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# Online Illegal Trade in Reptiles in the Netherlands

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## Introduction

In recent years, the illegal wildlife trade has received increasing attention. In the political debate, the focus is mainly on iconic species such as elephants, rhinoceroses, and tigers, but reptile populations are also seriously harmed by the illegal reptile trade. For example, reptiles are an easy target for criminal groups because they can often survive for a long time under poor transport conditions, reptiles are quiet, and they can easily be transported in suitcases or postal parcels (Altherr 2014). It has been determined that between 2010 and 2014, approximately 64,000 live wild vertebrates with protected status were seized; 95 per cent of these seized animals were reptiles (D’Cruze and Macdonald 2016).

Even though the illegal trade in reptiles is often associated with Asian origin countries, Europe is one of the biggest markets for illegal reptiles. This has been illustrated by research showing that the majority of all live animal seizures in the European Union (EU) over a ten-year period were reptiles (van Uhm 2016a). Sometimes the seizures concern reptile species from Europe, but many reptile species do not occur naturally within the EU. In fact, the majority of the illegal reptiles is first being imported from outside the EU and then the reptiles are freely traded within the EU borders (Gussow 2009; Sollund and Maher 2016; Mărginean et al 2018; van Uhm et al 2019; Sollund, this volume).

The Netherlands is an important player in the illegal reptile trade, both as a transit country and a destination country (van der Grijp 2016; van

Uhm 2016b; Janssen and Leupen 2019).<sup>1</sup> For example, the Netherlands is in the top ten of EU countries that import endangered reptile species, but a substantial part of the legal trade actually has an illegal origin (Janssen and Leupen 2019).<sup>2</sup> In addition to many live reptiles for the pet market, reptile products are on the market as belts, boots, bags, meat, medication, shields, skulls, skeletons, teeth and taxidermy (Auliya et al 2016; Harvey 2017). The more scarce, attractive and expensive some rare endangered reptiles become, the more interesting they are on the reptile black market (van der Grijp 2016).

The trade in wildlife, including endangered reptiles, is regulated by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). CITES is an international legal framework that regulates wildlife trade through CITES permits. The 184 parties, including the EU, are obliged to comply with the provisions of the convention and more than 30,000 species are listed in CITES. CITES is implemented in the EU through a set of regulations known as the EU Wildlife Trade Regulations (European Commission 2015). These regulations also apply in the Netherlands, and the Netherlands ratified CITES in 1984 (van Uhm 2012). However, many reptile species are not listed in CITES and can therefore be traded freely (Marshall et al 2020; Janssen and Leupen 2019).

Since the growth of the internet, the activities of reptile traders have increasingly expanded online. Today, a wide variety of species are traded on digital fora and marketplaces (IFAW 2008, 2012; Interpol 2013, 2017; Hastie and McCrea-Steele 2014; Hinsley 2016). The most recent report from the International Fund for Animal Welfare (IFAW) (2018) found that the turtle and tortoise are the most popular in internet commerce. Turtles and tortoises make up 45 per cent of the total. Traditionally, there has been a large illegal trade in spur-thighed tortoises (*Testudo graeca*) in Europe, which, according to EU seizures, still comprise the largest group of live reptiles intercepted, mainly from Morocco (van Uhm 2016b). Other commonly seized reptiles are lizards, crocodiles, alligators and snakes (Hastie 2018).

The Dutch trade in reptiles via the internet is increasing, for both legal and illegal trade (Janssen and Blanken 2016). In fact, the internet is one of the most important channels for Dutch trade in reptile species today. Trading

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<sup>1</sup> The Netherlands is an important player in the international illegal reptile trade due to its geographically central location in Western Europe, the national economic and logistic infrastructure, including major airport Schiphol and harbour Rotterdam, but also because of its historical trading position in Europe and strong ties with former colonies in Africa, Southeast Asia and Latin America (van Uhm 2016a).

<sup>2</sup> Only a small number of European reptile species are trade regulated under CITES (CITES; Robinson et al 2015) or under the EU Wildlife Trade Regulations (EU WTR; Auliya 2003). However, most reptile species are covered by protective legislation (Temple and Cox 2009).

takes place on Dutch websites of providers such as Marktplaats. In addition, social media platforms, such as Facebook, are increasingly used for illegal trade as well as shielded forums providing secret opportunities for Dutch reptile traders (CITES Intervention Strategy, 2013–17).

In this chapter we discuss how digital developments play a key role in the illegal reptile trade and how this complicates enforcement in the Netherlands. We start this chapter with our methodology, then we will discuss our empirical results, including the nature, actors, *modi operandi* and organization of the networks involved, and we conclude with a brief discussion about the bottlenecks for enforcement.

## Methodology

This chapter is based on empirical data collected for two research projects between 2016 and 2018. In these research projects, police files were analysed, experts were interviewed, and a network analysis was conducted. Police files were collected for the period 2008 to 2018; cases of illegal reptile trade and cases with an ‘internet component’ were selected for this research. In addition, a total of 17 experts were interviewed, including specialists from the Netherlands Food and Consumer Product Safety Authority (NVWA), various police officials, internet investigators, criminologists and biologists, and employees of conservation organizations, including the RAVON Foundation, Herpetofauna Foundation, IUCN/SSC Tortoise and Freshwater Turtle Specialist Group, IFAW, the Wildlife Justice Commission (WJC), CITES Netherlands and the International Union for Conservation of Nature (IUCN). By using semi-structured interviews, it was possible to adjust the questions related to the different topics covered during the interview (Davies et al 2011). The interviews added to the police files and literature and provided more depth to the topic (Fylan 2005; Maesschalck 2016).

In order to get insights on how criminal networks behave and collaborate in a distinctive way via the internet, we performed a network analysis on a case of illegal trade in turtles and tortoises in South East Asia with a link to the Netherlands. Data used for this case study were provided by the Wildlife Justice Commission based on multiple investigations into criminal networks active in illegal trade of CITES Appendix I and II turtle and tortoise species. The network analysis scheme aimed to map out the partnerships between different key figures online and offline; the relationships between the key figures were weighed here. The degree of these relationships is based on the degree of criminal involvement and the certainty of this involvement (Morselli 2009). In addition, where possible, we present the role of a relevant key figure in the illegal trade in turtles and tortoises in the association scheme. The focus was on identifying central key figures that are important for the

communication flow within the network, and the existence of smaller, tight-knit groups within the network. This provided information on the dynamics, structures and organizations of the illegal reptile trade networks.

## Results

### *The illegal reptile trade*

The reptile trade is characterized as trend sensitive (van Doorne 2007). For example, influenced by movies and social media, new reptile species become popular. Sometimes reptile species that are going to be included on the CITES list are popular in the illegal trade; when a potential CITES listing is announced, traders try to obtain as many animals as possible, illegally or not, before the stricter regulations come into effect (Rivalan et al 2007; Janssen and Krishnasamy 2018). Species that have recently been discovered are popular in the illegal reptile trade as well. Not incidentally, traders focus on trading them immediately after discovery.<sup>3</sup> A description of a new species in a publication with the exact coordinates where a population is located can provide sufficient information for this.<sup>4</sup> Other targeted species are those that are in high demand but are almost impossible to breed in captivity or are very expensive to breed, or those that do well in captivity but suffer from inbreeding and ‘new blood’ would be needed to revive these species (Altherr et al 2016). An example is the African spurred tortoise (*Centrochelys sulcata*), since breeding this tortoise to a significant size will take several years, which makes it unprofitable for traders.<sup>5</sup> In addition, it can be difficult to identify the difference between captive-bred reptiles and wild ones, providing opportunities for laundering illegal trade. An example of this is the illegal trade in the European pond turtle (*Emys obicularis*) (Auliya et al 2016).

The harms of the (illegal) reptile trade are diverse. First, the trade in reptiles can result in the extinction of reptile species, leading to a reduction in biodiversity (Hinsley et al 2016). About 45 per cent ( $n = 4,669$ ) of all reptile species in the world have been assessed for the IUCN Red List: 180 reptile species are critically endangered; 361 reptile species are threatened; and 403 reptile species are vulnerable (Puritz and Weller 2018). Second, the trade disrupts habitats as a result of the capture of the animals since reptiles can play an important role in the ecosystem (Schlaepfer et al 2005). Third, the trade in reptiles has a serious impact on the welfare of the animals during capture, captive breeding, transportation, sale or use (Sollund 2019).

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<sup>3</sup> Interview with NVWA Inspector, Nature team on 7 May 2018.

<sup>4</sup> Interview with Specialist reptiles, NVWA, on 4 May 2018.

<sup>5</sup> Interview with NVWA Inspector, Nature team on 29 May 2018 in The Hague.

Fourth, invasive reptile species can pose a serious threat to humans, through fungi, viruses and bacteria (Magalhães and São-Pedro 2012); a well-known example is Salmonella (Gilbert et al 2014). Fifth, the illegal reptile trade can pose a threat to native species, for example, native European tortoises are threatened because exotic red-eared sliders are released into the wild and they compete for food (Silva et al 2009; D’Cruze and Macdonald 2016). Another example is the barred grass snake (*Natrix helvetica*). This is the only grass snake that occurs naturally in the Netherlands. Research has shown that a subspecies of the eastern grass snake has been released in the Netherlands. Because these species are closely related, the chance of hybridization is high. Hybridization can be accompanied by ‘genetic pollution’ if genetic material from a native species is replaced by that of an exotic species. Due to the loss of local variants of genes, this is actually a form of extinction (van Riemsdijk et al 2020).

### *The actors*

In the illegal online reptile trade in the Netherlands, a distinction can be made between three offender types: the organized trader, the professional trader and the enthusiast. First, there are well-organized Dutch criminal networks involved in the online reptile trade (Kuijer-Slobbe 2016; Wildlife Justice Commission 2016).<sup>6</sup> High profits in particular attract these criminal networks (Puritz and Weller 2018; Bennett 2011). Such crime groups consider the reptiles as just another form of contraband, without taking into account regulations, such as CITES. The crime groups are involved in trading on a large scale on internet platforms, which requires a certain knowledge of the reptiles to be able to trade. These criminal networks are increasingly using the internet for their illegal business practices.<sup>7</sup>

Second, professional online traders refer to the regular traders who partially engage in illegal activities (Gussow 2009). It is relatively easy for the legal traders to enter the illegal territory, since they have the necessary knowledge, trade routes and sales market (Kuijer-Slobbe 2016). The professional online trader often has a company, they have solid knowledge of the legislation and transport rules and have the necessary social skills to maintain international trade contacts (Vinke 2001; van Uhm 2018a, 2018b). In other words, the legitimate business structure in the Netherlands is used for illegal online reptile trade. For example, reptiles are laundered via breeding farms by tampering with the underlying number calculations and consequently offered for sale online (Janssen and Leupen 2019).

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<sup>6</sup> Interview with NVWA Inspector, Nature team on 7 May 2018 and interview with Specialist reptiles, NVWA, on 4 May 2018.

<sup>7</sup> Interview with Specialist reptiles, NVWA, on 4 May 2018.

Third, there are private traders who are crossing the line by taking or shipping undocumented reptiles and keeping them for themselves or selling them (Gussow 2009; Sollund 2019). The enthusiast has the knowledge about where the reptiles are and how to catch them. A number of well-known Dutch reptile smugglers are known to let local residents do the trapping work for a small fee, in other cases they select the reptiles themselves and smuggle them, or let couriers smuggle the reptiles for a fee.<sup>8</sup> For this group, the internet offers the opportunity to enter the market without the need for high technical skills; online potential buyers and sellers can find each other via online forums, Facebook and similar social media (Lavorgna 2014; Wyatt et al 2022; Sollund, this volume).

Among the three groups, social ties established online seem to play a major role in the illegal reptile trade in the Netherlands (Kuijjer-Slobbe 2016). There are many niche markets in the reptile trade; for example, one crime group is concerned with monitor lizards, another group is concerned with chameleons. They are specialist groups with their own target group and their own social network online. Therefore, the role of trust is sometimes an explanation for this connection, which plays an essential role in criminal cooperation due to a lack of legal protection (Kop et al 2012; van Uhm and Wong 2019). While the online social networks are important in the organized trade and professional trade network, the enthusiast can operate completely independently as a ‘lone wolf’. On the Dutch internet forums, suppliers, wholesalers, intermediaries and traders have direct contact with each other. However, they often have a cross-border character, extending the Dutch borders, and research has shown that the same people are often behind multiple advertisements online, even if they use different names (NVWA 2013).<sup>9</sup>

The internet has a significant influence on the activities of the three offender types and has increased by lowering barriers and facilitating access to the online reptile underworld (Lavorgna 2014; van Uhm 2016a). The online reptile trade is carried out by a couple of well-known key offenders (Schneider 2008).<sup>10</sup> An internal Interpol report at the end of the 1990s already emphasized that a small group of Dutch people, some of them diversified from the drug trade into the illegal reptile trade, play a major role in the international reptile trade (Interpol 1996; van Uhm 2016b). In the first decade of the 21st century, this small group of Dutch people was still identified as important actors in the global illegal trade in reptiles and became active in the online reptile trade (Kuijjer-Slobbe 2016). A number

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<sup>8</sup> Interview with NVWA Inspector, Nature team on 7 May 2018.

<sup>9</sup> Interview with NVWA Inspector, Nature team on 7 May 2018.

<sup>10</sup> Interview with Specialist reptiles, NVWA, on 4 May 2018.

of the key traders of illegal reptiles have left the Netherlands and are now active in source countries, such as Indonesia.<sup>11</sup> However, the reptiles in which these people trade online do end up in the Netherlands (NVWA 2013).

### *Modi operandi*

After agreements are made online, different methods are used to illegally trade reptiles depending on the different locations, seasons, quantities and destinations. Smuggling small quantities of reptiles by air is a common method, as it often involves live animals that need to be transported quickly.<sup>12</sup> Reptiles are, in this case, hidden in hand luggage, checked luggage or hidden under the smuggler's clothes.<sup>13</sup> Dutch criminal networks take advantage of the massiveness of tourism and ensure that the reptiles arrive at an airport where they know that the control methods are underdeveloped or that there is little attention to illegal wildlife trade.<sup>14</sup> From the EU's external borders, reptiles, such as the Egyptian tortoise (*Testudo kleinmanni*), are smuggled into the EU by trucks of transport companies.<sup>15</sup> Once in Europe, they are transported further to other countries, including the Netherlands, by (lorry) cars.<sup>16</sup>

In addition, the granting of licences to trade farmed reptiles offers opportunities for Dutch criminal groups. This is because the use of permits results in loopholes in the law. Often dubious breeding reports are produced, so that reptile species can still be traded to the Netherlands under certain permits.<sup>17</sup> For example, protected reptile species of wild origin that normally fall under CITES Appendix I and are prohibited from trading can be traded under source code D if they are bred in captivity (van Uhm 2016c). A Dutch inspector revealed this in a large shipment of African spurred tortoises. The African spurred tortoises had been reported as captive-bred, but the animals' physical appearance proved otherwise in the Netherlands.<sup>18</sup> These African spurred tortoises had a much larger carapace than would be plausible for captive-bred African spur tortoises; it would take many years to have a shell

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<sup>11</sup> Some of these people have since passed away.

<sup>12</sup> Interviews with Wildlife Justice Commission Senior Investigation Manager on 25 May 2018 in The Hague; NVWA Inspector, Nature team on May 29, 2018 in The Hague; and biologist and co-founder Pro Wildlife on 31 July 2018 via email.

<sup>13</sup> Interviews with Wildlife Justice Commission Senior Research Manager on 25 May 2018 in The Hague; Zoologist and Deputy Chair of IUCN Tortoise and Freshwater Turtle Specialist Group on 25 June 2018; and specialist of Ecojust on 19 June 2018 in The Hague.

<sup>14</sup> Interview with NVWA Inspector, Nature team on 29 May 2018 in The Hague.

<sup>15</sup> Interviews with CITES wildlife crime consultant on 25 June 2018.

<sup>16</sup> Interview with NVWA Inspector, Nature team on 29 May 2018 in The Hague.

<sup>17</sup> Interview with founder of Herpetofauna foundation on 11 June 2018 in Tilburg.

<sup>18</sup> Interview with NVWA Inspector, Nature team on 29 May 2018 in The Hague.

of such a large size, resulting in higher prices for the tortoises than they were being sold for.<sup>19</sup>

Dutch criminals also benefit from the fact that some countries are not members of the CITES treaty and wild-caught reptiles can easily be sourced (Nijman and Shepherd 2011). Law enforcers regularly lack the expertise to identify reptile species, and some countries give low priority to tackling the illegal trade in reptiles (Sollund 2019).<sup>20</sup> A reptile expert explained that there are many suspicions that animals from the wild are being laundered as captive-bred by using a third country as a stopover. This is possible because some authorities have no idea what species they are dealing with and write down everything the trader in question says (Sollund 2022a).<sup>21</sup> The Netherlands also plays a role here as transit hub. For example, reptiles from Indonesia, destined for the United States, make a detour via the Netherlands, after which they are indicated as captive-bred reptiles and offered for sale online.<sup>22</sup>

Once the reptiles are in the Netherlands, often they are traded online, even though offline trading takes place at large reptile fairs, or in the parking lots of the relevant reptile fairs. A reptile fair that is central to this is the one in Houten in the Netherlands. However, a large number of the illegal reptiles are often already sold in advance via online forums before the fair takes place.<sup>23</sup> In other words, during the fair the illegal trade takes place, but the deal and payment have been made via the internet in advance (Sonricker Hansen et al 2012; Interpol 2013). This facilitates reptile parcels from all over the world to be delivered to Dutch customers without any problems and relatively cheap (Spapens 2016).

### *Going online*

Even though reptiles are often offered in small batches online, they can be linked to large batches. In practice, if a Dutch trader indicates that he has ‘a couple for sale’ and ten people respond, the trader can sell a couple ten times. In this case, the trader has only one advertisement online and can therefore claim to have sold only one pair.<sup>24</sup> Therefore, it is difficult to determine

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<sup>19</sup> Today, limits are set for reptile species in which this plays a role. This means that reptile species entering the EU with a cultured origin (origin code C) may not exceed a certain size. This is usually the size reached after a maximum of one year.

<sup>20</sup> Interview with founder of Herpetofauna foundation on 11 June 2018 in Tilburg and zoologist and deputy chairman of IUCN Tortoise and Freshwater Turtle Specialist Group on 25 June 2018.

<sup>21</sup> Zoologist and Deputy Chairman of IUCN Tortoise and Freshwater Turtle Specialist Group on 25 June 2018.

<sup>22</sup> Interview with a criminologist on 28 July 2018 in Amsterdam.

<sup>23</sup> Interviews with CITES wildlife crime consultant on 25 June 2018.

<sup>24</sup> Interview with Specialist reptiles, NVWA, on 4 May 2018.

what is behind one online advertisement; in several Dutch investigations, enforcers have found exceptionally large numbers of reptiles linked to such internet advertisements.

In addition, web design or maintenance developers, bitcoin exchangers, internet service providers and suppliers of legal products and postal services may play a part either willingly or unintentionally in the online illegal reptile trade in the Netherlands (Kruithof et al 2016). The internet can be seen as a bridge builder for the illegal reptile trade in the Netherlands. Internet enables contact with facilitators, for example contacts with Dutch criminals who are specialized in forging documents (Lavorgna 2014). Dutch cases show that they offer reptiles via the internet on different platforms, from public auction and sales sites such as Marktplaats, to online forums, corporate websites, classified ad sites and social media websites (Hinsley 2016).<sup>25</sup> However, the online marketplaces are still the main avenue for the illegal reptile trade, but the use of social media is increasing in the Netherlands (see also: Yu and Jia 2015; Hinsley 2016; Cuevas and McCrea-Steele 2017). Social media as a communication channel allows easy and private communication (Krishnasamy and Stoner 2016). Moreover, social media is flexible; by closing one channel, then reptile traders go to another, explained informants. For example, if Facebook becomes stricter, it will shift to WhatsApp, Signal or WeChat. New platforms are also being set up by the illegal reptile traders themselves. One of the advantages of using Facebook over commercial trading platforms is that it is free to use. Within Facebook there are 'Facebook groups', which provide a place for people with similar hobbies and interests to come together. Live reptiles are advertised and key figures in the reptile business post photos on Facebook for the purpose of selling them; social media not only serves as a means of communication between key figures, but also functions as an advertising platform.<sup>26</sup>

In particular, the speed with which reptiles can be advertised and sold using Facebook is of great importance to Dutch illegal reptile traders, as they often involve live reptiles destined for the exotic pet market. There is no longer a need for a physical store in the Netherlands, because illegally obtained animals can be traded directly on the platform.<sup>27</sup> Previously, it could take years before a Dutch buyer could track down a specific species, but with

<sup>25</sup> Interview with Specialist reptiles, NVWA, on 4 May 2018.

<sup>26</sup> Interviews with Wildlife Justice Commission Research Specialist on 11 June 2018 in The Hague; Zoologist and Deputy Chair of IUCN Tortoise and Freshwater Turtle Specialist Group on 25 June 2018; and with NVWA Inspector, Nature team on 29 May 2018 in The Hague.

<sup>27</sup> Interviews with a criminologist on 28 July 2018 in Amsterdam and founder of Herpetofauna foundation on 11 June 2018 in Tilburg.

the advent of the internet, buyers can now find out within a day where they can buy the animal species, even if this is sometimes on the other side of the world.<sup>28</sup> This has resulted in Facebook being completely flooded with advertisements of live reptiles.<sup>29</sup> Facebook has also had a significant impact on reptile markets. Dutch traders are trying to identify which species are most in demand by placing advertisements where people can place orders in advance. Moreover, Facebook is used to create new demand markets. According to a reptile expert, ‘egging’ is used. This happens when a merchant posts an ad online and advertises it as something very special. This creates a feeling of envy among the buyers, creating a new market for the reptile species that did not exist before.<sup>30</sup>

### *Reptile case: the organization behind the network*

In order to better understand the organizational structure of the illegal reptile networks and the role of the internet and social media, a network analysis was performed (Figure 4.1). The network analysis revealed that the respective illegal reptile network, with a link to the Netherlands, was organized in a star structure. Key figures active in a star-structured organization play a central role in (online) communication and have a high degree of visibility within a network (Arquilla and Ronfeldt 2001; Clifton and Rastogi 2016). A high degree of visibility means that the relevant key figures are more exposed to law enforcement oversight (Morselli 2009). In addition, the presence of a star structure implies the absence of a hierarchy (Arquilla and Ronfeldt 2001). In a hierarchically structured network, key figures have a low degree of visibility and are in contact with as few others in the network as possible (Morselli 2009).

Three key figures emerged in the network analysis as intermediaries with the most direct (online) contacts with other key figures and traders in the network. This is in line with the growing evidence that key figures in a criminal network no longer only have an authoritative role, but act as intermediaries (Morselli 2009).

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<sup>28</sup> Interviews with Wildlife Justice Commission Senior Research Manager on 25 May 2018 in The Hague; a criminologist on 28 July 2018 in Amsterdam; Zoologist and Deputy Chair of IUCN Tortoise and Freshwater Turtle Specialist Group on 25 June 2018.

<sup>29</sup> Interview with Wildlife Justice Commission Investigation Specialist on 11 June 2018 in The Hague.

<sup>30</sup> Interview with zoologist and deputy chairman of IUCN Tortoise and Freshwater Turtle Specialist Group on 25 June 2018.



In the illegal reptile trade, the role of an intermediary to ensure rapid communication and money flows is of great importance. Money is often an important motive for organized illegal reptile traders active in the trade, but for enthusiasts economic interests play a subordinate role.<sup>31</sup> Therefore, the respective reptile trade network is driven by capital need efficiency in direct communication because there is a short time span between actions (Duijn et al 2014). Social media and internet perfectly facilitate this communication within the analysed network.

To facilitate fast communication flows, the illegal reptile traders take advantage of the security and speed of the internet. The network analysis shows that these communication flows were extensive, with several merchants across the world interacting through social media. In several cases, these traders advertised the same photos of turtles, tortoises and other reptile species on Facebook, suggesting a partnership between these traders.<sup>32</sup> The network analysis also revealed that on online platforms, such as Facebook, it is possible for illegal reptile traders to handle not only the sale but also the advertising of live reptiles. This may be an indication of a shift in the distribution of criminal activities whereby it is possible for them to take on multiple roles. In other words, the network analysis has shown that the internet facilitates international cooperation between illegal reptile traders and that by taking on multiple roles, a criminal network involved in reptiles can gain more control over the entire trade chain and thereby also gain more control over the illegal trade.

### **Bottlenecks for enforcement of online reptile trade**

The Netherlands' role in the international reptile trade is intrinsically linked to the EU. The implementation of CITES in the EU – as one party – ensures that the EU Single Market facilitates internal trade in illegal reptile species. Even though the enforcement authorities in the Netherlands act within the respective national, European and international legislation, as soon as the reptiles have been illegally smuggled from the country of origin, they can be traded legally within the EU (van Uhm 2016a). Moreover, the EU Wildlife Trade Regulations currently do not prohibit the trade in several

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<sup>31</sup> Interviews with Wildlife Justice Commission Senior Research Manager on 25 May 2018 in The Hague; founder of Herpetofauna foundation on 11 June 2018 in Tilburg; zoologist and deputy chair of IUCN Tortoise and Freshwater Turtle Specialist Group on 25 June 2018; Wildlife Justice Commission Research Specialist on 11 June 2018 in The Hague; and biologist and co-founder of Pro Wildlife on 31 July 2018 via email.

<sup>32</sup> This can also be a form of fraud. Similarly, photos of other traders are used to get people to transfer an advance, but they do not actually own the animals. An indication is if large numbers of rare animals are offered outside the country of origin.

reptile species that enjoy a protected status in their countries of origin, which makes the EU a major player in the illegal trade in such reptile species (Janssen and Leupen 2019).

In addition, it is not always mandatory for online reptile traders in the Netherlands to include proof that the seller meets the requirements of legislation; it can be difficult to ensure, together with a website owner, that the legislation is enforced or policies are developed to prevent illegal trade (Interpol 2013). The online marketplaces that have developed a strong policy show that this leads to a decrease in illegal trade via these sites, but the illegal trade is displaced to other fora (Cuevas and McCrea-Steele 2017).

Distinguishing legal reptile trade from illegal reptile trade via the internet presents another major challenge for Dutch law enforcement. Reptiles cannot be personally examined and there is usually little or no supporting CITES documentation proving legal trade (Cuevas and McCrea-Steele 2017). In the Netherlands, the internet is often still monitored manually per advertisement and expertise is needed for monitoring the online trade, which makes it a tedious, time-consuming and expensive task (Hernandez-Castro and Roberts 2015).

Moreover, online Dutch illegal reptile traders are rapidly adapting and moving to new platforms (Hinsley 2016). In particular, social media platforms mainly focus on communication and are not specifically made for online commerce. The communication on these platforms can take different forms with different privacy settings which complicates detection via the various platforms (Cuevas and McCrea-Steele 2017).

Finally, the Dutch authorities could develop policies to improve the transparency and awareness about illegal reptile trade, since many buyers and sometimes traders of reptiles are not aware of the illegal background of reptiles (Sollund 2022b). Together, these bottlenecks pose significant challenges to law enforcement and complicate preventing and tackling the online illegal reptile trade in the Netherlands.

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