



# Bearly on the radar – an analysis of seizures of bears in Indonesia

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## Abstract

Indonesia is home to one species of bear, sun bear *Helarctos malayanus*. Aside from forest loss and habitat degradation, wild populations are being hunted and killed for the illegal wildlife trade. Yet, very little data exists on the extent of this exploitation or its potential impact on bears. To gain a better understanding on this front, we assessed seizure data involving bears, their parts and derivatives in Indonesia from 2011 to 2018. We obtained 71 records of seizures of bears in Indonesia over the 8-year period which was estimated to represent a minimum of 254 sun bears. We found a relatively high number of bears being kept as pets as well as parts prized as trophies or talismans like claws, teeth, or taxidermied specimens. To a lesser extent, we found bear parts coveted for traditional medicine use and for food. At least five countries were linked in the illegal trafficking of bears from Indonesia, mostly involving bear parts (teeth, claws, gall bladders and paws). Our results show that the sun bear trade in Indonesia is widespread and persists despite its protection status, in violation of national laws and international regulations. While numerous seizures have been made, follow-up arrest, prosecution and conviction rates are extremely low. Considering how lucrative the illegal trade in wildlife has become, punishments must reflect the crime if it is to serve as any kind of deterrent, and if the sun bear is to be saved from further decline.

**Keywords** *Helarctos malayanus* · Kalimantan · Sumatra · Sun bear · Wildlife trade

## Introduction

Widespread poaching is considered a major driver in the decline of bear populations across Asia (Shepherd and Nijman 2007; Foley et al. 2011; Shepherd and Krishnasamy 2013; Burgess et al. 2014; Lee et al. 2015; Wilcox et al. 2016; Nijman et al. 2017; Or et al. 2017; Crudge et al. 2018; Gomez and Shepherd 2018; Livingstone et al. 2018). This is mainly due to the demand for their gall bladder/bile used in traditional medicines and live bears harvested to stock bear bile extraction facilities (Mills and Servheen 1994; Meijard 1999; Foley et al. 2011; Livingstone and Shepherd 2014; Wilcox et al. 2016; Gomez and Shepherd 2018). Their meat (and especially paws) is also coveted by specialized wild/

exotic meat restaurants, their parts (e.g. claws, teeth, skull, skin) prized as trophies, and increasingly cubs are captured for the exotic pet industry (Kanyakumari 2015; Krishnasamy and Stoner 2016; TRAFFIC 2016; Gomez and Shepherd 2018).

The smallest and least understood of the Asian bear species is the sun bear *Helarctos malayanus*. On a global scale, the sun bear is assessed as ‘Vulnerable’ by the IUCN Red List of Threatened Species (Scotson et al. 2017). Populations are reported to be in decline across their range, with species extinction recorded in China and Singapore. Indonesia is considered one of the last remaining strongholds for sun bears, although habitat loss there remains a significant threat to their survival. Sun bears are the only native bear species in Indonesia and are split into two subspecies, *H.m. malayanus* on the island of Sumatra and *H.m. euryspilus* on the island of Borneo. Populations once occurring on the island of Java have long been considered extirpated (Scotson et al. 2017).

Illegal and unsustainable wildlife trade is rampant in Indonesia and is a prominent threat to a wide variety of species, and sun bears are no exception (Shepherd and Magnus 2004; Shepherd 2010; Altherr et al. 2011; Nijman et al. 2012; Chng et al. 2015; Auliya et al. 2016; Janssen and Blanken

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2016; Gomez and Bouhuys 2018; Morgan 2018). Demand in Indonesia is large for stuffed specimens prized as trophies or decorative items, for the claws and canine teeth considered ornamental in nature or as talismans, and to a lesser extent as pets, for food and for traditional medicine (Meijard 1999; Kurniawan and Nursahid 2002; Shepherd and Magnus 2004; Nijman and Nekaris 2014). Sun bears are frequently caught in snares in Indonesia, set deliberately for bears, or often in snares set for species worth more on the black market, such as Tigers *Panthera tigris sumatrae* (Shepherd and Magnus 2004). There is also evidence of illegal cross border trade with the reported export of bear bile products from Indonesia to Malaysia, Thailand and Singapore (Kurniawan and Nursahid 2002; Burgess, et al. 2014; Gomez in prep).

However, the extent of the trade in sun bears in Indonesia and the results of efforts made to counter this trade are poorly known. While wild bear population and densities have not been well examined in Indonesia (Tumbelaka and Fredriksson 2006), the illegal bear trade along with habitat loss and destruction in Indonesia is considered to be a significant threat to the species (Meijard 1999; Kurniawan and Nursahid 2002; Tumbelaka and Fredriksson 2006; Scotson et al. 2017), yet targeted interventions to counter the trade in bears have been limited in Indonesia. As such, we have attempted to shed light on this crime and the efforts to counter the crime as well as provide recommendations intended to support enforcement and conservation effort to ensure Indonesia remains a significant stronghold for the sun bear.

## Protection status

Sun bears have been a protected species in Indonesia since 1973. The principal legislation pertaining to the regulation of wildlife trade in Indonesia is the *Act of the Republic of Indonesia No.5 of 1990 concerning Conservation of Living Resources and their Ecosystems*, where species are categorized as Protected or Unprotected. ‘Protected’ species are classified as ‘Endangered’ or ‘Rare’ and are not allowed to be caught, injured, killed, kept, possessed, cared for, transported, or traded whether alive or dead. Violation of this law stipulates a maximum penalty of 5 years prison sentence and a fine of IDR100 million (~USD7100<sup>1</sup>). Exceptions in this regard are permitted by the Government for the purposes of research, science, and/or safeguarding a species. Under *Government Regulation No.7 1999 Concerning the preservation of flora and fauna*, sun bears are listed as protected species, which essentially means that all trade and harvest of wild-caught specimens is prohibited. *Government Regulation No.8 1999 Concerning the utilization of wild plants and animals of this*

*Act*, however, allows the trade of a protected species provided they are captive-bred second and subsequent generations. Currently, this exemption is not permitted for bears. In addition, sun bears are also listed in Appendix I of the Convention on international Trade in Endangered Species of Wild Fauna and Flora (CITES), and as such international commercial trade in bears, their parts or derivatives is prohibited. Indonesia has been a Party to CITES since 1978. Indonesia’s wildlife legislation in relation to the protection and regulation of harvest and trade of native species is enforced by the Ministry of Environment and Forestry’s Department of Forest Protection and Nature Conservation (KKH) (at the national level) and the Natural Resources Conservation Agency (BKSDA) (at a sub-national level).

## Methods

We collected records of seizures involving bears in Indonesia for the period 2011–2018. Data were extracted from various sources including from media reports, published literature, the CITES Trade Database and the government website *Sistem Informasi Penelusuran Perkara* (SIPP) (an information database of the courts for each district). We also requested for seizure data from the Indonesian CITES Management Authority, but there was no response to our request. Online searches for bear related seizures were conducted in both English and Indonesian. We have only included records where Indonesia is reported as the location of the seizure in the analysis. All seizures were entered into a database for analysis and were carefully checked to avoid duplication.

Using the seizure data, we have attempted to map important trade hubs and routes, or at least centres where trade exists. We have estimated a minimum number bears recorded in trade from commodities seized, by either counting whole or near-whole specimens seized (e.g. live animals, skins, carcass), or by tallying quantities of body parts seized (e.g. gall bladders, claws, teeth, paws) that form one whole individual per seizure record. In terms of tallying body parts, each bear is naturally assumed to have four paws, one gall bladder, 20 claws and 40 teeth (or four canines if this is specifically mentioned). For example, a seizure of a skull and skin would be counted as one, as these could potentially have been derived from the same individual and similarly a seizure of two paws, 20 teeth and 5 gall bladders would be counted as a minimum of five individuals. Where quantities of seized commodities were not provided, we estimated at minimum that one bear was involved. We have also attempted to gauge levels of penalties accompanying seizures. We have quantified the volumes of bears seized from the trade over a set period and determine if there are any trends in trade and/or enforcement efforts. Finally, based on our findings, we make recommendations for improved reporting of bear seizures (applicable to any

<sup>1</sup> <https://www.oanda.com/currency/converter/> (on 20 February 2019)

species) to enable trends in trade and other relevant data to be better utilized in conservation and policy interventions.

Due to inherent biases in the way seizure data are reported (given varying levels of law enforcement, reporting and recording practices, language biases, etc.), this dataset is interpreted with caution. Reported seizures are likely to represent only a fraction of the illegal trade and so under-estimate its full extent (Burgess et al. 2014; Nijman 2015). As such, the data set presented here is not to be assumed as representing absolute trafficking trends or volumes.

### Results

For the years 2011–2018, we obtained 71 records of seizures of bears in Indonesia representing an estimated minimum of 254 sun bears (Annex I). The greatest number of seizures was recorded in the last 3 years of the study period, with number of records peaking in 2016, while 2017 recorded the greatest number of bears seized which was estimated to represent 96 bears (Fig. 1). This averaged seven bears per seizure in 2017 in comparison to other years where the average ranged between 1 and 5 bears per seizure.

These incidents involved the seizure of various commodities including live animals as well as parts and whole taxidermied specimens (Table 1). Of the 71 seizure records, 42 incidents involved live bears amounting to 61 animals, 11 of which, where reported, were cubs (< 1 year old). Most of these animals were being kept as pets and were either seized

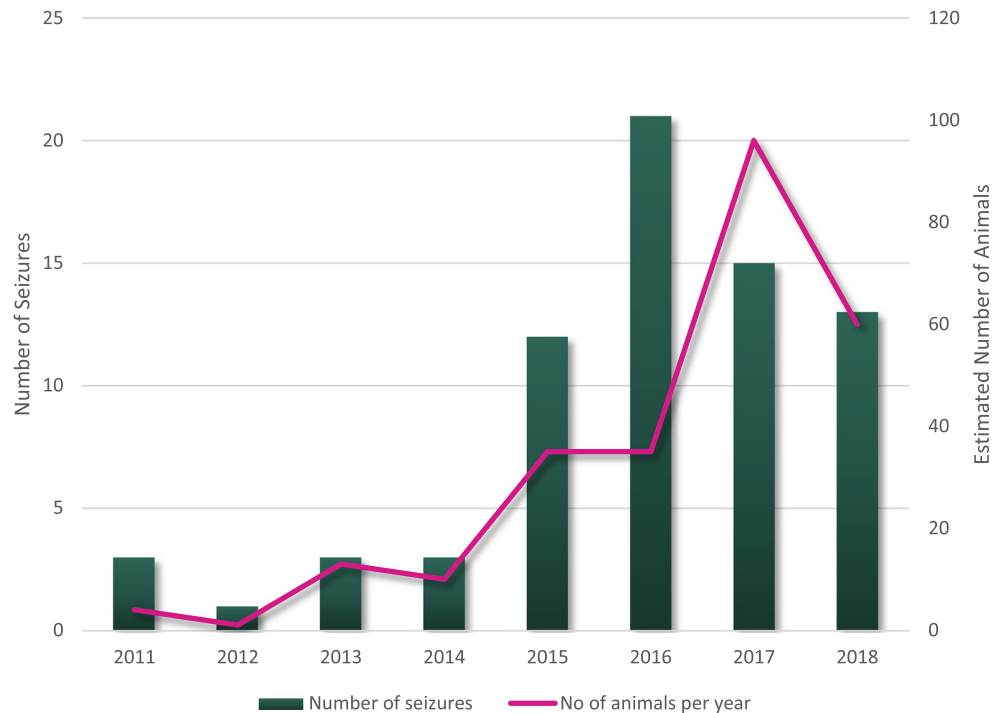
**Table 1** The various types of bear commodities seized in Indonesia from 2011 to 2018 including the number of times each commodity was seized and quantities

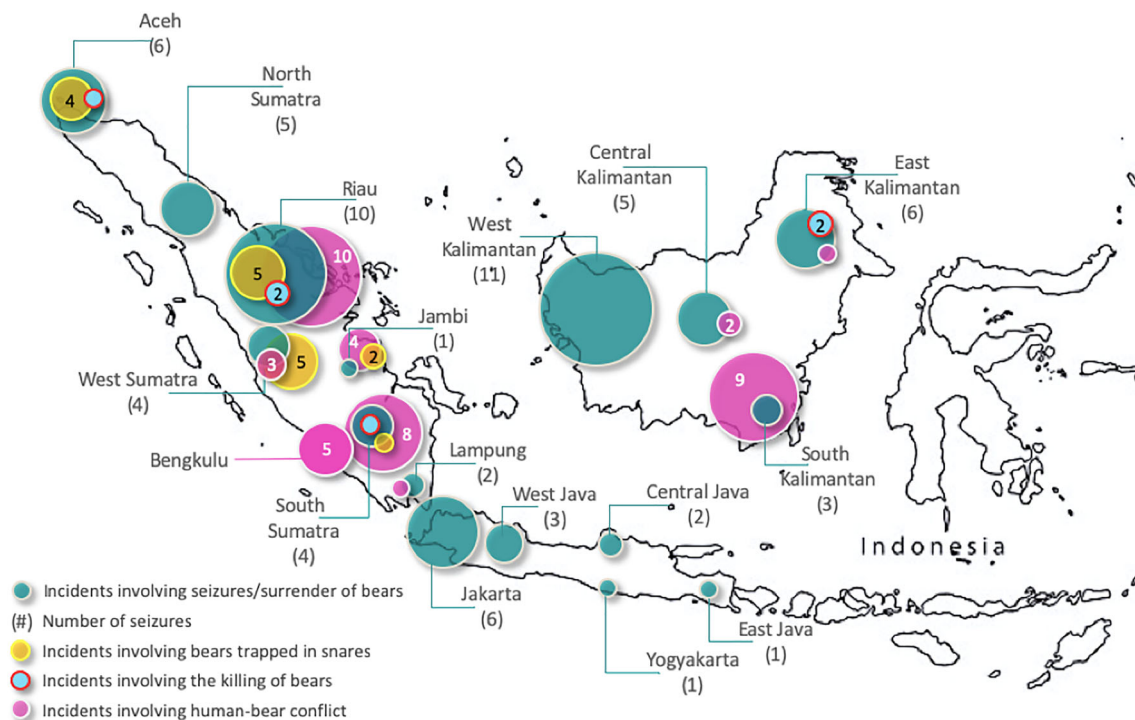
Commodities seized	No. of seizures	Quantity seized
Live	42	61
Canines	12	241
Claws	9	1387
Taxidermied (stuffed whole)	7	8
Skins	5	5
Skulls	4	6
Paws	3	91
Dead	3	5
Gall bladders	3	38
Bones	2	268
Claw pendant	1	1
Body parts (unspecified)	1	35

by or surrendered (owners made aware of the illegality in keeping protected species as pets are given opportunity to voluntarily hand over the animal) to the local authorities. In terms of incidents involving bear parts, claws were the most abundant commodity recorded with 1387 pieces seized in nine incidents, followed by bones, canines, paws and gall bladder.

Most of the incidents were recorded on the island of Sumatra ( $n = 32$  incidents) followed by Kalimantan ( $n = 25$  incidents) and Java ( $n = 13$  incidents) (Fig. 2). The provinces of West Kalimantan and Riau appear to be trade hotspots with 11 and 10 incidents obtained for each location, respectively, followed

**Fig. 1** The number of bear seizures/surrenders obtained for Indonesia that occurred within the country from 2011 to 2018 based on data extracted from media sources, published literature, CITES Trade Database, Indonesian government website (SIPP), etc., with the corresponding minimum number of bears involved (estimated based on commodities seized per record)





**Fig. 2** Seizure hotspots that occurred within the country between 2011 and 2018 based on data extracted from media sources, published literature, the CITES Trade Database and Indonesian government website (SIPP). Locations are grouped by provinces in Indonesia. A total of 71 seizure incidents were obtained. Of these, 70 have been mapped out above. An additional record could not be mapped, as the specific incident location was unknown. Aside from seizures, there

were a further 67 incidents obtained within the study period which involved (1) the illegal killing of bears which were either posted on Facebook or reported by local villages to authorities ( $n=7$ ); (2) reports of bears caught in snares within plantations reportedly set for wild boars ( $n=17$ ); and (3) incidents involving bear attacks on humans within plantations ( $n=43$ )

by Aceh, East Kalimantan and Jakarta with six incidents each. Aside from seizures, we noted a further 67 incidents related to bears that occurred during the study period. These were mostly human-bear conflict cases ( $n=43$ ) that were reported to the authorities. Of note, however, were at least seven incidents where bears were killed and mutilated either for sport, trophies or their parts, five of these were Facebook posts; and 17 cases where bears were found caught in snares that were reportedly set for wild pigs *Sus scrofa* (Fig. 2). In both instances (i.e. killing and trapping), a minimum of 33 bears were involved.

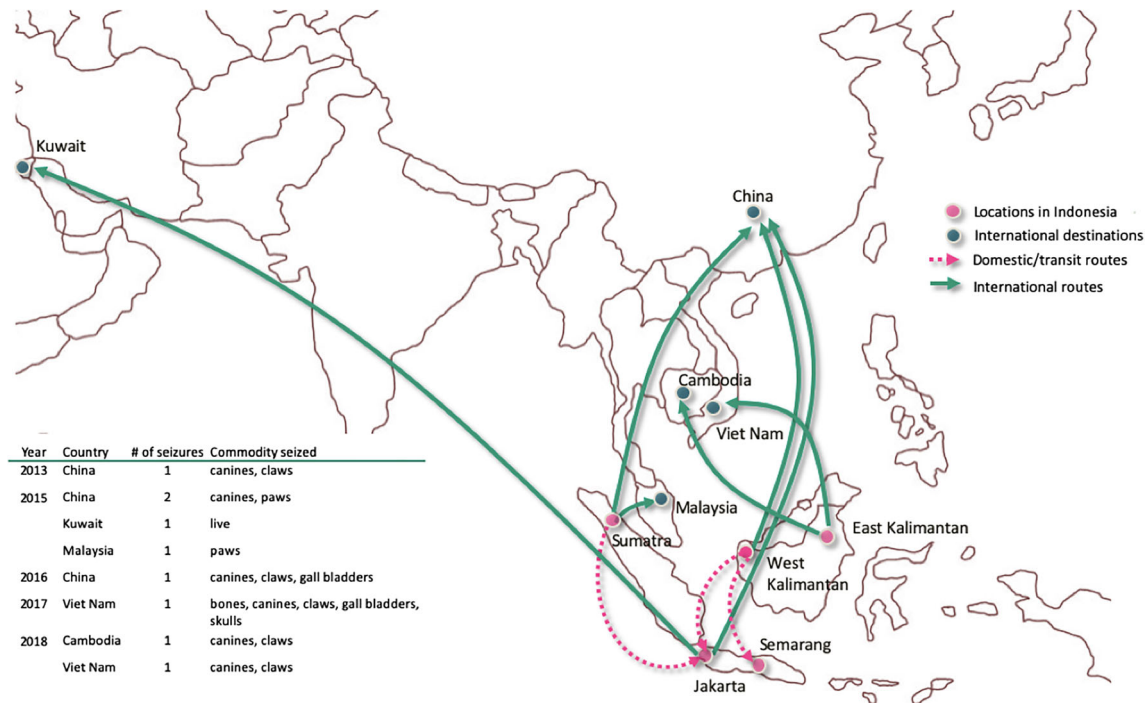
There were seven incidents that included information on international trade routes involving five countries (Fig. 3). China was linked as a destination country in four incidents, and commodities seized were primarily of bear parts including canines, claws, gall bladder and paws. Viet Nam was linked to two incidents in East Kalimantan in which airmail packages containing bear parts were intercepted by authorities. In one incident, the package contained over a thousand bear claws, hundreds of bones, as well as canines, gall bladder and bear skulls representing an estimated 68 bears, the largest seizure recorded in the study period. In the second incident which occurred as recently as December 2018, the package contained canines and claws and implicated Viet Nam and Cambodia as destination countries. In two other incidents,

Kuwait and Malaysia were linked as destination countries and comprised paws to Malaysia, and a live bear to Kuwait.

Of the 71 seizure records obtained, we could only find successful prosecution records for 23 cases (32.4%) (Table 2). Only one case came close to the maximum sentence that can be afforded to crimes involving bears (i.e. 5 years in gaol and IDR100mil fine). The seizure occurred in January 2018 and involved 64 bear paws with 22 frozen pangolins and a live one, for which the trader was given 4 years and 6 months in gaol as well as a IDR100mil fine (approximately USD 6900) by the Muaro District Court in Sumatera in June 2018. The remaining convictions ranged from 0 to  $\leq 1$  year ( $n=15$  cases) to 1.5–2 years ( $n=7$  cases). In addition, most of these cases involved seizures of other protected wildlife species including Tigers, orangutans, pangolins, hornbills, Clouded Leopard *Neofelis nebulosa*, variety of bird species, porcupine and Sumatran Serow *Capricornis sumatraensis*.

## Discussion

This study shows that the local demand for bears remains common and widespread in Indonesia, and this corresponds to findings of Meijard (1999) and Kurniawan and Nursahid



**Fig. 3** International trade routes involving sun bears from Indonesia based on seizure records obtained between 2011 and 2018. Of the 71 seizure records obtained, only seven records had information on international trade routes and linked Cambodia, China, Kuwait,

Malaysia and Viet Nam as reportedly destination countries in the illegal trafficking of bears from Indonesia (presented in the embedded table). Note that some incidents implicate more than one country

(2002). The domestic trade in bears seems to primarily feed the demand for trophies, charms and souvenirs (i.e. canines, claws, skulls, skins, taxidermied bears). There were also a significantly high number of live bears that were seized which were mostly kept as pets, although there were a few bears that were confiscated from privately run zoos reportedly due to mistreatment of the animals, lack of a valid permit, or reports that the bears were bought on the black market. Bears are also being killed for food. Some of this is opportunistic in nature where bears have been ensnared in traps reportedly set for wild pigs. In some cases, villagers call in the authorities to deal with the trapped bears, and in others, the bears are killed and either consumed or are found mutilated with their parts such as paws, gall bladder and canines, removed. The most recent case was in April of 2018 where a group of villagers found three bears on two separate occasions ensnared and proceeded to kill them and cook the meat. The culprits were apprehended after posting pictures of the mutilated bears on social media. There is also evidence revealing a more targeted hunting of species traded internationally for their parts used largely in traditional medicines. In January 2018, authorities confiscated dozens of bear paws and pangolin meat stored in the refrigerator of a suspect’s house. It was reported that the suspect purchased the animals from an indigenous tribe in Jambi, West Sumatra, which, according to authorities, are then sold to Chinese restaurants in big cities in Java. While not examined in this study, Kurniawan and Nursahid (2002) also

report on the local demand for bear gall bladders which are used by traditional medicinal practitioners. They found that 78 drug stores, of the 124 surveyed in eight large cities across Indonesia, either sold manufactured or farmed bear bile medicine imported from China or gall bladders sourced locally from sun bears. A closer examination of the traditional medicine industry in Indonesia is warranted to examine the extent and magnitude of the use of bear parts and corresponding impacts on sun bear populations, particularly since the traditional medicine industry is one of the key threats facing bear species in the rest of Asia (Foley et al. 2011; Burgess et al. 2014; Lee et al. 2015; Wilcox et al. 2016; Nijman et al. 2017; Gomez and Shepherd 2018).

The seizure data also reveal Indonesia as a source country for live bears and their parts to international markets, primarily Cambodia, China, Kuwait, Malaysia and Viet Nam. There was only one record obtained that entailed the shipment of a live bear from Jakarta to Kuwait with origins reported as Sumatra. This was part of a larger investigation into the international trafficking of wildlife involving live orangutans and Clouded Leopards to Middle Eastern countries. This is not surprising considering that the Middle East is under increasing scrutiny for their flourishing exotic pet industry which is affecting wildlife globally. China was implicated as a destination country in four incidents involving bear parts (canines, claws, gall bladder and paws). In all four cases, other wildlife commodities had been seized along with bear parts and

**Table 2** The number of seizures that resulted in arrests and convictions involving bears and their parts in Indonesia, 2011–2018

Date	Seizure location	No. of suspects	Evidence	Sentence
22 Nov 2012	Central Java	1	1 live	Not sentenced because the suspect was underage
24 Apr 2013	West Kalimantan	1	1 canine and 44 claws (and various other wildlife products)	Sentenced to 8 months in gaol and IDR10mil fine
24 Oct 2013	Aceh	2	1 taxidermied (and other stuffed wildlife)	One sentenced to 2 months in gaol and IDR5mil fine or additional 3 months in gaol; and one sentenced to 3 months in gaol and IDR2.5mil fine or additional 3 months in gaol
9 Dec 2013	North Sumatra	2	9 gall bladders (and parts of other wildlife species)	One sentenced to 5 months in gaol and IDR5mil fine or additional 2 months in gaol; and one sentenced to 6 months in gaol and IDR5mil fine or additional 2 months in gaol
3 Jan 2014	Aceh	1	6 canines, 1 skin (and parts of other wildlife species)	Sentenced to 1 year in gaol and IDR10mil fine or additional 4 months in gaol
21 Feb 2015	West Java	1	1 live (and other live wildlife species)	Sentenced to 1.5 years in gaol and IDR5mil fine or additional 1 month in gaol
23 Apr 2015	North Sumatra	1	26 paws (and pangolin meat)	Sentenced to 1.5 years in gaol and IDR50mil fine
30 Jul 2015	West Java	1	1 taxidermied head (and other wildlife parts)	Sentenced to 3 months in gaol and IDR1mil fine or additional 1 month in gaol
2 Sep 2015	West Kalimantan	2	21 canines (and Helmeted Hornbill beaks)	Both sentenced to 1 year in gaol and IDR50mil or additional 1 month in gaol
27 Sep 2015	East Kalimantan	3	1 dead	All sentenced to 7 months in gaol
14 Oct 2015	Lampung	3	1 skin (and skin of Clouded Leopard and Leopard Cats)	All sentenced to 1 year in gaol and IDR50mil fine or additional 1 month in gaol
6 Nov 2015	Jakarta	5	1 live	All sentenced to 1.5 years in gaol and IDR10mil fine or additional 3 months in gaol
15 Jan 2016	Jakarta	2	1 skin, 1 skull, 1 taxidermied (and parts of other wildlife)	Both sentenced to 1 year in gaol and IDR50mil fine or additional 1 month in gaol
7 Feb 2016	Yogyakarta	2	1 live	One sentenced to 9 months in gaol; and one sentenced to 3 months in gaol
27 Feb 2016	Jakarta	1	9 claws, 5 gall bladders, 20 canines	Sentenced to 3 years in gaol and IDR5mil fine or additional 2 months in gaol
21 Apr 2016	West Kalimantan	1	2 skulls, 1 paw, 1 canine, 24 claws (and parts of other wildlife)	Sentenced to 9 months and 10 days in gaol
23 Sep 2016	West Java	2	2 taxidermied, 1 skull, 9 claws (and parts of other wildlife)	Both sentenced to 1 year and 4 months in gaol and IDR2.5mil fine or additional 3 months in gaol
27 Apr 2017	South Sumatra	1	1 canine (and parts of other wildlife)	Sentenced to 7 months in gaol and IDR10mil fine or additional 1 month in gaol
14 Jul 2017	East Kalimantan	1	2 skulls, 266 bones, 1087 claws, 67 canines, 24 gall bladders	Sentenced to 2 years in gaol and IDR50mil fine or additional 2 months in gaol
17 Jan 2018	West Sumatra	1	64 bear paws (and pangolin meat)	Sentenced to 4.6 years in gaol and IDR100mil or additional 6 months in gaol
5 Feb 2018	North Sumatra	1	5 canines, 3 claws (and parts of other wildlife)	Sentenced to 2 years in gaol and IDR50mil fine or additional 2 months gaol
11 May 2018	South Kalimantan	1	36 canines, 11 claws (and parts of other wildlife)	Sentenced to 1 year in gaol and IDR5mil fine or additional 2 months in gaol
11 Aug 2018	Lampung	10	1 taxidermied, 2 skins	Five sentenced to 1 year in gaol and IDR100mil fine or additional 1 month in gaol; and five sentenced to 1 year and 2 months or 3 months in gaol and IDR100mil fine

Data was obtained from the Indonesia's Sistem Informasi Penelusuran Pekara (SIPP) website and represents records that we could find for the study period and media reports. It therefore should not be considered absolute numbers

reportedly involved wildlife smuggling syndicates. Malaysia was implicated in one incident comprising bear paws along with pangolin meat. There have been numerous studies implicating Malaysia as a destination country of bear parts from Indonesia (Meijard 1999; Kurniawan and Nursahid 2002; Foley et al. 2011; Gomez in prep). Recent studies show that

Malaysia continues to play a significant role as a consumer market for bear parts and derivatives (Or et al. 2017; Gomez in prep). During surveys of traditional medicine outlets in Malaysia between 2017 and 2018, there were a few traders who claimed to source their bear products from Indonesia (Gomez in prep).

More recently, Viet Nam and Cambodia have been implicated as destination countries in the shipment of bear parts from East Kalimantan. The largest sun bear seizure in this study period took place in 2017, involving two bear skulls, 266 bones, 24 gall bladders, 1087 claws and 67 canines, destined for Viet Nam. According to the suspect arrested, this was not the first time that such a shipment had been sent to Viet Nam (Anon. 2017). Viet Nam is currently one of the biggest consumers of bears, their parts and derivatives in Southeast Asia (Foley et al. 2011; Burgess et al. 2014; Wilcox et al. 2016). According to Wilcox et al. (2016), while the demand for farmed bear bile products in Viet Nam appears to be decreasing, the trade in wild-origin bear products and parts remains lucrative, threatening all bear species in Asia. Cambodia had the highest number of bear-related seizures in Asia from 2000 to 2011 and included live bears which were mostly sun bears and to a lesser extent bones, canines and paws (Burgess et al. 2014). In July 2016, a woman was caught in Cambodia with bear gall bladders and paws smuggled from Thailand. According to Thona et al. (in prep), there is a reported preference and willingness by locals to pay more for the gall bladders of sun bears than Asiatic Black Bears. That said, Cambodia has also been described as a transit country in the smuggling of bear products to China and Viet Nam (Foley et al. 2011).

Seizures involving bears in Indonesia appear to have increased over the study period with the highest number of seizures recorded in the last 3 years (i.e. 2016–2018). A multitude of reasons could be seen for this including poor record keeping or reporting of seizures in earlier years or generally lower market demand for bears and their parts. This increase also suggests improved enforcement efforts in Indonesia, a factor which has been observed in general where illegal trade in wildlife is concerned. However, it is unlikely to be a result of targeted effort in the conservation of sun bears. At least 33 incidents of the 71 obtained for this study also involved seizures of various other wildlife, including high profile species such as Tigers, orangutans, pangolins, hornbills, Clouded Leopard and birds, and involved wildlife smuggling syndicates. Further, even though enforcement efforts appear to have improved in Indonesia, follow-up arrests, prosecution and conviction rates are extremely low. Considering how lucrative the illegal trade in wildlife has become, the consequent punishment must reflect the crime if it is to serve as any kind of deterrent (i.e. the risks must outweigh the rewards). There has only been one case where the punishment was very close to the maximum penalty afforded by the law concerning crimes involving protected species. On the one hand, it sends a very strong message to illegal wildlife traders, and on the other, the fact that there has only been one such account highlights the lack of conservation concern for sun bears. Furthermore, this outcome could partly be due to the fact that a large quantity of frozen pangolins were seized as well. The illegal trade in pangolins has gained much attention in recent years which has not

only raised the profile of the species but also garnered tremendous effort and action towards their conservation (Semiadi et al. 2009; Sopyan 2009; Nijman 2015; Challender and Waterman 2017; Gomez et al. 2017).

Historically, bears have always been hunted in Indonesia by indigenous communities for ceremonial clothing, food, jewellery, medicine, protective charms and hunting trophies, yet this was considered to have little impact on wild populations due to the traditional hunting methods used (Meijard 1999). However, hunting methods have since evolved, with the use of firearms, snares and electrocution. The clearing and logging of forests have made wildlife all the more accessible to poachers, and this is likely to have significant impacts on wildlife populations including sun bears. This study shows that sun bears continue to be hunted and killed in Indonesia to meet a demand that is both domestic and international in nature. Despite their protected status since 1973, bears are persistently and widely traded illegally throughout the country. International trade regulations are also being violated with evidence revealing Indonesia as a source of trafficked bears to other parts of the world. Perhaps, this stems from the fact that bears are not considered a priority species of conservation concern in Indonesia. There were at least two seizure records which involved local enforcement officers or army personnel. Locals who were found keeping bears as pets are given an opportunity to surrender the animal without facing any consequences despite in the possession of a protected species. Further, based on non-seizure records, bears are frequently in conflict with locals and indiscriminately trapped in snares. They are considered pests when they invade plantations or are feared due to incidental attacks on locals. These factors, combined, are gravely concerning as Indonesia is considered one of the last strongholds for sun bears, with populations already locally extinct in some parts and dwindling in others across the rest of their range in Asia.

## Recommendations

Enforcing legislation meant to protect bears from poaching and trade should be made a high priority for authorities in Indonesia. Networks trafficking bears and bear parts and derivatives should be investigated and dismantled. Maximum penalties as afforded under *Act of the Republic of Indonesia No.5 of 1990 concerning Conservation of Living Resources and their Ecosystems* should be utilized to ensure that the law has a deterrent effect and impact. A system of reporting of seizures of bears, and their parts and derivatives, to the central office of the Directorate General of Forest Protection and Nature Conservation (KKH) should be implemented to allow for regular monitoring and evaluation of enforcement efforts and prosecution outcomes.

We also recognize the need to increase awareness amongst relevant stakeholders in Indonesia, including conservation

organizations, enforcement agencies, the judiciary, traditional medicine practitioners and retailers, hunters and poachers, consumers and the general public to highlight the laws protecting species and the conservation needs of the sun bear.

Finally, monitoring of the illegal trade in bears and their parts and derivatives should continue in Indonesia to support enforcement efforts, to gauge the impact and effectiveness of enforcement efforts, and to identify and measure trends in the trade so that effective conservation and enforcement interventions can be implemented.

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