TRAFFIC

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TRAFFIC REPORT

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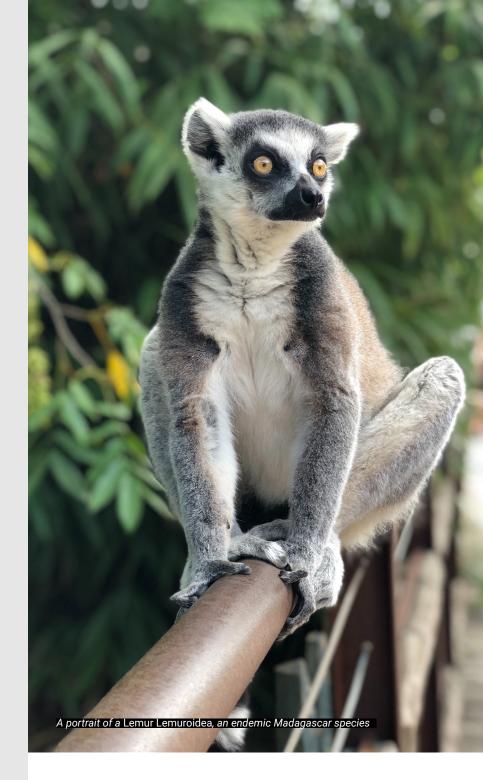
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INTRODUCTION

MADAGASCAR IS A DIVERSE COUNTRY, WITH MORE THAN 70% OF ITS NATIVE SPECIES ENDEMIC TO THE ISLAND (MYERS *ET AL*., 2010).

This unique and rich biodiversity makes Madagascar an important source of flora and fauna for domestic and global wildlife trade, both legal and illegal. The illegal trade in timber (Ratsimbazafy *et al.*, 2016) and wildlife (JNCC, 1993) has been identified as the second-largest threat (after deforestation) to Malagasy biodiversity, driving the decline of Madagascar's endemic species and eroding revenue generated from legitimate wildlife trade.

Baobab trees that often found in Madagascar are a native Madagascar tree species

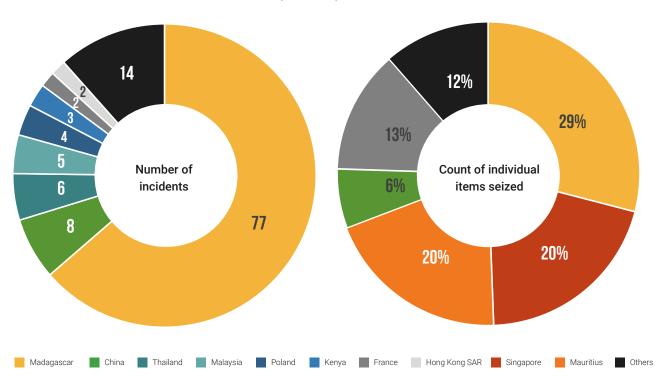
Southeast Asia (SEA) plays a vital role in the trade of some of Madagascar's threatened endemic species. Malagasy reptiles and amphibians are traded openly and underground in major physical and online markets in SEA (e.g., Morgan, 2017; Runhovde, 2018; Nelson and Cochrane, 2020), some of which contravenes national legislation and CITES. SEA also functions as a re-export and transit hub for Malagasy wildlife. Traders in SEA import Malagasy reptiles and sell to collectors worldwide (AI Jazeera, 2015), and the world's largest Malagasy timber seizure to date occurred in Singapore while in transit (Ratsimbazafy *et al.*, 2016). This assessment of trade aims to comprehensively document the extent and dynamics of the legal and illegal trade of wildlife species between Madagascar and SEA, including species and commodities traded, enforcement actions. The full comprehensive analysis was shared directly with the relevant governments and this report synthesises some of the main issues and recommended solutions. The findings and recommended solutions. The findings and recommendations from this study are expected to guide future work to improve trade regulation of Madagascan species, specifically involving SEA and ensure that wildlife trade is legal and sustainable.

GLOBAL SEIZURES INVOLVING MADAGASCAR

A brief analysis from seizure records collected by TRAFFIC illustrates Madagascar's illegal wildlife trade. From 2000 to 2021, 121 seizures globally involving Madagascar were reported (including one in Reunion). All originated from Madagascar. Of these, 77 (64%) seizures occurred in Madagascar. Regarding the number and size of seizures, significant seizures also took place in Mainland China (henceforth China), France, Mauritius, and Singapore (**Figure 1**).

FIGURE 1

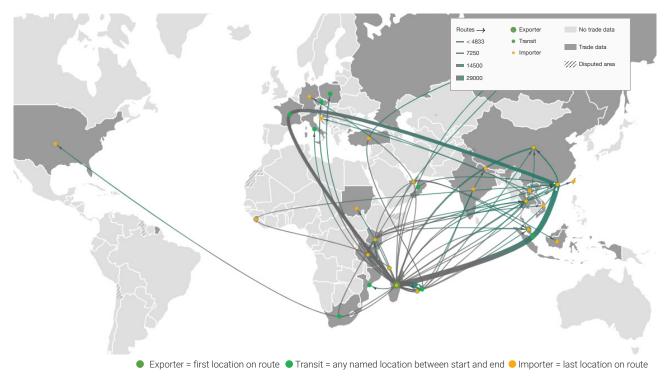
Number of incidents and count of individual items seized by the country



In total, 32 countries were implicated¹ along the trafficking route, even though the seizure may not have occurred there. Thailand was implicated the most (20 incidents, mostly as a destination country), followed by Kenya (13 incidents; mostly transit). Some of the other prominent countries and territories implicated (by number of incidents or volumes confiscated) included Malaysia, Mauritius, France, Singapore (transit), and China and Hong Kong SAR (importers) (**Figure 2**).

FIGURE 2

Global seizures involving Madagascar, showing routes for seizures by the number of individuals/pieces. The thickness of the lines corresponds to the quantities seized. Where quantities are not known, a minimum quantity of 1 is used to represent the route where known.



A total of 144,478 individual items and an additional 1,218kg by volume were seized. The major commodities seized were timber (mostly *Dalbergia* species), with 80,112 roundwood, sawn wood and unspecified wood pieces. Reptiles and amphibians also featured prominently, with 34,728 individuals seized. Most were endemic Malagasy tortoises, including at least 30,875 Radiated Tortoises, with smaller quantities of chameleons. At least 36 seizure incidents, or 30% of all Madagascarrelated incidents, clearly stated a SEA country's involvement². This study delves further into SEA's involvement in Madagascar's wildlife trade.

¹ Implicated countries refers to countries were involved along the trafficking route even though the seizure may not have occurred there. For

example, while six seizures occurred in Thailand, it was implicated in 20 incidents as it was part of the route for other seizures.

² The Southeast Asian region includes Brunei, Myanmar, Cambodia, Timor-Leste, Indonesia, Lao PDR, Malaysia, the Philippines, Singapore, Thailand and Viet Nam.

METHODOLOGY seizure analysis

Open-source data of wildlife seizure incidents involving Madagascar and at least one SEA country at any point of the trade route from 1 January 2000 to 30 June 2021 were extracted from TRAFFIC's Wildlife Trade Information System (WiTIS). Additional seizure data was sought from Malagasy government authorities and NGOs. Seizure data for 2015 to 2019 were provided by Malagasy Customs, while the Regional Directorate of Environment and Sustainable Development for the Analamanga region shared their recorded seizure and law enforcement statistical data for 2009 to 2020. Seizure records are an indirect measure of trafficking levels. The covert nature of any illicit activity and the many variables that influence crime and detection effort mean that the true extent is likely to be greater than those reflected by seizure records alone. Additionally, while every effort was made to cross-check the information with available sources, the data's accuracy, reliability, and completeness are variable. The results of this dataset may potentially cause bias in analysis and should therefore not be considered an absolute measure of illegal wildlife trade trends.

CITES TRADE DATA

To assess the historical and current legal reported trade between Madagascar and SEA, CITES Trade Data for all taxa between Madagascar and SEA countries were analysed. The data was extracted from the full CITES Trade Database download (version 2020.1), which documents each taxon's transaction with a CITES Permit with a unique identifier. The number of transactions (i.e. the number of shipments reported using a unique identifier) and volumes traded were used to quantify trade levels. The parameters used for this analysis were:

- **Timeframe:** 1975-2019. As not all Parties have submitted records for 2019 as of the time of analysis, the dataset for 2019 is considered incomplete.
- Source codes: All excluding "I" (seized items)
- Purpose codes: All
- Commodity and Unit: All
- **Quantity:** Madagascar reported trade, SEA reported trade, unless otherwise stated.
- **Type of trade:** Direct and indirect trade³ (re-exports involving Madagascar as the

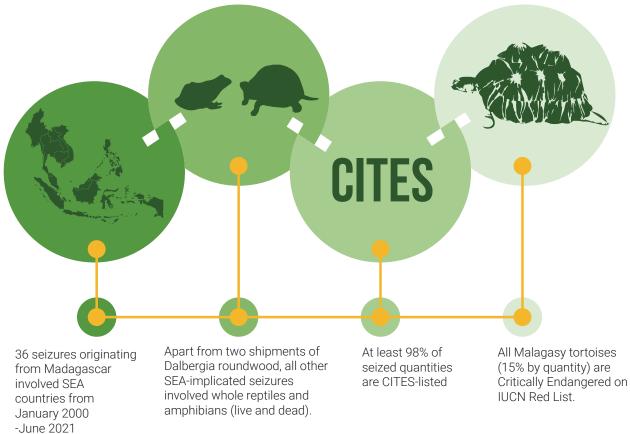
origin). It is assumed that direct and indirect trades are reported separately, and therefore not duplicated in the data record. Numbers refer to combined direct and indirect trade unless specified otherwise.

CITES trade data helps quantify legal trade volumes; however, it is worth noting that these data are limited as they are based on reported transactions and only cover species listed in the CITES Appendices. Discrepancies in quantities reported by importers and exporters may be due to differences in units or taxonomic level used or specimens being exported at the end of one year but only received by the importer the following year. Madagascar reports the quantities listed on permits issued rather than quantities traded, which may likely result in underestimating quantities reported by the exporter. Legal international trade recorded and reported depends on how and when a species is listed on CITES. For instance, Malagasy Dalbergia species listings only came into effect from 2013, therefore only trades occurring after this are reported.

Indirect transactions involve another country in the trade between MG and SEA that acts as a re-exporter. In the CITES Trade Data, MG is the "Origin" country, a second country is the "Exporter" and an SEA country is the "Importer".

RESULTS

SEIZURES



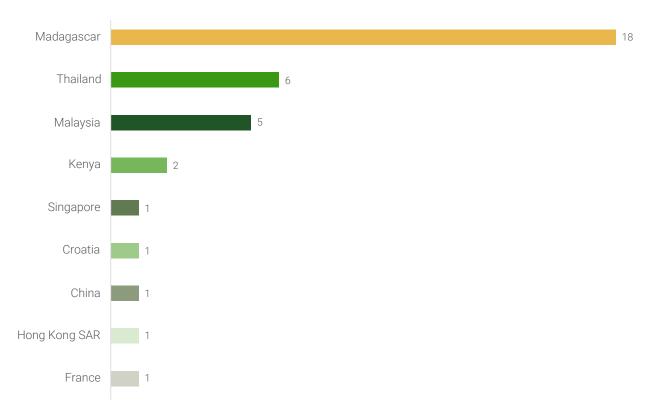
Number of seizures and quantities involved for each taxon. Note that the number of seizures adds up to more than 36 as some seizures contain multiple taxa.

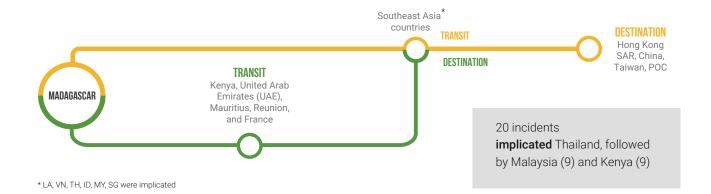
TAXON	NUMBER OF SEIZURES	QUANTITY	IUCN	CITES
Astrochelys radiata	27	5,421	CR	
Astrochelys yniphora	17	255	CR	
Chamaeleonidae	4	686	Various	Various
Pyxis arachnoides	4	32	CR	
Lacertidae	3	35	Various	Various
Testudines	3	42	Various	/
Brookesia	2	96	Various	/
Dalbergia	2	32,605	Various	
Anura	1	58	Various	Various
Dyscophus antongilii	1	47	LC	
TOTAL		39,277		



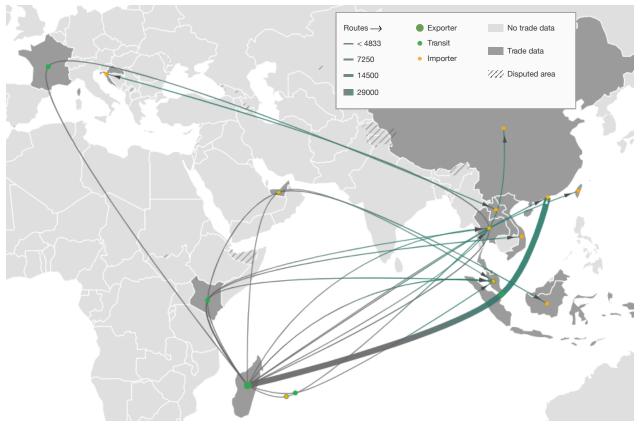


Number of seizures from Madagascar to SEA carried out in each country/territory





Seizures involving Madagascar and SEA countries showing implicated countries and routes where available. The thickness of the lines corresponds to the quantities seized. Where quantities are not known, the minimum quantity of 1 is used to represent the route where known.



• Exporter = first location on route • Transit = any named location between start and end • Importer = last location on route

Most incidents involved smuggling by air (32 incidents; 89%), with only two by sea (both Dalbergia seizures), and two incidents on smugglers' premises. Of the air smuggling incidents, 27 were found in personal baggage on passenger flights. Intelligence and targeted operations led to eight seizures, and routine inspection and X-ray inspections uncovered 11 cases; detection methods were unknown for the other 17 cases. In at least six cases,

tortoises were taped up or wrapped in diapers before being hidden in suitcases – a common smuggling method for live tortoises. In another case, smugglers tried to prevent detection from scanning machines by taping electronic devices to the animals' bodies. Radiated Tortoises were also hidden in a shipment of sea cucumbers on air freight, or concealed in a wooden model boat. Ploughshare tortoise Astrochelys yniphora and Radiated tortoise Astrochelys radiata for sale in Indonesia

LAW ENFORCEMENT OUTCOMES

TRAFFIC's WITIS recorded nine cases with successful convictions, mostly occurring in Madagascar. Thirteen cases resulted in only confiscations of the contrabandand another 12 ended in arrests without known conviction outcomes. Another case was eventually acquitted⁴, while two were marked as "pending", but no further information was available.

TABLE 1

Arrest and prosecution outcomes and cumulative penalties by seizure country where data was available

SEIZURE COUNTRY	NUMBER OF SEIZURES	PEOPLE ARRESTED	PEOPLE CHARGED	PEOPLE IMPRISONED	PEOPLE FINED
Madagascar	18	22	16	4	2
Thailand	6	4	2	1	2
Malaysia	5	2	2	2	0
Kenya	2	4	4	0	2
France	2	0	0	0	0
Croatia	1	2	2	0	0
Singapore	1	0	0	0	0
Hong Kong SAR	1	1	1	0	Unknown
China	1	0	0	0	0
TOTAL	37	35	27	7	6

A total of 35 people were arrested from all the seizures, and 27 were successfully convicted, of which 16 were in Madagascar (**Table 1**). Most of the suspects apprehended from all seizures were Malagasy (28 people).

However, not all suspects were arrested; hence the number of suspects for whom details were available exceeds the number of people arrested.

4

CITES TRADE FROM MADAGASCAR TO SEA

CITES Trade Data was analysed to assess the legal trade in CITES-listed species between Madagascar and SEA countries.





THAILAND LARGEST SOUTHEAST ASIAN IMPORTER OF WILDLIFE FROM MADAGASCAR, MOSTLY IMPORTING ORNAMENTAL PLANTS, LIVE REPTILES AND AMPHIBIANS (Madagascar-reported export quantities)

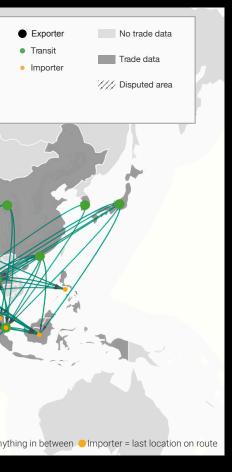


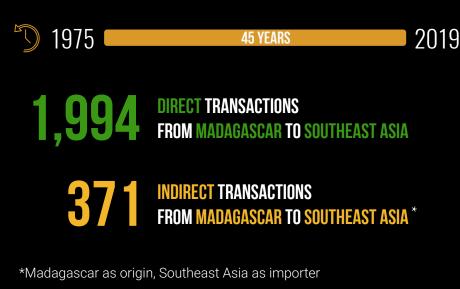


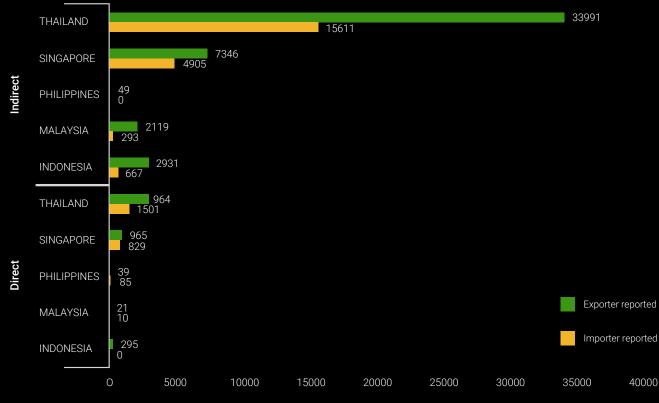
EUROPEAN NATIONS FEATURED HEAVILY AS RE-EXPORTERS FOR **INDIRECT TRADE** ORIGINATING FROM MADAGASCAR TO SOUTHEAST ASIA

France was the top re-exporter with 103 transactions; Italy, Switzerland and Germany in top 10. Other top 10 re-exporters: Namibia, Thailand, the USA, Hong Kong SAR, Singapore and Japan. (SKIN) Mostly involving Nile Crocodile *Crocodylus niloticus* leather and skins.









EXPORTER AND IMPORTER REPORTED NUMBER OF INDIVIDUALS* EXPORTED FROM MG TO SEA

*Whole live or dead individuals and unique parts (e.g., skull, whole skin)



MOST EXPORTED TAXONOMIC ORDERS



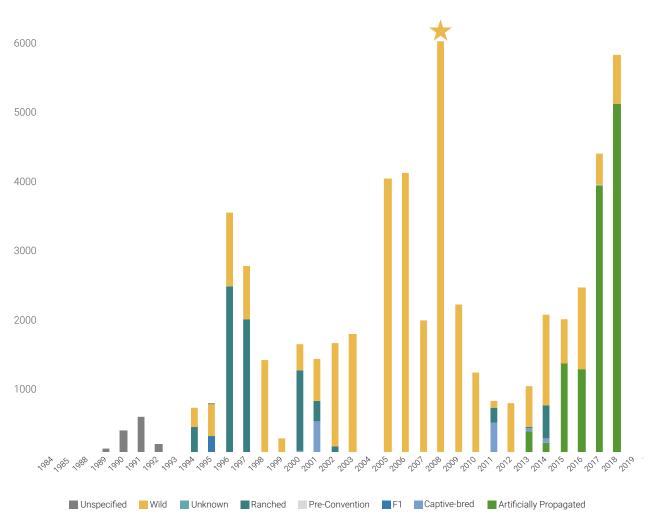
ORDER	NUMBER OF TRANSACTIONS	EXPORTE	R-REPORTED QUANTITY	IMPORTER-REPORTED QUANTITY	ĺ
Sauria		736	12,218		6,639
Orchidales		431	7,708		1,691
Euphorbiales		342	5,468		1,120
Gentianales		316	61,704		4,608
Crocodylia		224	8,962		6,368
Anura		166	3,546		2,848

TOP COMMODITY TYPES: • Transactions #1 16,518 live animals (39%) | #2 23,572 live plants (44%) | #3 53,900 seeds (2%) | #4 8,356 skins (5%)

Most exported commodities were declared as *Wild*; but in recent years, more artificially propagated (plants) were reported (**Figure 3**). This suggests an increase in Malagasy ability to artificially propagate ornamental plants commercially. However, there is no indication within Madagascar of this sudden increase in capacity, and most ornamental plants are believed to be wild-harvested (Newton, D. *in litt.*). Further work is needed to understand if wild-harvested plants are deliberately being misdeclared as captive.

FIGURE 3

Exporter-reported quantities for all taxa according to source code. *Note that in 2008, 54,106 units units were recorded, due to Madagascar reporting the export of 52,000 Wild Gentianales seeds - this bar exceeds the axis



For direct exports, importer-reported quantities were significantly lower than exporter-reported quantities. This could be because Madagascar reports according to permits issued rather than actual shipments taking place.

CITES TRADE FROM SEA TO MADAGASCAR

694

DIRECT TRANSACTIONS FROM SOUTHEAST ASIA TO MADAGASCAR

(Southeast Asia as origin and Madagascar as importer)



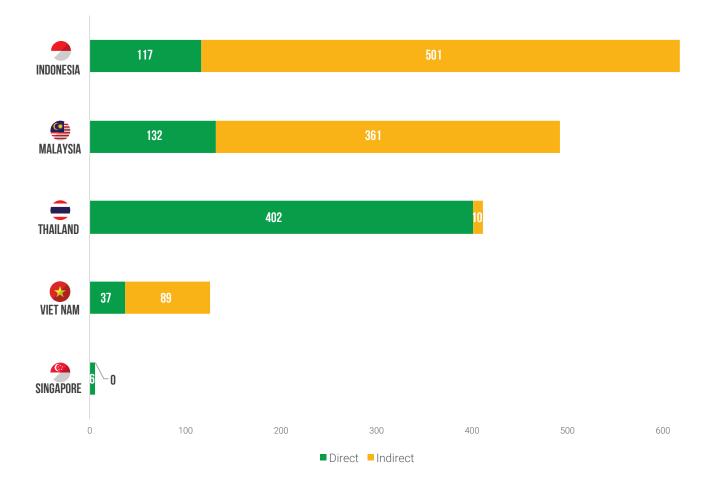
INDONESIA IS LARGEST SOUTHEAST ASIAN Exporter of Wildlife to Madagascar

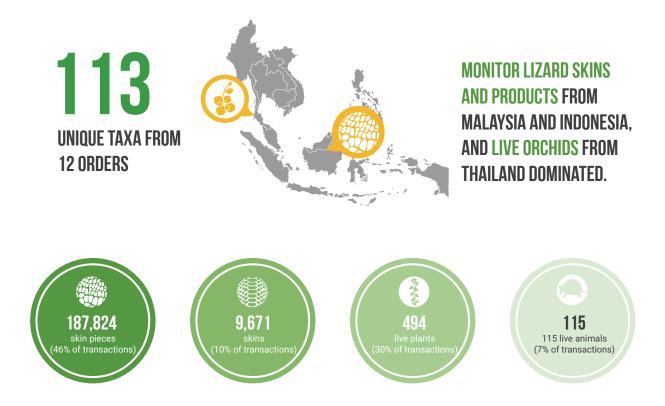
(Madagascar-reported import quantities)



FOR INDIRECT TRADE ORIGINATING FROM SOUTHEAST ASIA, FRANCE Was the biggest re-exporter to Madagascar, with 948 Transactions

Number of direct and indirect transactions from SEA countries to Madagascar





There were substantial discrepancies in exporter- and importer-reported quantities, particularly for direct and indirect imports from Indonesia and indirect imports from Malaysia.

Number of items imported by Madagascar from Indonesia or Malaysia directly (top) and indirectly (bottom). Both exporter-reported and importer-reported quantities are presented



DIRECT IMPORTS

CASE STUDIES: ISSUES OF CONCERN

A Panther Chameleon Furcifer pardalis found in the wild

TRAFFICKING AND LAUNDERING OF LIVE REPTILES AND AMPHIBIANS

Despite long-term trade restrictions and suspensions for many species dating as far back as 1994 (CITES, 2010), Malagasy reptiles and amphibians are still traded in global exotic pet markets (Carpenter *et al.*, 2004; Rabemananjara *et al.*, 2008; Todd, 2011; Robinson *et al.*, 2015; Runhovde, 2018) and TRAFFIC trade monitoring regularly records Malagasy reptiles for sale in SEA, both online and in physical markets. Relatively high numbers of Ploughshare Tortoises have been observed openly for sale in Indonesia (170 individuals between 2010-2016; Morgan et *al.*, unpublished.), while Radiated Tortoises are regularly recorded in Indonesia, Malaysia and Thailand (Nijman and Shepherd, 2015; Morgan, 2018; TRAFFIC, unpublished data). Malagasy tortoises in particular featured prominently in the seizure record.

BOX 1 PLOUGHING TOWARDS EXTINCTION

The Ploughshare Tortoise *Astrochelys yniphora*, also known in Malagasy as the Angonoka, is considered the most threatened tortoise in the world. Currently, fewer than 100 adults are estimated to remain in the wild (CITES, 2016), though it is likely lower due to continued poaching. Its unique beauty and increasing rarity have intensified international interest from reptile collectors and enthusiasts. It is estimated that up to 2,000 Ploughshare Tortoises have passed through the trade in the past decade (Beastall *et al.*, 2013). Most of the trade in this species out of Madagascar was destined for Asia, with mainland China, Hong Kong SAR, Taiwan, POC, and Thailand being the most common destinations (Nelson and Cochrane, 2020).

This demand is catered for by an extensive network of criminal and corrupt actors across Madagascar, transit and destination countries, contributing to weakening hard-won gains (Nelson and Cochrane, 2020). With the sole government-owned conservation breeding centre in Madagascar, and strict regulations on commercial trade, these animals observed in trade are almost certainly wild-caught smuggled animals. >100

adult Ploughshare Tortoises

estimated to remain in the wild





From 2012, to further reduce poaching, conservation organisations engraved the carapaces of captive, confiscated and wild tortoises with large, permanent, and unmistakable unique codes. The procedure does not affect the animal but was intended to reduce their desirability as collector's items (Kiester et al., 2013) and help law enforcement authorities to identify individuals and trace their origins (Raghavan et al., 2015). Recent sightings of stolen tattooed tortoises in Asia suggest that the traceability aspect of the procedure has been a success. At the end of 2015 and early 2016, eight tattooed Ploughshare Tortoises were advertised on Facebook and could be identified down to the individual. The traders were later arrested for shipping other Malagasy tortoises, but unfortunately, the Ploughshares had already disappeared. This was the first major sale of marked adult animals. The second case involved an Indonesian national who posted a photograph of one marked adult on Instagram. While these sightings sadly indicate that even defaced tortoises still have a value on the black market, attempts to sand off and remove the engravings by traffickers were apparent from the photographs (Morgan et al., unpublished).

From our CITES trade data analysis, 12,216 lizards, 3,546 frogs and toads, 100 tortoises, 100 crocodiles, and 20 snakes were reported by Madagascar to SEA both directly and indirectly. Chameleons, geckos and mantellid frogs made up 97% of transactions and 98% of exporter-reported quantities. Most of these (95%) are reported as wild-caught. However, in SEA, many Radiated Tortoises, Madagascar Day Geckos and Malagasy chameleon species observed in trade are claimed to be from captive sources. In many instances they appear to be so; the animals offered are often young, with many individuals of similar size and age and in good physical condition. This indicates that Malagasy reptiles sold in SEA may constitute a mix of wild and captive-bred animals.

Despite CITES suspending exports of many Malagasy reptiles from Madagascar for periods of time, there is continued evidence of poaching and smuggling of live reptiles out from Madagascar to SEA (Todd, 2011). Some illegally wild-sourced individuals could be laundered into the legal trade through breeding facilities in non-range States.

A closer look at the imports of Calumma spp., Furcifer spp., Phelsuma spp. and Uroplatus spp. into Thailand from all countries showed that non-range states such as Lebanon and Kazakhstan were sources for many of these in 2004-2005, all of which were reportedly bred in captivity. These occurred while there was a CITES suspension for exports of Phelsuma spp., Calumma spp. and Furcifer spp. from Madagascar. It is unlikely that these countries had the facilities or legally acquired breeding stock to breed the species in quantities imported by Thailand; therefore the animals are more likely to have been laundered wildsourced specimens to circumvent the CITES suspension. This modus operandi has been flagged before for Malagasy reptiles (Nijman 2010; Nijman and Shepherd, 2011; Todd, 2011), and Lebanon and Kazakhstan were flagged by Outhwaite et al. (2014) as suspected laundering conduits for other live reptile trade.

THE ROLE OF IVATO AIRPORT IN WILDLIFE SMUGGLING

Ivato Airport is the leading international airport in Madagascar and the only airport that connects Madagascar to SEA. It is exploited for wildlife trafficking: the seizure analysis showed that 89% of Madagascar's wildlife seizures implicating SEA were transported by air from Ivato International Airport. Improved transport links, such as direct flights between Antananarivo and Bangkok, have made Thailand's capital the prime trading centre for illegal tortoises and other reptiles from Madagascar (see Seizure Analysis; Nijman and Shepherd, 2015).

Various stakeholders are involved in security and baggage control at Ivato airport, including the Civil Aviation Authority, ground handlers, airlines, air and border police, wildlife authority, customs, the gendarmerie, freight handlers, and the airport management authority (Ravinala). Interviews conducted among representatives from each institution revealed a lack of communication, collaboration, data exchange and trust between institutions. For example:

 While customs made most seizures, the wildlife department officer outpost at lvato was rarely informed on time to proceed jointly with the seizure.

- The CITES Management Authority seldom shares species export documents and information with other institutions.
- Customs officials are not always aware of wildlife trade regulations regarding chameleon and lizard species (e.g. quotas and prohibited species).
- The officers involved in export control at the airport are not always informed of export permit issuance and species quotas.

Ivato International Airport's poor infrastructure, including the deficiency of scanners, is another weakness that enables the smuggling of illegal wildlife products. Additionally, alleged corruption among enforcement officials exacerbates the problem. For instance, colluding officers are bribed to allow traffickers and luggage to bypass security checks. These factors highlight Ivato Airport as a bottleneck and weak link in smuggling Malagasy wildlife to other countries, including SEA. Therefore, efforts should be focused here as a priority site, to increase the capacity and coordination of institutions involved to enhance enforcement.

89% Madagascar's wildlife

seizures implicating Southeast Asia were from Ivato Airport Aalagasy Rosewood Dalbergia maritima logs

DETECTING AND INTERCEPTING CONTRABAND: TOOLS AND **OPPORTUNITIES**

This seizure analysis revealed that smuggling of live reptiles from Madagascar into SEA is mostly by commercial passenger flights. In many cases, the animals were concealed in personal check-in baggage, often wrapped in tape, stockings, diapers and either placed among the travellers' possessions or hidden in secret compartments. There are accounts of smugglers attempting to avoid detection by X-ray machines by wrapping the animals in tinfoil and electronic strapping devices (see Seizures; Morgan et al., unpublished).

International smuggling of live tortoises using these methods are typical modus operandi used worldwide, in smuggling attempts of Indian Star Tortoises (DÇruze et al., 2015), and Black Pond Turtles (Leupen, 2018; Stoner, 2018). In several instances, the smuggler abandons the bags to reduce detection. This method employs on-site staff to facilitate the undetected movement of such bags through routine checks or even physically move the cargo from the airside to the landside in the destination country.

A combination of targeted intelligence/tipoffs and routine X-ray scans appear to be the most common and effective detection methods. Investigations into the organised crime networks moving this cargo would allow meaningful disruption of the whole network but often requires a lot of work to uncover the network and set up sting operations. On the other hand, routine scans of passenger bags may intercept more illegal shipments of wildlife, but often result in only confiscations without arrests or inadequate evidence to charge suspects in court. This also requires

training of airport staff to be vigilant for signs of wildlife smuggling (e.g. what the animals look like on X-ray scans, unusual smells emanating from bags, unusually heavy suitcases).

A project on Reducing Opportunities for Unlawful Transport of Endangered Species (ROUTES), of which TRAFFIC was a founding member, has developed training resources and industry guidance specially for commercial air transport industry⁵. These are designed to train individuals from ground handlers to cabin crew to identify and act on warning signs of illegal wildlife smuggling through passenger flights or air cargo.

Beyond live reptiles and amphibians, the world's largest seizure of rosewood of more than 3,000 tonnes of rosewood logs were smuggled by sea using shipping containers. Singaporean authorities intercepted them due to a tip-off in Singapore's Jurong Port, where the container ship was berthed in transit. The logs were transported without permits but did not appear to be concealed nor mislabelled. TRAFFIC has developed a comprehensive compendium on Red Flag Indicators for wildlife and timber trafficking in containerised maritime cargo⁶, as guidance to help the industry identify wildlife crime. It includes information on indicators of illicit activities and irregular behaviour. Some examples are questionable paperwork, consignments split across multiple shipments, last-minute requests for shipment clearance, and abnormal or sudden changes in routes or destinations.



commercial passenger flights

are often used to smuggle live reptiles from Madagascar to Southeast Asia

6

https://www.traffic.org/publications/reports/how-to-spot-the-warning-signs-of-wildlife-crime-in-the-maritime-industry/

⁵ https://routespartnership.org/



PROSECUTIONS: MIXED SUCCESSES AND SHORTFALLS

Successful convictions of wildlife smugglers remain the exception to the norm in Madagascar and Southeast Asia, with challenges in collecting evidence along the chain of custody, developing a strong prosecution case, and sensitization of judges to the seriousness of wildlife crime (Krishnasamy and Zavagli, 2020). In Madagascar, a man advertising 10 Radiated Tortoises online was arrested in October 2019, sentenced to one year's imprisonment, and fined MGA20 million (USD5,282 at 2019 rate) and MGA 20million (USD5,282 at 2019 rate) damages. In January 2020, a seller was arrested and sentenced to MGA10 million (USD 2,640 at 2020 rate) fine in addition to MGA1,000,000 (USD264 at 2020 rate) for the illegal possession and sale of two Radiated Tortoises – but unusually, no imprisonment. The difference in sentencing indicates the need for sentencing guidelines.



guidelines are needed to

ensure prosecution success

BOX 2 CRACKING A 10,000-TORTOISE OPERATION

On 10 April 2018, an inter-agency crackdown resulted in a seizure of nearly 10,000 Radiated Tortoise and the conviction of three individuals for illegal possession of a protected species in a landmark court ruling in October 2018. This was the first national effort led by a consortium of organisations, locally known as the Stakeholder Network.

The seizure itself occurred after a tip-off from a Stakeholder Network member, after which the gendarmerie and control service at the Regional Directorate of the Environment and Sustainable Development agents proceeded to seize the animals, which were held on private premises for export. Although the main destination country was not revealed during the investigation, it was thought to be SEA. Three individuals were arrested (unfortunately, excluding the gang leader) and the tortoises transferred to the SOS Turtles Centre in Madagascar.

Investigations uncovered photographs of the tortoises in the homeowner's phone and evidence showing that the homeowner rented his property to the gang leader and was aware of the illegal business conducted by his tenant. The case was then referred to the prosecutor's office of the Court of the First Instance of Tulear and the three defendants found guilty and sentenced to six years of imprisonment each, plus joint fines of MGA100 million (USD30,003 at 2018 rates) and damages of MGA30 million (USD9,999 at 2018 rates), under Art. 30 of *Law 2005-018 on International Trade in Endangered Species of Fauna and Flora.* This marks the most successful milestone in combatting the illegal trade of tortoises in Madagascar to date. The following factors were critical to the success of this case:

- The wide media coverage of the case.
- Proactive engagement of civil society and NGOs in the case proceedings. For example, WWF and Alliance Voahary Gasy (AVG)⁷ hired a lawyer to support the Regional Directorate of the Environment of the Atsimo Andrefana Region with the prosecution of the case.
- Close collaboration between the Stakeholder Network and law enforcement agencies in the Atsimo Andrefana region, during the investigation, seizure, prosecution, and media engagement.
- Strict compliance with procedures by
 the Tribunal de Première Instance of Tulear,
 including the self-recusal of a judge due to
 the conflict of interest as her husband
 was the defence lawyer of one of the three
 defendants.
- A double preliminary investigation of suspects by Department of Forests agents and by the Bureau Indépendant Anti-Corruption (BIANCO) that collected personal information on the mastermind.
- Meticulous gathering of evidence that led to sufficient charges against the defendants as *flagrante delicto*, including the seizure and investigation of the suspect's phones which are unusual in law enforcements procedures in Madagascar.



almost 10,000 Radiated Tortoise seized thanks to

a tip-off

3 individuals arrested

and later was sentenced to six years in jail

There have been a few successful convictions in SEA countries. In July 2010, two Malagasy women arrested in Malaysia for smuggling reptiles and amphibians were each sentenced to a year in jail under Section 10 (a) of the International Trade in Endangered Species Act 2008, Malaysia's CITES-implementing law that had then just come into force. This case was successful because the suspects were caught red-handed with the evidence, enabling a strong case to be built to prosecute the smugglers. However, the women were not the masterminds behind the operations but 'mules' hired to smuggle the animals. Though they gave testimonies implicating the masterminds, the true criminals were not arrested (Al Jazeera, 2015).

In March 2013, in the attempted smuggling of 54 Ploughshare Tortoises and 21 Radiated Tortoises from Madagascar to Thailand via Nairobi, Kenya, the Malagasy national to whom the luggage was registered was sentenced to two years' imprisonment in lieu of a THB 2,850,000 (USD 92,600) fine for violation of the Animal Protection Law B.E. 2482. The Thai man trying to collect the suitcase was released on bail, and no updates were available. Despite the successful prosecution of the smuggler, this case is also notable for the disappearance of several seized animals from the governmentrun rescue centre. These were initially attributed to mortality, but later revealed that the animals were allegedly stolen (Bangkok Post, 2016; Kiester et al., 2013), highlighting the challenges with securing and repatriating seized wildlife.

In contrast, a five-year court battle in Singapore concerning the world's largest rosewood seizure met with eventual defeat, after initial success. First acquitted in 2015, the case was revisited in 2017 by a high court and the accused was sentenced to three months' jail and the maximum fine of SGD500,000. His company was also fined the same amount for importing Madagascan rosewood without a permit, under Section 4(1) of the *Endangered Species (Import and Export) Act.* Eventually, in 2019 the Supreme Court of Singapore overturned this decision (Supreme Court of Singapore, 2019).

One of multiple reasons was the interpretation of the Endangered Species (Import and Export) Act and that the case did not meet the criteria for "transit". Crucially, the Malagasy government could or would not confirm the illegality of the logs, confusingly providing conflicting statements over the two years (Carver, 2017; Supreme Court of Singapore, 2017; Carver, 2019). This resulted in the prosecution having to shift from the original straightforward case that the shipment was an illegal export from Madagascar, to have to build a case around the legality of the import into Singapore (Carver, 2019). In the end, what should have been a strong case on the world's largest rosewood seizure fell on this technicality and the failure of Malagasy officials to confirm illegality.

Since then, Singapore has revised its law with the Endangered Species (Import and Export) (Amendment) Act 2022, strengthening its regulatory regime and improving its definition on the control of scheduled species in transit.



arrests made

in most cases usually exclude the masterminds behind the smuggling

CONCLUSIONS

Where carried out sustainably and lawfully, the legal wildlife trade is a valid and important contributor to Madagascar's economy. However, an unknown proportion of this is mixed in with illegal activity: poaching, trafficking, and even possible laundering. This illegal activity undermines Malagasy and international laws that are in place to protect threatened endemic Malagasy species and directly impacts wild populations. The case studies illuminate that organized Malagasy wildlife crime is complex and international in nature, e.g. large numbers of endemic Malagasy reptiles illegally traded by Malagasy intermediaries before being trafficked overseas to international buyers and the suspected laundering through "breeding facilities" in nonrange States. Gaps in detection, investigation, arrests and prosecutions involving wildlife trafficking in Madagascar further undermine the effective implementation of laws.

Southeast Asian countries involved in trade with Madagascar functioned as transit, reexporting and/or destination and sometimes source countries. They have an essential role to play to ensure that trade with Madagascar is legal, and to intercept trafficked wildlife. Due to the international nature of this trade, crosscountry coordination is crucial to go beyond seizing contraband and disrupt the organized networks behind this exploitation of endemic and threatened Malagasy wildlife.

The main challenges in Madagascar are:

- Low levels of capacity within enforcement agencies responsible for passenger and luggage control, particularly with respect to CITES regulations, species and guotas.
- Poor communication and coordination across enforcement agencies, especially at ports and airports.
- Deficiency of wildlife detection infrastructure and safety provision at international airports, especially at Ivato International Airport

- Absence of critical materials along the chain of custody
- Widespread allegations of corruption amongst officials

The main challenges in Southeast Asian importers are:

- Inadequate information on the legal status of shipments, e.g., protected wild-sourced reptiles declared as captive-bred; seized timber with mixed messages about whether it was legally exported from Madagascar.
- In most cases only the 'mules' were arrested and, in only some cases convicted, while the kingpins were not apprehended
- The long term care and repatriation of live Malagasy reptiles

Nonetheless, there are some promising successes and recent developments:

- The cases documented illustrate that with detailed investigations, surveillance, and adequate collection of evidence by wildlife conservation groups and government agencies, the countries' laws can be effective
- Recently revised and improved wildlife legislation in some Southeast Asian nations most implicated in wildlife trade with Madagascar (Malaysia, Singapore, Thailand) close some loopholes and increases penalties
- Recent demonstrable commitment from law enforcement agencies in SEA countries (Indonesia, Malaysia, Singapore, Thailand) to act against wildlife crime involving their countries (TRAFFIC seizure data)
 - Industry-specific guidance to detect and intercept wildlife smuggling has been developed for the aviation and shipping industries, so the private sector can also play a role.

RECOMMENDATIONS

TO PROTECT THREATENED ENDEMIC MALAGASY SPECIES

Based on the identification of gaps and priority areas to target such enforcement actions in both Madagascar and SEA, we recommend:

MADAGASCAR

DEVELOP AND IMPLEMENT A CROSS-AGENCY Intelligence-sharing Platform

IMPROVE SECURITY CHECKS AT IVATO AIRPORT AND OTHER KEY EXIT POINTS

This will enable real-time information sharing between entities to increase communication and collaboration between stakeholders and strengthen collaboration and inter-agency coordination. The platform should help with the proactive gathering of intelligence, investigation of offences and prosecution of offenders. The focal point from each agency should have the expertise to collate, analyse and disseminate information. In addition, processes to develop risk profiles and maintain accurate records (e.g., registers for seizures, arrests) should be set up. This platform should develop an inclusive national action plan to tackle wildlife crime with benchmarks and timeframes to ensure effective implementation.

Intercepting trafficked wildlife at the source country enables easier rehabilitation and release for live animals. As various stakeholders are involved in passengers and luggage control, multi-sectoral protocols can help trace and report instances of wildlife trafficking. There is a need to develop a system for more effective information exchange between enforcement agencies and private companies operating at the main exit points. Use of biological scanners at the baggage handling and cargo section and improving existing shipment control procedures can mitigate wildlife smuggling.

COLLABORATE WITH NON-GOVERNMENTAL ORGANIZATIONS ON INVESTIGATIONS AND PROSECUTIONS

Apprehending wildlife criminals and enhancing successful court case outcomes are crucial to deter traffickers. Strong collaboration with non-governmental organizations e.g. in court procedures should be encouraged to enhance the effectiveness of investigations and prosecutions.

INCREASE AWARENESS AMONGST JUDGES AND PROSECUTORS

National sensitization workshops for magistrates and members of the prosecution services on wildlife crime and the existing legal tools that are available to combat it can raise awareness among judges and prosecutors on provisions under the Penal Code on illegal wildlife trade. Additionally, these can include promoting the exchange of information and experience between judges and prosecutors; identifying best practices for successful prosecutions; produce guidance, tools, common standards and approaches to the prosecution of illegal wildlife trade-related offences; sharing training programs and contribute to better understanding, of the implementation and enforcement of criminal law related to wildlife and CITES.

ADDRESS INFORMATION GAPS ON SOURCING OF MALAGASY WILDLIFE

There is insufficient understanding about the sourcing of some Malagasy wildlife, e.g. whether non-timber plants are wild-sourced or artificially propagated as declared in CITES exports. Research into this would support endemic Malagasy species' legal and sustainable trade and provide importing countries with information to assess the source and legality of incoming wildlife from Madagascar.

SOUTHEAST ASIA

INCREASE SECURITY CHECKS OF Flights originating From Madagascar

VERIFY IMPORTS OF MALAGASY ENDEMIC SPECIES **Limitations in Madagascar's interception** of outgoing smuggled wildlife and the prevalence of smuggling live reptiles through checkin baggage on passenger flights makes it worth flagging flights originating from Madagascar – including those transiting in another country – as high risk.

CITES MAs in importing countries are urged to check with exporting country authorities to verify the origin and legality of shipments of Malagasy endemic species, particularly live reptiles and amphibians where laundering has been documented. This is especially important for CITES Appendix I-listed species such as Radiated Tortoises, where only international trade from CITESregistered captive-breeding facilities is permitted.

CLOSE MARKETS AND ONLINE GROUPS SELLING ILLEGAL WILDLIFE FROM MADAGASCAR

Continued monitoring of locations and platforms in SEA by various stakeholders (NGOs, researchers, tech companies and government agencies) can identify where protected Malagasy wildlife is sold. Follow-up actions to shut down these trade avenues will contribute to tackling trade from the demand side.

IMPROVE INVESTIGATIONS, PROSECUTIONS AND CONVICTIONS

While there were some successful prosecutions there were also many shortfalls: cases without conviction records, arrested individuals let out on bail, overturned convictions. Furthermore, in most cases only the 'mules' were arrested, but no follow-up investigation or action taken against the masterminds behind the trafficking networks. Successful convictions of the key individuals behind wildlife trafficking networks will disrupt their activities.

MADAGASCAR AND SOUTHEAST ASIA

IMPROVE SEIZURE Reporting and Conviction Follow-UP

This encourages more transparent information sharing between Madagascar and Southeast Asian countries. Additionally, publicizing successful enforcement actions can act as deterrents and signal the country's intent to treat wildlife trafficking as a serious crime

IMPROVE BILATERAL COMMUNICATION TO VERIFY EXPORT/ IMPORT PERMITS

Establishing clear focal points within CITES MAs and SAs in each country can improve communications between exporting and importing countries in confirming the validity of CITES permits.

IMPLEMENT AND MAINTAIN CITES E-PERMITTING SYSTEM

INCREASE AWARENESS OF WILDLIFE TRAFFICKING RISKS **The uptake of CITES e-permits** by CITES MA in Madagascar and Southeast Asian nations will allow for improved international cooperation, sharing of permit data and reporting on trade using international standards, increase the traceability of wildlife products, resolve exporter-importer discrepancies and increase resilience against corruption and fraudulent documentation.

Airport and port authorities and service providers, and air and freight transport companies are on the frontlines of international wildlife smuggling. Existing TRAFFIC training materials can be delivered to them to ensure the sensitization on IWT. These materials include basic introductions to CITES, common smuggling methods and red flags to look out for. Frontline officers should be equipped with species identification skills and materials and connected with species expert networks who can quickly and accurately identify lookalike species.

INVESTIGATE CRIMINAL NETWORKS BETWEEN MADAGASCAR AND SOUTHEAST ASIA

Cooperation between source, transit and destination countries is vital for the successful investigation and prosecution of illegal wildlife trade, as such, there is a need to adopt legal information sharing instruments and the exchange of expertise should be enhanced to deepen the investigation and prosecution ability, this will widen the net of suspects involved and provide wider access to serious criminal charges. Additionally, working-level meetings are necessary to build networks of officials to facilitate closer ties and operational exchanges among law enforcement officials.

FACILITATE REPATRIATION OF SEIZED LIVE WILDLIFE FROM SOUTHEAST ASIA TO MADAGASCAR

As many endemic Malagasy reptile species are already threatened, if any are seized in Southeast Asian nations, authorities in both countries are urged to facilitate the repatriation process through the efficient issuance of official letters and CITES permits. Close cooperation with wildlife rescue facilities with the necessary expertise would expedite the process and reduce mortality rates.

REFERENCES

- AI Jazeera. (2015). Return of the Lizard King. https://www.aljazeera.com/program/101-east/2015/4/21/return-of-the-lizard-king
- Bangkok Post. (2016). Rare Madagascan tortoises missing from breeding station. *Bangkok Post* published: 6 June 2016. Retrieved from: https://www.bangkokpost.com/thailand/general/1003889/rare-madagascar-tortoises-missing-from-breeding-station (Visited: 23 March 2021).
- Carpenter, A.I., Rowcliffe, J.M., and Watkinson, A.R. (2004). The dynamics of the global trade in chameleons. *Biological Conservation* 120: 291-301.
- Carver, E. (2017). Singapore convicts' rosewood trader in historic CITES seizure. *Mongabay*, 26 April. Accessed from: https://news.mongabay. com/2017/04/singapore-convicts-rosewood-trader-in-historic-cites-seizure/
- Carver, E. (2019). Singapore acquits trader in world's biggest rosewood bust, worth \$50m. *Mongabay*, 19 April. Accessed from: https://news. mongabay.com/2019/04/singapore-acquits-trader-in-worlds-biggest-rosewood-bust-worth-50m/
- Convention on International Trade of Endangered Species of Wild Fauna and Flora (CITES). (2010). Notification to the Parties No. 2010/012. CITES, Geneva, Switzerland.
- D'Cruze, N., Singh, B., Morrison, T., Schmidt-Burbach, J., Macdonald, D. W., and Mookerjee, A. (2015). A star attraction: The illegal trade in Indian Star Tortoises. *Nature Conservation*, 13, 1.
- Joint Nature Conservation Committee (JNCC). (1993). A preliminary review of the status and distribution of reptile and amphibian species exported from Madagascar. Joint Nature Conservation Committee Report, JNCC, Peterborough, UK.
- Kiester, A., Mandimbihasina, A., Lewis, R., Goode, E., Juvik, J., Young, R., and Blanck, T. (2013). Conservation of the Angonoka (Ploughshare Tortoise), Astrochelys yniphora. Chelonian Research Monographs 6:162–170.
- Krishnasamy, K., and Zavagli, M. (2020). Southeast Asia: At the heart of wildlife trade. TRAFFIC, Southeast Asia Regional Office, Petaling Jaya, Selangor, Malaysia.
- Leupen, B. (2018). Black Spotted Turtle Geoclemys hamiltonii Trade in Asia II: A Seizure Analysis (2014–2016). TRAFFIC Southeast Asia Regional Office, Petaling Jaya, Selangor, Malaysia.
- Morgan, J. (2017). Trade in illegally sourced tortoises and freshwater turtles in Jakarta the need for legal reform in Indonesia. *Journal of Indonesian Natural History* 4 (2):12-17
- Morgan, J. et al. (2017)., unpublished Ploughing towards extinction: an overview of the illegal international Ploughshare Tortoise trade
- Morgan, J. (2018). Slow and Steady: The Global Footprint of Jakarta's Tortoise and Freshwater Turtle Trade. TRAFFIC, Southeast Asia Regional Office, Petaling Jaya, Selangor, Malaysia.
- Nijman, V. (2010). An overview of international wildlife trade from Southeast Asia. Biodiversity and Conservation 19:1101-1114.
- Nijman, V., and Shepherd C. R. (2011). The Role of Thailand in the International Trade in CITES-listed Live Reptiles and Amphibians. *PLoS ONE* 6: e17825.
- Nijman, V., and Shepherd, C.R. (2015). Analysis of a decade of trade of tortoises and freshwater turtles in Bangkok, Thailand. *Biodiversity and Conservation* 24(2):309-318.
- Myers, N., Mittermeier, R. A., Mittermeier, C. G., Da Fonseca, G. A. B., and Kent, J. (2000). Biodiversity hotspots for conservation priorities. *Nature* 403: 853–858 (2000).
- Nelson, A., and Cochrane, J. (2020). Trafficking Malagasy Tortoises: Vulnerabilities and illicit markets in the western Indian Ocean. The Global Initiative Against Transnational Organized Crime, Geneva, Switzerland.
- Outhwaite, W., Mundy, V., Kecse-Nagy, K., and Crook, V. (2014). Concerns Regarding Trade in Specimens Claimed to be Derived from Captive Breeding or Ranching Assessment of Select Examples. Report commissioned by CITES Secretariat, Annexe 1 of AC27 Doc. 17.
- Rabemananjara, F.C.E., Rasoamampionona Raminosoa, N., Ravoahangimala Ramilijaona, O., Rakotondravony, D., Andreone, F., Bora, P., Carpenter, A., Glaw, F., Razafindrabe, T., Vallan, D., Vieites, D.R., and Vences, M. (2008). Malagasy poison frogs in the pet trade: a survey of levels of exploitation of species in the genus Mantella. In: Andreone, F. (Ed.), *A Conservation Strategy for the Amphibians* of Madagascar. Vol. 45. Monografie del Museo Regionale di Scienze Naturali di Torino, pp. 277–299.
- Ratsimbazafy, C., Newton, D., and Ringuet, S. (2016). Timber Island The Rosewood and Ebony Trade of Madagascar. TRAFFIC Report.
- Runhovde, S.R. (2018). Illegal online trade in reptiles from Madagascar. Global Initiative Against Transnational Organized Crime.
- Robinson, J.E., Fraser, I.M., John, F.A.V., Randriananantoandro, C., Andriantsimanarilafy, A., Razafimanahaka, J.H., Griffiths, R., and Roberts., D.L. (2018). Wildlife supply chains in Madagascar from local collection to global export. *Biological Conservation 226* (2018), 144-152.
- Stoner, S. (2018). Operation Dragon: Revealing new evidence on the scale of corruption and trafficking in the turtle and tortoise trade. The Wildlife Justice Commission, The Hague, The Netherlands.
- Supreme Court of Singapore (2017). In The High Court of The Republic of Singapore Magistrate's Appeal No 9192 of 2016; Respondent Magistrate's Appeal No 9193 of 2016. https://www.supremecourt.gov.sg/docs/default-source/module-document/judgement/ ma-9192-9193-of-2016-pp-v-kong-hoo-(private)-limited-anor-rosewood-no-2-judgment-v9-(final)-pdf.pdf
- Supreme Court of Singapore (2019). Case Summary: Kong Hoo (Private) Limited v Public Prosecutor. Accessed from: https://www. supremecourt.gov.sq/news/case-summaries/kong-hoo-private-limited-v-public-prosecutor
- Todd, M. (2011). Trade in Malagasy reptiles and amphibians in Thailand. TRAFFIC Southeast Asia, Petaling Jaya, Malaysia.

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A close-up of seized Radiated Tortoise Astrochelys radiata

WORKING TO ENSURE THE TRADE IN WILD PLANTS AND ANIMALS IS NOT A THREAT TO THE CONSERVATION OF NATURE

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