

International Trade in Endangered Species of Wild Fauna and Flora in the Czech Republic, European Union and in the World

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The trade in wildlife, its parts and products is at least as old as recorded humankind's history. Without wishing to start thoughtful intellectual considerations we would like to stress that it had initially been a swap

or a barter, later accompanied by monetary trade which consequently mostly replaced the former. Wildlife trade has recently been moving increasingly to the Internet.



Orchids represent more than 70% of all CITES-listed species; at present, more than 26,000 species have been known and approx. 100,000 their hybrids have been also named. © Dana Turoňová

Legal v. illegal wildlife trade

To quantify the international wildlife trade volume and value on a global scale has been difficult. The more precise data is available only in taxa protected under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Its Parties report annually the number of export/import permits and certification granted, the number of traded species and derived products and countries of their origin and destination. The data is available within the CITES Trade Database which as of 15 January 2022 included more than 20 million records (UNEP-WCMC 2022a). Moreover even the information source displays certain shortcomings (BEREC *et al.* 2018, 2021, ROBINSON & SINOVAS 2018, SLÁBOVÁ *et al.* 2021). We should particularly take into account that the Parties significantly differ from each other in fulfilling the duty: *e.g.* in 2019 126 Parties provided the data required while there were at that time 183 Parties.

From 1975 to 2014 the volume of reported trade in CITES-listed wildlife species quadrupled and in 214 it included about 100 million whole-organism equivalents (HARTFOOT *et al.* 2018, PLESNÍK & JELÍNKOVÁ 2018). The international legal trade in wild fauna and flora and derived products covering also non-CITES-listed taxa including fish and timber has increased more than five-fold in value in 2005 – 2019 and twenty-fold since the early 1980s (IPBES 2020). According to the United Nations International Trade Statistics Database it was worth USD 107 billion in 2019: the top commercial categories for wildlife trade were seafood (82%), furniture (7%), and fashion (furs and hides) (6%, ANDERSSON *et*



During six years, more than 1.36 billion pet animals were imported only to the United States. Annual import of the Green iguana (*Iguana iguana*) mainly from captive farming operations in Honduras is more than one million specimens. © Jan Plesník

al. 2021). Nevertheless, other source give significantly higher number (*cf.* EU 2016). It should be mentioned that legal trade of course does not necessarily mean that commodity was taken from the wild or managed in captivity sustainably.

Even more serious troubles appear in efforts to reasonably estimate the volume of global illegal wildlife trade. It is not only because ambiguities in defining illegal wildlife trade on a global scale

from a point of view of legislation, but also due to its covert nature and an overlap with legal trade (ESMAIL *et al.* 2020, TITTENSOR *et al.* 2020, WYATT 2021). Therefore, there are various international illegal wildlife trade volume estimations, ranging from USD 4 billion to 23 billion per year, most often between USD 7 to 8 billion/year (EU *I.c.*, NELLEMAN *et al.* 2016, SCHEFFERS *et al.* 2019, t'SAS-ROLFES *et al.* 2019). If the number includes also illegal logging and fishing it could reach USD 48 – 216 billion per year (WORLD BANK 2019). The more precise measuring the variable is also complicated by the fact that contrary to other illegal trade, demand in wild fauna and flora changes relatively often and quickly.

It is no secret that illegal wildlife trade can be linked to crime and in some cases, to terrorism (UNEP 2018, FATF 2020, UNODC 2020, WJC 2021). No wonder: it is among five most profitable criminal enterprises and according to some opinions, it is the third most lucrative illegal transnational crime, only behind trafficking arms and narcotics (NELLEMAN *et al. I.c.*, VAN ULM 2016, ESMail *et al. I.c.*).

The table on page 74 presents the most often traded taxa/groups protected by CITES in the world (2014 – 2018, UNEP-WCMC 2022b), European Union (2019, UNEP-WCMC 2021) and in the Czech Republic (2015-2019, MoE CR 2022,

INTERNATIONAL WILD ANIMAL TRADE AND COVID-19

Trade in wild fauna has recently been debated particularly in relation to the COVID-19 zoonosis spillover which according to some opinions could originated at Wuhan wet market in China (LI *et al.* 2020, MIZUMUTO *et al.* 2020, PLESNÍK *et al.* 2020). The more recent analysis of the data available suggests the SAR-CoV-2 coronavirus could be transmitted to humans through raccoon dogs (*Nyctereutes procyonoides*) caged in the western section of the market (WOROBEY 2021).

It seems that due to continuing and increasing the purchase and sale on the Internet wild pet trade did not decrease even during restrictions on COVID-19 (MORCATTY *et al.* 2021). In addi-

tion, in some parts of the world, *e.g.* in Africa or India, after some decline in poaching of commercially interesting species caused by restrictions on movement, *i.e.* lockdown after lifting them, poaching has again increased (MCNAMARA *et al.* 2020, ADITYA *et al.* 2021, PLESNÍK 2021).

Data suggests that up to now the extent of international wildlife trade in the Czech Republic did not significantly declined by the COVID-19 syndemic, just the opposite. In 2020, 54,974 specimens of the wild animal species protected by the CITES was exported from the Czech Republic, thus establishing a record in the number: of them, 40,000 were birds (CENIA 2021).

The most frequently traded CITES-listed wild taxa/groups and derived products in the world, European Union and Czech Republic (UNEP-WCMC 2020, 2022a, 2022b, MŽP 2022)
↔export, →import

geographical location period	commodity/the most frequently traded taxon/group
world 2014 – 2018	mammal skins/Collared peccary (<i>Pecari tajacu</i>) live primates/Crab-eating macaque (<i>Macaca fascicularis</i>) live birds/Grey parrot (<i>Psittacus erithacus</i>) reptile skins/American alligator (<i>Alligator mississippiensis</i>) live corals (Anthozoa) orchids (Orchidaceae) including hybrids cacti (Cactaceae)
European Union 2019	↔ →live ornamental plants including snowdrops (<i>Galanthus</i> spp.), orchids, cacti and cyclamens (<i>Cyclamen</i> spp.) →reptile skins/American alligator
Czech Republic 2015 – 2019	↔birds/Red-rumped parrot (<i>Psephotus haematonotus</i>) and Eastern rosella (<i>Platycercus eximius</i>), birds of prey of the genus <i>Falco</i> including interspecific hybrids ↔primates/Ring-tailed lemur (<i>Lemur catta</i>) ↔amphibians/dart-poison frogs (<i>Dendrobatidae</i>) →reptiles/freshwater turtles of the genus <i>Graptemys</i> , Green iguana (<i>I. iguana</i>), Ball python (<i>Python regius</i>), Hermann’s tortoise (<i>Testudo hermanni</i>) →reptile skins/American alligator →birds/parrots (Psittacidae) →mammal trophies/baribal (<i>Ursus americanus</i>) →corals

UNEP-WCMC 2022b). They are commented below.

Trade in wild fauna and flora on a global scale

International wildlife trade covers surprisingly a broad range of subspecies, species and genera including globally threatened ones: some taxa are traded more often worldwide. Approx. one quarter of all terrestrial vertebrate species has been traded and the proportion shall be most likely increasing. On the other hand, trade in invertebrates, plants and fungi has to a large extent been neglected and poorly documented (SCHEFFERS *et al. l.c.*, FUKUSHIMA *et al.* 2021). In respect of volume and financial value the trade in timber plays first violin on a global scale (WORLD BANK *l.c.*).

Let us look in detail at CITES-taxa. Unlike mammals and reptiles in which 62% and 66% of the global trade are hides, birds are almost exclusively traded as living specimens: of them, 80 % of transactions are individuals reared in captivity. Not without an interest that the Czech Republic is ranked globally the fourth in number of birds exported: in 2014 – 2018 200 000 birds was exported from the country. Among fishes, which

also are sold and purchased as living organisms, the Asian arowana (*Scleropages formosus*) is exported in the highest numbers, being considered to be symbol of good luck and prosperity, especially by Asian cultures: more than 1.25 million specimens reared at the registered breeding facilities were sold yearly.

The European Union as an important wildlife trade market

In addition to South and East Asia and the U. S. A. the European Union is one of the most significant players in global wild fauna and flora trade. On the one hand it displays huge purchase power allowing it to import high numbers of both living specimens and wildlife products, on the other hand there has been a long-term and successful tradition in wild plant growing, cultivation and planting and wild animal breeding there. Thus, it is no exaggeration the EU Member States can keep in captivity and breed a huge number of specimens which are consequently exported literally across the world. According to the official data, the annual value of trading the above articles in the EU is approx. EUR 100 billion, being according to other sources the financial value of the global legal wildlife trade as a whole (see above).

If aiming at import to 27 EU Member States we find that only in 2019 there were approx. 99,200 transactions representing in total 37.5 million imported specimens. The reader would be surprised that within the total number of imported wildlife individuals live ornamental plants dominated (93%). In the total number of wild plant and animal species imported in the EU (4, 315) plants again dominated with 78%.

As it has been pointed out the EU Member States are important wild plant and animal exporters whereas within these exports captive-produced or artificially propagated specimens dominate. In total, 26.5 million specimens were exported from united Europe in 2019. Also in this case, prominent exports by volume included live artificially propagated plants (96%), exported mostly by the Netherlands, mainly cacti (especially *Schlumbergera truncate*, commonly known as “Christmas cactus”), moth orchid hybrids (*Phalaenopsis* hybrids) and snowdrops (*Galanthus* spp.). Over half of the 2,194 different taxa involved were plants.

Which species are traded most often in the Czech Republic?

The Czech Republic plays in international wild fauna and flora trade a prominent role. It is not only due to geographical location, but also highly developed and very popular plant growing, cultivation and planting and wild animal breeding: in many cases Czech growers and breeders achieve great results. In addition, they had turned professional themselves after 1989 and used numerous contacts to enter a foreign market. In the Czech Republic, having a population of 10.5 million inhabitants, there are 50,000 – 80,000 persons actively keeping or trading CITES-listed species compared with 3,000 such persons in Hungary and 600 in Portugal (ŘÍHOVÁ *in litt.*).

While globally wildlife product trade in CITES-listed species dominates, in the Czech Republic the wildlife trade mostly consists of live specimens. Since 2008 the number of wild animals exported from the Czech Republic tripled (CENIA 2021). In trading wild birds the country is in addition aquarium fish trade, the latter aiming mostly of course at non-CITES-listed species, among major world trading powers (see above). In addition to exotic avifauna, the often exported bird species include also birds of prey. In 2015 – 2019, 788 interspecific hybrids of the genus *Falco*, 285 Peregrine falcons (*F. peregrinus*) and 240 Saker falcons (*F. cherrug*) were exported from the Czech Republic for falconry, most often to the United Arab Emirates, Kuwait and Qatar.

Wild plant and animal trade in the Czech Republic, being from a global point of view when taking into account the human population size there relatively large, is not always legal. Let us remember only some actions carried out by enforcement authorities, e.g. *Trophy* (solving illegal trade in tiger products, PLESNÍK *et al.* 2019, UCOVÁ *et al.* 2019), *Rhino* (rhino horns on the black market, PLESNÍK 2015), *Osseus* (illegal trade in ivory, rhino horns and tiger bones) or *Lora* (illegal trade in parrots). Unfortunately, above cases cast negative light on growers and breeders in the eyes of the general public not only in the Czech Republic.

In the second half of 2022, the Presidency of the Czech Republic in the Council of the European Union will offer suitable opportunity to present experience of implementing the CITES in the Czech Republic. For November 2022, the 19th meeting of the Conference of the Parties to CITES is scheduled to be held in Panama City where the Czech Republic delegates shall be coordinating EU positions and negotiating them with representatives of other governments or regional groups. In addition to traditional topics, such as international trade in ivory, rhino horns, rare timber and marine organisms, the meeting will be dealing also with wildlife trade on the Internet or specimens produced through biotechnology.

Cross-border wildlife trade outlook

The wildlife trade importance for global nature conservation is confirmed, *inter alia*, by the fact that the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) was adopted in 1973 in Washington, D.C. as only the second multilateral treaty aiming at natural and landscape heritage protection, conservation and management. Its mission definitely is not to eliminate international wild plant and animal trade but to control in a reasonable way thus ensuring that international trade in specimens of wild animals and plants does not threaten the survival of the species protected by the Convention by providing a framework to be followed by each Party.

Sometimes we can meet the opinion that unsustainable use of biota for commercial purposes is goal-directly overstated and that for organisms involved is not so dangerous. A quantitative meta-analysis of 31 studies estimating trade-driven declines in mammals, birds and reptiles in habitats used by humans and less affected areas particularly in South American



In 2015 – 2019 6,000 products from skins of American alligators (*Alligator mississippiensis*) killed in the wild in the United States were imported to the Czech Republic, particularly from Switzerland. © Jan Plesník



Among 1,480 cacti species assessed by the IUCN (International Union for Conservation of Nature) 31% is threatened by extinction: almost half of them are endangered due to illegal collection of live specimens and seeds in the wild particularly by European and Asian growers. © Dana Turoňová

and African tropes concluded that the terrestrial vertebrate species declined in abundance by 62 % where wildlife trade occurs: of them, 16.4 % faced local extirpations. The decline was caused more profoundly by international trade than local one and the difference between

protected areas and the unprotected landscape was not significant (MORTON *et al.* 2021). About 15,000 commonly traded medicinal herb species, usually rather wild-collected than propagated and cultivated, are threatened (SCHIPPMANN *et al.* 2006).



In five years 245 ring-tailed lemurs (*Lemur catta*) were sent abroad from the Czech Republic, mostly to China. © Jan Plesník



In April 2020, after almost ten years, when the strictest lockdown restrictions were applied in the Republic of South Africa no Southern white rhino (*Ceratotherium s. simum*) had been killed in the Kruger National Park for a whole month. After lifting them number of poached rhinos again increased in the iconic protected area. © Jan Plesník

Governments in source countries forego up to an estimated USD 12 billion each year in potential fiscal revenues that are not collected due to illegal logging, fishing, and wildlife trade. If we try to quantify how illegal and unsustainable trade in wild fauna and flora influences ability of ecosystems to provide humans with benefits, from anthropogenic point of view called ecosystem services or nature's contribution to people, their reduction or loss is hardly imaginable USD 1 – 2 billion in 12 months only (WORLD BANK *l.c.*).

Legal trade in wildlife and derived products has been an important element of the world economy, particularly in developing countries, and millions of people depend on it with their lives. Illegal and unsustainable use of biota, expressed by bushmeat (PLESNÍK & PELC 2021), can directly or indirectly damage target and non-target species, cause ecosystem service loss, support spreading of invasive alien species, pests, parasites and pathogens including causal agents and vectors of zoonoses and disturb both local and global economy (CARDOSO *et al.* 2021). Of course, the solution is not to absolutely prohibit trade in wildlife and derived products but to support changes in consumption patterns, ensure food security, diversify and stabilize incomes for local communities and indigenous people, control wildlife trade on the internet, enforce law including international one, enhance scientific knowledge of biota, improve protected area effectiveness, certificate sustainable use of biological diversity in a uncorrupted way, carry out legal reasonable wild plant growing, cultivation and planting and wild animal keeping in captivity, use current technologies against illegal wildlife collecting, poaching and smuggling and least but not least to enhance and to improve communication with, education of and awareness among the general public and the target groups (FUKUSHIMA *et al. l.c.*, PLESNÍK & HANEL 2021). ■

The list of references is attached to the online version of the article at
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