine products would be illegal since they would be defined as containing "any readily recognisable part or derivative thereof" as outlined in CITES Resolution

Figure 12: Examples of e-commerce platforms with pangolin scale medicines available for sale with international shipping

Day Shop by ~ Q. Search f	or anything	All Categories V	Search
E Back to home page Listed in Category: Health & b See more 2	uady > Sláin Cana > Other Sláin Cana > gns Jing Wain Hong Waler Fee Burns Ultions and		S f 💟 🖸
People who viewed this item also viewed Specify LAR LER From You Jung. HKD 76 34 HKD 76 315 HKD 76 315			8
	2pcs JingWanHong 京万紅jing wan h ★★★★ 3 product ratings	nong 20g/tube Free shippi	ng (New!)
	Seller : shunbinshangbu (4160 *) 58.3% Positive Save this Seller Contact seller See other terms	feedback	
	Canditian: New	Last one / 5 sold	
	Cuantity: 1 Price: US \$18.85 Approximately HKD 148.6		
* (A) *	Approximately HKD 148.0	Buy It Now	
	8	Add to Cart	
	Last item available	More than 82% sold	Longtime me
	Shipping \$3.00 (ameres, MSI 22.2)	 Standard Shipping from China/Hon 	a Kana Taiwan to war
	See dotails Infamalianal obspread of dem Bern lacebox: ()(10.0, China	a may be subject to cuations processing and add	iturai charpes. O
- 🐔 📟 🚆 🚍	Ships to: WorkNets: Save ent	. Oct. 5 and Wed. Oct. 21	
	Payments: Ny VISA .	after <u>receiving cleared payment</u> . Ø	
	Returns: Seller does not accept n	relums] See details	
angolin product "DuJi DuJi	iao Gao" (杜记独角膏) sold on Taob	bao	
中國素基 · · 平均在用资		油肉用油菜 右	алей - 🗯 Мил
淘宝网	证末端		Q 🔘
	START THAT SHE START AND AND AND	職 春秋月常久党府 抵制	26
首員 > 保貸运销编集签辑 > 运方类 > 屈因舟外有	4 > 程度增加的		
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86.	交付方式 (1) 副 副 合有字論 彩扇頁		

Conf. 9.6 (Rev. CoP16).¹²⁷ This demonstrates the significant potential for China's legal pangolin scale medicine market to generate products that are exported and therefore enter illegal international trade.

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和關約一一) / 免費注用 和盈知度成	(4 年)) 秋田県 10年71. 全地、花田県、桜田、安田、泉田、山口、五日子、大東 (2 年, 2 月 4 月 4 月 2 日 2 日 2 日 2 日 2 日 2 日 2 日 2 日 2 日 2
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<u>cfH</u>	



Time for action: Chinese Government must close its legal pangolin scale market

In 2016, following years of pressure from the international community and wildlife campaigners, the Chinese State Council issued an order banning the processing and sale of elephant ivory.128 This recognised that closing the legal domestic ivory market would help combat the global trafficking of ivory.

Now is the time for similar leadership from the Chinese Government to eliminate consumer demand for traditional Chinese medicines containing the products of globally threatened species.

The findings presented in this report show that China's legal trade in pangolin scale medicine has a high

potential to be driving the global pangolin trafficking crisis. On the horizon, the growing global expansion of TCM through China's Belt and Road Initiative will potentially exacerbate the threat trafficking poses to wildlife,¹²⁹ including pangolins. Meaningful action from the Chinese Government to close its domestic market for pangolin scale medicines is urgently required.

China's Wildlife Protection Law, particularly Article 27, plays a pivotal role in ensuring a flawed system for regulating the commercial trade in pangolin scales persists. This legal context legitimises the consumption of pangolin scales in medicine and stimulates consumer demand for an illicit product that is sustaining transnational organised crime and pushing pangolins towards extinction.

Most TCM medications do not use the body parts of globally threatened wildlife and the replacement of pangolin scales in TCM is feasible. Recently, academics have pointed out that herbal substitutes with similar purported functions do exist.130

Pangolins carry coronaviruses and may have played an intermediary role in the 2019 spillover of coronavirus (SARS-CoV-2) from bats to humans in China.13 While the science on this link is not conclusive, it does demonstrate that the trade in pangolins poses a global human health risk. The pangolin scale

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medicine supply chain involves many stages in which humans can be exposed to the viruses they carry.135

In February 2020, China announced regulations prohibiting the consumption of terrestrial wild animals as food, a measure intended to safeguard human health.¹³⁶ This failed to also prohibit the trade in wild animals for other purposes such as traditional medicine.¹³⁷ The use of wildlife parts in medicine is also a risk factor in disease spillover since it requires the capture, transport and processing of animals.

Stakeholders in China are already calling for the wildlife consumption ban to extend beyond food and include the medicinal use of wildlife.¹³⁸ Action from the Chinese Government to end the use of wild animals, such as pangolins, in medicine is a critical measure needed to prevent future pandemics and protect the world's rapidly declining biodiversity.

Above: Temminck's pangolins (*Smutsia temminckii*) rescued from the illegal wildlife trade in Zimbabwe by Tikki Hywood Foundation

Recommendations

The Chinese Government should:

- Prohibit the acquisition, sale or possession, including for medicinal purposes, of all parts and products of pangolins and other globally threatened species, including those from captive-bred sources. This can be achieved by amending the Wildlife Protection Law, including key Articles such as 25, 27 and 28 to unambiguously prohibit commercial use of wildlife under special State protection or CITES Appendix I listed species¹³⁹
- Remove pangolins and other globally threatened species entirely from the TCM pharmacopoeia and other nationally approved medicine lists to end the production of patent medicine containing these species as an ingredient
- Destroy Government and privately held stockpiles of pangolin scales where they are no longer needed for criminal justice, scientific or training purposes
- Clarify the penalties for pharmaceutical companies and hospitals which illegally source, manufacture or sell pangolin scales
- Implement an extensive demand-elimination and consumer behaviour change campaign to end the use of pangolins and other globally threatened species in TCM
- Continue successful efforts to investigate and prosecute transnational criminal networks involved in pangolin trafficking, in cooperation with source and transit countries

The companies named in this report should:

- Immediately cease production and sale of products containing pangolin scales
- Revise formulations of these products and replace pangolin scales with herbal alternatives from sustainable sources
- Make a public statement that they will no longer use the products of wildlife threatened by trade

Investors of these companies should:

- Withdraw investments in the companies detailed in this report pending assurances that the company will cease the use and sale of pangolins and other wildlife threatened by trade
- Review investment portfolios and publicly announce divestment in companies using wildlife threatened by trade

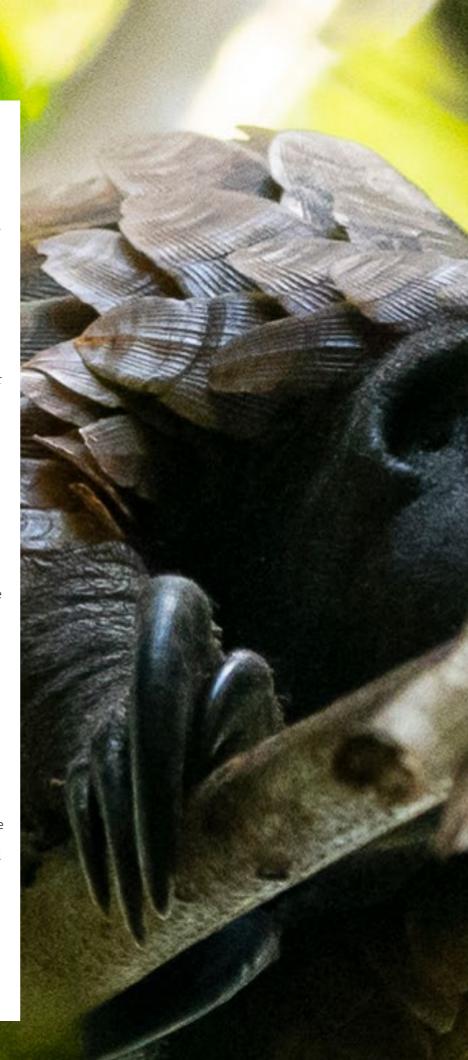
CITES Parties should:

- Call for urgent action by China to eliminate consumer demand for pangolin scale products, including the closure of its domestic legal market for TCM containing pangolin scales
- Call for the adoption of an amendment to Resolution Conf. 17.10 on the conservation of and trade in pangolins so that it strongly encourages Parties with high levels of consumer demand for pangolin specimens to eliminate demand for these, including closing legal domestic markets
- Call for the adoption of an amendment to Resolution Conf 17.10 so that the Secretariat is instructed to report to the Standing Committee and the Conference of the Parties on the status of pangolins in the wild, their conservation and trade controls in place
- Call for urgent action by pangolin range, transit and consumer states to address pangolin trafficking, using intelligence-led investigations and implementation of legislation aimed at disrupting transnational organised crime, including money laundering laws

Source and transit countries, especially Nigeria, Cameroon, the Democratic Republic of the Congo, Malaysia, Singapore, Vietnam and Hong Kong should:

- Where necessary, strengthen legal frameworks for the protection of pangolins and other globally threatened wildlife, and those related to combating transnational organised crime
- Resource and undertake multi-agency intelligenceled investigations into the criminal networks involved in pangolin scale trafficking, including the corrupt facilitators and enablers implicated, and deliver successful prosecutions with proportionate penalties

Environmental Investigation Agency





Appendix I: full list of pangolin products still in pharmacopoeia 2020

Name of formula	English translation	Purposes
再造丸	Zaizao Wan	Improve blood circulation
拔毒膏	Ba Du Gao	expel pus and other toxics, anti-inflammatory
金蒲胶囊	Jin Pu Jiaonang	Treat gastric cancer and esophageal cancer; clear phlegm and other toxics
妇科通经丸	Fuke Tong Jing Wan	Relieve menstrual cramps and resolve blood stasis
麝香脑脉康胶囊	Shexiang Nao Mai Kang Jiaonang	Relive stroke and hemiplegia
龟龄集	Guiling Ji	Strengthen kidney, improve memory and sleep, reduce cough and loss of appetite
阿魏化痞膏	Awei Huapi Gao	Relieve abdominal pain and tight chest
茴香橘核丸	Huixiang Juhe Wan	Relieve pain and testicular swelling

Appendix II: full list of pangolin products still covered by national insurance

Name of formula	English translation Source of patented ingredient list that contains pangolin		
再造丸	Zaizao Wan	Pharmacopoeia 2020 (中国药典)	
拔毒膏	Ba Du Gao	Pharmacopoeia 2020 (中国药典)	
茴香橘核丸	Huixiang Juhe Wan	Pharmacopoeia 2020 (中国药典)	
威灵骨刺膏	Wei Ling Gu Ci Gao	List of new medicines approved by the National Medical Products Administration (新药转正标准)	
痔血丸	Zhi Xue Wan	National Standard for Chinese Patent Drugs by the Ministry of Health (卫生部药品标准中药成方制剂)	

Appendix III: Annual consumption of pangolin scales stockpile, announced by NFGA

Annual consumption of pangolin scales stockpile (in kg) ⁱⁱⁱ								
	Total	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
Beijing 北京	35,548	2,591	4,370	6,270	6,343	5,975	5,000	5,000
Zhejiang 浙江	26,758	3,900	3,721	3,355	3,555	3,927	4,100	4,200
Shanghai 上海	24,718	3,960	3,876	2,860	3,360	3,562	3,700	3,400
Jilin 吉林	13,749	1,400	1,411	2,405	2,606	2,247	2,230	1,450
Guangdong 广东	13,706	2,400	367	1,978	1,870	1,650	2,720	2,720
Liaoning 辽宁	13,100	2,521	688	2,776	2,675	1,575	1,565	1,300
Yunnan 云南	8,520	1,900	1,550	852	1,352	1,666		1,200
Sichuan 四川	7,952	402	1,100	900	1,400	1,400	1,400	1,350
Jiangxi 江西	7,237		2,251	993	1,493		1,600	900
Tianjin 天津	6,019	495	1,248	1,348	972	950	536	470
Hebei 河北	5,301		307	859	1,359	1,155	900	720
Hubei 湖北	3,989	831	579	380	650		800	750
Shanxi 山西	3,340	1,428		396	223	564	380	350
Shandong 山东	2,895	820	597	679				800
Henan 河南	2,346	792	711	323	32	159		330
Heilongjiang 黑龙江	2,228	226	381	339	344	289	300	350
Shaanxi 陕西	2,188	1,038	235	546	19		350	
Guizhou 貴州	1,907		1,300	301				306
Inner Mongolia 内蒙古	1,463	240	305	206	457	256		
Chongqing 重庆	1,290			720			220	350
Hunan 湖南	600		540				60	
Tibet 西藏	520				520			
Anhui 安徽	360			360				
Fujian 福建	190		190					
Qinghai 青海	142	142						
	186,067	25,085	25,726	28,845	29,229	25,374	25,861	25,946

Appendix IV: Additional products containing pangolin scales advertised on manufacturer websites

Company name (Chinese as originals)	Based in	Product name	Image of the product & ingredients (Pangolin is circled in Red)			
Jilin Haitong Pharmaceutical Co., Ltd 吉林海通制药有限公司 NMPA: Z20025831 CNWM: Yes but unclear	Jilin	Jin Jia Pai Shi Jiao Nang [Diuretic capsule] 金甲排石胶囊		http://www.jljb.com/?dt_portfolio=brilliant-idea 【成 例】三板(物)、没药(的)、养芍、你仁(称)、早鱼数、日菜、粉壳(的)、菜木、 青皮、乳香(的)、喜菜仁、川牛蒜、车莳子、海根(空山中(酒)、广金银草。		
GuangYuYuan Chinese Herbal Medicine Co. Ltd 山西广誉远国药有限公司 NMPA: Z14020687 CNWM: Sx07/13/9k1kkkknke	Shanxi	Guiling Ji [Metabolism and body vitality capsule] 龟龄集		http://www.topsun.com/content/2309.html http://www.guangy.uyuan.cn/index/article/index/aid/359.html لتقطقاتناته : شهر مهم، مهرب : (2007) ه. بهر مهرب المهرب المهرب المهرب المهرب المهرب المهرب المهرب المهرب المهرب خطور محرف		
Henan Lantian Pharmaceutical Co., Ltd 河南蓝天药业有限公司 NMPA: Z41020256 CNWM: Hen30/16/mkjkkkk3k8	Henan	San Jiasan [Blood-circulation and bruise- relieving powder] 三甲散	ALA 三甲散 Sergis Ser ・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・	_http://www.lantianyy.com/ProductOpen.aspx?id=12 【成 份】 龟甲(砖赁、醋淬)、鳖甲(砖赁、醋淬)、穿山甲(砖赁)、 商内金(砖赁)		
Yue's Tongren Sanmenxia Pharmaceutical Manufacturing Co., Ltd 乐氏同仁三门峡制药有限公司 NMPA: N/A CNWM: N/A	Beijing	Zaizao Wan [Rejuvenation pill] 再造丸	攀氏同仁 再造九	http://www.yuestr.com/zhaopai/2017032438.html 希知時、全地、途光、空田、 電気の学、音信、東京、地区、国际、国际、工業市、金市、学校主、新作作(約)、最近後(前外)、有等後、5年、高外、主法、白 水、刀分、発信、原具、地区、国际、同志、原生、合作(形)、日本、人工業、同作(小)、高振素(家)、美工、人工業、国本、 に、工、内容明、国家(約)、人参、高定、合作(水)、中、人工業、制作(内)、高振素(家)、美工、人業、医純化、愛有度、反 ち、肉かり、「夏谷、早了6、日不、当約、以至、专以品、愛白品、男大文(物句)、建作		
Baotou Chinese Herbal Medicine Co., Ltd 包头中药有限责任公司 NMPA: Z15021281 CNWM: N/A	Inner Mongolia	Huixiang Juhe Wan [Funnel pain-relieving pill] 茴香橘核丸	Contraction of the second seco			
Beijing Huamiao Pharmaceutical Co., Ltd. 北京华邈药业有限公司	Beijing	Pangolin scales 山甲片		http://www.huamiao.com.cn/product/1.html		
NMPA: N/A CNWM: N/A	Definid	Pangolin scales 穿山甲		http://www.huamiao.com.cn/product/6.html		
Beijing Bao Shu Tang Sci-Tech Pharmaceutical Co., Ltd 北京宝树堂科技药业有限公司 NMPA: Z11021182 CNWM: N/A	Beijing	Zaizao Wan [Rejuvenation pill] 再造丸	再造九	https://www.baoshutang.com/shop/yaopin/9		
Huatuo International Chinese Medicine Co., Ltd 华佗国药股份有限公司 NMPA: Z20063289 CNWM: N/A	Anhui	Zaizao Wan [Rejuvenation pill] 再造丸		http://www.chinahuatuo.com/chanye/huatuoguoyao/ sandawangpai/596.html		
Jilin Shuangxing Pharmaceutical Co., Ltd. 吉林双星药业有限公司	Jilin	Qian Lie Hui Chun Jian Nang [Prostate rejuvenation capsule] 前列回春胶囊	^{学65[*]} 前列回春放業 Giantichuichan Jiaeaang Giantichuichan Jiaeaang Giantichuichan Jiaeaang	http://www.sxyy.cc/pro/38.html 【成 印】 虎肤、地北、水北、卡诺、 貴術、 茯苓、 南菜 (平山)(和)、 熟地、 白和定谷母、 龍耳、 黄芪、 米酸子、 正 不留作、 五味子、 枸杞子、 菟林子、 道字素、 甘草、		
NMPA: Z22020700/ Z20025830 CNWM: Yes but unclear	Jilin	Jin Jia Pai Shi Jiao Nang [Diuretic capsule] 金甲排石胶囊	Contraction of the second seco	http://www.sxyy.cc/pro/56.html. 【成 份】三枝(利)、没所、赤方、株仁(利)、兒魚利、白芷、枳壳(炒)、養木、吉皮、乳香(炒)、薏苡 仁、川牛蘿、午前子、厚朴、(空山甲(利)))」广金钱草。		
Jilin Guoyao Pharmaceutical Co., Ltd. 吉林国药制药有限责任公司 NMPA: Z22021599 CNWM: N/A	Jilin	Kang Shuan Zaizaowan [Thrombolysis rejuvenation pill] 杭栓再造丸		http://www.jlgyzy.com/pd.jsp?id=48#pfc=%7B*groupId s*%3A%5B3%5D%2C*mul*%3Atrue%2C*nvMid*%3A437 %2C*lid*%3A1%7D&_pp=0_437_3		
Jilin Aodong Group Jinhaifa Pharmaceutical Co., Ltd 吉林敖东集团金海发药业股份有 限公司 NMPA: Z22021227 CNWM: N/A	Jilin	Zhongfeng Zaizao Wan [Stroke remanufacturing pill] 中风再造丸	And the second s	http://www.jlaod.com/#/page?id=4c8323ee59504b34a86344c2d3092866		

Company name (Chinese as originals) Based in Product name 9 Jilin Daojun Pharmaceutical Fengshi Guanjieyan Wan Co.,Ltd. 吉林道君药业股份有限公司 [Rheumatoid arthritis Jilin tabletl NMPA: Z22022 CNWM: N/A 风湿关节炎片 NP22 Shengui Zaizao Wan [Ginseng-cinnamon rejuvenation pill] **É-**& A Hulunber Songlu Pharmacy Co.,Ltd 呼伦贝尔松鹿制药有限公司 参桂再造丸 Inner Mongolia NMPA: Z15021620 / Z15020833 Huixiang Juhe Wan CNWM: N/A · · · · · · · · · · [Funnel pain-relieving pill] 茴香橘核丸 -----Harbin Sanctity Biological Pharmaceutical Co.,Ltd Shexiang Nao Mai Kang Jiaonang [Stroke and numbeness 麝香胞肽康胶囊 哈尔滨圣泰生物制药有限公司 Harbin COLUMN THE NEW YORK ADDRESS OF THE PARTY relief capsule] NMPA: Z20040131 CONTRACTOR OF T CNWM: N/A 麝香脑脉康胶囊 Tianjin Boai Bio-Pharmaceutical Sheng Ru Zhi Co., Ltd 天津市博爱生物药业有限公司 [Lactation drink] Tianjin NMPA: Z12020414 CNWM: N/A 生乳汁 Tianjin Darentang Jingwanhong MREE Awei Huapi Gao Pharmaceutical Co., Ltd 天津达仁堂京万红药业有限公司 [Abdominal and chest pain Tianjin relief cream] MRAA NMPA: 712020574 CNWM: N/A 阿魏化痞膏 Taiji Group Sichuan Taiji Sheng Ru Zhi Pharmaceutical Co Ltd 太极集团四川南充制药有限公司 [Lactation drink] 生乳汁 Sichuan 生乳汁 CNWM: N/A Shandong China Health Bridge Xiaru Yongquan San Pharmaceutical Co., Ltd 山东中健康桥制药有限公司 下乳涌 [Lactation powder] Shandong NMPA: 737020383 CNWM: N/A 下乳涌泉散 Shandong Mingren Freda Dongfang Huoxue Gao Pharmaceutical Co., Ltd. 山东明仁福瑞达制药股份有限公司 [Blood stasis relief cream] Shandong NMPA: Z37020953 CNWM: N/A 东方活血膏 Shanxi Huayuan Pharmaceutical C Kang Shuan Jiao Nang Biotechnology Co.,Ltd. [Thrombolysis capsule] 山西华元医药生物技术有限公司 Shanxi 抗栓胶囊 NMPA: 714021856 CNWM: N/A Shanxi Yellow River Traditional Kang Shuan Jiao Nang Chinese Medicine Co., Ltd. 山西黄河中药有限公司 [Thrombolysis capsule] Shanxi NMPA: Z200031 抗栓胶囊 CNWM: N/A Guangdong Sanlan Wu Shen Qi Ling Wan / AO Pharmaceutical Co., Ltd. Jin Yuan [Ginseng nourishing pill] 广东三蓝药业股份有限公司 Guangdong NMPA: 720090945 CNWM: N/A 五参芪苓丸 New Cicon Pharmaceutical Co., Huayu Gujing Heji [Kidney relieving mixture] 新奇康药业股份有限公司 Xinjiang 化瘀固精合剂 NMPA: B20021011 CNWM: N/A Zhuzhou Kangshengtang Pharmaceutical Co., Ltd. 株洲康圣堂药业有限公司 8 Xueshanghua Chaji [Muscle and joint-pain relief liniment] 君上 Hunan NMPA: Z20020 CNWM: N/A 雪上花搽剂 Jiyao Holding Group – Jiangsu Puhua Kesheng Pharmaceutical Fu Ma Kai Bi Pian [Joint-pain relief tablet] Co., Ltd. 江苏普华克胜药业有限公司 Jiangsu 附马开痹片 NMPA: Z2001008 CNWM: N/A Jiangxi Dikang Pharmaceutical Co., Ltd. DuJiao Gao [Pain and swelling relief 江西地康药业有限公司 plaster] Jiangxi NMPA: 736020 CNWM: N/A 独角膏

SMOKE AND MIRRORS

Environmental Investigation Agency

	Image of the product & ingredients (Pangolin is circled in Red)
# 关节炎月	http://www.daojunyaoye.com/cpjg01.asp?pageclass=1030201&id=57
	【成
	http://www.songlu.net/index. php?m=content&c=index&a=show&catid=13&id=145
再造入 ····································	(1) 日本市、中市、和市、和市、市市、市市、市市、市市、市市、市市、市市、市市、市市、市市、市市
	http://www.songlu.net/index. php?m=content&c=index&a=show&catid=32&id=162 [44] 約1,016(出約1,7/m615,168(出約1,254,169(出約1,164,119)) [44] 約1,016(出約1,7/m615,168(出約1,254,169(出約1,164,119)) [44] 約1,016(出約1,7/m615,168(出約1,254,169(出約1,164,119)) [42] (43),430(出約1,254,169(出約1,254,169(出約1,164,119)) [42] (43),430(出約1,254,169(出約1,164,119)) [42] (43),430(出約1,254,169(出約1,254,169(出約1,254,169(出約1,164,119))
	http://www.shengtaizhiyao.com/cpxg.asp?id=12
	【成 倍】 异羊狗、天寒、水牛角浓缩粉、大黄、桃仁、三七、丹参、地龙 (穿山)
	http://www.tjboai.com/boaigixia/shengwuzhiyao/#producturl 成 份:当日、地英、英芪、党参、玄参、麦参 功能主治: 补气养血, 波明通乳 用于产后阴血亏虚,乳汁湿少
	http://www.jing-wan-hong.com/contents/787/891.html 成 分 雨雨、厚朴、三板、雨手、雪瓜、生草乌、生川乌、 大柿、使日子、口瓜、穿山甲、白菜、 細葉、 細南 造、大菜、 茂肉子、 洗菜、 四香、 白湯、 雄 支、 肉桂、 褐瓜、 四湯、
	http://www.taijiny.com/content/?273.html 【或 你】当時、地美、黄芪(紫炙)、克致 空山中 紀)、玄参、麦冬、知得。
和泉散 QUATSBR	http://www.zjkqjt.com/case_show.asp?id=1631
ter 东方活血膏 Deratura Natura Constantion	http://www.c-p-f.cn/show-41-22-1.html * 成約: 生川尾, 生芹尾, 红花, 川菜, 見着 (物), 没药 (物), 刻花, 知法, 愛山芹 (物), 然凡, 血菜, 金梨, 自然現, 天房, 狩狩, 水等子, 昆木耳, 健葉, 白枳, 香香, 沐井, 金粱花, 石荷, 蒔菜, 金料湯, 万茶, 隆华,
· · · · · · · · · · · · · · · · · ·	http://www.sxhyit.com/products_show.php?lanmu=&c_id=16&id=257 【成 命】当日花、丹参、镭泉(放沙) 、易次、土蟹虫、痰松、紫癜、灼凉、与我子 (4)、人丁二素、酸(0,6%)、甘草、土皮草、超刺素(硫砂)、有原来(0))、乌鸦素(面印)、体虫(法 (4)、小丁二素、酸(0,6%)、甘草、土皮草、超刺素(硫砂)、有原来(0))、乌鸦素(面印)、体虫(法 (5)、小田平(沙淡)
BANKE .	http://www.sx-huanghe.com/index.php?p=products_show&id=39&c_id=9&lanmu=2 [成、你】当月尼、丹参、電振(法約、服売、土鳖虫、軟紙、水紙、蘇 房、地龙、马低子(何)、人工關係、執所(活利)、甘草、土茯苓、延胡家 (園物)、骨碎形(例)、乌紫紀(減例)、甘虫(去型)、(文山甲(沙湾))
	_http://www.gdsanlan.com/ProductDetails.aspx?iProld=526
	http://www.qikang.com/index.php?id=58 【成 份】 桑椹、「牛膝、」 川芎、「丹参、赤芍、 泽兰、 没药、 穿山中、 王不留行、 莪术、 蒲公英、 栀子。
	http://www.zzkst.com/newsInfo.aspx?fatherId=110210&id=48 【成 份】三七、红花、血喝、自然閉、地黄、糯木叶、质叶秋海棠、生草乌、天南星、雪土一枝蒿、 马钱子(砂浸)、季葱茄、松叶、(F山甲(砂浸)、全蝎、樟脑、冰片、薄荷脑。
25.4	http://www.keshengpharm.com/product.asp?id=1 دیری ا BF OD . ۱۱۵ (MD . ۱۹۹ / ۲۵۰ , ۴۵ (۱۹۹) . ۱۹۳ (۱۹۹) ۲۹۹ (۱۹۹) ۲۹۹ (۱۹۹) ۲۹۹ (۱۹۹) BBC. ۱۳۹ (۱۹۹) .
	http://www.jxdkyy.cn/productshow.php?cid=15&id=7 [近台] 白時子、乳香、浴煎、削子、红花、阿维、白泥、五倍子、菊油、木草子、血泡、菜菜 (中)呼 (透射) 当8.]

Company name (Chinese as originals)	Based in	Product name	Image of the product & ingredients (Pangolin is circled in Red)		
Hebei Wansui Pharmaceutical Co., Ltd. 河北万岁药业有限公司 NMPA: Z20000038 CNWM: N/A	Hebei	Wei Ling Gu Ci Gao [Bone spur healing cream] 威灵骨刺膏	成灭什朝有	http://www.wansui.com.cn/product/showproduct.php?lang=cn&id=54 (成 例】快送威灵仙、香加皮、赤芍、当た 加支 香谷林、白芷、生川乌、生草乌、光清、乾清、銘削 成、判者、派者、芥子、磁石、细令、花椒(単山甲(均)) 阿及、	
Hebei Jinniu Yuanda Pharmaceutical Technology Co., Ltd. 河北金牛原大药业科技有限公司 NMPA: Z13021680 CNWM: N/A	Hebei	Sheng Ru Zhi [Lactation drink] 生乳汁	http://www.hbjnyd.com/pro/product_400.html 【成份】当归、地菜、黄菜(圆类)、党参、玄参、麦冬、零山甲(制)		
Bao Ding Jinzhong Pharmacy Co, Ltd. 河北金钟制药有限公司 NMPA: Z20053100 CNWM: N/A	Hebei	Ba Du Gao [Toxin-removing plaster] 拔毒膏		http://www.jinzhongzhiyao.cn/index.php/Product/product/product_detail/ cateid/13/id/32.html 【成約】金根花、港港、大井、松枝、地井、松子、黄松、赤芍、当町、川子、白芷、白菜、木巻子、龍厚子、金 家、花木、紫梁、桃(金山市)、山茶、北井、竹香、白香、白香、白香、白素、白素、木巻子、龍厚子、金 子、南方府庁宿菜、有気病之和海水和漁場等病	
Henan Confidence Pharmaceutical Co., Ltd. 河南信心药业有限公司 NMPA: N/A (Z41022088 - not in NMPA database) CNWM: N/A	Henan	San Jiasan [Blood-circulation and bruise-relieving powder] 三甲散		http://www.hnxxyy.com.cn/product_show/743.html 【成 份】 免甲(砂漠、脳淬)、鳖甲(砂漠、脳淬)(穿山甲(砂漠), 跨内金(砂漠),	
Henan Huafeng Pharmaceutical Co., Ltd. 河南华峰制药有限公司 NMPA: Z19983065 CNWM: N/A	Henan	Zhenggu Gao [Bone-strengthening cream] 正骨膏	1000 1000 1000 1000 1000 1000 1000 100	<u>http://www.hnhfzy.net/view.asp?id=1414</u> <u>寧山甲</u> 通望下礼、谓特地教、但凡满远。用于理切 成年、以十元点、成時流奇、关节命命、座 木利幸。	
Inner Mongolia Renze Pharmaceutical Co., Ltd. 内蒙古仁泽药业有限公司 NMPA: Z15021147 NWM: N/A	Inner Mongolia	Sheng Ru Zhi Lactation drink 生乳汁		http://www.renzeyaoye.com/pd.jsp?id=10#_pp=114_370 主要成分: 当时、地黄、黄芪(蜜灸)、党参、玄参、麦冬、(学山甲(例)、知母。	
Henansheng Baiquan Zhiyao Youxiangongsi 河南省百泉制药有限公司 NMPA: Z41021698 CNWM: N/A	Henan	Fengshi Guanjieyan Wan [Rheumatoid arthritis tablet] 风湿关节炎片	如理天节奕片	http://www.bqzy.com/productInfo.php?pid=93	
Hubei Weishi Bio-Pharmaceutical Co., Ltd. 湖北威仕生物药业股份有限公 NMPA: Z42021551 CNWM: N/A	Hubei	Sheng Ru Ling [Lactation medicine] 生乳灵		http://www.hbwssw.com/index_a_show_c_index_catid_20_id_22_m_ content.html 产品成分: 型性, 胎費 等天 (安全)、或 多、玄多、麦参 空印甲(沙漠编行) 其 号、销标, 红缕、弱码声(本打版句),	
Tengzhou Ruizhi Pharmaceutical Co., Ltd. 滕州锐志药业有限责任公司 NMPA: Z37021562 CNWM: N/A	Shandong	Zhenggu Gao [Bone-strengthening cream] 正骨膏	正骨骨	http://www.tzrz.com.cn/cn/products/ll.htm 11 5: ##. &##. #fr. ##. ##. ##. ##. ##. ##. ##. ##. ##. #	
Gansu Jinling Pharmacy Group Co., Ltd. 甘肃省金羚集团药业有限公司 NMPA: Z62020106 CNWM: N/A	Gansu	Sheng Ru Zhi [Lactation drink] 生乳汁		http://gsjljt.kwt.17888.com/ws-1000354-c0003-cn/product_617.shtml 【或母】当归、地武、黄芪(蜜炙)、党参、玄参、麦冬、受血中(利) 知母; 结构为红糖粉、苯甲酸 请。	
Yaodu Pharmaceutical Group Co., Ltd. 药都制药集团股份有限公司 NMPA: Z13020674 / Z13020685 CNWM: N/A	Hebei	Shengui Zaizao Wan [Ginseng-cinnamon rejuvenation pill] 参桂再造丸 Sheng Ru Zhi [Lactation drink] 生乳汁	<u>またれる違ん</u> では、Alter Production from Validation Conference	http://www.yaodu.cn/article/index/id/1098/cid/52.html (G c) なた、2014 Art, 500 (201)、大き (201)、大き (201)、大き (201)、大き (201)、大き (201)、ホー (201)、また (201)、キャ (201)、キャ (201)、キャ (201)、キャ (201)、パー (201)、エー (2010年 (202)、アビド (201)、444、(2014)、2015、381-201、601 (2015、201-201)、4211, 0212、455 http://www.yaodu.cn/article/index/id/1039/cid/34.html (401) ニード、水志、美代 (世史)、文法、(401)、445、支化、(401)、445、支化、(401)	
Shapuaisiqiangshen Pharmaceutical Co., Ltd. 莎普爱思强身药业有限公司 NMPA: Z20060375 / Z22021384 CNWM: N/A	7heii	Qian Lie Hui Chun Pian [Prostate rejuvenation tablet] 前列回春片		http://spasqs.com/pd.jsp?id=18#_pp=106_517 【成 份】成状、地志、木通、车前子、关黄柏、茯苓、農畜 (9山甲(物))、 規設、白花を苦草、鹿茸、黄芪、栗麻子、主不留行、五種子、枸杞 子、菟丝子、涎羊藿、甘草。	
	Zhejiang	Qian Lie Hui Chun Jian Nang [Prostate rejuvenation capsule] 前列回春胶囊		http://spasqs.com/pd.jsp?id=17#_pp=106_517 【成 份】 皮杖、地友、木通、车前子、黄柏、茯苓、蔦香 (穿山甲(窓)) 蜈蚣、白花蛇舌草、鹿茸、黄茸、黄茸子、王不留行、五味子、 枸杞子、菟丝子、涩羊藿、甘草。	

Company name (Chinese as originals)	Based in	Product name	
Changchun People Pharmaceutical Group Co., Ltd. 长春人民药业集团有限公司 NMPA: Z22021097 CNWM: N/A	Jilin	Huitian Zaizao Wan [Huitian rejuvenation pill] 回天再造丸	
Liaoning Kangboshi Pharmaceutical Co., Ltd. 辽宁康博士制药有限公司 NMPA: Z19994079 CNWM: N/A	Liaoning	Ruquan Keli [Lactation pill] 乳泉颗粒	Far' E
Liaoning Chaohua Pharmaceutical Co., Ltd 辽宁朝花药业有限公司	Liaoning	Zaizao Wan [Rejuvenation pill] 再造丸	8 A.4.9
NMPA: Z21021004 / Z21020137 CNWM: N/A		Shengui Zaizao Wan [Ginseng-cinnamon rejuvenation pill] 参桂再造丸	1 8° 2 1
Tonghua Yongji Pharmaceutical Co., Ltd. 通化永基药业股份有限公司 NMPA: Z22021447 CNWM: N/A	Jilin	<mark>Cuiruwan</mark> [Prolactin] 催乳丸	
Zhengzhou Handu Pharmaceutical Group Co., Ltd. 郑州韩都药业集团有限公司 NMPA: Z20043756 CNWM: N/A	Zhengzhou	Kang Shuan Jiao Nang [Thrombolysis capsule] 抗栓胶囊	an 抗栓肌 Landerant Desta fast Ander
Chongqing Peidu Pharmaceutical Co., Ltd. 重庆陪都药业股份有限公司 NMPA: Z20026804 CNWM: N/A	Chongqing	Fufong Zhuifeng Gao [Pain relieving plaster] 复方追风膏	Í
Tieling Dujigao Yaochang 铁岭市社记膏药厂 NMPA: Z21021826 CNWM: N/A	Liaoning	DuJi DuJiao Gao [Swelling and dampness reducing cream] 杜记独角膏	4
Changchun Overseas Pharmaceutical Group Co., Ltd. 长春海外制药集团有限公司 NMPA: Z20083438 CNWM: N/A	Jilin	Liyangling Pian [Easy throat tablet] 利咽灵片	3.4 10 10.11
Shaanxi Huaxi Pharmaceutical Co, Ltd. 陕西华西制药股份有限公司 NMPA: Z20003274 CNWM: N/A	Shaanxi	Kang Shuan Jiao Nang [Thrombolysis capsule] 抗栓胶囊	All real and
Shaanxi Kanghui Pharmaceutical Co.Ltd. 陕西康惠制药股份有限公司 NMPA: Z20053293 CNWM: N/A	Shaanxi	Kang Shuan Jiao Nang [Thrombolysis capsule] 抗栓胶囊	⁵ 抗相
Qinghai Gela Dandong Pharmaceutical Co., Ltd 青海省格拉丹东药业有限公司 NMPA: Z63020181 CNWM: N/A	Qinghai	Kang Shuan Jiao Nang [Thrombolysis capsule] 抗栓胶囊	* <u>tt</u> t
Heilongjiang Wushijimin Pharmaceutical Co., Ltd. 黑龙江吴氏济民制药有限公司	Harbin	Awei Huapi Gao [Abdominal and chest pain relief cream]	2



Notes

i "Tonnes" = metric tonnes (1,000kg).

ii For seizures in which the destination was known.

iii Note: seizure data are subject to biases associated with law effort/detection and reporting.

iv The CITES Review of Significant Trade procedure, defined in Resolution Conf. 12.8 (Rev. CoP17), was designed to identify species that may be subject to unsustainable levels of international trade.

v It is typical for the traditional Chinese medicine industry to use non-taxonomic terms, which obfuscates which species are being used in medicine.

vi Chinese patent medicines are medicines in traditional Chinese medicine comprising multiple ingredients combined in standardised quantities in a ready-to-use form such as tablets, oral solutions or dry suspensions.

vii Including those imported in 2016/2017 from the DRC on falsified CITES permits, more information: p6 <u>https://cites.org/sites/default/files/eng/com</u>sc/69/E-SC69-29-02-02.ndf

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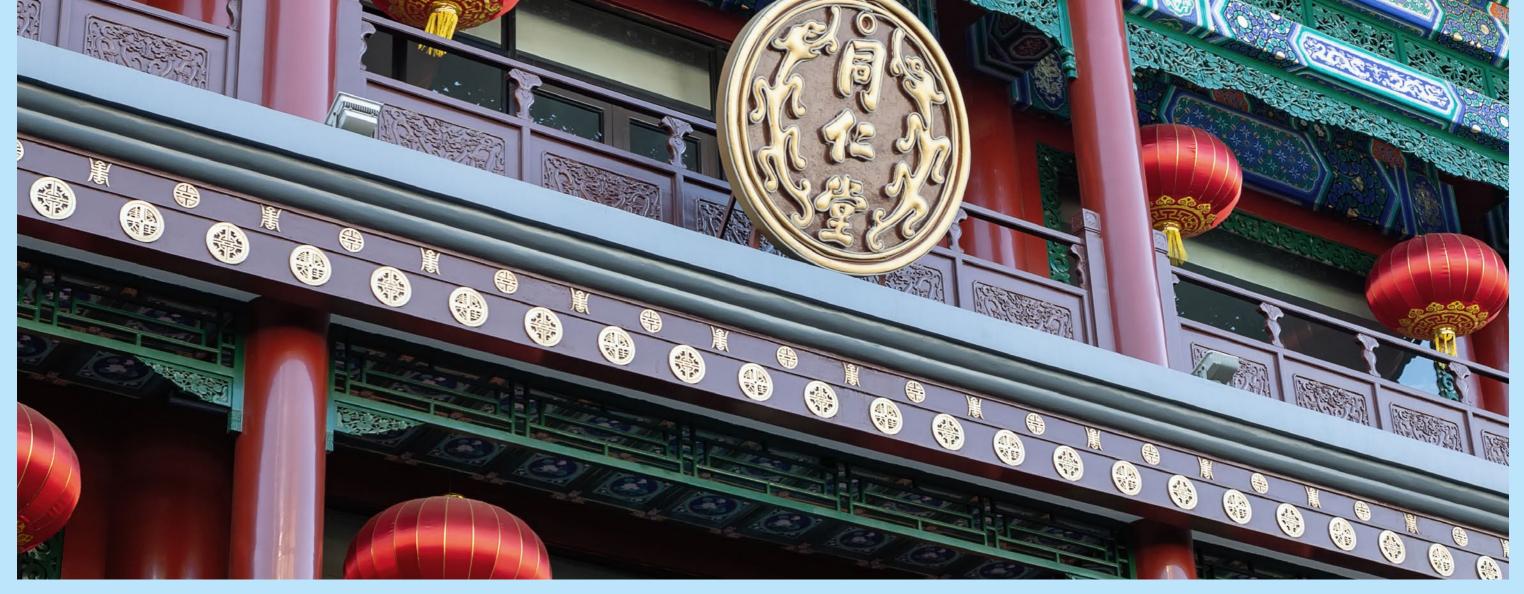
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- **Above:** Beijing Tong Ren Tang, one of China's largest traditional Chinese medicine companies, is involved in the production and sale of pangolin scale medicines

Sunda pangolins (*Manis javanica*) rescued from poachers in Vietnam and undergoing rehabilitation in Cuc Phuong National Park, Vietnam

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