



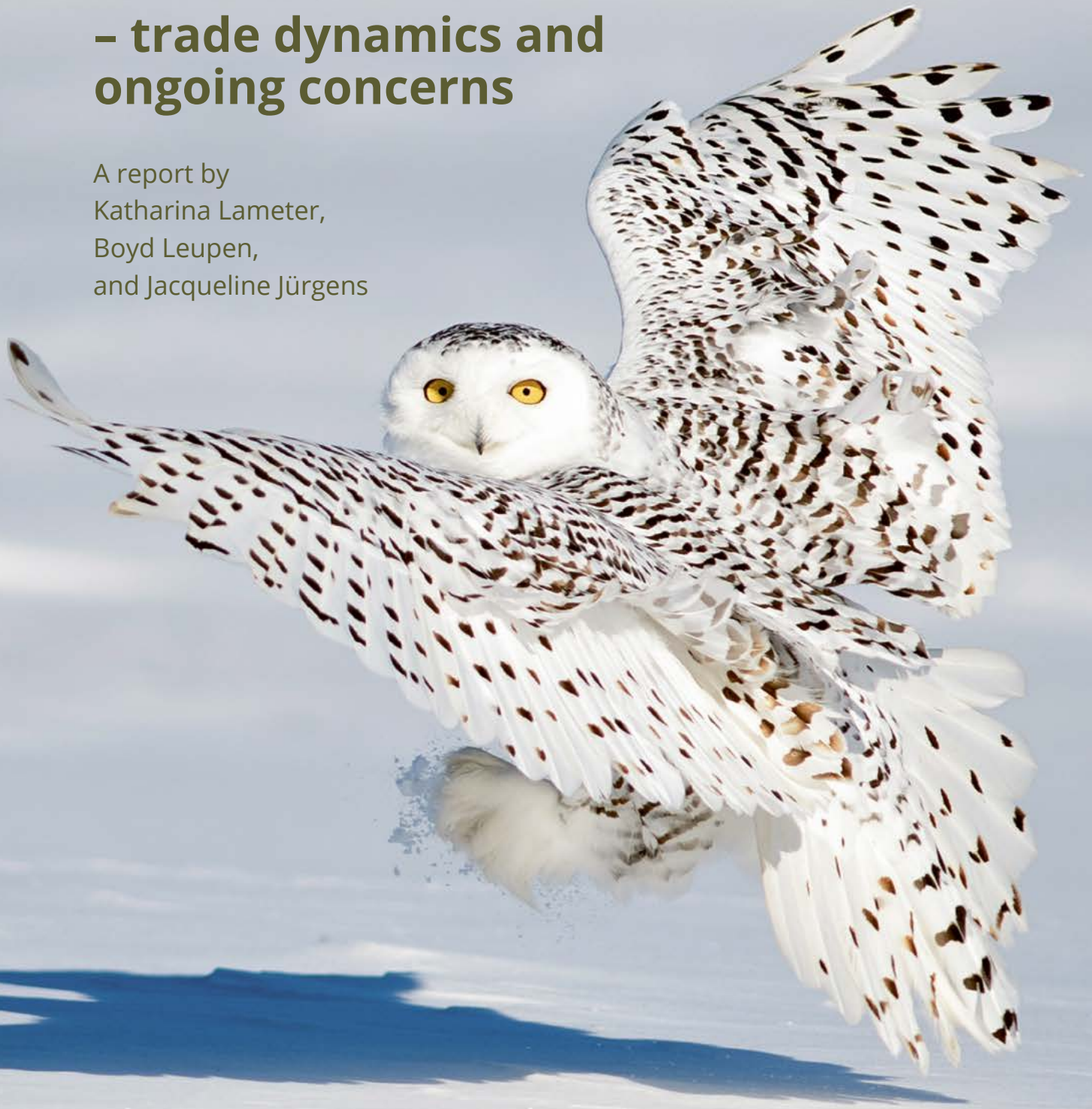
Wild birds traded and kept as pets in the EU

Trade dynamics and ongoing concerns

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Summary

Birds have long held cultural and recreational value in Europe, with the EU being one of the world's most important pet markets for birds. However, the EU's role in the international bird trade has changed due to several regulations restricting or prohibiting the import of, and trade in, birds. The EU's legal framework for bird trade, including the EU wild bird import ban (2005), EU Wildlife Trade Regulations (1996), and the Birds Directive (1979), aims to regulate trade, ensure animal and public health and protect biodiversity. This legal framework has proven to be valuable, but loopholes, enforcement challenges, and inconsistent application of the law have enabled illegal and unsustainable bird trade in the EU to continue. To effectively regulate the trade and private keeping of birds and ensure sustainability, it is crucial to introduce supplementary measures and eliminate existing loopholes. We therefore recommend the following (see Section 7 for more details):

1. Legal initiatives

- Tighten the EU wild bird import ban to **close existing loopholes**
- Expand current or develop additional **preemptive regulatory measures** for birds kept and traded as pets
- Implement **systematic record keeping** of bird imports and of seizures on species level as well as registration of bird movements and keeping within the EU
- Develop and support **CITES listing initiatives** aimed at protecting bird species threatened by international trade

- **Standardise and improve marking and ringing regulations**

- Ensure that all EU Member States establish **deterrent penalties** that are reflective of the seriousness of the crime and ensure the risks of illegal bird trade outweigh the benefits

2. Improve law enforcement

- Ensure availability of **sufficient resources for enforcement authorities**
- Improve national, EU, and international **interagency cooperation**
- **Ensure that trade exemptions**, such as those concerning the species listed in Annex X of Commission Regulation No. 865/2006, **are scrutinised and reconsidered**
- **Raise awareness among enforcement authorities and the judiciary** of the various pieces of legislation regulating bird trade and for illegal trade
- Encourage full application of the **penalty range** to ensure effective deterrence
- Ensure that the regulations relating to the **welfare of birds in transit** are properly enforced

3. Raise awareness

- Conduct public and targeted **awareness campaigns** to raise consumer awareness
- Develop and implement targeted **demand reduction campaigns**



1. Introduction

Birds are popular pets around the world, with a large variety of species being traded, often in high volumes, across domestic and international physical and online markets (BirdLife International, 2016; Bush et al., 2014). Birds are desired for a variety of reasons, including their aesthetic beauty, singing abilities, intelligence, and (perceived) rarity in the wild and/or in the market (e.g. Chan et al., 2021; Chng et al., 2018). Bird keeping practices run deep in many cultures, sometimes dating back centuries (Jain et al., 2022; Tella & Hiraldo, 2014; Boehrer, 2010). However, with human population growth, increasing wealth and globalisation, and growing interest as a result of social media, the sustainability of these practices cannot be guaranteed. The trade in birds (other than poultry) for domestic and international exotic pet markets threatens wild populations (BirdLife International, 2021b; Martin et al., 2019; Fogell et al., 2018; Eaton et al., 2015) and has been associated with the spread of infectious diseases and species invasions (Su et al., 2022; Cardador et al., 2019; Abellán, 2016; Pârâu et al., 2016; Bose-ret et al., 2013; Karesh et al., 2007; MacKenzie, 2005).

In Europe, bird keeping is a popular pastime; bird hobbyist associations are plentiful, as are bird trade fairs, some of which are among the biggest in the world.

The EU is, and historically has been, one of the most important markets for birds kept and traded as pets globally (Reino et al., 2017; FAO, 2011), with tens of millions of individuals of species ranging from small native passerines to colourful exotics such as parrots being kept across EU households. Research has shown that birds rank as the third most commonly kept pets after cats and dogs in the EU (FEDIAF, 2024; Boseret et al., 2013). Although the EU's role changed from a principal importer to a main exporter of birds after the implementation of the wild bird import ban in 2005, it remains a major player in the international bird trade chain (Chan et al., 2021; Cardador et al., 2019, 2017; Panter et al., 2019). Much of the EU bird keeping hobby consists of legally bred and traded animals, although captive-bred birds may be descendants from illegally acquired parent stock (Morton et al., 2024; Nijman et al., 2018). Nevertheless, concerns regarding the legality, sustainability, ecological impact, ethics, welfare, and health implications of bird trade, including in the EU market, remain and need to be addressed. In this report, we zoom in on these concerns, with the aim of ensuring that bird trade and husbandry comply with legal requirements and do not pose a threat to bird populations in the wild, impact animal welfare or risk human and public health.



2. EU legislation

The EU aims to prevent illegal wildlife trade by tackling the root causes, strengthening the legal and policy framework against wildlife trade, and enforcing the rules and measures (European Commission, 2022).

The EU's approach to regulating bird trade encompasses various key legislative instruments focused on public health and biodiversity protection: five pieces of legislation regulating trade in birds from third countries into the EU (referred to in this report as the EU wild

bird import ban), the EU Wildlife Trade Regulations, and the EU Birds Directive (see Table 1). While the legislative framework is generally considered robust (TRAFFIC, 2014), enforcement gaps and legal loopholes remain (European Parliament, 2017). Enforcement efforts vary across EU Member States, with penalties often too lenient to effectively deter illegal activities (European Parliament, 2017; TRAFFIC, 2014).



Timeline: EU legislation pertaining to bird trade

Table 1: Legal regulation of trade in birds into and within the EU

Commonly referred to as	Legislation	Year of implementation	Impact
EU wild bird import ban (now part of the Animal Health Law)	<ul style="list-style-type: none"> ■ Commission Decision 2005/759/EC (European Commission, 2005) replaced by Commission Decision 2007/25/EC (European Commission, 2007) replaced by Commission Implementing Regulation (EU) 2021/1938 (European Commission, 2021b) ■ Regulation (EU) 2021/1933 (European Commission, 2021a) ■ Commission Delegated Regulation (EU) 2020/692 (European Commission, 2020a) ■ 'Animal Health Law' Regulation (EU) 2016/429 (European Parliament and the Council, 2016) ■ Regulation (EU) No 576/2013 (European Parliament and the Council, 2013) 	<p>2005 (temporary) 2007 (permanent)</p>	<ul style="list-style-type: none"> ■ prohibits the import of birds except from registered facilities from selected countries ■ determines strict quarantine & veterinary regulation for trade in birds bred in captivity ■ exemptions are made for personal birds kept as pets and zoos ■ establishes a model identification document for non-commercial movements of birds kept as pets into the EU
EU Wildlife Trade Regulations	<ul style="list-style-type: none"> ■ Council Regulation (EC) No 338/97 (Council of the European Union, 1996) ■ Commission Regulation (EC) No 865/2006 (European Commission, 2006) 	<p>1997 2006</p>	<ul style="list-style-type: none"> ■ implements the rules established by CITES, also includes bird species that are protected in the EU ■ CITES-listed species can be protected more strictly in the EU ■ requires import permits for CITES App. I & App. II (EU Annexes A & B) species ■ lists additional species that are protected under EU legislation ■ contains an additional Annex D, which serves as a watch list for monitoring species that are classified by the EU as being of concern and are not listed in CITES ■ allows trade in captive born and bred CITES App. I (Annex A) species in the EU without EU certificates or other permits if they are listed in Annex X of Commission Regulation (EC) No 865/2006 (Article 62(1))
EU Bird Directive	<p>Council Directive 79/409/EEC (Council of the European Communities, 1979) replaced by Directive 2009/147/EC (European Parliament and the Council, 2009)</p>	<p>1979</p>	<ul style="list-style-type: none"> ■ aims to protect all bird species native to the EU, including their habitat ■ prohibits all deliberate actions involving the capture or killing of wild birds, significant disturbance during the breeding season & destruction or damage to nests or eggs ■ allows the hunting of 84 bird species during specified hunting seasons

CITES and the EU Wildlife Trade Regulations

The EU Wildlife Trade Regulations implement the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the major global mechanism regulating international movement of species threatened by unsustainable trade, in the EU (CITES, 2021; Wijnsteker, 2011; European Commission, 2006). When entering the EU, species listed in the Regulations require specific import and export documentation to be traded, depending on the Annex they are listed in. However, intra-EU trade does not require CITES documentation (internal EU certificates are only required for species listed in Appendix I/Annex A) and animal movements between EU Member States are not recorded. Additionally, species not protected under the Regulations require no trade permits at all.

EU wild bird import ban and its impact

The EU wild bird import ban was introduced in 2005 in response to the spread of Avian Influenza. It was based on a European Food Safety Authority (EFSA) assessment of the health and animal welfare risks associated with the bird trade, which acknowledged “*a high mortality rate and widespread suffering amongst imported wild birds*” (European Commission, 2007; EFSA, 2006; European Commission, 2005). The ban led to a substantial reduction in EU imports of wild-caught birds (Chan et al., 2021; Cardador et al., 2019, 2017; Reino et al., 2017). In 2017, EFSA published a further scientific assessment concluding that the animal health requirements laid down in Decision 2007/25/EC on the ban on bird imports (European Commission, 2007) are effective in mitigating the risks of Avian Influenza entering the Union. It was therefore used as a basis for the animal health requirements for birds laid down in the Animal Health Law (EFSA Panel on Animal Health and Welfare et al., 2017; European Parliament and the Council, 2016). Penalties for violation of the Animal Health Law (Article 268) and Regulation (EU) No 576/2013 (Article 42) must be effective, proportionate, and dissuasive and are determined by the EU Member States, which are responsible for enforcing the EU legislation (European Parliament and the Council, 2016; European Parliament and the Council, 2013).

To enhance compliance with the import ban and minimise fraud, birds may only be imported into the EU for commercial purposes from breeding facilities approved by the responsible institutions in exporting countries,

as wild-caught and captive-bred birds are almost indistinguishable and current labelling methods can easily be counterfeited (European Commission, 2021c; European Commission, 2013; EFSA, 2006).

Before the ban came into force, it faced strong opposition from the European Association of Importers and Exporters of Birds and Live Animals, which tried to prevent the ban with a lawsuit in 2006 (European Association of Importers and Exporters of Birds and Live Animals, 2006a). They argued that illegal trade would increase and European breeders would have difficulties maintaining captive bird populations without new bloodlines from wild-caught birds (European Association of Importers and Exporters of Birds and Live Animals, 2006b). However, in practice trade was positively impacted as European breeders no longer had to compete with low priced wild-caught birds. The ban encouraged domestic captive breeding and the EU evolved from a primary importer to a major exporter of captive-bred birds (CITES Trade Database, 2024; EUROSTAT Database, 2024).

According to FEDIAF, representing the European pet food industry, the popularity of birds as pets has not waned. On the contrary, a comparison of FEDIAF data shows that the number of birds kept as pets in the EU significantly increased from 2004 to 2022 (FEDIAF, 2022; FEDIAF, 2004 cited in Zentek, 2004).

Loopholes in the wild bird import ban legislation

Since its inception in 2005, the EU wild bird import ban has suffered from loopholes that have been deliberately used to smuggle birds into the EU (van Uhm & Spapens, 2020). Once smuggled birds have made it into the EU, they can be easily moved within the single market, as there is a lack of centralised and standardised recording of such movements on species level (European Commission, 2020b). For example, the number of birds that may be imported as pets is limited to five per single non-commercial movement and the animals have to accompany their owner (European Commission, 2021a; European Parliament and the Council, 2016). However, there is still no limit to the number of movements that can be carried out within a given period.

Exceptions allow zoological organisations to import birds. The European Association of Zoos and Aquaria (EAZA) advises its members not to acquire wild animals except in specific cases mainly for conservation purposes (EAZA, 2019). Furthermore, EAZA guidelines

strongly advise against selling individuals and prohibit it in case of species in breeding programs (so-called EEPs; EAZA, 2019). However, only about 400 of the approximately 3,500 zoos registered in the EU are members of EAZA (Turner, 2011) and non-member zoos may ignore these rules. Additionally, the term 'zoo' lacks a uniform definition across the EU, with some countries having strict regulations and others inter-

preting the term more loosely (European Commission, 2024, 2018; European Council, 1999). This creates a potential loophole for illegal trade; once imported under a zoo's name, birds can be resold to private individuals, including as pets. Additionally, traders may exploit legitimate zoos by importing surplus amounts of birds and selling them commercially (S. Bruslund, pers. comm.).

Box 1: Captive breeding

The captive breeding of various bird species has increased significantly in recent years to supply the global pet market. Parrots in particular, are in high demand due to their popularity as pets. While it is often assumed that captive breeding can reduce pressure on wild populations and prevent illegal trade (Wang et al., 2019; Collar & Butchart, 2014; Alves et al., 2013), recent studies suggest that the increased supply of captive-bred animals may further stimulate demand and normalise consumption (Davies et al., 2024; Rizzolo, 2021). There are increasing concerns that the demand for wild animals as breeding stock as well as misdeclaration and laundering of wild animals in so-called breeding farms are diminishing or undermining the benefits of captive breeding, posing challenges to law enforcement (Davies et al., 2024; CITES, 2019; Tensen, 2016; TRAFFIC, 2016). Captive breeding may offer a conservation solution, but consumers and policy makers should be aware that this can only be the case under the right economic, operational, legal, and social conditions (Davies et al., 2024; Tensen, 2016).

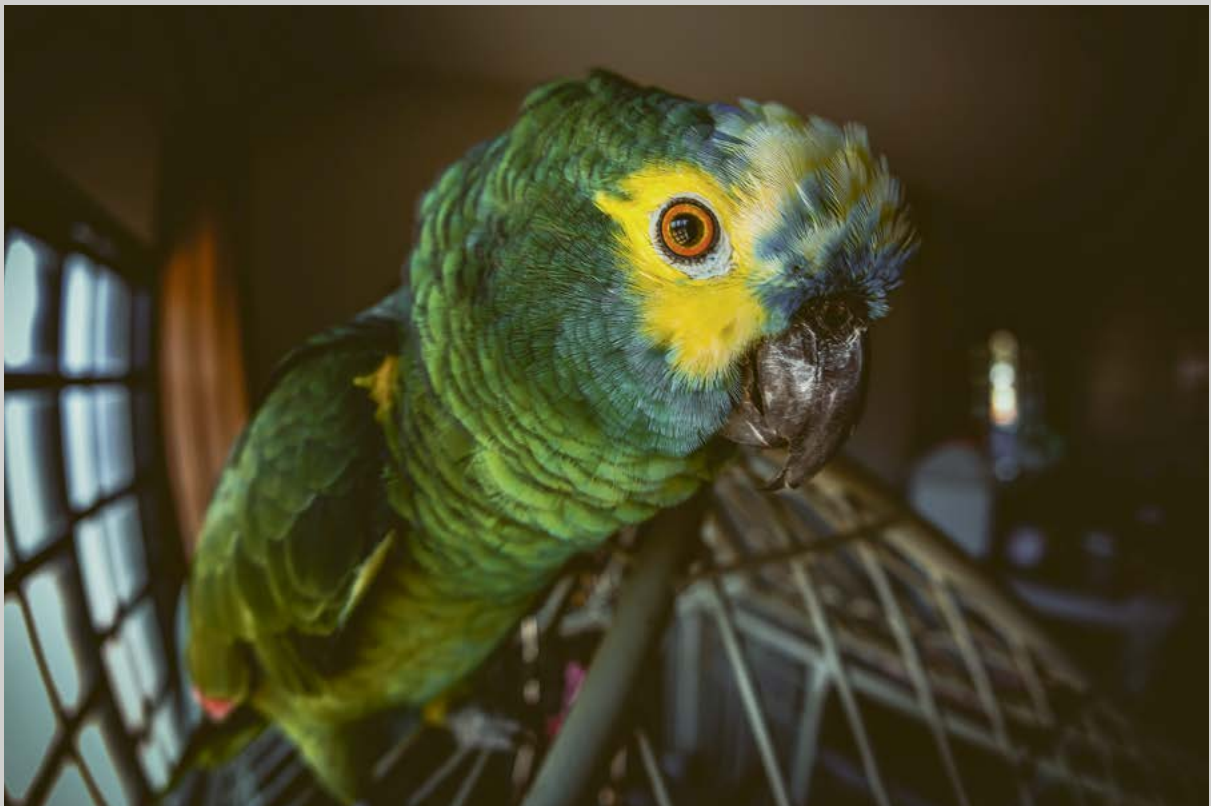
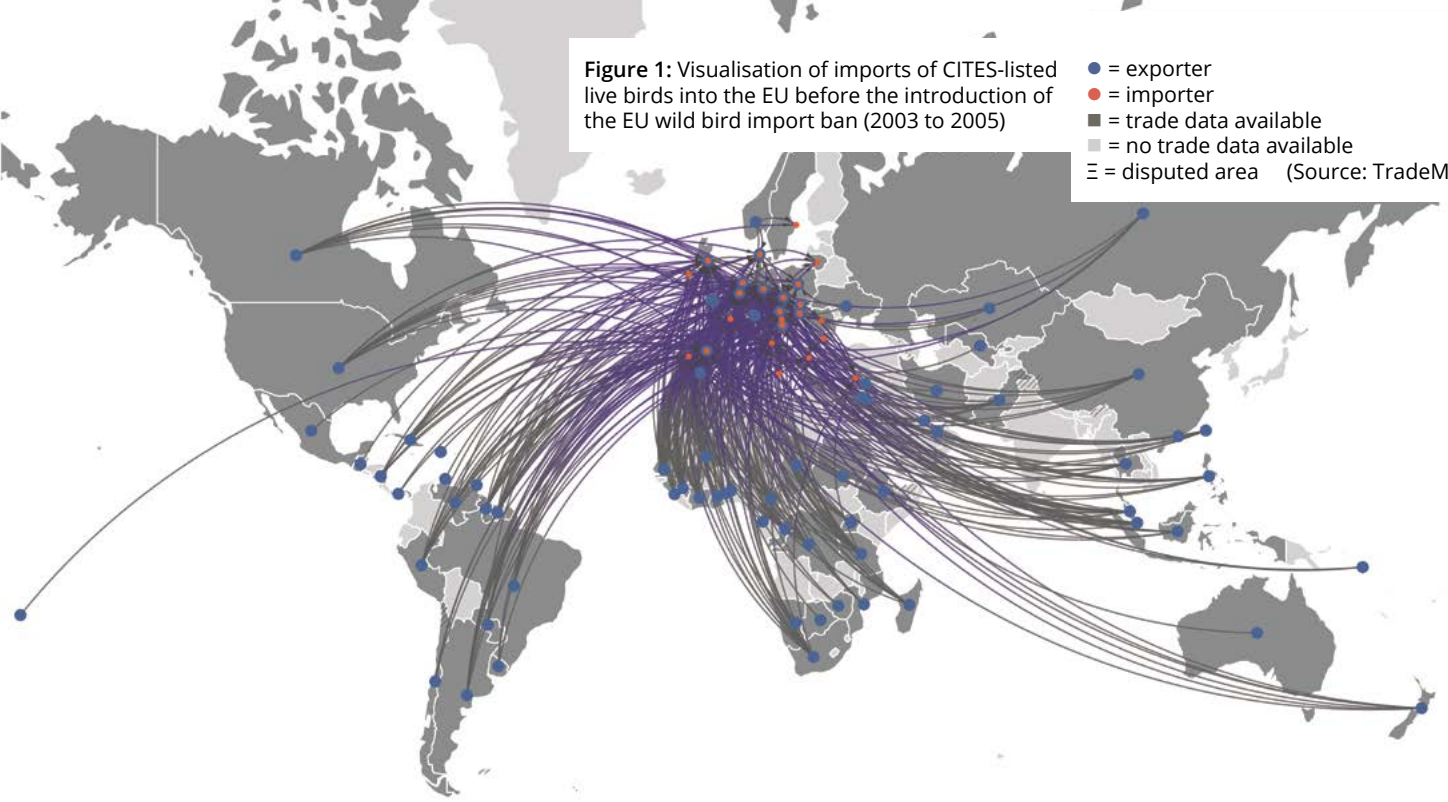


Figure 1: Visualisation of imports of CITES-listed live birds into the EU before the introduction of the EU wild bird import ban (2003 to 2005)

● = exporter
● = importer
■ = trade data available
■ = no trade data available
≡ = disputed area (Source: TradeMapper)



3. Extent of legal and illegal trade

Birds are traded through various channels. While bird fairs and pet shops have traditionally been the main distribution points, birds traded as pets are nowadays increasingly sold online and via social media platforms. This has enabled new global connections between traders and hobbyists across different countries, and has created new challenges in monitoring the trade and enforcing existing legislation (Siriwat & Nijman, 2020; Aloysius et al., 2019; Harrison et al., 2016). The fact that parts of the trade take place in private groups on social media platforms makes monitoring by the authorities even more difficult.

3.1. Analysis of data on bird trade and keeping

The keeping and trading of birds is highly popular in the EU. According to FEDIAF (2017 to 2022), an estimated 35.4 to 38.6 million individuals are being kept as pets within the Union. However, due to a lack of monitoring mechanisms for legal trade, as well as the covert nature of illegal trade, it remains impossible to determine the exact scale and scope of the bird trade in the EU. Furthermore, there are no official records of the variety of bird species kept as pets. Nevertheless, there are several tools that can provide indications of trade volumes. To obtain the best possible overview of the trade and keeping of birds in the EU, we analysed

five different databases (CITES Trade Database, EURO-STAT, WiTIS, SiTDB, and a private database (Noeske, 2024)) as well as two important publications on bird keeping (FEDIAF and EXOPET study) (see Section 8 for more details on the data sources used).

Volume and trends of the bird trade into and within the EU

Until 2005, the EU was the largest importer for wild-caught birds from around the world, with millions of live birds imported annually (see Figure 1; Reino et al., 2017; FAO, 2011).

This changed after 2006, when commercial imports of live birds into the EU collapsed and the implementation of the EU wild bird import ban led to a major shift in trade practices in the European bird trade: The EU went from being a net importer of wild-caught birds to a major exporter of captive-bred birds (see Section 2).

While intra-EU trade volumes and exports of CITES-listed birds remained stable due to captive breeding, total imports of CITES-listed birds from outside the EU fell by 95 %, from around half a million individuals per year between 2003 and 2005 to less than 1,000 individuals per year between 2006 and 2022, in all but one year (2008) (see Figure 2; CITES Trade Database, 2024). Most of the birds imported after the ban were captive-

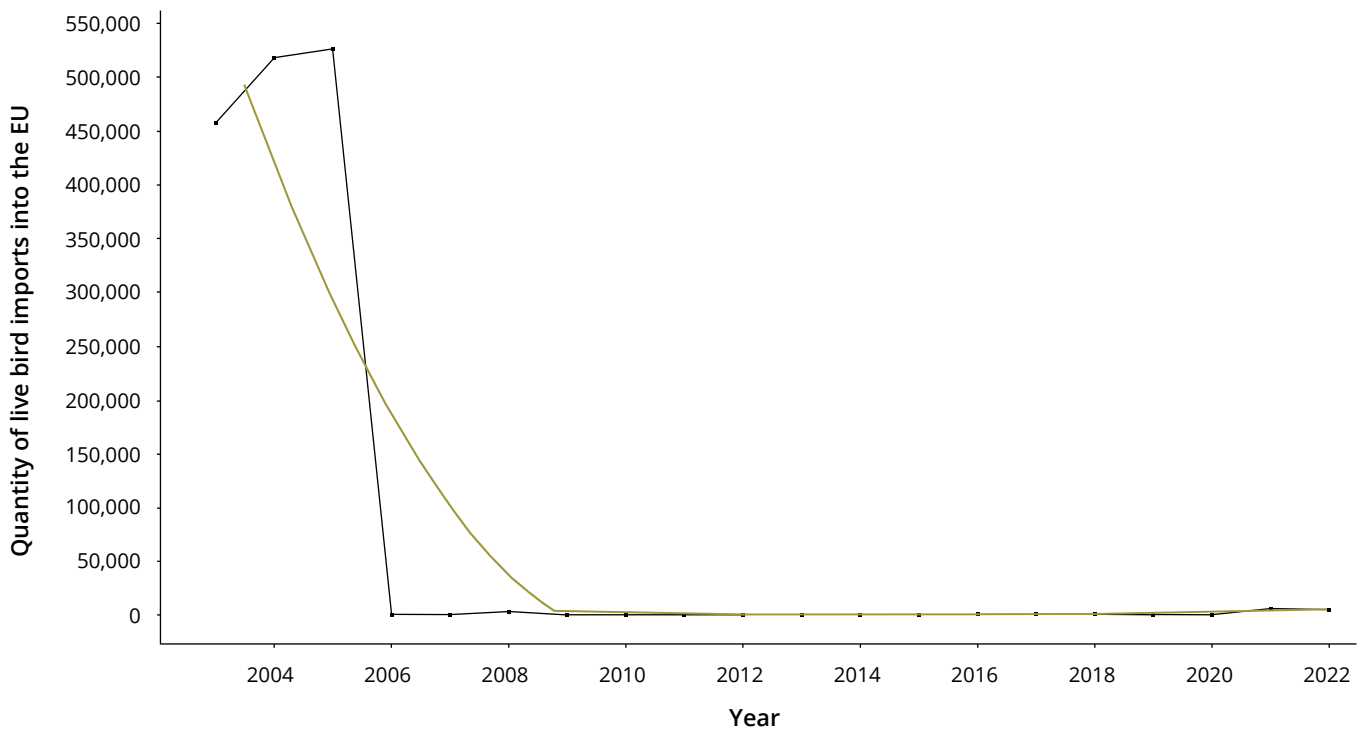


Figure 2: Quantity of CITES-listed live birds imported into the EU per year between 2003 to 2022; green line = regression line
Source: UNEP-WCMC CITES Trade Database (2024)

bred (86.3%; n = 18,420) and 4.5% (n = 967) were wild-caught, whereas before the ban the vast majority were wild-caught (88.9%) (CITES Trade Database, 2024).

Parrots (Psittaciformes) were by far the most frequently imported order after the implementation of the bird ban, followed by doves & pigeons (Columbiformes), falcons & other birds of prey* (Falconiformes), woodpeckers & allies (mainly toucans) (Piciformes), and passerines (Passeriformes) (see Table 2; CITES Trade Database, 2024). However, it is important to note that while nearly all birds of the parrot and falcon orders are listed on Appendices I or II of CITES, only a small proportion of the species belonging to doves & pigeons (about 1.5%), woodpeckers & allies (mainly toucans) (about 2.7%), and passerines (about 1.5%) are listed under CITES. The majority of the trade in these orders is therefore not covered or documented by CITES. Comprehensive trade data for non-CITES protected bird species are currently not available as there is no systematic record-keeping for these species. Potentially, such data could be captured by EUROSTAT, but in practice this database only includes records pertaining to 'parrots', 'birds of prey', and 'ostriches & emus', most of which are listed in CITES and should be captured in its database (EUROSTAT Database, 2024).

Table 2: Top five CITES-listed bird orders imported into the EU after 2006 (CITES Trade Database 2024)

Order		Quantity	Percentage [%]
English name	Scientific name		
Parrots	Psittaciformes	16,183	75.8
Doves & pigeons	Columbiformes	2,349	11.0
Falcons & other birds of prey*	Falconiformes*	1,276	6.0
Woodpeckers & allies (including toucans)	Piciformes	648	3.0
Passerines (including songbirds)	Passeriformes	427	2.0

*Under the Howard and Moore Complete Checklist of the Birds of the World (Trust for Avian Systematics, 2020) used by CITES the Falconiformes also include other birds of prey now widely accepted to belong to the order Accipitriformes by most other bird taxonomies (HBW and BirdLife International, 2024).

Bird species kept and traded in the EU

It is estimated that no fewer than 4,000 bird species are kept as pets worldwide (Ribeiro et al., 2019; Bird-Life International, 2016). Although the import ban has drastically reduced the number of animals imported into the EU, the diversity of bird species kept as pets in the EU has remained high. Following extensive analyses of the databases by Noeske (2024) and SiTDB (Bruslund et al., 2023; Juergens et al., 2021) as well as the EXOPET study (2018, 2017), which selectively documented bird species in trade and husbandry after 2006, there are at least 2,721 different bird taxa (2,545 species and 176 subspecies) in the EU market, 76 % of which are not regulated by CITES and therefore poorly covered by official trade databases (see Figure 3).

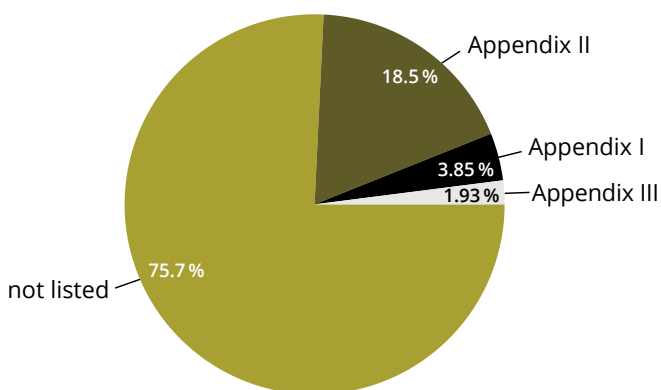


Figure 3: Percentage of CITES status of bird species documented within the EU after 2006

Songbirds, for example, are the largest order of birds and are one of the most traded bird orders in terms of number of species (Donald et al., 2024; Davies et al., 2022b; Species360 Conservation Science Alliance, 2021). At the same time, trade in these species is insufficiently documented as they are not protected by CITES and, consequently, no trade monitoring mechanisms are in place (Donald et al., 2024; CITES Secretariat, 2023a). The SiTDB (Bruslund et al., 2023) is currently the only database that provides an overview of songbird species traded within the EU (Juergens et al., 2021). According to the SiTDB, 983 different songbird species were documented in EU trade after 2006 (Juergens et al., 2021). Despite the import ban on wild birds, the SiTDB reports wild-caught specimens in trade for 92.7% (911 species) of these songbird species (Juergens et al., 2021).

3.2. Illegal trade of birds into and within the EU



Illegal trade, by its very nature, is difficult to quantify. Successful smuggling attempts inherently go unnoticed, while unsuccessful attempts may not always be systematically documented by enforcement agencies. Illegal trade that involves falsified documentation is equally difficult to identify and track. The EU is nevertheless known to be an important destination for illegal wildlife, including live birds (van Uhm & Spapens, 2020; van Uhm, 2016). Although the 2005 implementation of the EU wild bird import ban led to massive declines in legal trade in wild sourced birds (Chan et al., 2021; Cardador et al., 2017) a black market for these animals, which often fetch high prices, continues to exist (van Uhm & Spapens, 2020). The illegal bird trade in the EU is multifaceted and consists of intra- and international trade chains involving both native and exotic species. It is often conducted by well-organised global criminal networks who are attracted to its low risks and potentially high benefits (MDR Sachsen, 2023; Taylor et al., 2023; Hruby, 2022; van Uhm & Spapens, 2020; Weerth, 2020).

Laundering

Laundering is a common method to conduct illegal trade in protected and/or regulated species such as taxa listed in CITES (Hughes et al., 2023). Several methods are used to circumvent existing legislation. Leg rings, parentage declarations, CITES certificates, and other relevant documentation can be easily falsified (van Uhm & Spapens, 2020; Green Corruption Team,

2021). For example, wild nestlings and adult birds of native European species have been known to be ringed to launder them as captive-bred (Budde, 2021; McDonagh, 2020; S. Bruslund, pers. com.). While native European bird species have been protected from trapping for trade under the EU Birds Directive for several decades, recent studies have shown that unlawful hunting and trapping of native bird species is still widespread within the EU (Brochet et al., 2019, 2016). In some known cases, exceptions in EU legislation, such as trade exemptions for zoos and import waivers for birds that are privately owned as pet by EU citizens (see Section 2), are used to illegally bring protected birds into the Union (van Uhm & Spapens, 2020). Seeing how species-specific expertise is required to detect falsifications, detection of laundering practices remains challenging.

Smuggling

In addition to laundering practices, birds may be smuggled into the EU. Illegal trade chains and modes of transportation are highly variable, with some routes running directly into the EU, for example from South America (Bertrams & Gercama, 2022), while others are more elaborate, for example running from Africa, through Turkey and Eastern Europe, into the EU (see Box 2; Taylor et al., 2023; Hruby, 2022; Sina et al., 2016). Although much bird smuggling likely happens over land and sea, most reported seizures take place at airports as comprehensive controls of car traffic, train passengers, and large cargo ships are difficult and costly to implement.

Box 2: Bird smuggling through Serbia

Bird smuggling into the EU is difficult to prevent due to the Union's long and sometimes porous borders. This is illustrated by well-known smuggling routes that enter the EU via its south-eastern border. Taylor et al. (2023) show that Serbia, as a key transit point in the Balkans, plays a central role in facilitating bird smuggling into the EU along well-established routes used for human and drug trafficking. Birds, destined for the pet market, especially songbirds such as yellow-fronted canaries (*Crithagra*



mozambica), have been known to be illegally exported in large numbers from Guinea to Serbia and laundered using false Guinea-issued certificates of origin. Taylor et al. (2023) state that birds are primarily transported from Guinea to Serbia via Istanbul and subsequently smuggled across the poorly enforced Hungary-Serbia border. Once they have successfully entered the EU, the birds become impossible to track and their illegality impossible to determine (Taylor et al., 2023). Data from 2007 to 2009 and 2011 to 2015 on bird imports to Serbia, which Pro Wildlife received from a whistleblower, indicate that bird smuggling through Serbia into the EU has been common practice since the implementation of the EU wild bird import ban.

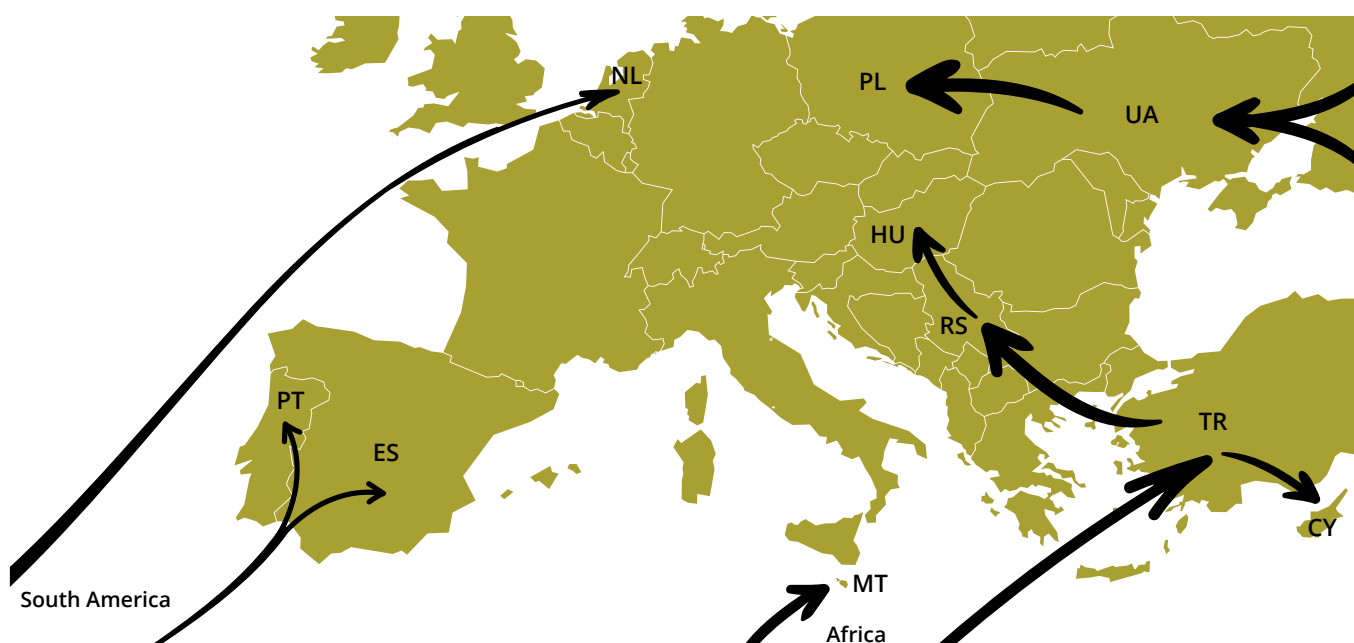
Protected birds have also entered the EU market through theft from zoos and rescue centres, as well as through laundering at official holding facilities (so called 'bird hotels' containing birds confiscated by the government) (van Uhm & Spapens, 2020). The latter practice has included the declaration of valuable birds as 'deceased' whereas in reality they were sold on the market for high prices (van Uhm & Spapens, 2020). Once birds are laundered or smuggled into the EU market, detection and enforcement become extremely difficult, if not impossible due to the Union's free internal market. Furthermore, the lack of CITES registration of EU breeding facilities for species listed in CITES Appendix I has been criticised for hampering prevention of illegal trade in strictly protected species (CITES Secretariat, 2023b; Borrell, 2020). In the case of nationally protected species that are not covered by international legislation, trade becomes effectively legal after entering the EU market, even if they were illegally exported from their country of origin (Heinrich et al., 2021).

Seizure records

The WiTIS data shows that 7,013 birds of at least 132 different species were seized across 166 incidents that involved the EU between 2006 and 2022 (WiTIS Database, 2024). The reasons for seizure were not given in the data and could have ranged from violations of wildlife trade laws to quarantine-related interventions or other reasons (see Section 2 for more details). Nearly half of the seized birds (n = 3,112; 44%) were not identified to species level in the reporting,

illustrating the difficulties of documenting illegal trade in the EU (WiTIS Database, 2024). The most commonly seized families were finches (Fringillidae) and parrots (Psittacidae). Of the species that could be identified, Europe's native hawfinch (*Coccothraustes coccothraustes*) was seized in the highest numbers (WiTIS Database, 2024). This was due to a single incident in 2015 involving an Italian national smuggling the birds into Malta; a known bird trapping and hunting hotspot within the EU. Although captive breeding of hawfinches occurs within the EU pet trade, this example shows that part of this trade may nevertheless involve illegally trapped and traded wild individuals.

Poland (n = 33; 20%), Spain (n = 32; 19%), and Italy (n = 12; 7%) accounted for the highest seizure numbers, while Malta (n = 994; 14%), Belgium (n = 706; 10%), and Spain (n = 675; 10%) accounted for the highest total volumes seized (WiTIS Database, 2024). A known case involving the dismantling of a large bird trapping and smuggling operation in Poland also implicated Italy, confirming laundering and illegal trade practices in both countries (CABS, 2023). However, whether the seizure data are indicative of countries' relative importance in the (illegal) bird trade in the EU, more intensive enforcement efforts, or both, remains difficult to determine. More than two-thirds of the seizures reported in the WiTIS Database (n = 117; 70%) took place between 2013 and 2022 (WiTIS Database, 2024). This period also accounted for the vast majority of seized birds (n = 5,629; 80%) (WiTIS Database, 2024). This may again hint at increased illegal trade levels and/or improved enforcement efforts over time.



Map: Examples of known smuggling routes of live birds into the EU



4. Bird welfare issues

Birds are sensitive creatures with high cognitive abilities (Peng & Broom, 2021) whose welfare in the trade should be of the highest priority. They are highly diverse with needs differing between species (Hawkins, 2010; van Hoek & Ten Cate, 1998), rendering the responsible trading and keeping of birds a complex issue. Welfare of birds needs to be taken into consideration during each stage of the trade chain from trapping to transportation to sale at a retailer, and eventually at bird keepers' homes.

Bird welfare during transport

Mortality rates during handling and transportation are much higher for birds than for any other animal species that are traded for human use (Peng & Broom, 2021). This is especially the case when shipments involve wild-caught individuals. The stress of trapping and transportation, in addition to incompetent handling, poor feeding, the lack of sleep and space, unhygienic conditions, and exposure to zoonotic diseases and toxic fumes that many shipped birds are likely to experience, often results in high mortality (Peng & Broom, 2021). Many birds do not survive these hardships and die even before they are exported to their final destination (Hart, 2013; CITES

Authorities of Cameroon, 2012; CITES AC, 2006; Clemmons, 2003; González, 2003; McGowan, 2001; Pérez & Zúñiga, 1998; Iñigo & Ramos, 1991). Those who survive continue the journey with more birds dying during export or shortly after arrival in the country of destination (Schütz, 2003; Steinmetz et al., 1998; TRAFFIC, 1991). Mortality rates as high as 75 % have been reported for larger birds such as parrots, and rates of up to 90 % for smaller birds (Peng & Broom, 2021). For CITES-listed species, welfare requirements during international transit are regulated under Articles III, IV and VII of CITES. These regulations are further detailed in the International Air Transport Association's (IATA) Live Animal Regulations and Perishable Cargo Regulations, as well as the CITES Guidelines for the non-air transport of live wild animals and plants. At points of sale, birds often continue to be subjected to unfavourable conditions, which may lead to further mortalities. In addition to the obvious welfare implications, high bird mortality rates also suggest that observed trade levels only represent a small fraction of the numbers of birds that are trapped from the wild (see Figure 4). The conservation implications of the bird trade (see Section 5) may therefore be considerably greater than reported trade numbers suggest.



Figure 4: Visualisation of the mortality rates of wild-caught birds in the trade chain

Bird welfare at home

Physiologically and behaviourally, birds that are kept as pets differ little from their wild counterparts, even after multiple generations of captive breeding (Peng & Broom, 2021). Sometimes, human interests such as cost reduction or aesthetics and accessibility of the cage are, consciously or unconsciously, given priority over birds' unique requirements and general well-being (Hawkins, 2010).

Poor housing conditions lead to poor bird welfare (van Hoek & Ten Cate, 1998). Although needs vary between species (Peng et al., 2013; Hawkins, 2010), broader pet welfare models (Mellor et al., 2020; Mellor & Beausoleil, 2015; Fraser et al., 1997) generally agree on several main themes, particularly on animals' (including birds) needs for balanced and varied diets, a comfortable and pleasant physical environment, a healthy and fit body, an ability to express rewarding behaviours, and freedom to engage in fulfilling social interactions and behaviour (Warwick et al., 2024). As Peng & Broom (2021) state: *"birds need to—breathe, rest and sleep, exercise, avoid fear, drink and feed, have access to an appropriate hiding or resting place, explore, have social contact, minimise disease, preen, thermoregulate, avoid harmful chemical agents, and avoid pain"*.

Failure to meet welfare needs may result in birds' poor physical condition, disease, boredom, frustration, and stress (Hawkins, 2010).

Birds' decreased welfare may manifest itself in the form of undesirable behaviours such as self-mutilation, feather picking, and so-called stereotypies; repetitive behaviours such as route tracing and spot picking (Hawkins, 2010; van Hoek & Ten Cate, 1998). The indicators of birds' wellbeing are not always clear and can be misjudged by owners (Steiger, 2006). Insufficient knowledge of behaviour and/or housing and feeding requirements on the part of the owner can be to the detriment of birds, even if the owner has the best intentions. Moreover, overly affectionate behaviour can have negative impacts on certain species of birds (Burmeister et al., 2022; Steiger, 2006).

Overall, it is of the highest importance that owners are well-informed about, and see to, the needs of their birds, as well as capable of recognising indicators of decreased welfare. It is also important to recognise that some bird species cannot be kept responsibly by private individuals due to their physiology and/or natural behaviour and needs (Hawkins, 2010), and should therefore not be kept as pets at all.



5. Conservation issues

The commercial trade in birds can have serious conservation implications for wild populations and ecosystems. In 2019, the IPBES report on biodiversity loss named the direct exploitation of wild animals (and plants) as the second greatest threat to biodiversity, even ahead of climate change (IPBES, 2019). In addition to local environmental impacts in source countries, trade can harm ecosystems in consumer countries. Although the EU has banned the import of wild birds since 2005, wild-caught birds still enter the Union (see Section 3.2). They may be smuggled or legal loopholes may be used to circumvent the import ban (van Uhm & Spapens, 2020; see Sections 2 & 3.2).

Trade impacts in source countries

Trapping for trade has directly contributed to wild bird declines around the world (Ribeiro et al., 2019; Annorbah et al., 2016; Chng et al., 2015; Eaton et al., 2015). In some cases, trapping for trade has even been identified as a main driver behind the decimation and (near-)extinction of bird populations. These cases include birds that are popular as pets and regularly found in the EU market such as grey parrot (*Psittacus erithacus*; see Box 3), Bali myna (*Leucopsar rothschildi*), and Java sparrow (*Padda oryzivora*; see Box 4).

Box 3: Illegal trade in grey parrots

Grey parrots (*Psittacus erithacus*) are one of the most traded parrot species for the international pet trade, due to their remarkable intelligence and ability to mimic human speech (BirdLife International, 2021b; Martin et al., 2019; Poole & Shepherd, 2017). The overexploitation of wild populations for international pet trade has led to a sharp decline of the species throughout its range in West- and Central Africa, so that it is classified as Endangered on the IUCN Red List and listed in Appendix I of CITES since 2016 (UNEP, 2024). Illegal trapping for trade and the laundering of wild-caught individuals nevertheless continues (Davies et al., 2022a; Martin, 2017). For grey parrots, a mortality rate of 60 % to 66 %, in some cases even up to 90 %, was found before arrival at the final destination (Mozzer & Prost, 2023).

Box 4: Java sparrow – almost gone from the wild

The Java sparrow (*Padda oryzivora*) is popular in trade around the world (BirdLife International, 2021a). Although the species has now been domesticated and is heavily bred on a commercial scale, initial trade predominantly involved wild-caught birds, which has led to the decimation of wild populations on its native island of Java in Indonesia. Overexploitation of wild populations was particularly high in the 1960s and 1970s (BirdLife International, 2001) but trapping (predominantly to supply the Indonesian domestic market) continues to this day. Today, one could easily buy a captive-bred Java sparrow in the EU market (see Figure 5), but one would be hard pressed to find one in the wild in its native range and this is a direct result of the trade.



Figure 5: Java sparrows for sale on a Dutch bird trading website; various colour morphs are available

In many cases, consumers may not be aware of the true origin of the birds they purchase. Ringing fraud (see Section 3.2) and the laundering of wild-caught birds through breeding facilities make the determination of birds' origin all the more difficult and even captive-bred birds may be descendants of illegally captured and exported parent stock (Morton et al., 2024; Nijman et al., 2018). The unsustainable exploitation of wild birds has a direct effect on populations and, by extension, can result in a destabilisation of the ecosystem in question and contribute to environmental decay (Şekercioğlu et al., 2004).

The techniques used to catch birds in the wild may also be harmful to the environment; bird lime and mist nets are still frequently used in Africa, Latin America, Asia, and the Mediterranean (Harris et al., 2017; Khelifa et al., 2017; Reuter et al., 2017; Souto et al., 2017; Brochet et al., 2016; Tamungang et al., 2016; Platt et al., 2012). Both are inherently indiscriminate and the fate of "by-catch" of other non-target birds, especially if not marketable, is often unclear as those animals

may not appear in capture and trade records (Khelifa et al., 2017). The illegal use of chemicals to catch parrots (Tamungang et al., 2016) and the cutting down of trees to reach nestlings are other trapping methods that are highly destructive for both fauna and flora in source countries. To mitigate the negative effects of trade, it is important to be aware of the origin of a bird before purchasing it. To enable this, the legal origin of the bird from captive sources needs to be ensured by checking the certification of import, if rings or other markers (e.g. microchips) are present, and if the seller can provide a reliable breeding history.

Trade impacts in consumer countries (IAS)

In addition to the conservation impacts of bird trapping in source countries, international trade can strongly impact the environment in consumer countries. Imported birds may carry diseases that affect native populations (see Section 6), and may establish invasive populations when they escape or are set free.

Invasive alien species have been named as one of the five principle drivers of biodiversity loss (IPBES, 2023) and hundreds of alien bird species have been recorded in the European wild (Cardador et al., 2019; Abellán et al., 2016; Pârâu et al., 2016). More than 70 of these species have established invasive populations (Pârâu et al., 2016). A good example of such a species is the rose-ringed parakeet (*Alexandrinus krameri*) (Jackson, 2021). It is among the 100 most invasive alien species in Europe (European Commission, 2009) and is the continent's most abundant parrot (Pârâu et al., 2016). Hundreds of years of import for the pet trade have resulted in firmly established rose-ringed parakeet populations around Europe, most notably in Belgium, France, Germany, Italy, the Netherlands, Spain, and the UK (Pârâu, et al., 2016), where they may compete with native birds (and bats) for food and nesting space (Jackson, 2021). Monk parakeet (*Myiopsitta monachus*), known in its native South American range for its destruction of crops (Preston et al., 2021; Senar et al., 2021) and damage to human infrastructure on

account of its nest-building activities (Strubbe & Matthysen, 2009), is another highly invasive species in Europe (Strubbe & Matthysen, 2009). Other common invasive species associated with the EU pet trade are songbirds such as common myna (*Acridotheres tristis*) and red-vented bulbul (*Pycnonotus cafer*), both of which are on the List of Invasive Alien Species of Union Concern (European Commission, 2016). Studies have shown that bird invasion risks have dropped since the implementation of the EU wild bird import ban in 2005 due to the drastic reduction in wild bird imports and increased captive breeding (Cardador et al., 2019, 2017; Reino et al., 2017). Captive-bred birds tend to have lower invasion potential due to changes in behaviour and fitness making them less suitable to survive under wild conditions (Carrette & Tella, 2015; Cabezas et al., 2013). Nevertheless, alien species invasion remains a serious risk of the pet trade, especially considering the fact that bird species with invasive potential are disproportionately favoured as exotic pets (Gippet & Bertelsmeier, 2021).



6. Health risks

Birds are carriers of a variety of pathogens that can affect native bird populations, humans, and livestock, in some cases with severe sanitary and/or economic consequences (Boseret et al., 2013, Burgos & Burgos, 2007; Karesh et al., 2007). In mammals and birds, the number of undetected viruses is estimated at 1.67 million, of which 631,000 to 827,000 could have the potential to infect humans (Carroll et al., 2018).

Both wild and domestic birds are reservoirs for pathogens with zoonotic potential including a number of bacteria, viruses, parasites, and fungi (Kozdruń et al., 2015; Boseret et al., 2013). Avian pathogens hold a substantial potential for spillover to humans, however, so far cases of infections from birds kept as pets have been limited to a few notable zoonoses (see Table 3; Malik et al., 2021). Among these more prominent avian zoonoses is Avian Influenza (especially subtype A(H5N1)), a viral disease that may lead to respiratory failure in humans, potentially resulting in death (van den Berg, 2009; Alexander, 2007). Avian Influenza has swept across large parts of the globe since the early 2000s with serious consequences for public health and the poultry industry (Gashaw, 2020; Lycett et al., 2019; Neumann et al., 2010; Moore et al., 2006). Curbing highly pathogenic Avian Influenza was also the main reason behind the EU's implementation of the wild bird import ban in 2005 (see Section 2.).

Although zoonoses may be spread through the natural movements of migratory birds, trade has also been identified as an important driver of zoonotic outbreaks (Boseret et al., 2013; van den Berg, 2009; Karesh et al., 2007; MacKenzie, 2005). Illegal trade is particularly problematic (Hosseinian, 2022; Boseret et al., 2013) due to the absence of monitoring mechanisms, the lack of sanitary measures, and the often large quantities of potentially wild-caught birds of different species and geographical origin that are transported together.

There are multiple known cases of highly pathogenic Avian Influenza isolated from birds that were confiscated as they were smuggled into Europe (Utermohlen & Baine, 2018; Karesh et al., 2007; Borm et al., 2005). Legal trade, too, can facilitate the spread of zoonotic disease, particularly when birds are packed together in tight spaces such as in pet shops and at bird fairs (Can et al., 2019; Boseret et al., 2013; MacKenzie, 2005). Zoonotic diseases may be transmitted between birds and between humans and birds through vectors such as mites, mosquitoes, and ticks, or through direct contact (Malik et al., 2021). Birds kept as pets and their owners, are at risk of zoonotic disease, which may be contracted in breeding facilities, during transport, pet shops or bird markets, through introduced birds without testing and quarantine, or potentially through direct contact with birds living in the wild when birds are kept in outdoor cages (Boseret et al., 2013).

Table 3: Examples of the most relevant zoonoses associated with the keeping of birds (based on Malik et al., 2021 & Boseret et al., 2013)

Viral disease	Bacterial disease (pathogen)	Parasitic/fungal disease (pathogen)
<ul style="list-style-type: none"> ■ Avian Influenza (especially H5N1) 	<ul style="list-style-type: none"> ■ Chlamydophilosis also known as psittacosis (<i>Chlamydia psittacii</i>) 	<ul style="list-style-type: none"> ■ Cryptosporidiosis (<i>Cryptosporidium spp.</i>)
<ul style="list-style-type: none"> ■ West Nile Virus 	<ul style="list-style-type: none"> ■ Salmonellosis (<i>Salmonella spp.</i>) 	<ul style="list-style-type: none"> ■ Cryptococcosis (<i>Cryptococcus neoformans</i>)
<ul style="list-style-type: none"> ■ Japanese Encephalitis 	<ul style="list-style-type: none"> ■ Tuberculosis (<i>Mycobacterium spp.</i>) 	<ul style="list-style-type: none"> ■ Giardiasis (<i>Giardia spp.</i>)
<ul style="list-style-type: none"> ■ Newcastle Disease 	<ul style="list-style-type: none"> ■ Campylobacteriosis (<i>Campylobacter spp.</i>) 	<ul style="list-style-type: none"> ■ Aspergillosis (<i>Aspergillus fumigatus</i>)



7. Recommendations

The implementation of the EU wild bird import ban in 2005 was a constructive and urgently needed step to better regulate the trade in wild birds in the EU. Although it was primarily based on economic and public health considerations, it had multiple secondary effects, e.g. restriction of wild bird trade in the EU, prevention of invasive alien species, and market consolidation. However, the current analysis of the data and literature clearly shows that, despite the import ban and the proven decline in wild bird imports, illegal trade of birds is an ongoing concern within the EU due to weaknesses in the legislation and enforcement. In order to further improve the regulation of the trade and private keeping of birds, and ensure the sustainability of the trade, bird welfare, public and animal health, we recommend the following:

1. Legal initiatives

- **Tighten the EU wild bird import ban to close existing loopholes** (see Section 2), e.g., strictly regulate the number of movements of birds kept as pets into the EU and establish clear and effective guidelines for the import of wild birds by zoos, including banning and sanctioning the onward sale of animals to private keepers and retailers and authorising the import of wild-caught birds only in exceptional cases
- **Expand current or develop additional preemptive regulatory measures for birds kept and traded as pets**, taking into consideration the results of the three studies on exotic pets currently being conducted on behalf of the EU Commission (European Commission, 2023a,b), so that it reflects national legislation in countries of origin, ensures the sustainability of trade as well as bird welfare, and addresses concerns regarding health, safety, and invasiveness
- **Implement systematic record keeping of bird imports and of seizures on species level** (including information on the reason for seizure) **as well as registration of bird movements and keeping within the EU** to support law enforcement and research
- **Develop and support CITES listing initiatives aimed at protecting bird species threatened by international trade**
- **Standardise and improve marking and ringing regulations** (e.g use of microchips, forgery-proof rings, return of surplus rings, etc.)
- **Ensure that all EU Member States establish deterrent penalties that are reflective of the seriousness of the crime and ensure the risks of illegal bird trade outweigh the benefits**, including raising

of minimum and maximum penalties, in combination with sufficient enforcement and judiciary vigour (see next section)

2. Improve law enforcement

- **Ensure availability of sufficient resources for enforcement authorities** to ensure that skill levels and capacities (e.g. species identification, familiarity with common laundering practices, etc.) are available for effective enforcement and that rapid and efficient cooperation with taxonomic experts is established
- **Improve national, EU, and international inter-agency cooperation** particularly at the Union's fringe borders and at other entry hubs into the Union where efforts to counter smuggling and open illegal trade are most needed
- **Ensure that trade exemptions** such as those concerning the species listed in Annex X of Commission Regulation No. 865/2006 **are scrutinised and re-considered** to avoid laundering of wild individuals of highly vulnerable species (e.g. red siskin (*Carduelis cucullata*))

- **Raise awareness among enforcement authorities and the judiciary of the various pieces of legislation regulating bird trade and for illegal trade** to ensure that this issue is sufficiently recognised and prioritised
- **Encourage full application of the penalty range to ensure effective deterrence**
- **Ensure that the regulations relating to the welfare of birds in transit**, such as the IATA Live Animal Regulations, IATA Perishable Cargo Regulations, and the CITES Guidelines for the non-air transport of live wild animals and plants are properly enforced

3. Raise awareness

- **Execute public and targeted awareness campaigns to raise consumer awareness** of the bird trade and associated conservation, welfare, and public health concerns
- **Develop and implement targeted demand reduction campaigns** to reduce illegal and unsustainable trade in relevant species



8. Methodology

The aim of the trade data analysis was to obtain a comprehensive picture of the EU-wide bird trade, long-term developments, and trends following the implementation of the EU wild bird import ban. We therefore analysed the trade (imports and exports) of live birds and their private keeping in the EU over a 20-year period (2003 to 2022), where data was available, focusing mainly on data collected after the EU wild bird import ban (2006 to 2022). For this purpose, we analysed data from private and publicly accessible databases (see below for details) and reviewed the available literature. The data was analysed using the statistical programs R and RStudio (version 4.3.3 and version 2023.03.1+446). Therefore, the data was cleaned according to the requirements of R and the following packages had to be installed: 'tidyverse', 'devtools', 'usethis', 'ggplot2', 'ggpubr', 'ISLR2', 'lubridate' and 'plotrix'.

CITES Trade Database: a database that records international trade in species listed in the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Trade records are submitted by individual countries (Parties to the Convention) with both importing and exporting countries reporting on species-level trade numbers. For the EU, only imports and exports are recorded, intra-EU trade is not captured in the database (CITES Trade Database, 2024). For more information on the CITES Trade Database, see <https://trade.cites.org/>.

EUROSTAT Database: EUROSTAT is the official statistical office of the EU. Its database records commercial trade (into, from and within the EU) in various commodity groups, including live animals. For live birds, the available dataset only included aggregated trade records (no species specific data) for 'birds of prey', 'ostriches & emus', and 'parrots' and is therefore lacking data for many bird groups (EUROSTAT Database, 2024). For more information on EUROSTAT, see <https://ec.europa.eu/eurostat/en/web/main/home>.

EXOPET study: this study was commissioned by the German Federal Ministry of Food and Agriculture and was carried out by the University of Leipzig and the Ludwig Maximilian University Munich between 2015

and 2018 (EXOPET study, 2018, 2017). The study's main aim was to identify welfare issues associated with the exotic pet trade. For the current report, we specifically requested data on the range of bird species that was encountered during the study. For more information on the EXOPET study, see <https://exopet-studie.de/>.

FEDIAF data: the European Pet Food Industry Federation (FEDIAF) keeps annual statistics concerning pet food consumption and pet ownership across Europe. Bird ownership estimates were available for the 2017 to 2022 period (FEDIAF, 2017 to 2022). For more information on FEDIAF statistics, see <https://europeanpet-food.org/about/statistics/>.

SiTDB: the Songbirds in Trade Database (SiTDB) is an open-source database that contains national and international trade assessments for live songbirds. Assessments are based on scientific publications, expert opinion, field and trade observations, and published and unpublished expert trade notes, and include statements of whether species have been observed in trade since 2006 (Bruslund et al., 2023; Juergens et al., 2021). For more information on the SiTDB, see <https://www.sitdb.org/>.

WiTIS Database: the Wildlife in Trade Information System (WiTIS) is a publicly available wildlife seizure and incident database managed by TRAFFIC. The contents of the WiTIS database predominantly consist of English language open-source media records (WiTIS Database, 2024). The seizure analysis for this report focussed on the period after the implementation of the EU wild bird import ban (2006 to 2022). For more information on WiTIS, see <https://www.wildlifetrade-portal.org/>.

Noeske data: Rosemarie Noeske, member of the German NGO Vogelschutz-Komitee, has been documenting the trade and keeping of birds in the EU since 2019 (Noeske, 2024). Data was collected on species and subspecies level in a non-structured way, predominantly from German and Dutch online bird trade platforms and magazines. For the current report, this data on the species range was requested, and information on the protection status, IUCN status etc. was added.



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Glossary

CABS	Committee Against Bird Slaughter
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
EAZA	European Association of Zoos and Aquaria
EEP	EAZA Ex situ Programmes
EFSA	European Food Safety Authority
EUROSTAT	Statistical office of the European Union
FAO	Food and Agriculture Organization of the United Nations
FEDIAF	European Pet Food Industry Federation (Fédération européenne de l'industrie des aliments pour animaux familiers)
IATA	International Air Transport Association
IAS	Invasive alien species
SiTDB	Songbirds in Trade Database
UNEP	United Nations Environmental Programme
WiTIS	Wildlife Trade Information System

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Imprint

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