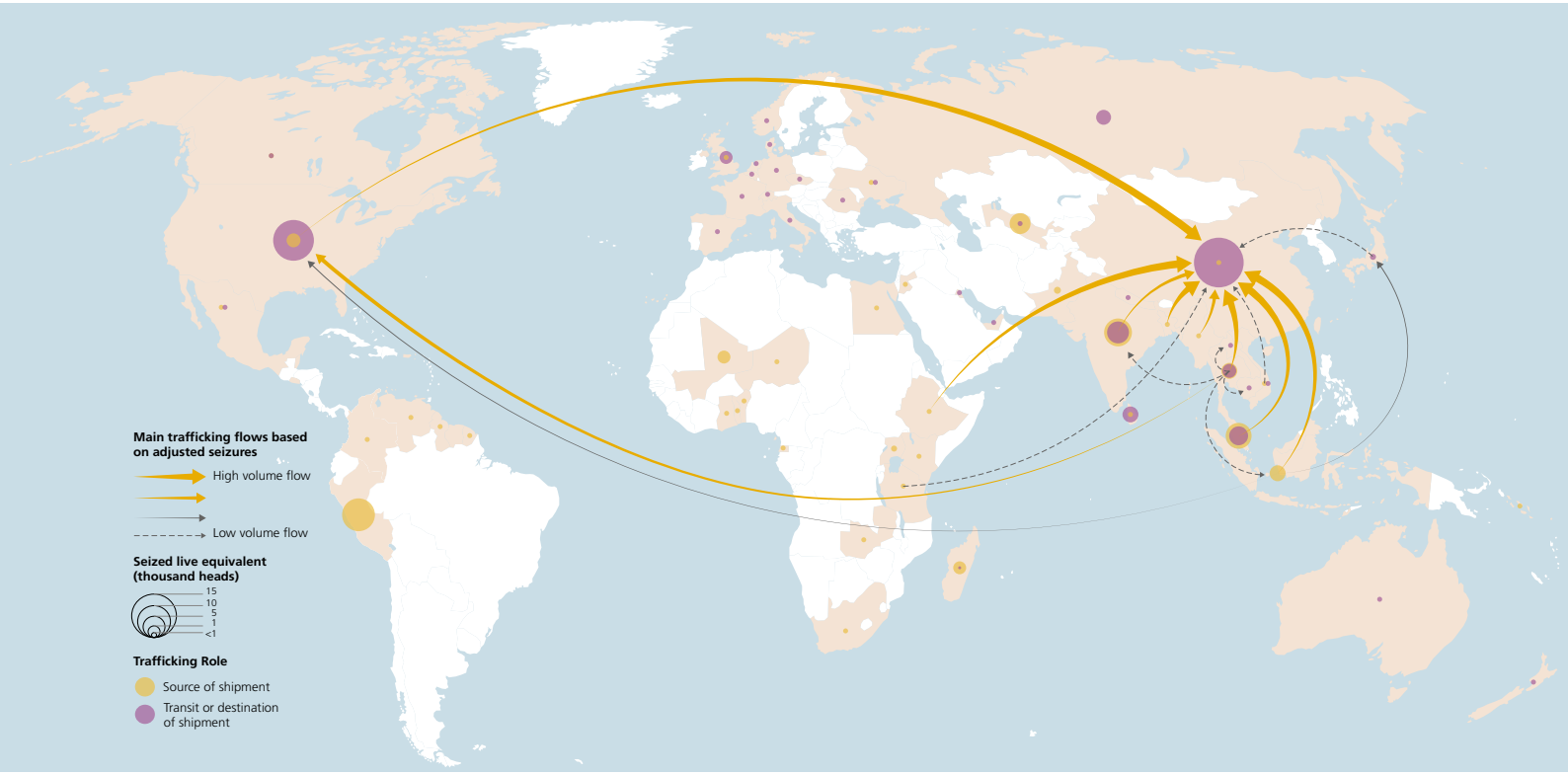
# LIVE REPTILES

# 5

## Map 1 Trafficking flow map - Reptilia (2007-2018)*




Source: UNODC World WISE Database *The year 2018 is based on partial data.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.
A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas).

In the last *World Wildlife Crime Report*, several species of reptiles appeared among the most trafficked species in the world, including crocodilians, lizards, snakes, tortoises and freshwater turtles.[1] The same species remain prominent in the analysis conducted for this report. The three largest markets for illegally traded reptiles that appear in the seizure records are:

- Reptile skin or shells used in the décor or fashion industries;
- Reptile meat organs, or venom consumed as a food, tonic or medicine;
- Live reptiles used as pets, for zoos, or breeding.

The last *World Wildlife Crime Report* focused on the illegal skin trade, highlighting the ways that unregulated collection of wild pythons and boas can introduce illegally caught skins into the legal fashion industry. Since 2016, however, according to the CITES Secretariat, fashion brands, designers and department stores have expanded their support to reptile conservation programmes around the world. While small leather items (such as handbags, wallets, belts, and shoes) continue to be the single largest category of reptile products seized, the number of live reptiles seized is comparable to the number of reptile skins from crocodilians, snakes, and lizards seized, and live reptile seized.[2]

Because the smuggling of live reptiles often results in high mortality rates, seizures involving live reptiles or whole reptile bodies[3] are included in the analysis below as "live reptile equivalents." In addition, species known to be widely used for their meat or skin or widely farmed were excluded,[4] so the analysis below focuses on wild-sourced species that are likely to be traded as pets or among reptile collectors and breeders. According to World WISE, nine out of the top ten CITES-listed wild-sourced live reptile species seized in recent years, based on a head count, were tortoises and freshwater turtles (Figure 1).[5] Consequently, this chapter pays particular attention to the illegal trade in live turtles and tortoises.[6]

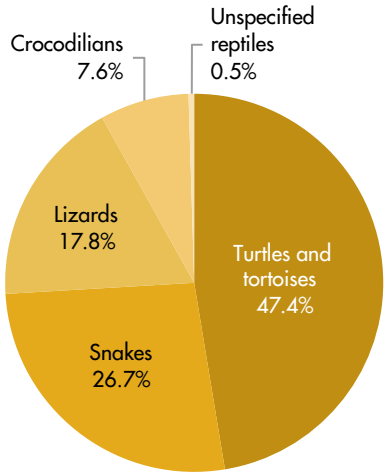
The majority of the live reptiles seized (70 per cent) were listed on Appendix II of CITES, with 18 per cent on Appendix I and 4 per cent on Appendix III. The remaining live reptiles seized for CITES violations were not identified down to a taxonomic level that allowed for an exact appendix listing classification.[7] The top 10 CITES-listed live reptile species seized, excluding food species, are indicated in the table 1 below, along with their Appendix listing and IUCN status.

In addition to World WISE data, the chapter uses qualitative data based on a series of 30 interviews with reptile experts and people involved in the live reptile trade during 2019.[14]

## Sourcing

Live reptiles detected in illegal international trade come from several different parts of the world, including South Asia, Central Asia, South-East Asia, East Africa and West Africa. Based on World WISE seizure data, India is the leading national source of seizures and is the source of a variety

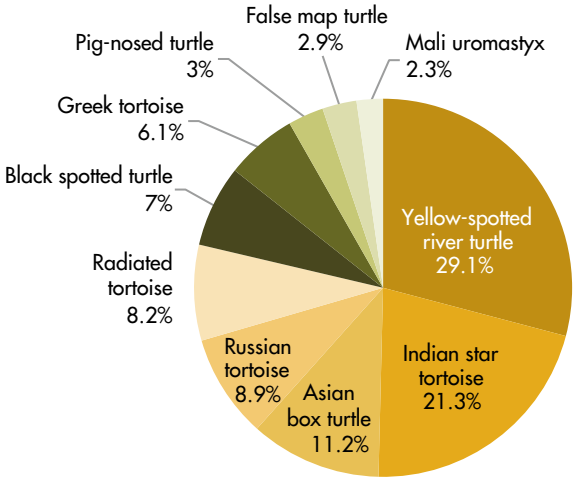
**Fig. 1** Share of broad reptile groups in total number of live reptile equivalents seized, 2007-2017*




Source: UNODC World WISE Database

*Includes live specimens and bodies. Based on 6,015 seizure events.

**Fig. 2** Share of top ten CITES-listed live reptiles seized, 2007-2017

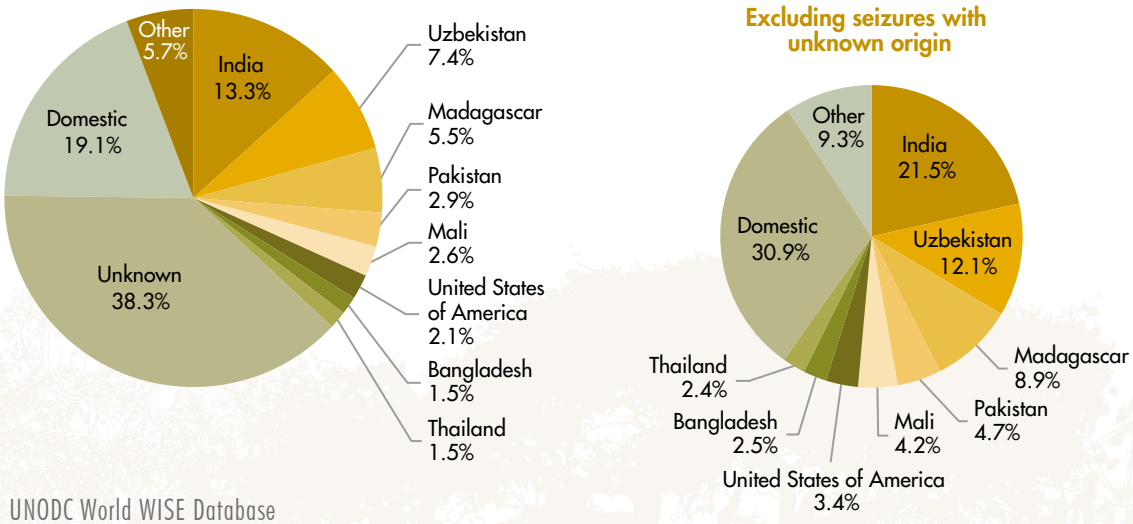



Source: UNODC World WISE Database

* Includes bodies.

** The top ten live reptile species seized represent 33% of all reptiles seized when looking only at bodies and live specimens.

**Fig. 3** Share of source countries for the top ten live reptile species seized,* 2007-2017




Source: UNODC World WISE Database

*Excluding food species. Includes bodies.

**Table 1** Top ten seized reptile species for the live trade, 2007-2017

| TOP 10 CITES-LISTED SPECIES SEIZED | COMMON NAMES OF SPECIES | IUCN RED LIST STATUS[8] | POPULATION TREND[9] |
|---|---|---|---|
| *Podocnemis unifilis (Appendix II)* | Yellow-spotted river turtle[10] | Vulnerable | Unknown |
| *Geochelone elegans (II)* | Indian star tortoise | Vulnerable | Decreasing |
| *Cuora spp. (II)*[11] | Asian box turtle | Endangered or critically endangered[12] | Decreasing for three species and unknown for all others[13] |
| *Testudo horsfieldii (II)* | Russian tortoise | Vulnerable | Unknown |
| *Astrochelys radiata (I)* | Radiated tortoise | Critically endangered | Decreasing |
| *Geoclemys hamiltonii (I)* | Black pond turtle/ Indian spotted pond turtle | Endangered | Decreasing |
| *Testudo graeca (II)* | Greek tortoise | Vulnerable | Unknown |
| *Carettochelys insculpta (II)* | Pig-nosed turtle | Endangered | Decreasing |
| *Graptemys pseudo-geographica (III)* | False map turtle | Least concern | Unknown |
| *Uromastyx dispar (II)* | Mali uromastyx | – | – |

* Excluding food species, including bodies.

of species, most notably the Indian star tortoise (*Geochelone elegans*). Uzbekistan appears prominently due to the indigenous Russian tortoise (*Testudo horsfieldii*). Madagascar is seen as the source of seizures of at least 30 species of reptiles, but most prominently the radiated tortoise (*Astrochelys radiata*). The black pond turtle (*Geoclemys hamiltonii*) is seized from a wide range of source countries, including India, Indonesia, Malaysia, Pakistan and Thailand.

The wide range of seizure source locations makes it difficult to generalize about the means of collection. Based on interviews with international reptile traders,[15] poachers collect animals by hand or with snares, pitfall traps, fishing line or funnel traps, and sometimes specialized hunting dogs. The advent of YouTube and other video sharing sites has resulted in an abundance of "how to" videos promoting the best ways to catch certain species, especially in South-East Asia. Most poachers living in the range area collect reptiles opportunistically for secondary income and keep them at their homes until middlemen come to collect them. They may also breed and grow-out reptiles.

At this early point in the trafficking chain, prices paid are often very low. For example, illegal market prices for turtles in the Philippines range from US$1-15 per turtle at the source. These are sold for 10 to 100 times that at the retail level. Radiated tortoises (*Astrochelys radiata*) from Madagascar are sold for US$2-10 at source, while they are sold to the end consumer for US$1,000-2,000 (for a one- to three-year-old animal, depending on the colour).[16]

Interviews with reptile traders around the world suggested that contraband reptiles may be laundered through captive breeding operations. International traders say that some suppliers will illegally source gravid females from the wild, so that they lay their eggs at their farm, and they then declare the offspring to be captive-bred. "Niche" species, with very specific or lesser-known ecologies, diets and behaviours that make them difficult or costly to breed in captivity, are typical targets for this sort of laundering.[17]

## Trafficking

The intention of this kind of wildlife trafficking is to get the animals to arrive alive at their final destination. To reduce mortality rates due to suffocation, dehydration, starvation or otherwise, most international trafficking of live reptiles occurs by air: 56 per cent of the live reptile seizure incidents in World WISE that included transport information involved air transport.

According to interviews with reptile dealers around the world, turtles and tortoises are a good product to sell because they tend to sell for higher prices than other reptiles and survive transportation well, providing higher profit margins. Some turtle and tortoise species are valuable enough to air courier, making use of carry-on or checked luggage. Some experts interviewed reported cases involving

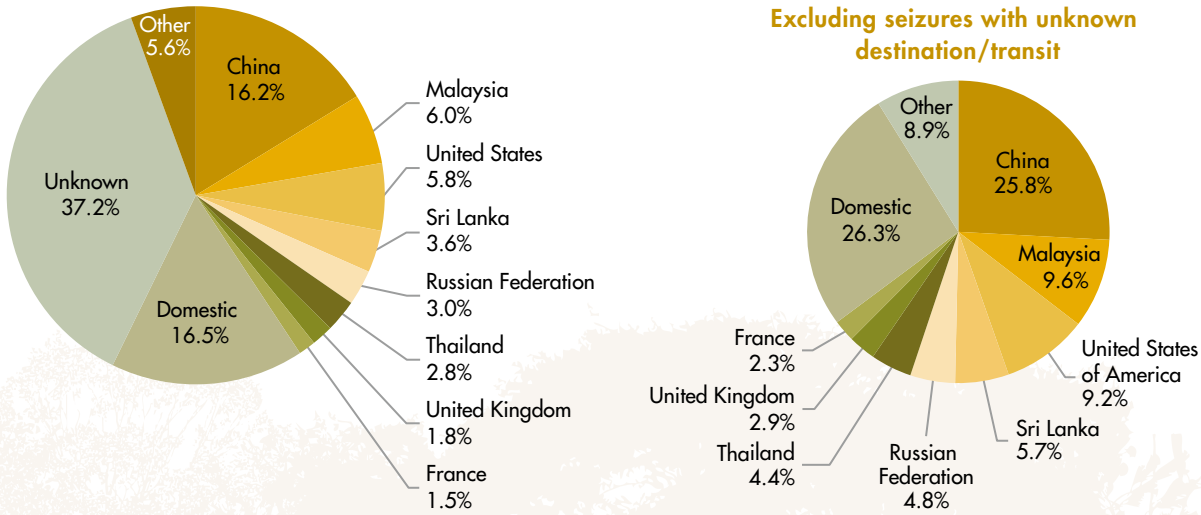
airport personnel facilitating the trafficking of ploughshare tortoises (*Astrochelys yniphora*), for example.[18] Use of air freight also appears to be on the rise as well as the use of express mail using devised packaging and techniques that allow live reptiles to be posted to buyers. Mail and air courier seizures have increased more than any other means of trafficking documented in World WISE in recent years, each more than doubling from 2016 to 2017.

Small-scale seizures of less than 15 reptiles per shipment accounted for 80 per cent of seizures in World WISE. For these small-scale seizures, the 15 most valuable species seized represented only 9 per cent of shipments; the large majority of shipments were of less valuable species. Many seizures of tortoises and freshwater turtles seem to involve small numbers of animals carried or kept as personal pets or souvenirs. Trends in the illegal trade in tortoises and freshwater turtles, though, do differ geographically, with a relatively large number of seizures in Europe and North America involving smaller quantities of specimens per event, whilst a smaller number of seizures in Asia resulted in much greater quantities of specimens seized.[19] A smaller number of seizures of large to very large shipments (that is several hundred or thousands of live specimens) have also been documented, suggesting the involvement of well-organized criminal networks, consisting of collectors, local traders, wholesalers, exporters and importers.[20]

Based on seizures, Asia is the main destination (or possible transit destination) for the illegal live reptile trade. East and South-East Asia, followed by the United States of America and Europe, are the main destinations for tortoise and freshwater turtle species.[21] Trafficking routes are in constant flux with traffickers seeking out emerging transit opportunities and concentrating their activities in major air transit hubs.[22] These hubs provide more direct flight options that reduce the transit time necessary to get trafficked live reptiles to their destination, limiting deaths in transit. The trafficking flow map at the beginning of the chapter provides an overview of some of the current trafficking routes.

Private Facebook groups and other social media platforms are in some cases the dominant sales points. For example, in Indonesia, according to interviews with experts in the trade, many physical markets have closed in favour of online sales, as these reduce overhead costs and often receive less official scrutiny. When online sales points are detected by law enforcement, traffickers simply switch platforms. Facebook, in May 2019, added a functionality to its site enabling the public to report illegal wildlife trade, and subsequently shut down various Indonesian Facebook groups. In response, traffickers moved to other platforms, such as vk.com or mewe.com, even keeping the same group names they had on Facebook. WhatsApp groups have also been used to traffic reptiles since the Facebook crackdown. These groups are smaller than those from Facebook because WhatsApp limits the number of people that can join groups. Perhaps partly as a result, these splintered groups have become more specialized, with some focusing on specific species. Some groups also moved to Telegram, which has no group member limit. In some cases, these moves have made illegal activity more difficult to detect because they make use of encoded private messaging applications.

**Fig. 4** Share of the most reported final destination or transit countries for the top ten live reptile species seized,* 2007-2017




Source: UNODC World WISE Database
*Excluding food species. Includes bodies.

This rise in online markets allows hobbyists, and not only traders, to import and breed on a small scale and sell directly to other hobbyists, both to supplement their income and fund their hobby. In doing so they cut out the middleman and the overhead costs involved in brick and mortar operations. Private sellers are less exposed to law enforcement and specialized shipping services make it easy to ship from home.

In addition to these virtual meeting places, large reptile shows often act as rallying points for collectors and dealers to build relationships and trade merchandise. Sales of illegally imported reptiles at such shows are generally pre-arranged via social media and private messaging so the dealer can meet buyers outside the show to avoid law enforcement scrutiny as well as avoid the risk of returning with unsold trafficked animals.[23]

In September 2019, Austrian customs at Vienna International Airport intercepted an Austrian national living in the Philippines with a suitcase filled with 43 venomous snakes and 45 other reptiles.[24] His plan was to cross the open border between Austria and Germany and sell the animals at Terraristika Hamm, a quarterly trade fair that claims to be the largest of its sort in the world.[25]

Dealers at shows find different ways of circumventing legislation and bans on selling protected species. These include laundering the animals as captive bred, marking animals that are illegal to trade as "display only" in order to ensure dealers are officially acting within the law. Dealers can also label animals as being sold for "scientific or educational purposes only" in order, for example, to bypass legislation preventing commercial trade in turtle specimens smaller than 4 inches (10.2 cm).[26] After some scandals, most of the larger reptile shows in recent times have stricter controls to prevent these kinds of operations. A greater focus on traceability and proof of valid captive breeding claims would also help prevent these abuses.

Street markets, both permanent and temporary, are also a common place to obtain illegal reptiles based on seasonal availability. At the Mercado Sonora in Mexico,[27] reptile dealers sometimes keep native animals that are illegal to trade in the back of their stalls or have local suppliers nearby who can deliver rapidly if interested international collectors visit.[28] To evade law enforcement, some dealers at the Mercado de Peces, also in Mexico, suggested collectors come back on the weekend for sales of illegal wildlife because less law enforcement agents are on duty then.[29]

## Endnotes

1 See figure 3 on the share of type of wildlife among total seizures (aggregated on the basis of standard value) 2005-2016 on page 16 of the first World Wildlife Crime Report published by UNODC in 2016. Included in these most trafficked species are various species of python, boa, monitor, alligator, crocodile, and caiman, as well as turtles and tortoises.

2 Small leather products made of reptile skin are very common (more than 13,000 seizures) but two-thirds of these were of one or two items (such as two shoes). These seizures may be related to tourists or others who inadvertently travel internationally with products made of protected reptile skins, rather than the actions of traffickers. Reptile skin seizures are sometimes reported by weight or another unit (as are live reptiles less commonly), but based on those seizures in which a count is given, there were 386,156 reptile skins seized in World WISE, compared to 316,393 live reptiles. World WISE contains 5,699 seizures of live reptiles (99.2% in which a count is given), compared to 1,644 seizures of reptile skins (98% in which a count is given).

3 Note that the World WISE database separates taxidermy specimens from dead bodies so the whole reptile bodies mentioned here are not meant for the taxidermy market.

4 Looking at the volume of all reptile species seized, the top species illegally traded include a number that are primarily consumed for meat or the skin trade and/or are heavily farmed with little need for wild-sourcing or conservation protection. They include, for example, the green iguana (*Iguana iguana*) and the ball python (*Python regius*), both of which are heavily farmed and in the top ten species for the legal reptile commercial trade based on number of live specimens, according to the CITES Trade Database. Also excluded are *Varanus nebulosus* (clouded monitor), *Varanus bengalensis* (bengal monitor), and *Ptyas mucosus* (oriental rat snake), excluded because they are primarily traded for the skin trade. *Amyda cartilaginea* (Asiatic softshell turtle), *Mauremys reevesi* (Chinese pond turtle), *Testudo hermanni* (Hermann's tortoise), and *Naja atra* (Chinese cobra) are primarily consumed for their meat (as well as for traditional Chinese medicine for Chinese cobra), so were also removed. These species are not, first and foremost, traded for the live pet trade and have therefore been removed from the analysis.

5 The exception being the Mali uromastyx lizard (*Uromastyx dispar*).

6 All analyses nevertheless include all reptile types.

7 30% of reptiles seized had no CITES listing information and were excluded from this analysis.

8 The Red List of the International Union for the Conservation of Nature (IUCN) is a compilation of research about plant and animal species put together on a voluntary basis by interested scientists. This compilation involves the assignment of a threat status, from "least threatened" and "critically endangered" which is updated periodically, as well as an assessment of the population trend.

9 International Union for the Conservation of Nature (IUCN), *The IUCN Red List of Threatened Species*, Version 2019-3 (available at: http://www.iucnredlist.org).

10 The yellow-spotted river turtle suffers from overfishing (partly as fisheries bycatch) and habitat loss in addition to harvesting for the pet trade. Its conservation status is unclear. Poaching in the wild for the pet trade is a major contributor to the decline in population numbers, so it was included in this list.

11 *Cuora spp.* is left at the genus level in this table because most seizures did not identify the specimen seized down to the species level. *Cuora amboinensis*, though, is number 14 in the top 15 seized reptile species for the live trade by count. The other reptiles in this top 15 seized were all identified down to the species level.

12 Except for the Southeast Asian box turtle (*Cuora amboinensis*) which is listed as vulnerable.

13 Decreasing for *Cuora picturata* (Southern Viet Nam box turtle), *Cuora galbinifrons* (Indochinese box turtle), *Cuora yunnanensis* (Yunnan box turtle) and *Cuora bourreti* (Bourret's box turtle). Unspecified for *Cuora trifasciata* (golden coin turtle), *Cuora mouhotii* (keeled box turtle), *Cuora flavomarginata* (yellow-margined box turtle), *Cuora zhoui* (Zhou's box turtle), *Cuora mccordi* (McCord's box turtle), *Cuora amboinensis* (Southeast Asian box turtle), *Cuora aurocapitata* (Yellow-headed box turtle) and *Cuora pani* (Pan's box turtle).

14 See the Methodological Annex for details.

15 UNODC fieldwork, see Methodological Annex.

16 UNODC fieldwork.

17 Ibid.

18 UNODC fieldwork.

19 See CITES CoP 17, Doc. 73, Annex 2 (2016), *Species specific matters: Tortoises and freshwater turtles (testudines spp.)*.

20 See CITES CoP 17, Doc. 73, Annex 2 (2016), *Species specific matters: Tortoises and freshwater turtles (testudines spp.)*.

21 66% of the seizure incidents in World-WISE reported origin while 74% included destination.

22 UNODC fieldwork.

23 UNODC fieldwork.

24 Federal Ministry of Finance of the Republic of Austria. (September 16, 2019). 43 poison snakes and another 45 reptiles seized by Austrian customs. Vienna, Austria: Federal Ministry of Finance of the Republic of Austria. See, for example, '43 Giftschlangen und 45 weitere Reptilien auf Flughafen Wien sichergestellt', *Der Standard,* 12 September 2019.

25 For more information about the trade fair, see: http://www.terraristikahamm.de/content/index.php.

26 UNODC fieldwork.

27 Sellers also sell reptiles along the highways in Mexico, especially those with high national tourist traffic.

28 UNODC fieldwork.

29 Ibid.