

A rapid assessment of the trade in Saiga Antelope horn in Peninsular Malaysia

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INTRODUCTION

Saiga Antelopes *Saiga tatarica* are facing a perilous future as their numbers in the wild continue to decline. The taxonomy of the Saiga Antelope has been subject to several changes over the years and in the past populations were split into two distinct species i.e. *S. tatarica* and *S. borealis*. However, based on the current IUCN Red List of Threatened Species, the Saiga Antelope treated as a single species is now split into two sub-species: fragmented populations of *S.t. tatarica* occurring in Kalmykia in Russia and Kazakhstan, and *S.t. mongolica* (equivalent to *S. borealis*) occurring in western Mongolia (IUCN SSC Antelope Specialist Group, 2018). Their original range has greatly reduced, with populations in Ukraine and China now extinct; in Russia, they occur in the steppes north-west of the Caspian Sea in Kalmykia and in parts of the Astrakhan Region; in Kazakhstan, they can be found in the Ural region, Betpak-dala and Ustyurt; migrating populations are no longer seen in Turkmenistan and those reaching Uzbekistan have declined; and in Mongolia, populations are found only on the Shargiin Gobi and Huisiin Gobi, the Mankhan area and Dorgon steppe (IUCN SSC Antelope Specialist Group, 2018).

With herds historically numbering in the millions, the global population of the Saiga Antelope is said to have declined by over 95% since the early 1990s due to hunting and exploitation for trade (Milner-Gulland *et al.*, 2001; Mallon, 2008; IUCN SSC Antelope Specialist Group, 2018). Although the species could recover its numbers rapidly, in more recent times, Saiga Antelope populations, particularly in Kazakhstan and Mongolia, also plummeted due to disease outbreaks (Frankfurt Zoological Society *et al.*, 2016; Saiga Conservation Alliance, 2017). The dramatic decline in wild populations resulted in the species being assessed as Critically Endangered by the IUCN Red List of Threatened Species in 2002 (Mallon, 2008). As of January 2018, the global population of Saiga Antelopes was estimated at 164,600–165,600 (IUCN SSC Antelope Specialist Group, 2018).

The Saiga Antelope is coveted for its horns which are used in traditional Asian medicine and its meat is consumed for food (Milner-Gulland *et al.*, 2001; Lishu *et al.*, 2007; Mallon, 2008; Theng *et al.*, 2017; Lam, 2018). As the horns are an exclusive (and permanent) feature of the male Saiga, selective hunting to supply this demand has skewed the sex ratio among wild populations, making breeding and ultimately species survival more difficult. If unmanaged, the trade in Saiga Antelopes could contribute to the extinction of an already imperilled species. In South-east Asia, this trade is most prevalent in Malaysia and Singapore, where Saiga Antelope horn is promoted in medicine for its “cooling effect” despite limited evidence of its efficacy (Chan, 1995; Theng and Krishnasamy, 2017). During the 1990s in particular, large quantities of Saiga horn were imported to Malaysia and Singapore (S. Broad, pers. comm, April 2019).



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Saiga Antelopes *Saiga tatarica*.

During a survey on the availability of bear bile products in traditional Chinese medicine (TCM) outlets across Peninsular Malaysia in 2018, incidental observations of Saiga Antelope horn products were noted. It appeared to be one of the most common medicinal products derived from wildlife to be observed in trade, alongside bear bile pills and porcupine bezoar. This paper presents findings from the survey on Saiga Antelope horn availability in Peninsular Malaysia and provides an insight into its current open trade.

BACKGROUND

International governance

In 1995, the Saiga Antelope was listed in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) to ensure strict regulation of the international trade in Saiga parts and derivatives. Continued declines however led to a hunting ban in all range States, implemented during different periods between 1999 and 2014 (Theng and Krishnasamy, 2017). This effectively means that no legal horn export has been permitted from range countries since then. Trade however is permitted by some non-range States from stocks acquired prior to these bans, with a valid permit. In December 2018, Mongolia submitted a proposal for consideration by CITES Parties at the 18th meeting of the Conference of the Parties, to transfer *Saiga tatarica* from CITES Appendix II to Appendix I to prohibit all international commercial trade. The proponents of the proposal explain that this is intended to help ensure that international commercial trade will not contribute to further declines, and to help range, transit and importing CITES Parties to combat any illegal trade where newly hunted Saiga Antelope products may be laundered through stockpiles (CITES, 2019).

The Saiga Antelope is also listed in Appendix II of the Convention on the Conservation of Migratory Species of Wild Animals (CMS, or the Bonn Convention). A CMS Appendix I- and II-listing obligates Parties to, *inter alia*, prohibit the taking of Appendix I species (unless in exceptional cases) and conclude international agreements which would benefit Appendix II species. To this end, a Memorandum of Understanding (MoU) concerning the conservation, restoration, sustainable use of Saiga

Antelope *Saiga* spp. was adopted in September 2010 (CMS, 2010). Although not a Party to CMS, Malaysia periodically provides reports to the Convention, which contributes to the Medium-Term International Work Programme (MTIWP) for the Saiga Antelope.

LEGISLATION AND REGULATION IN PENINSULAR MALAYSIA

In Peninsular Malaysia, trade in Saiga Antelope is regulated under the *Wildlife Conservation Act 2010* (WCA), which permits trade through a licensing system, regulated by the Department of Wildlife and National Parks Peninsular Malaysia (DWNP). The DWNP also controls the management and distribution of stocks that are permitted for trade. Any violations can incur a minimum fine of MYR20,000 (USD5,000) or a maximum fine of MYR50,000 (USD12,500), or imprisonment of not more than one year, or both. Any import and export violations are also covered under the country's CITES implementing legislation, the *International Trade in Endangered Species Act 2008* (INTESA). Anyone found guilty of importing or exporting Saiga Antelope parts or products without a valid licence is liable to a maximum fine of MYR1million (USD250,000), or imprisonment to a term not more than seven years, or both. If the violation involves a corporate body, fines can reach MYR2million (USD500,000).

The trade in traditional medicine (TM) is further governed in Malaysia by at least three other laws. The *Traditional and Complementary Medicine Act 2016* regulates all traditional and complementary medicine practitioners and services. The Traditional and Complementary Medicine Council is the leading

body governing the implementation, regulation and enforcement of the Act. Anyone found guilty of violating the Act can be liable to a fine of MYR30,000 (USD7,500) or two years' imprisonment for the first offence. Those found not legally registered as a practitioner can also be fined MYR50,000 (USD12,500), or imprisoned for up to three years, or both, and may also be prohibited from registering as a practitioner for a period of two years upon conviction. The *Sale of Drugs Act 1952 (Control of Drugs and Cosmetics Regulation 1984)*, requires compulsory registration of all pharmaceutical products, including TM products containing wildlife derivatives. Products must have adequate records and labels; applicants must trace all steps of production and distribution and keep these records for one year beyond the expiry date. The general penalty for offending individuals is a maximum fine of MYR25,000 (USD6,250) and/or imprisonment for up to three years for the first offence, and a maximum fine of MYR50,000 (USD12,500) and/or five years' imprisonment for subsequent offences. Offending companies are liable to a fine of up to MYR50,000 (USD12,500) for the first offence, and MYR100,000 (USD25,000) for subsequent offences.

METHODS

Incidental observations of Saiga horn products were noted during a bear bile survey across outlets in Peninsular Malaysia between April and May 2018. Open availability was recorded and information such as prices and stock were gathered opportunistically through conversations with traders, though the actual volumes in trade were difficult to record. All observations of trade claimed to be of, or to contain Saiga horn derivatives, were assumed to be genuine. This is in accordance with the WCA, which states in Section 3: "part or derivative means any

States	No. of Shops	Types of Products	Price (whole horn)	
			MYR	USD
Johor	30	horns (whole), shavings, powders bottled Saiga water, bottled Saiga tea	2.67–12.00/g -	0.65–2.93/g -
Kedah	11	horns (whole), shavings, powder (capsule)	8.00–18.67/g	1.95–4.55/g
Kelantan	11	shavings, powder	-	-
Melaka	28	horns (whole), shavings, powder	85.33/g 20.00–40.00/g	20.81/g 4.88–9.76/g
Negeri Sembilan	9	horns (whole), shavings, powder	0.56/g 120.00/g	0.14 g 29.27/g
Pahang	13	shavings, powder	-	-
Penang	12	horns (whole), shavings	6.67-8.00/g 208.00-224.00/g	1.63-1.95/g 50.73-54.63
Perak	33	horns (whole), shavings, powder, powder mixed with pearl powder (capsule), concoction	4.00–9.00/g	0.98-2.20/g
Perlis	3	shavings, concoction	-	-
Terengganu	4	shavings, powder	-	-

Table 1. TCM outlets with Saiga Antelope horn products for sale by State in Peninsular Malaysia, April–May 2018. - = prices not recorded; Note: observations from the State of Selangor and Federal Territory of Kuala Lumpur are not included here as trade information was not recorded in a consistent or standardised manner, and therefore not included for analysis. Saiga horns have however been recorded in trade in these two location in previous surveys of TCM outlets in 2006, and rapid checks on selected shops in 2018 confirms this. Some outlets may have more than one form of Saiga horn product available. Price information is denoted based on offers by traditional medicine stores.

Source	INTERNATIONAL TRADE TO MALAYSIA		INTERNATIONAL TRADE FROM MALAYSIA	
	Importer MY (kg)	Exporter (kg)	Exporter (MY) (kg)	Importer (kg)
Pre-Convention horns	1,582.09	2,904.24	608.12	717.12
Pre-Convention, wild horns	112.60	140.85	338.60	1284.30
Wild horns		80.10	374.34	374.34
Wild derivatives		0.90		
Wild/Pre-Convention horns	50.00	59.00		
Seized derivatives				120.05
Seized horns				0.02
Unknown horns	302.60	30.00	948.40	
Total	2,047.29	3,215.09	2,269.46	2,495.83

Table 2. Summary of import/exports of Saiga Antelope horns traded with Malaysia (MY), 1995–2017. Source: CITES Trade Database.

substantially complete or part or derivative of wildlife, in natural form, stuffed, chilled, preserved, dried, processed or otherwise treated or prepared, which may or may not be contained in preparations, and includes anything which is claimed by any person, or which appears from an accompanying document, the packaging, a label or mark or from any other circumstances, to contain any part or derivative of wildlife". Records of trade data extracted from the CITES Trade Database are also included here to provide records of international trade of Saiga Antelope horns involving Malaysia. Results presented also include comparison with information gathered during a TRAFFIC survey of TCM outlets in Malaysia in 2006 (von Meibom *et al.*, 2010).

RESULTS

Market survey

Of 228 TCM outlets surveyed in 10 States across Peninsular Malaysia, 154 (67.5%) were found to be openly selling Saiga Antelope horn products (Table 1). Horn shavings were the most common Saiga Antelope product observed in trade, sometimes packaged with herbs. Whole horns were available in some States, although a couple of traders reported that genuine Saiga Antelope horn is hard to come by and that some TCM traders use the horns of goat, cow or buffalo as substitutes. Bottled water, a "tea" reported to contain Saiga Antelope horn, and a bottled concoction reported to consist of Saiga Antelope horn and pearl liquid were also offered for sale.

TRAFFIC's survey of 111 TCM outlets in five locations across Peninsular Malaysia in 2006 found 109 outlets (98%) with Saiga Antelope horn products or derivatives for sale (von Meibom *et al.*, 2010). Shavings were the most common product available then (recorded in all 109 TCM outlets) followed by horns (whole)—over 800 horns were recorded in 68 outlets.

The price for Saiga Antelope horn during the present survey varied quite considerably in each State. The highest price was recorded in Penang with the maximum

value quoted at ~MYR224/g (USD55/g), followed by Negeri Sembilan with ~MYR120/g (USD30/g). Negeri Sembilan also had the lowest price recorded with MYR280/500 g (~MYR0.56/g), followed by Johor with ~MYR2.7/g. The large differences in price could be an indication of the authenticity of the product (with lower prices indicating the substitution of other animal horns). In comparison, prices recorded in 2006 ranged from a minimum of MYR1.6–8/g (USD0.40–2/g), indicating a significant increase over the 12-year period.

CITES trade data analysis

According to the CITES Trade Database, between 1995 and 2017 Malaysia imported an average of 2,631 kg of Saiga horn and exported 2,382 kg (Table 2). Countries and territories that reported importing Saiga horns from Malaysia were China, Hong Kong Special Administrative Region (SAR), New Zealand, Singapore and the USA, while countries and territories that reported exporting Saiga horns to Malaysia were China, Hong Kong SAR and Singapore.

No trade records were reported after 2015, and in the last decade since 2005, Malaysia's imports were generally low, accounting for about 16% of its total imports. Imports were mainly of horns from Singapore and Hong Kong SAR, which were reported as pre-Convention specimens. During this time, Malaysia also (re)exported horns to Hong Kong SAR and Singapore and derivatives to New Zealand and the USA.

Information from the CITES Trade Database also suggests that at least 10 shipments of Saiga Antelope horns and derivatives between 1998 and 2010 could have been seized in the USA and New Zealand, reported to have been exported from Malaysia. In two of these records at least, the origin of the item was reported to be China. These transactions are assumed to be seizures upon import, as the source of the trade is indicated by the Source Code "I", i.e "confiscated or seized specimens".

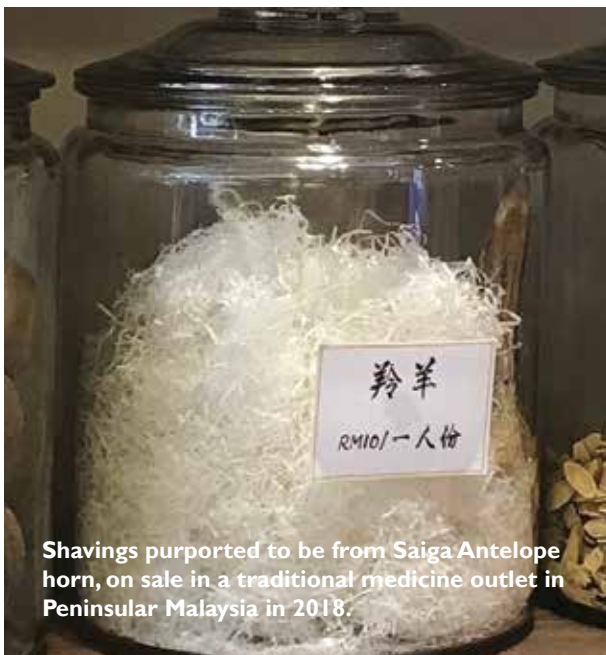
DISCUSSION AND CONCLUSIONS

Although Malaysia is not party to CMS, which monitors conservation (including trade) in migratory species such as the Saiga Antelope, in its report to the Convention in 2015, the DWNP reported that 119.45 kg of horns were imported from Kazakhstan, Singapore and Hong Kong SAR that were declared as pre-Convention stocks (CMS, 2015). A further 10.8 kg of shavings and 365.5 kg in the form of powder/slices was also reportedly imported. The period of this import was unreported.

The DWNP maintains a database of registered dealers through its licensing system. However, the number of dealers permitted to trade in Saiga and the volume/stockpile of Saiga horns and derivatives is unknown. Permitted trade volumes are based on a trader's application for a dealer's licence, and all sales must be recorded in the dealer's stock book (DWNP pers. comm. to K. Krishnasamy, October 2018). It is not clear how stocks are regulated or if stocks may have originated from illegal imports. At the 66th meeting of the CITES Standing Committee (SC66 Doc. 52) (CITES, 2016), it was reported that one seizure of unknown origin took place in Malaysia in 2012 consisting of horn cuttings

and medicinal products, and resulted in the prosecution of three individuals. CITES trade data reveal a further 10 records that might be seizures implicating Malaysia as a transit country in the international trafficking of Saiga-related products, with the majority of those occurring from 2006–2010. A 2016 study of Singapore's international trade in Saiga revealed that the legal import of horns had declined by 99% over the previous decade, yet vast quantities of horns, reportedly from stockpiles, were still being exported to Hong Kong SAR, China and Malaysia (Theng *et al.*, 2017). CITES trade data from 1995–2015 revealed that Singapore was the world's largest (re)exporter of Saiga horns, surpassing those from Saiga range countries from where horns were also imported by Malaysia (Theng and Krishnasamy, 2017). Von Meibom *et al.* (2010) further concluded that Saiga horns were illegally being exported from Malaysia although the volume and significance of this trade was unknown.

This study confirms an active trade in Saiga Antelope horns and derivatives in Peninsular Malaysia. While trade is permitted, it is unclear what proportion of this trade is occurring in accordance with regulations, or otherwise, or indeed whether the products are always genuine. The discrepancies in trade data and the lack of information on stocks in the country—either quantities held by traders, those maintained in government custody and those privately-held, if any—make it impossible to ascertain current legal stocks permitted for trade. More comprehensive reporting to CITES and CMS would facilitate this. A detailed study on the stocks and consumption of Saiga Antelope horns in Malaysia would also provide better and more accurate insights into current consumption and demand patterns, to guide awareness raising and demand reduction-related activities, as appropriate. These efforts should be undertaken collaboratively between governments, NGOs and, importantly, with the traditional Chinese medicine dealers and practitioners in the country.



Shavings purported to be from Saiga Antelope horn, on sale in a traditional medicine outlet in Peninsular Malaysia in 2018.

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