
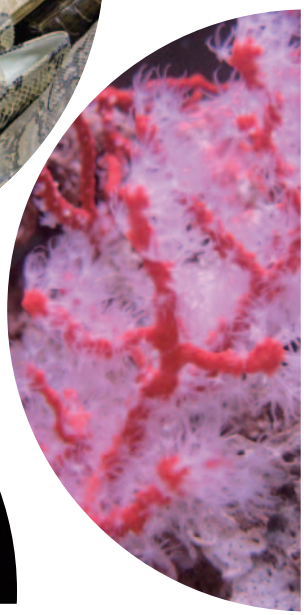


The State of Wildlife Trade in Japan

Akiko Ishihara, Kahoru Kanari
Tsugumi Saito, Soyo Takahashi

A TRAFFIC EAST ASIA REPORT















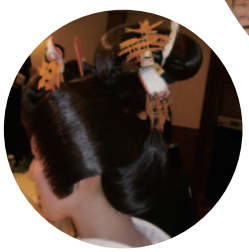


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TRAFFIC East Asia-Japan

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INTRODUCTION

James Compton, Senior Director for Asia
Akiko Ishihara, Senior Representative for Japan

To understand Japan' s fascination with products derived from wild animals and plants, one needs to go no further than the imperial treasure house, or *Shoso-in*, located in Nara. The *Shoso-in* collection of 'treasures' includes an unmatched array of objects made of ivory, Hawksbill Turtle shell or bekko, rhinoceros horn, rare timbers, medicinal plants including ginseng and Saussurea, and the most revered piece of aromatic agarwood, which is given its own individual name of *Ranjatai.*

These important cultural relics have been passed down as part of an imperial collection, and remain part of Japan' s rich cultural heritage. They also demonstrate the trade links between Japan and a variety of source countries in Asia, Africa and the Pacific rim. Many of the same trade routes still persist into the 21st century, with modern Japan deeply reliant on imports of natural resources to fuel its economy, to augment its food and medicinal security, and for luxury goods.

Japan' s patterns of consumption have a direct connection to conservation of high biological diversity, the 'priority places' which harbour a range of endangered fauna and flora species in terrestrial, marine and freshwater ecosystems. Ivory, timber and abalone are sourced from Africa; medicinal plants, reptiles, and agarwood from Asia; tunas, sharks and corals from the Pacific, Atlantic and Indian Oceans; timber from the Americas; and salmon from the Russian Far East. It is clear that trade in wild animals and plants is very much part of Japan' s global ecological footprint.

What has changed markedly is the abundance of supply. Many populations of these wild animal and plant species have become seriously depleted. This is because the 'treasures' of the natural world have become increasingly regarded as commodities—a change from subsistence use with small surpluses for trade towards commercial levels of exploitation. Another major change in recent decades has been that Japan' s economy has become more closely tied to that of China, and as China' s economy has expanded, so has the tendency for Japan to become an end-consumer of products sourced from its close neighbour, known as 'the world' s factory' .

The articles contained in *the State of Wildlife Trade in Japan* provide analysis and insight into current patterns of supply and demand, and show the mix of luxury, tradition, and necessity that drives Japan' s wildlife trade consumption. In a developed economy such as Japan' s, not only the trading companies, but Japanese consumers themselves have an ethical choice to make. Since the turn of the 21st century, Japanese society is changing to a 'green' way of thinking after years of over-consumption. In many ways this is not new to Japan—and could eventually represent a return to the ethics of the Edo Period, when nothing was wasted and recycling was very much part of the social contract.

This publication, launched on the occasion of Japan' s hosting of the 10th meeting of the Conference of the Parties to the Convention on Biological Diversity, aims to foster greater understanding of Japan' s trade patterns. It provides information for government decision-makers, who along with active participation from the private sector and civil society must play a critical role to shift Japan' s wildlife trade economy to one of responsible consumption. Japan' s leadership in this global effort can change market dynamics in a positive direction, and set new global standards for environmental stewardship. By focusing on legal and sustainable sources of and alternatives for wild animal and plants and their products and derivatives, Japan' s negative ecological impact will be reduced. And through strong collaboration with trading partners, many of them long-standing countries of supply for natural capital, Japan can contribute to the enhancement of sustainable management practices for wild animal and plant populations.

The following Japanese yen / US exchange rates sourced from the Bank of Japan were used in the report.

1999 USD1 = JPY 119.67 2008 USD1 = JPY 89.20

2005 USD1 = JPY 100.00 2009 USD1 = JPY 100.32

2007 USD1 = JPY 82.84

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Japan's imports of CITES-listed species

Tsugumi Saito, Project Staff

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Records of exports and imports in species listed in the Appendices of CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) provide useful reference information concerning the scale and characteristics of Japan' s international trade in wildlife. This report analyses the status of such trade, using the most recent data on import/export volumes of CITES-listed species compiled by Japan' s Ministry of Economy, Trade and Industry, in 2007.

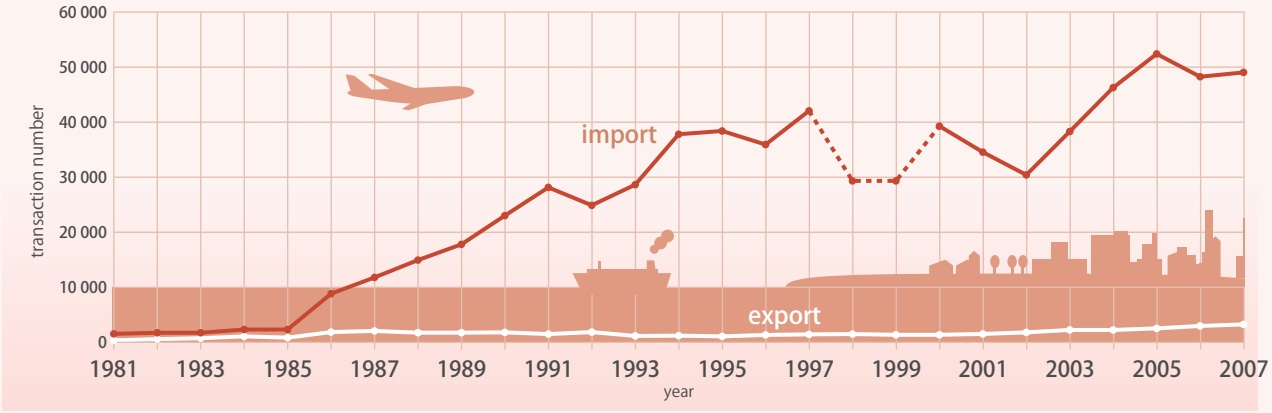
There is a great variety of wild plant and animal species and it is impossible to envisage the entire picture of international trade in these. Although Japan' s Ministry of Finance compiles trade data by commodity, it is often difficult to get a picture of the volumes of trade by species. There are roughly 5000 CITES-listed animal species and 28 000 plant species, and each CITES Party compiles records of imports/exports (including re-exports) of these species.

CITES regulations on species are based on the degree of protection needed by the given flora or fauna in trade, and species protected by CITES are listed in one of three Appendices (Appendix I, Appendix II, Appendix III). As a rule, all international trade for primarily commercial purposes of species listed in Appendix I is prohibited, and in the case of exceptions, trading requires an export permit issued by the government of the exporting country and an import permit issued by the government of the importing country. Commercial trade of species listed in Appendix II is regulated by a permitting system and requires an export permit issued by the government of the exporting country. In the case of Appendix III-species, listed at the discretion of individual range Parties, an export permit issued by the government of the exporting country, or a certificate of origin, is required.

The 2007 data on trade in CITES-listed species analysed in this report were the latest data available at the time research was conducted, and are based on the permits and certificates submitted to Customs on import to Japan, or (re-)export from Japan, of CITES-listed species. The units used to measure trade vary and it is very difficult to make a consistent and integrated analysis. For this reason, an individual incident of trade activity is termed a 'transaction' for the purposes of this analysis. Although this will not give a measure of total import volume, it gives an indication of frequency of transactions in different species of animals and plants.

As is clear from **Figure 1**, import transactions to Japan are far more numerous than (re-)exports from Japan. There are some fluctuations, but the number of import transactions peaked in 2005 and increased overall. Although the number of export transactions is

Figure 1 Trends in export/import transactions in CITES-listed species in Japan



Note: Due to a difference in the method of compilation in 1998 and 1999, these two years cannot be compared to the others.
Source: Ministry of Economy, Trade and Industry. CITES annual report 1981-2007 (compiled by TRAFFIC East Asia-Japan)

Table 1 Import transactions to Japan for 2007, by Appendix and taxon

			Appendix I		Appendix II		Appendix III	
			No. of transactions	No. of Species	No. of transactions	No. of Species	No. of transactions	No. of Species
Fauna (Animal)	CHORDATA	MAMMALIA	209	13(3)	1187	43(1)	14	4
		AVES	77	11	2462	170(1)	9	3
		REPTILIA	349	5(1)	25 587	172(4)	48	12(1)
		AMPHIBIA	0	0	73	25	0	0
		PESCES	337	4	225	14(2)	0	0
	ARTHROPODA		0	0	217	32	0	0
	ANNELIDA		0	0	4	1	0	0
	MOLLUSCA		0	0	95	7	252	1
	CNIDARIA		0	0	7064	130(25)	0	0
Animal Total			972	33(4)	36 914	594(33)	323	20(1)
Flora (Plant) Total			241	54(2)	10 619	924(14)	1	0(1)
Total			1213	87(6)	47 533	1518(47)	324	20(2)

Note: Species figures in ( ) are spp., sp. – i.e. genus or family-level classification only. Figures outside ( ) are the number of different types of species, excluding spp., sp.
Source: Ministry of Economy, Trade and Industry. (2009). CITES annual report 2007 (compiled by TRAFFIC East Asia-Japan)

very small, the number has increased over the past five years or so, and in the 10-year period from 1997 to 2007 the overall number of exports rose from less than 1500 to 3314. The total number of import transactions for 2007 was 49 070 and total exports were 3314. Approximately 80% of the imports and 70% of the exports were in animal specimens.

Imports

Table 1 shows that approximately 97% (47 533) of transactions involved species listed in CITES Appendix II. Of the Appendix II-listed species for both flora and fauna, reptiles made up the largest group imported, accounting for approximately 54% of all transactions involving Appendix II-listed species. There were at least 640 species of flora and 978 species of fauna imported. (These figures are based on transaction records at species-specific level.) There are cases of the same species being classified under different Appendices owing to such anomalies as “split-listing” , usually of geographically separate populations. Such data have deliberately not been double-counted in the totals.

The species accounting for the largest number of import transactions was the American Alligator (Mississippi Alligator) *Alligator mississippiensis* (8732 transactions, or about 17.8 % of the total). The next-largest groups are Reticulated Python *Python reticulatus* (3747 transactions) and Nile Crocodile *Crocodylus niloticus* (3192 transactions), with the remainder of the top 10 species also being reptiles. However, among transactions in higher taxa without recorded species names there is also a considerable number of

Table 2 Top five exporters/points of origin for Japan imports

exporters[1]	animals	plants	total	%	point of origin[2]	animals	plants	total	%
Taiwan	1658	6254	7912	16.1%	Indonesia	9777	383	10 160	20.7%
Indonesia	7570	326	7896	16.1%	USA	9064	378	9442	19.2%
Switzerland	6805	0	6805	13.9%	Taiwan	1509	6225	7734	15.8%
Italy	5639	8	5647	11.5%	Malaysia	2314	752	3066	6.2%
France	3384	12	3396	6.9%	Colombia	2054	6	2060	4.2%

[1] exporters or re-exporters [2] Imports with no entry in the point of origin column are not counted
Source: Ministry of Economy, Trade and Industry. (2009). CITES annual report 2007 (compiled by TRAFFIC East Asia-Japan)

imports of CNIDARIA, including stony corals (SCLERACTINIA spp.) (440) and *Acropora* spp. (400). In contrast to the case with fauna, imports of flora are seldom recorded by species name. For example, in 2007 there were 7150 import transactions for species of the orchid family, which were simply imported under the family name orchids (Orchidaceae spp.), with the species name unknown. This makes orchids the second-largest import group after the American Alligator. Orchids, including transactions at family and species level, account for approximately 85% of all flora imports. Of the flora imports for which the species name is known, the largest number of transactions involved *Phalaenopsis amabilis* (108).

Exporters and points of origin

In terms of numbers of exports, the five most significant traders to Japan are Taiwan, Indonesia, Switzerland, Italy and France (**Table 2**). For the top exporter, Taiwan, most of the transactions involve Orchidaceae, and these account for 57.6% of all imports of CITES-listed flora by Japan. In contrast, 95.9% of the exports to Japan by the second-largest exporter, Indonesia, involve fauna, and most of these are stony corals. The imports from Switzerland, Italy and France comprise a large number of transactions involving reptile leather products.

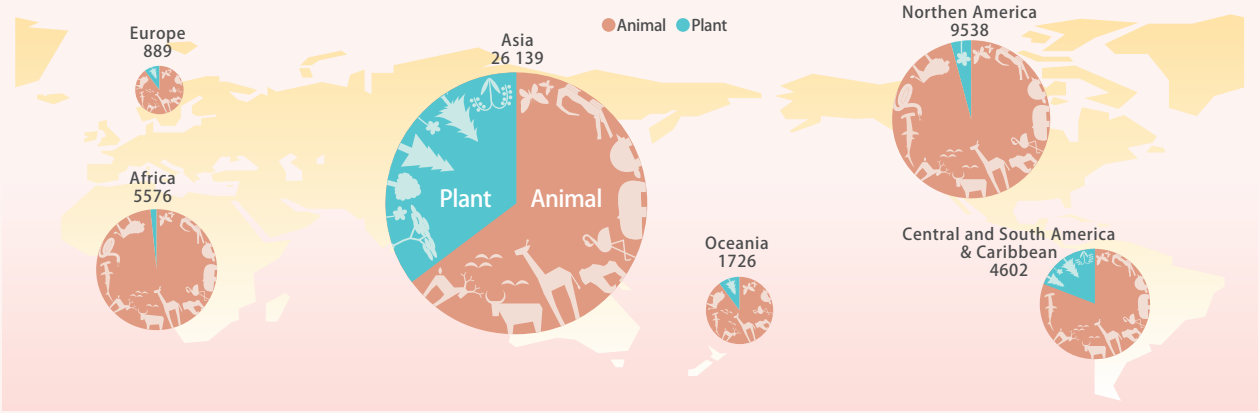
The top five countries/territories listed as "country of origin" for imports to Japan are Indonesia, USA, Taiwan, Malaysia, and Colombia. In imports of flora, there is a strong association with Taiwan, and it is high on the list of recorded exporters and on the list of recorded points of origin.

When the points of origin are viewed in terms of region, by far the largest numbers of import transactions are with countries/territories in Asia as seen in **Figure 2**. The next-largest numbers of transactions are with North America, followed by Africa. In comparison with other regions, Asia is the source of imports for a far higher percentage of flora. This is due to the presence of Taiwan, which is the point of origin for such a large share of flora imports. Europe and Asia account for the largest numbers of transactions of live animals and corals, respectively, and in four other regions reptile leather products account for from 45-90% of regional totals of transactions exported to Japan.

Wild or farmed? Sources of species imported into Japan

In CITES annual reports, information is recorded on whether imported specimens were reported as originating from the wild or from a captive-bred source (fauna) or an artificially propagated source (flora). In the 2007 statistics for Japan, 20 067 transactions involved fauna imports reported to be sourced from

Figure 2 Numbers of import transactions by region of origin, 2007



*Zonal classification refers to web page of United Nations. http://unstats.un.org/unsd/methods/m49/m49regin.htm. Viewed 31 August 2010.
*Except for 600 cases where point of origin was unknown.
*Total number of cases is proportional to area of a circle.
Source: Ministry of Economy, Trade and Industry. (2009). CITES annual report 2007 (compiled by TRAFFIC East Asia-Japan)

the wild and 17 182 transactions were reported as being from captive-bred sources (**Table 3**). In contrast, very few transactions of flora were reported to be taken from the wild, while more than 90% were reported as from artificially propagated sources.

Table 3 Imports by source type, 2007

	animals	plants	total
wild	20 166	607	20 773
captive bred and ranching	17 182	10 200	27 382
others and origin unknown	861	54	915
total	38 209	10 861	49 070

Source: Ministry of Economy, Trade and Industry (2009). CITES annual report 2007 (compiled by TRAFFIC East Asia-Japan)

What descriptions are used for imported species and their products?

The descriptions under which CITES-listed species are imported can indicate how the CITES-listed species are being used in Japan. According to CITES procedures, the description of a species/product at the time of transaction may be one of 73 types (as of 2007) for record-keeping (CITES, 2006).

The most common form in which specimens of fauna species are imported is skin, hide or as other leather products (**Table 4**). Most of these products are from reptiles, which constitute 99.5% of total skin products. On the other hand, live imports come from a wide variety of fauna categories. Mammal specimens are imported in the widest range of forms, including clothing, scientific specimens and carvings.

Skin/hide/leather products

Most of these products are from reptiles, as noted, although a small number is from mammals and birds. Because some of these imports are recorded in terms of number of products/individuals and others by weight, it is difficult to make comprehensive comparisons. At least 1.12 million reptile skins were recorded imported in 2007, according to records of imports noting the number of products/individuals. The volume of imports was greatest from Hong Kong.

Live fauna

In 2007, live specimens of CITES-listed animals imported to Japan totalled more than 120 000 individuals from over 400 species. Of these, 12 547 individuals were Appendix-I species, and Asian Arowana *Scleropages formosus* accounted for approximately 97% of the Appendix-I imports.

Most of the live animals imported were Appendix-II species, amounting to 102 034 individuals. Of these,

Table 4 Numbers of transaction per type of product (fauna) imported to Japan, 2007

		total	live	body	bone, skeleton, skull	hair, feather	claw, horn, tusk	egg	shell	gall bladder	musk	meat	specimen (scientific)	leather product (small) (large)	skin, skin piece,side	plate	garment	cloth	carving	derivertives	extract	medicine	caviar	coral (raw)
CHORDATA	MAMMALIA	1410	143		4	14	63			3	4		294	51	65	8	344	49	172		1	195		
	AVES	2548	2527	5		2			1				6	3	2		1		1					
	REPTILIA	25 984	1162	7	3							254	1	23 209	1108		218		10	11		1		
	AMPHIBIA	73	73																					
	ACTINOPTERYGII	557	356	16								2									15		168	
	SARCOPTERYGII	5	2	2				1																
ARTHROPODA	INSECTA	202		202																				
	ARACHNIDA	15	15																					
ANNELIDA	HIRUDINOIDEA	4	4																					
MOLLUSCA	GASTROPODA	330	253						1										12	65				
	BIVALVIA	17	15																1					
CNIDARIA	ANTHOZOA	6977																	5	24				6948
	HYDROZOA	87		232																				87
Total		12 225	4550	464	7	16	63	1	2	3	4	256	301	23 263	1175	8	563	49	201	100	16	196	168	7035

Source: Ministry of Economy, Trade and Industry. (2009). CITES annual report 2007 (compiled by TRAFFIC East Asia-Japan)

the species imported in largest numbers was the Java Sparrow *Lonchura oryzivora* (formerly described as *Padda oryzivora*), accounting for approximately 29% of the total. All of these were imported from Taiwan. Tortoises and turtles TESTUDINES accounted for approximately 22% of the total. In other cases, such as that of the ARACHNIDA group of spiders (tarantulas), all imports are live and the tarantulas are believed to be kept as pets, while all of the INSECTA (butterflies, etc.) imported are assumed to be already dead and used for display purposes.

Of Appendix-III species, 6368 individuals were imported in 2007, with the largest group being tortoises and freshwater turtles, accounting for more than 99% of the total: tortoises (Testudinidae spp.) comprised 6225 individuals[1]. Since the import records do not include a species name, these records cannot confirm what kinds of tortoises were imported. Moreover, since the import records do give the number of individuals, as mentioned earlier, they are not included in the percentages of live fauna imports. However, records show that approximately 119 t of South African Perlemoen *Haliotis midae*, listed temporarily in Appendix III 2007–2010, were imported.

Flora

The 2007 total of import transactions for flora was 10 861. The largest number of transactions was for orchids Orchidaceae, followed by Thymelaeaceae, Nepenthaceae and Cactaceae (see **Table 5**). Most of the imports were as "live plants". The families for which over 90% of the imports were of live plants included Orchidaceae, Cactaceae, Nepenthaceae, etc., accounting for as many as 11 of the 24 families. Among imports of logs, wood powder and chips, the most prominent family is Thymelaeaceae (includes ramin *Gonystylus* spp. and agarwood *Aquilaria* spp.).

The import/export data kept on CITES-listed species are one of the few sources available for analysing reported international trade in plants and animals. When the overall trends in this trade are

[1] Some tortoises are reported as Appendix III as mentioned above, but all tortoises (Testudinidae) are listed in Appendix I and Appendix II.

Table 5 Types of products imported in 2007 (descriptions used for plant imports) viewed by flora family (number of transactions)

	total	live	root	seed	stem	dried plant	extract	medicine	powder	chips	log	timber	sawn wood	carving	derivertives	coral	leather product(small)
Orchidaceae	9237	9162	68			1	1	5									
Thymelaeaceae	427				23	5			12	85		276	4	21	1		
Nepenthaceae	359	359															
Cactaceae	244	237		2	3				1						1		
Sarraceniaceae	100	100															
Leguminosae	96										1	13	1	80		1	
Cyatheaceae	65	28			10	2			2	15		7			1		
Liliaceae	58	40					18										
Compositae	43		25		7	4		7									
Bromeliaceae	31	31															
Apocynaceae	28	18					1		4						4		1
Cycadaceae	26	26															
Primulaceae	26	5	21														
Euphorbiaceae	26	26															
Zamiaceae	24	24															
Droseraceae	22	20					2										
Amaryllidaceae	19		19														
Meliaceae	16											3	6	7			
Araliaceae	5		4					1									
Palmae	3	3															
Rosaceae	2						2										
Dicksoniaceae	1					1											
Agavaceae	1	1															
Zygophyllaceae	1												1				
Taxaceae	1							1									
Total	10861	10080	137	2	43	13	24	14	19	100	1	299	12	108	7	1	1

Source: Ministry of Economy, Trade and Industry. (2009) CITES annual report 2007 (compiled by TRAFFIC East Asia-Japan)

analysed on the basis of these data, a picture is generated regarding the variety of wild flora and fauna species Japan imports, from where they are imported, and in what form. Furthermore, these data are a starting point in getting a more detailed picture of the volumes of this trade and points of origin, which in turn can show to what degree Japan's consumption may actually be impacting flora and fauna in foreign habitats. This depiction of the connections between Japan and the rest of the world can enable Japanese citizens to become more aware of the degree of responsibility each person has for the conservation of wild animals and plants in foreign countries and territories.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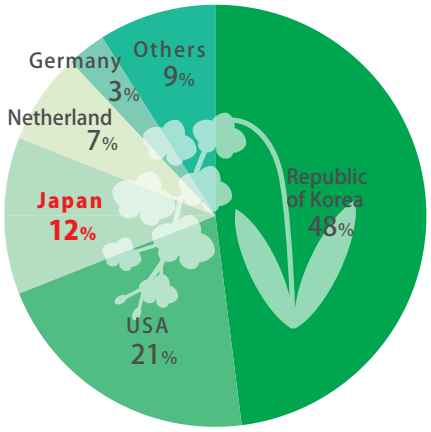
COLUMN

World imports of live orchids (Orchidaceae)

World imports of live orchid Orchidaceae by major importers (2007)

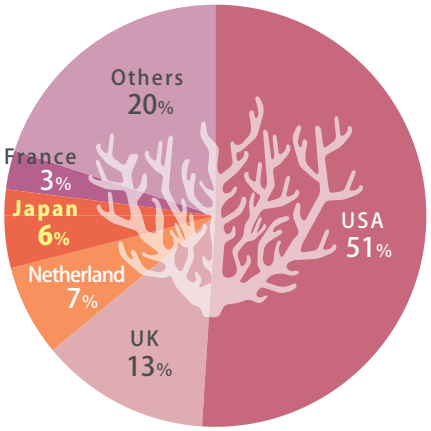


Over 119 million orchid plants were recorded in international trade worldwide in 2007.

*There are statistics recorded by weight: China: 2650 t; Hong Kong: 1446 kg; Singapore: 300 kg, Brazil: 50 kg, USA: 12.702 kg and some in small weight units that are not counted.
Source: CITES trade statistics derived from the CITES Trade Database, managed by UNEP-WCMC, received from E. White, UNEP-WCMC, *in litt.,* 24 June 2010.

World imports of stony corals SCLERACTINIA

World imports of stony corals SCLERACTINIA by major importers (2007)

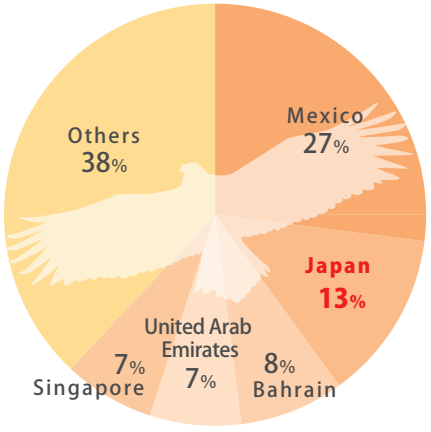


All species of stony coral SCLERACTINIA spp. are listed in CITES Appendix II. Due to the fact that a considerable amount of reported coral trade was recorded in weight units such as kilogrammes (not included in these statistics), it is difficult to grasp the actual trade volumes from these numbers of pieces alone. However, in 2007, the global trade in stony coral was 3.98 million pieces; of these, more than 2.51 million were traded live.

*Compiled from all forms reported (body, carving, coral (raw), derivatives, live, specimens (scientific)) for which the unit is piece or number.
*Other units such as weight (approximately 2696 t) exist, but have been excluded here because they are not comparable.
Source: CITES trade statistics derived from the CITES Trade Database, managed by UNEP-WCMC, received from E. White, UNEP-WCMC, *in litt.,* 24 June 2010.

World imports of live CITES-listed birds

World imports of CITES listed live birds by major importers (2007)

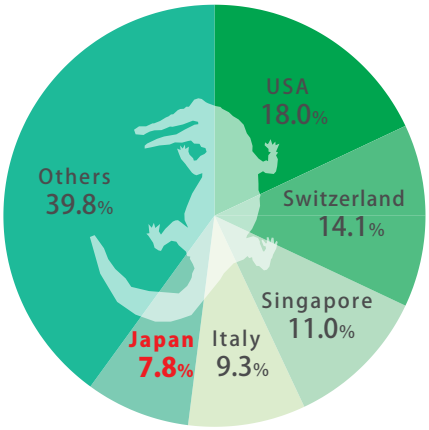


In 2007, some 320 000 live birds of about 460 CITES-listed species were traded internationally worldwide. The three species with the largest trade volumes were Java Sparrow *Lonchura oryzivora,* Black-masked Lovebird *Agapornis personatus* and Grey-breasted Parakeet *Myiopsitta monachus,* accounting for about 40% of all live CITES-listed bird in 2007.

Source: CITES trade statistics derived from the CITES Trade Database, managed by UNEP-WCMC, received from E. White, UNEP-WCMC, *in litt.,* 24 June 2010.

World imports of reptile skins and leather products

World imports of reptile skins and leather products (2007)



Various units are used in statistics for trade in reptile skins and leather products, which makes equivalent comparisons difficult. In compiling this analysis only data with type descriptions that can be counted as a unit of reptile skin product have been selected. From this data set, a total of over 15.9 million reptile leather products from CITES-listed species were reported in trade internationally in 2007.

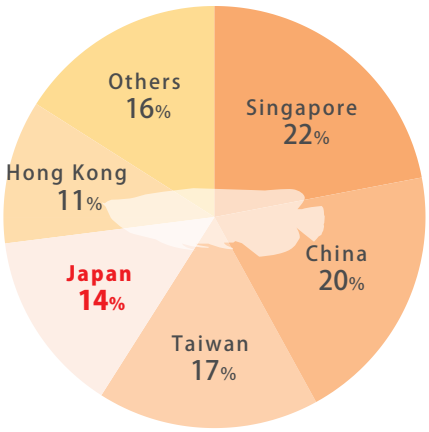
*The unit is number of pieces or amounts that can be judged the equivalent of a number of pieces, such as pair and sets. Units other than number of pieces are not included. Other units such as kg (14 391.296), m (4 107.09), cm^2 (1 251), sq. ft. (14 466.4) and m^2 (49) exist, but they are excluded here as not comparable.

*Skin and leather products here are the total of description codes (large, small) (LPS, LPL), side (SID), skin, hide (SKI), skin pieces (SKP)

Source: CITES trade statistics derived from the CITES Trade Database, managed by UNEP-WCMC, received from E. White, UNEP-WCMC, *in litt.,* 24 June 2010.

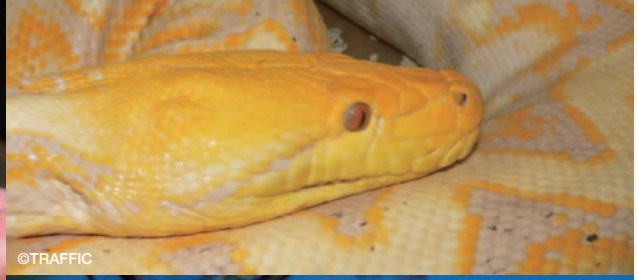
World imports of Asian Arowana

World imports of live Asian Arowana *Scleropages formosus* by major importers (2007)



With its natural habitat in Southeast Asia, Asian Arowana *Scleropages formosus* is classified as Endangered (EN) in the IUCN Red List and from 1995 all individual groups have been listed in CITES Appendix I. However, captive-breeding operations in Indonesia, Malaysia and Singapore are registered according to CITES requirements and allowed to trade under a permit system. Specimens bred at these operations and intended for export are implanted with an identification microchip to enable traceability. The world import total for 2007 was some 97 000 individuals, with East Asian countries accounting for the largest share of the trade.

Source: Compiled by TRAFFIC East Asia-Japan from UNEP-WCMC CITES Trade Database.Available at: http://www.unep-wcmc.org/citestrade/trade.cfm. Accessed on 11 June 2010.



Trade in Live Reptiles as Pets

Kahoru Kanari, Programme Officer

爬

Japan – a major importer of live reptiles

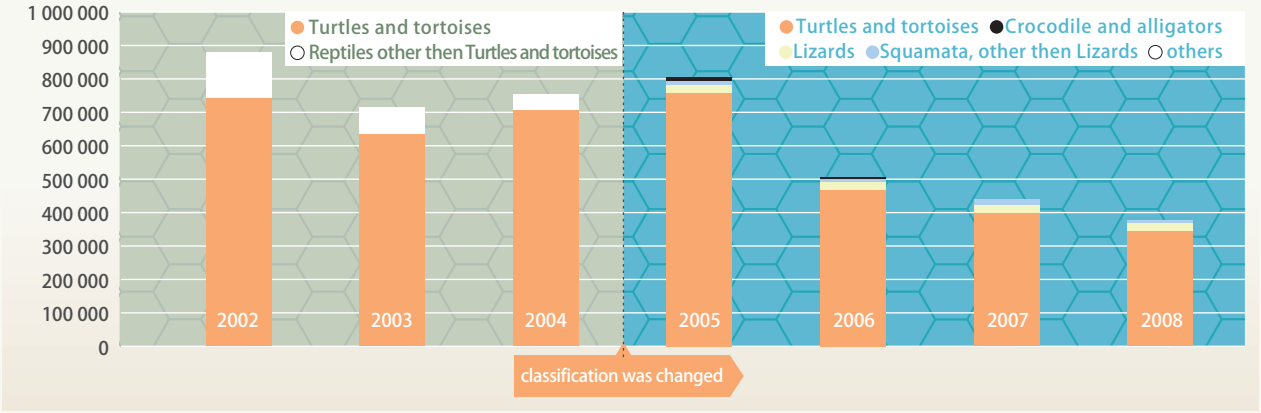
Japan's imports of live reptiles in 2007 were valued at JPY470 million, approximately USD 5.67 million, making it the third-largest importer of reptiles in the world (Ministry of Finance, 2010; UNSD Comtrade, 2009). According to the Trade Statistics of Japan, the number of reptiles imported has been decreasing gradually since 2005, with annual imports in the range of 300 000 individuals by 2008 (see **Figure 1**). For CITES-listed live reptile imports, Japan has continued to be among the top 10 countries since becoming a CITES Party in 1980 (CITES, 2010). Of the 2007 world import total of two million individual CITES-listed reptiles, Japan accounted for 64 000 (E. White, UNEP-WCMC, *in litt.,* 24 June 2010).

In contrast, according to trade statistics, Japan's exports (including re-exports) of reptiles for 2007 were valued at two million Japanese yen (USD 24 143) (Ministry of Finance, 2010), a small value in comparison with that of its reptile imports, clearly positioning Japan as a significant consumer market with regard to the reptile trade.

According to the CITES Trade Database compiled by UNEP-WCMC, there were 323 species of CITES-listed reptiles involved in international trade in 2007 and Japan imported 188 of these species, equivalent to approximately 58% of the total number of species in trade. Japan was the top importer in the world for the Indian Star Tortoise *Geochelone elegans* and the Spur-thighed Tortoise *Testudo graeca* in 2007. For Testudinidae spp. as a whole (i.e. all species of tortoises), Japan was second only to the USA in terms of import volumes in 2007 (see **Figure 2**). Prior to 2007, first and second places were occupied by Japan and the USA most years, making Japan one of the top global importers for Testudinidae spp.

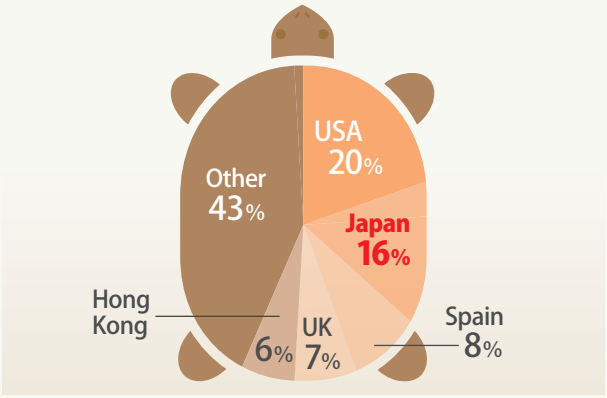
From 1981 to the late 1990s, Japan's imports of CITES-listed reptiles increased (see **Figure 3**). According to specialist magazines and books on reptiles, a concurrent upsurge in exotic animals began during Japan's "economic boom" from the late 1980s into the early 1990s. In the early stages of the boom, lizards such as iguanas and chameleons were popular (Sugano, 2008), and later, from the latter half of the 1990s, the ratio of tortoises and freshwater turtles grew. From CITES Trade Database information for 2007, the species with the largest number of live imports was Spur-thighed Tortoise, (11 147 individuals), followed by Central Asian Tortoise *Testudo horsfieldii* (6704 individuals). Among snakes, Ball Python *Python regius* was the most-imported species (5113 individuals), while among lizards the largest number of imports was of the Green Iguana *Iguana iguana* (2811

Figure 1 Number of live reptiles imported by Japan, according to trade statistics, 2002-2008



Source: Trade Statistics of Japan, Ministry of Finance, 2009
Notes: Description of classifications follows Japanese HS classification.
Since Japan established the import/export classification codes for collecting Customs trade statistics for live reptiles in 2002, 'turtles and tortoises' have accounted for a significant proportion of total Japanese live reptile imports, far exceeding those for snakes, lizards and crocodilians.

Figure 2 World imports of live tortoises (family Testudinidae), 2007



Source: CITES trade statistics derived from the CITES Trade Database, managed by UNEP-WCMC, received from E. White, UNEP-WCMC, *in litt.*, 24 June 2010.


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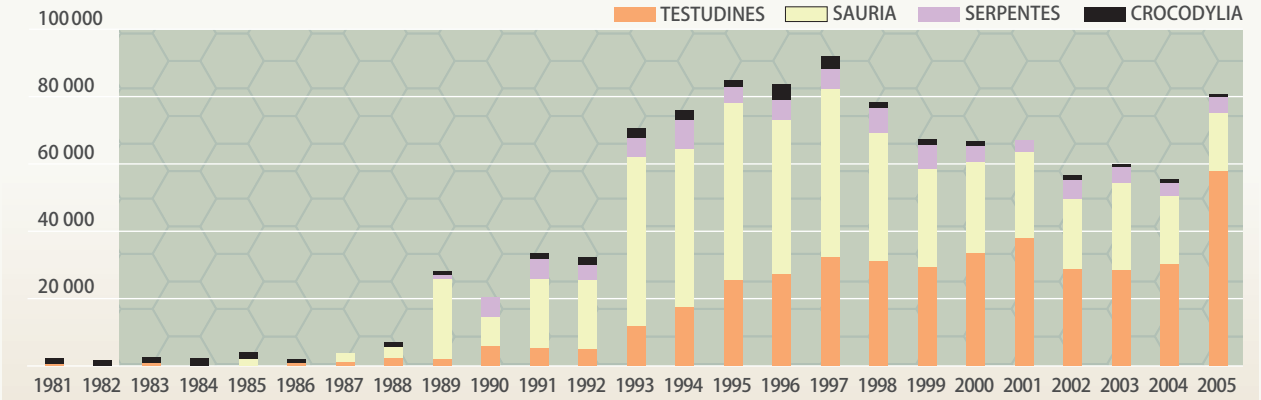
Figure 3 Numbers of CITES-listed live reptiles reported as imported into Japan during the period from 1981 to 2005



Source: UNEP-WCMC CITES Trade Database: data by request.
*Data exclude records in kilogrammes. (TESTUDINE spp. 1454kg in 1981, *Naja naja* 350kg in 1990 and *Pelodiscus sinensis* 17056.75kg in 2005)
*The Chinese Softshell Turtle *Pelodiscus sinensis* was listed in CITES Appendix III (CITES) by China between 17 February and 23 June 2005. A total of 27 100 individuals of this species were reported as imports to Japan during this period. This can be considered as one reason for the sudden increase in import numbers for TESTUDINES in 2005.

Figure 4 **Distribution of wild populations per continent/region corresponding to species observed in Japanese pet shops, 2007.**

Note: Species with habitats in multiple regions are counted in duplicate to include each region

individuals) (CITES trade statistics derived from the CITES Trade Database, managed by UNEP-WCMC, received from E. White, UNEP WCMC, *in litt*., 24 June 2010).

Pet shop survey results

In 2007, TRAFFIC conducted a survey of 40 pet shops that deal in reptiles in the east, west and centre of Honshu, the main island of Japan. The survey revealed 410 species of reptile on sale. In terms of numbers of species, lizards SAURIA spp. were the most numerous, accounting for 40% of the total number of species. As for tortoises and freshwater turtles, TESTUDINES spp., the survey found that more than half of all known species of were being sold. In this market survey, the most frequently sold reptile was found to be the Ball Python (CITES App. II). Among the tortoises and freshwater turtles, the species most often sold was the Spur-thighed Tortoise (CITES App. II). The survey revealed that the species in trade were most often those native to Southeast Asia, followed in regularity of occurrence by those native to Africa and Oceania (see **Figure 4**).

Among the species found in the pet shop survey were 15 species listed in the IUCN Red List (2007) as Critically Endangered (CR). Regardless of whether or not these Critically Endangered species are being traded legally, there remains a concern about the negative impact of this trade on the preservation of these species in their countries of origin.

Furthermore, the survey revealed that species protected under Japan' s *Cultural Properties Protection Law*, including the Japanese Yellow-margined Box Turtle *Cuora flavomarginata evelynae* and the Ryukyu Black-breasted Leaf Turtle *Geoemyda japonica*, were also being sold. Because these are protected species (designated as National Natural Monuments), and their sale is banned by the *Cultural Properties Protection Law*, these species were being sold illegally.

Legal regulation concerning live reptiles

In addition to *the Foreign Exchange and Foreign Trade Law* and *the Customs Law* that regulate the import/export of CITES Appendix I-listed species at the nation's ports and watersides, Japan also has *the Law for the Conservation of Endangered Species of Wild Fauna and Flora (LCES)* regulating the trade of

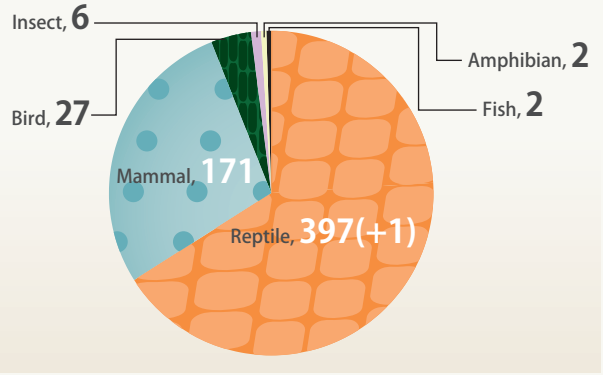
CITES Appendix I-listed species and other rare wildlife species once they enter Japan, and the capture of these species in Japan. *LCES* applies only to CITES Appendix I-listed species and not to Appendix-II or Appendix-III species. Therefore, once CITES Appendix-II or Appendix-III species have entered Japan there is no regulation concerning their trade within the domestic market.

Illegal trade

Reptiles are the most frequent targets of activities involving illegal imports of any fauna into Japan. In 2007 and 2008, 397 live reptiles or reptile bodies were seized by Japanese Customs officials (see **Figure 5**). Most of these reptiles were tortoises and freshwater turtles.

According to information analysed by TRAFFIC regarding incidents of illegal trade and Customs seizures within Japan between 1995 and 2008, the most frequent targets of this illegal trade are species including the Indian Star Tortoise *Geochelone elegans*, Radiated Tortoise *Astrochelys radiata*, Burmese Star Tortoise *Geochelone platynota*, and the Pancake Tortoise *Malacochersus tornieri*.

Figure 5 **Live animals and carcasses confiscated by Japanese Customs from 2007 to 2008 (except corals) (unit: no. of Individuals)**



Source: Ministry of Finance, Customs and Tariff Bureau, 2007
Note: One case (three specimens) consisted of reptiles and corals. If this case is included as one reptile individual, the total is 397; if it included two reptiles, the total is 398.

Conclusion

Japan is a major importer of live reptiles. Most of the reptiles sold in Japan are individuals that have been imported from foreign countries. Some of these are of species whose export is restricted in the countries of origin, or species on the IUCN Red List of Threatened Species. Although there are laws in place to regulate the trade of reptiles in line with the import/export regulations of CITES and Japan's domestic regulations such as *LCES*, those domestic regulations do not apply to all species of reptile. The most of illegal animal seizures (except corals) at Japan' s borders by Customs involve reptile species, but domestic trade infractions can only be enforced for Appendix I-listed species. Among the reasons that TRAFFIC has identified for these illegal activities are the lack of severity in the penalties for illegal trading under *LCES*, the management system shortfalls for traders and vendors dealing in rare animals, and the need to review the system for registering individual live animals. TRAFFIC believes that Japan, as an end-consumer of the world's wildlife resources, must amend its current national wildlife trade laws to ensure that the trade occurring in Japan is not threatening the populations of wild reptiles around the world, thereby reducing the negative impact of Japan' s ecological footprint.

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Timber Trade of Japan

Kahoru Kanari, Programme Officer

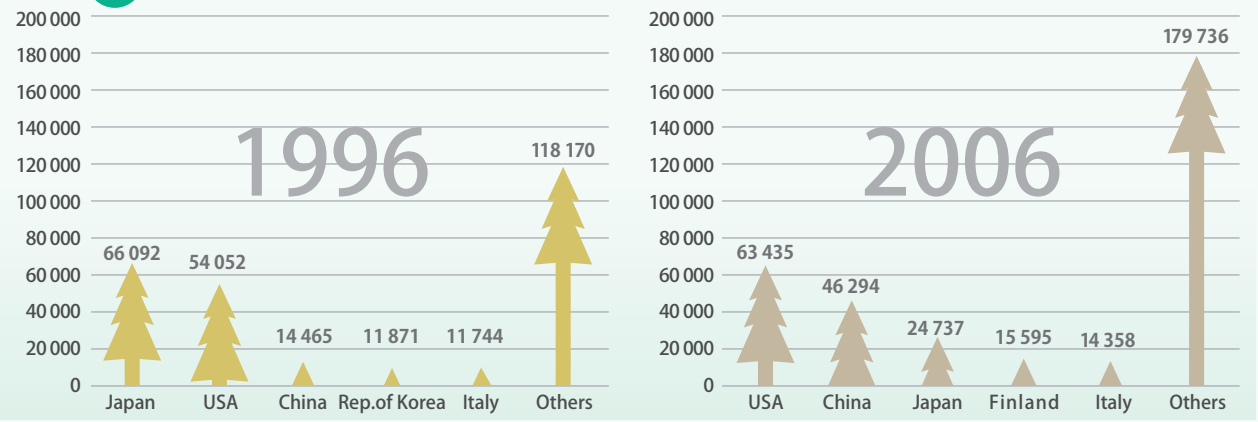
China: window to the world.

Japan has been and remains one of the largest importers of forest products in the world. In 1996, Japan was the number one timber importer in the world in volume. As the volume of demand for wood products in Japan has decreased in recent years, the USA and China replaced Japan as the largest importers, but based on 2006 data Japan remained the third-largest importer in the world (FAO, 1999; FAO, 2009). The country's self-supply ratio for wood products remains low at 27.8% (Japan Forestry Agency, 2010) and there is still a big dependency on imports as the supply source (see **Figure 1**).

Looking at the global dynamics of timber trade over the past decade, both the import and export volumes of China have increased along with its share of the trade, in a manner that befits the country's reputation today as 'the world's factory'. Japan' s timber imports have also been influenced by this emergence of China's trade in this sector as a neighbouring country. In 1999, Japan imported the largest share of its forestry products from the USA on a monetary basis, while China was only the fifthlargest supplier to Japan, with an amount accounting for just seven per cent of the total. Ten years later in 2009, however, China had become the largest supplier of forestry products to Japan, accounting for 15% of the total (**Figure 2**) (Ministry of Agriculture, Forestry and Fishery, 2010). In China, the flooding that occurred in the Yangtze watershed in 1998 led the Chinese government to implement limitations and bans of logging in the country's natural forest. As a result, much of the wood products Japan imports from China today are made up of timber that has been imported by China from other countries. In this way, Japan' s wood market is now affected by forestry products that have been logged in China' s trading partners, such as Russia and Southeast Asian and African countries, and then imported to Japan via China.

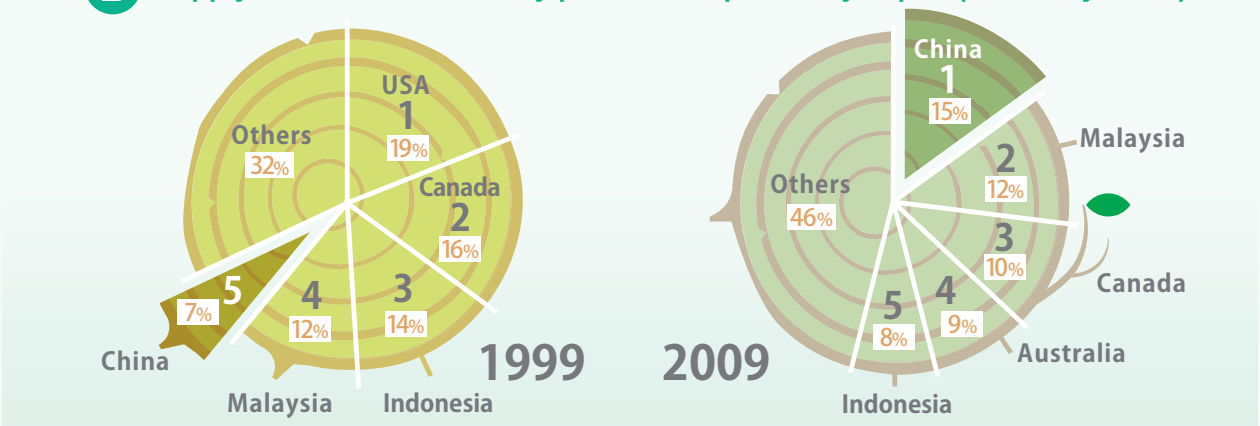
An important question is: Where do the wood products imported by Japan from China actually originate from? Wood is a product that can be obtained from a variety of trees and knowing the species of the product involved can be a clue for revealing the trade route by which it has been supplied. Japan generally does not capture the species-specific trade statistic codes under the Customs "Harmonized Commodity Description and Coding System" (hereafter HS) for tariff classification of commodities. Even though there are statistical and identification limitations to identifying each species, and only large categories such as conifers and certain species of tropical timber are shown in the HS classification, it can reveal some information. For

Figure 1 **World timber import (Unit: 1000m³)**



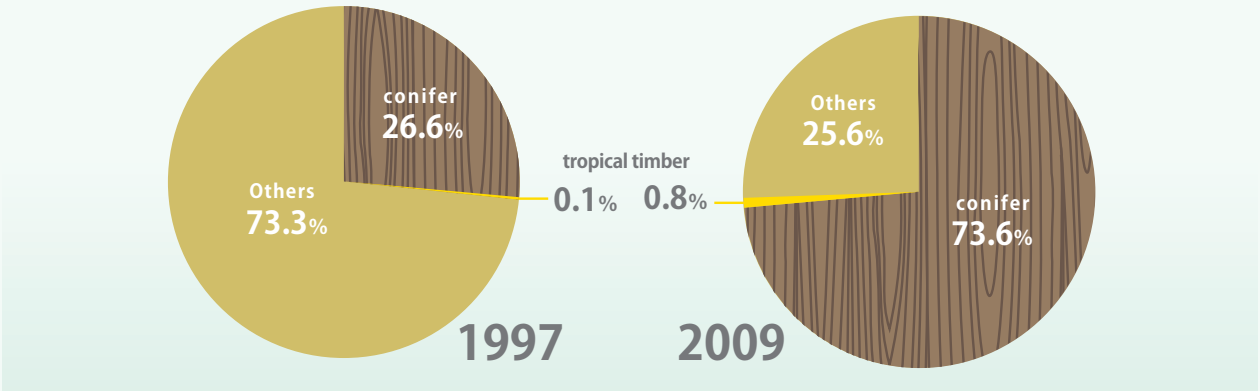
Total for industrial roundwood, sawnwood and wood-based panels.
Source: FAO, 1996; FAO, 2006, calculation by TRAFFIC East Asia-Japan

Figure 2 **Supply structure for forestry products imported by Japan (monetary basis)**



Source: Ministry of Agriculture, Forestry and Fishery, 2010

Figure 3 **Breakdown of sawn wood imports by Japan from China (HS4407) (volume percentage)**

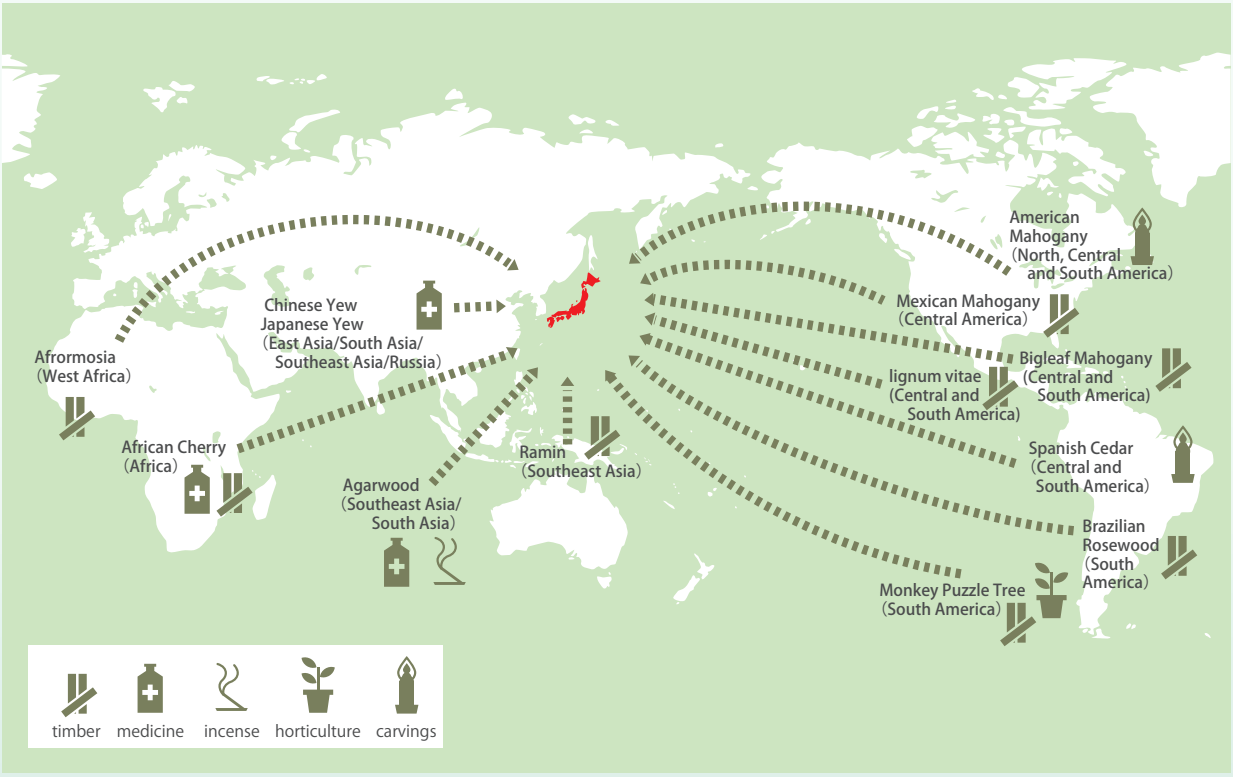


Source: Ministry of Finance Japan (2010). Trade Statistics of Japan

example, the breakdown of commodities under designated HS code 4407 wood (sawn wood with a thickness of over six millimetres) imported by Japan from China in 1997 was 26.6% conifers, 0.1% tropical wood and the remainder was "other species" (wood of temperate zone forests, etc., such as *Paulownia* spp.). By 2009, however, that breakdown had changed drastically, with conifers now constituting 73.6% and tropical wood 0.8% of the total (**Figure 3**) (Ministry of Finance, 2010).

In March 2010, TRAFFIC East Asia-Japan conducted a market survey of wood products sold on the general market in Japan that had been processed and

Figure 4 **CITES-listed wood species imported by Japan from around the world and their uses**



Source: Ministry of Economy, Trade and Industry, CITES annual report 2000-2007
Note: CITES annual report (Ministry of Economy, Trade and Industry). Species and descriptions are listed from all the species recorded as imported 2000-2007. The regions are identified by the species' natural origins.

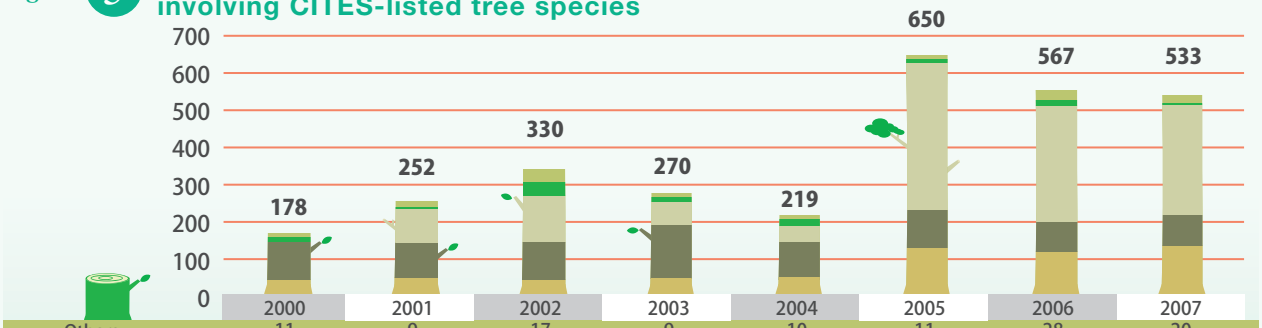
manufactured in China. In collaboration with the Forestry and Forest Products Research Institute, a study was made to determine the types of trees the wood came from. From that study it was determined that small wood products like tableware sold in Tokyo that are labelled "Made in China" are made mostly of wood from trees of the temperate zone or tropics from Asian countries of origin. Species that grow only in Borneo, such as Ulin *Eusideroxylon zwageri* and CITES-listed species such as Ramin *Gonystylus* spp., are identified in this study.

CITES-listed wood species and trade by Japan

Japan is an important importing country of CITES-listed tree species (**Figure 4**). CITES lists more than 30 tree species in its Appendices, and international trade of these products is monitored and regulated. Regarding Japan' s number of import transactions involving these species, imports of ramin *Gonystylus* spp. increased in 2005 when it was moved from Appendix III to Appendix II and has maintained a steady import volume since (**Figure 5**). Japan' s import records since 2000 show large import volumes of four types of CITES-listed tree species, the fragrant wood agarwood *Aquilaria* spp., Brazilian Rosewood *Dalbergia nigra* used for instrument making, Afrormosia *Pericopsis elata* used for making furniture and flooring, and ramin used for making picture frames and toys. Among these, Japan' s import volumes for ramin and Brazilian Rosewood are among the largest in the world (from a TRAFFIC search of UNEP-WCMC CITES Trade Database).

The trade records show distinct patterns of trade for each species. A country that supplies wood to Japan is not necessarily the country of origin of the species concerned. For example, agarwood is imported to Japan from Hong Kong or Singapore with the declared countries of origin as Indonesia and Malaysia. Brazilian Rosewood is imported to Japan from the USA, the UK

Figure 5 **Numbers of Japan's import transactions (numbers of permits) involving CITES-listed tree species**



	2000	2001	2002	2003	2004	2005	2006	2007
Others	11	9	17	9	10	11	28	20
Pericopsis elata	17	2	19	15	17	10	16	4
Gonystylus spp.	0	91	139	53	41	401	323	297
Dalbergia nigra	105	96	109	143	98	103	83	82
Aquilaria spp.	45	54	46	50	53	125	117	130

Source: Ministry of Economy, Trade and Industry, CITES annual report

Table 1 **Types of wood interdicted by Japan Customs**

date of interdiction carried on	type of transportation	form	type	number	unit	reason for interdiction	CITES App.	exporting country / territory
2007/May/07	baggage transported by air	incense	agarwood	13	pieces	no CITES export/re-export permit	II	Taiwan
2007/Nov./12	mail	jewellery and accessory	agarwood	1	pieces	no CITES export/re-export permit	II	Viet Nam
2007/Nov./13	mail	pouch	agarwood	1	pieces	no CITES export/re-export permit	II	Taiwan
2008/Sept./5	mail	incense wood	agarwood	1	pieces	no CITES export/re-export permit	II	Thailand
2008/Sept./5	mail	incense wood	agarwood	1	pieces	no CITES export/re-export permit	II	Thailand
2008/Nov./6	mail	medicine	agarwood	90	pieces	no CITES export/re-export permit	II	China

Source: Japan Customs, 2007; Japan Customs, 2008

or Germany with the declared country of origin as Brazil. Afrormosia is declared as originating from the Congo and Cameroon, but the wood is imported to Japan from Taiwan.

While much of the trade is done legally in accordance with CITES procedures, there are also cases where Japanese Customs has stopped illegal transactions in these species (Japan Customs, 2007; Japan Customs, 2008). Among CITES-listed species, attempted smuggling of import shipments of agarwood, primarily in postal packages from Thailand, Taiwan, China and Viet Nam have been stopped at Japanese Customs in 2007 and 2008 (see **Table 1**).

In terms of CITES (re-) exports from Japan, the number of export transactions of products derived from CITES-listed tree species from Japan amounts to only about one-fifth the number of import transactions, even in the years of high export frequency. In some years there has been only one such export transaction recorded.

Forestry products imported to Japan as the final consumption destination are sold on the Japanese market in a number of forms. There are specialized stores dealing in unprocessed timber and specialized stores selling processed wood products (instruments, incense). There are no statistics or studies available by species or which give a whole picture of the scale of Japan's market for CITES-listed tree species.

In the ongoing efforts of countries around the world to protect forest resources from over-exploitation and put in place measures to prevent illegal logging and trade in illegal timber, CITES provides a framework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that can be effective in a number of aspects for forest resources conservation. These include CITES functions for monitoring trade, the fact that it provides a structure to achieve sustainable forestry practices and its role in promoting the establishment and implementation of related national laws. However, the present lack of awareness by traders, consumers and enforcement officers of the fact that CITES regulates and monitors trade in some tree species, as well as the difficulty in species identification, continue to be two of the major challenges in order to make CITES truly effective. Even greater efforts must be made from now on to tackle the issues of increasing awareness of CITES requirements and compliance by Japan' s wood import and trade industry and to put in place effective law enforcement based on strengthened monitoring functions. This should include a focus on species identification, supported by the necessary government policy measures and administrative diligence.

Looking to the future, it is necessary to build on initial bilateral co-operation efforts between Japan and its trade partners. Progress has been made with individual Southeast Asian countries and China to combat illegal logging and illegal timber trade, but it is increasingly important to determine the country of origin through increased traceability between point of harvest and end-use market destinations. By understanding where the wood coming to Japan, for example via China, was actually harvested, it will be possible to pursue opportunities to improve governance and management of forest resources in major timber-producing countries throughout the world.

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COLUMN

Statistics and the Role of Customs

In Japan, the statistics available to provide insight into the status of international trade in wood are the Ministry of Finance's Japan Trade Statistics and the CITES annual report of the Ministry of Economy, Trade and Industry. The Trade Statistics provide data on shipments valued at more than JPY 200 000 (USD 1994) per case but do not contain statistics concerning species. On the other hand, the CITES annual report lists all transactions by species, but only for species listed in the CITES Appendices.

One of the problems with trade statistics in particular is the discrepancies in volume and price figures between the export country and import country records for the same shipments. TRAFFIC has noted these discrepancies and proposed measures such as having the export country and import country co-operate in comparing Customs declaration documents, to identify and eliminate these discrepancies in trade statistics and thus achieve greater transparency in international trade.

Figure **Example of discrepancies between reported Japanese Customs import data and reported Chinese Customs export data**

Note: Orange bars show Japan's Customs figures (imports), light green bars show China's Customs figures (exports). From 2000 to 2002 Japan's figures were higher, but since 2003 China's figures have been far higher than Japan's.
Sources: Japan Finance Ministry, China Customs Agency

Japan's Trade in Medicinal Plants

Kahoru Kanari, Programme Officer

People use wild flora in a variety of ways. For direct or indirect ingestion, the plants are used as food, oil, drink, spice, fodder, medicine, poison and as aromatics (Hotta *et al.*, 1989). Among these uses, the greatest number of plant species has been used for medicinal purposes – with a variety of plant-based pharmacopoeias and medicinal systems throughout the world. Even today, there are many countries that continue to depend on traditional medicine practices using medicinal plants as a primary means to maintain the health of their people. The medicinal plants are not only used domestically but also appear in international trade in large quantities. The industry has a huge commercial value – for example, in 2005, China sold medicinal plants equivalent to USD 14 billion (WHO, 2010), making it one of the world's leading producers. Of China's total medicinal plant production, the equivalent of USD 4 billion was exported to international markets and trade continues to grow at the rate of about 10% annually (TRAFFIC East Asia China Programme, 2008).

Japan also has a long history using flora for medicinal and aromatic purposes. In 2007 Japan imported 30 000 t of medicinal and aromatic plants and derivatives, valued at more than USD100 million in a single year, and ranked fourth globally only after USA, Hong Kong, and Germany in 2007 (**Table 1**). Those imported plants are used as components of Japan's traditional medicine, as well as in developing modern pharmaceuticals. Japan has a traditional medicine system called *Kampo* that derives from the long relationship of exchange with its neighbour, China. *Kampo* in Japan today is considered a unique Japanese derivation of medicine that has evolved from Chinese traditional practices. In this tradition, each "crude drug", which has a number of active ingredients, is mixed according to a special recipe to form *Kampo* medicines. *Kampo* medicine comprised 1.8% (JPY126 billion) of the total Japanese medical drug production in 2008 (JPY6 620 billion) (Ministry of Health, Labour and Welfare, 2008). Japan does not separate traditional *Kampo* from modern medicine, therefore all Japanese doctors can prescribe *Kampo* medicines as well as other drugs to their patients. In addition to the medicines prescribed by doctors, *Kampo* medicine is familiar to Japanese people as Over-the-Counter (OTC) drugs (those that do not require a prescription) or household stock medicines.

The latest Japanese pharmacopoeia defines medical supplies with officially recognized effects in Japan, and lists 158 types of crude drug derived from flora, fauna and minerals in its 'crude drug' section (Ministry of Health, Labor and Welfare, 2007). The large majority of these are derived from plants.

Table 1 Import of medicinal and aromatic plants (HS code 1211) in 2007

Country of import	Weight (kg)	Value (USD)
USA	67 387 437	247 601 384
Hong Kong SAR	50 324 804	179 050 628
Germany	47 176 771	154 250 000
Japan	28 431 569	117 981 544
Rep. Korea	33 294 613	55 416 669
China	19 327 106	34 582 744
France	18 380 625	80 009 985
Spain	15 711 003	51 309 122

HS code 1211: Plants and parts of plants (including seeds and fruits), of a kind used primarily in perfumery, in pharmacy or for insecticidal, fungicidal or similar purposes, fresh or dried, whether or not cut, crushed or powdered.
Source: UN Comtrade

Table 2 The Top Ten volumes of produced crude drugs (by species) from the 150 frequently-used crude drugs in Japan (1997-2002)

(1000kg)

name of crude drugs			2002			2001			2000			1999			1998			1997		
			total	domestic	imported	total	domestic	imported	total	domestic	imported	total	domestic	imported	total	domestic	imported	total	domestic	imported
生姜	*Shokyou*	Ginger	23 807	3	23 804	23 496	3	23 493	22 456	3	22 453	22 116	3	22 113	2248	0	2248	27 302	0	27 302
薏苡仁	*Yokuinin*	Coix Seed	7021	50	6971	8743	50	8693	10 113	100	10 013	6572	150	6422	11 230	150	11 080	11 251	0	11 251
蕃椒	*Tougarashi*	Capsicum	4000	0	4000	4000	0	4000	4600	0	4600	4607	0	4607	6000	0	6000	5643	0	5643
鬱金	*Ukon*	Turmeric	3727	0	3727	3982	0	3982	3800	0	3800	3709	10	3699	4125	10	4115	3645	10	3635
甘草	*Kanzou*	Glycyrrhisa	2016	0	2016	1945	0	1945	4151	0	4151	2384	0	2384	1541	0	1541	1942	0	1942
桂皮	*Keihi*	Cinnamon Bark	1259	0	1259	1555	0	1555	1336	0	1336	970	0	970	1310	0	1310	1462	0	1462
決明子	*Ketsumeishi*	Cassia Seed	1203	3	1200	1203	3	1200	1200	0	1200	1200	0	1200	900	0	900	1003	3	1000
紅花	*Kouka*	Safflower	1055	2	1053	1414	2	1412	1119	2	1117	906	0	906	937	0	937	797	0	797
人参	*Ninjin*	Ginseng	629	8	621	424	15	409	339	18	321	233	20	213	213	20	193	621	16	605
大棗	*Taisou*	Jujube	550	0	550	600	0	600	650	0	650	650	0	650	650	0	650	800	0	800

Note: Due to the changes of statistical collection method, those data have not been collected since 2003.
Source: Japan Kampo Medicines Manufacturers Association, 2002; Japan Kampo Medicines Manufacturers Association, 2003

In recent years, domestic production of *Kampo* medicines has increased by 4-5% between 2005 and 2007 in value (Japan Kampo Medicines Manufacturers Association, 2009). From records for 1997–2002, the crude drugs with the highest production volumes were: "*Shoukyou*" (Ginger *Zingiber officinale*), "*Yokuinin*" (Coix seed *Coix lacryma-jobi* var. *mayuen*), "*Tougarashi*" (Capsicum *Capsicum annuum*), "*Ukon*" (Turmeric *Curcuma longa*), "*Kanzou*" (Liquorice *Glycyrrhiza glabra* and *G. uralensis*), all of which are derived from plants (see **Table 2**).

Other than for medical supplies, medically effective flora are used as 'non-medical products' and 'cosmetics' , both defined by the Pharmaceutical Affairs Law of Japan as products that have some effect on the human body. Many of those plants are also taken as 'food with health claims' or just as food.

There are approximately 3000 species of plant significantly involved in the international trade of medicinal and aromatic plants in the world. Many of the medicinal plants used in Japan are imported from overseas, particularly from China. Looking at the sources of crude drugs from 74 companies in the Japan Kampo Medicines Manufacturers Association, domestically sourced crude drugs made up only 12% of the total supply, and those imported from China accounted for 83% of the total supply of crude drugs (Japan Kampo Medicines Manufacturers Association,

Table 3 **Estimation of wild supply component of medicinal plants for crude drugs**

	All from wild sources	From both wild and cultivated sources		All from cultivated sources
Type of crude drugs	9 types: e.g. *"Kanzou"* , (Liquorice *Glycyrrhiza glabra* and *G.uralensis*) *"Kakkon"* (Kudzu *Pueraria lobata*), *"Chorei"* (*Polyporus umbellata*)	11 types: e.g. *"Hange"* (*Pinellia ternata*), *"Maou"* (*Ephedra sinica, E. intermedia, E. equisetina*), *"Soujyutsu"* (*Atractylodes lancea, A. chinensis*)		30 types: e.g. *"Syakuyaku"* (*Paeonia lactiflora*) *"Keihi"* (*Cinnamomum cassia*) *"Bukuryou"* (*Poria cocos*)
Estimated weight (t)	Wild 2800	Wild 2000	Cultivation 1800	Cultivation 10 400
	Wild 4800	Cultivation 12 200		

Source: Asama, Japan Kampo Medicines Manufacturers Association, *In litt*., to TRAFFIC East Asia-Japan in August 2010

2010). By species, the average imported proportion of the 150 most-used crude drugs was 85.5% of the supply in 2002 (Japan Kampo Medicines Manufacturers Association, 2003). Of the 150 species, there were only 20 species for which domestic production accounted for more than half of the supply, including "Kumazasa" (*Sasa veitchii*), "Sansyou" (*Zanthoxylum piperitum*) and "Gajyutsu" (*Curcuma zedoaria*), while there were 80 species—more than half of the total—for which 100% of the supply came from imports (Japan Kampo Medicines Manufacturers Association, 2003).

According to the Japan Kampo Medicines Manufacturers Association, 50 types of crude drug produce 90% of Japanese *Kampo* production; 30% of the total supply of those 50 types of crude drug in weight are estimated to be from the wild (**Table 3**) (Asama, Japan Kampo Medicines Manufacturers Association *in litt*., to TRAFFIC East Asia-Japan, August 2010). **Since Japan depends heavily on foreign imports, the use of these medicinal plants in Japan has an impact on the population status of wild plants in the countries of origin.**

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FairWild Standard and global plant conservation measares

Human beings reap many benefits from plants but we can also be a threat to those same plants. On the 2010 Red List of the International Union for Conservation of Nature (IUCN), 70% of the 12 000 flora species evaluated were judged to be Endangered (IUCN, 2010), and of the known 50 000 to 70 000 species used for medicinal or aromatic purposes, about 21%, or 15 000 species were cited as being in danger of extinction (Schippmann *et al*., 2006).

The FairWild Standard (FWS), developed by a partnership of various organizations, including TRAFFIC, WWF and IUCN, offers a concrete set of principles and criteria to ensure that the collection and trade in plants from the wild is ecologically sustainable, socially responsible and fair. The FairWild Standard links to the Convention on Biological Diversity (CBD), providing the means for both private and public sectors to support the objectives of the CBD related to the sustainable use of plant resources and fair sharing of benefits resulting from such use (e.g. FairWild, 2010). The FWS is a useful tool to help achieve the selected Targets of the Global Strategy for Plant Conservation adopted by CBD in 2002 (CBD Secretariat, 2010), namely Targets 3, 11, 12, and 13. Within the access and benefit sharing (ABS) discussion of the CBD, the FairWild Standard supports the equitable sharing of benefits derived from genetic resources, ensuring that a sustainable and fair share of the profits derived from plant trade goes to the collectors, and thus protecting their livelihoods and customary rights.

TRAFFIC welcomes the wider involvement of the private sector in conserving the wild plant resources. Among the various scenarios of the FWS use, it provides a certification opportunity for businesses and operators involved in trade, providing them with the means to verify that their production methods are in line with the aims of GSPC and

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the ABS regime.

Several demonstration projects around the world tested the application of the standards, and promoted the spread of the FairWild Standard, including connecting local producers to markets. The most effective factor in persuading the producers to adhere to the FairWild Standard is through direct establishment of producer-buyer relationships. In order to promote global use of the FairWild Standard, TRAFFIC is working in Japan, as a major consumer region for medicinal and aromatic plants, to develop Japan's consumer market in line with the FairWild principles.

Field report: people and medicinal species in the Upper Yangtze River eco-region

One of the harvesting sites of medicinel species is there in China, which is the most important source country of medicinal plants to Japan. The region of the upper watershed of the Yangtze River in China is an eco-region with one of the world's richest biodiversity. Even within China, with its large production of medicinal plants, this region is especially well known as one important area for medicinal plants harvested from the wild. A project in which medicinal plants are gathered and traded according to the sustainable standards has been introduced in several sites, including Ningshan County in Shaanxi Province, where medicinal plants such as "*Nangomishi*" (*Schisandra sphenanthera*), *Polyporus* spp. the genus including "*Chorei*" (*Polyporus umbellatus*), "*Tenma*" (*Gastrodia elata*) and "*Jyurou*" (*Paris polyphylla*) are produced (**Figure**). Most of those are exported to end-consumer countries, such as Japan, as well as consumed inside China.

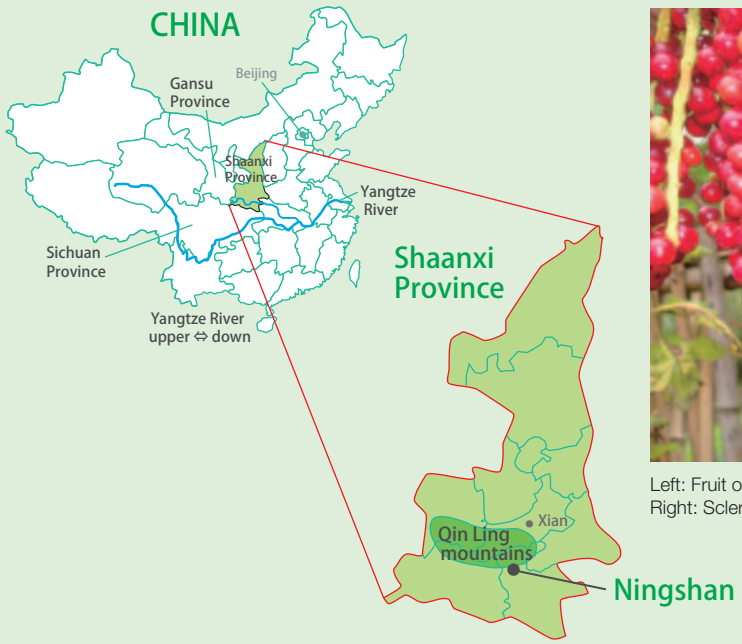
From the interview with local harvesters, some of them have existing sources of income from raising mushrooms, which still only earns them the equivalent of a few 100 000 yen annually. Another important 20% or so of their income comes from harvesting medicinal plants from the wild. There are also some areas where 100% of the people's income comes from medicinal plants.

Until now, however, little attention was paid to how these medicinal plants were collected. For example, there were some cases, in which very damaging harvest methods were used, such as pulling a plant out by its roots to obtain fruits. Also, the amounts harvested and the amounts traded tended to be small and unstable from year to year.

To establish a system of sustanable harvesting in this region, the collectors of medicinal plants were given detailed training before harvesting season, focusing on sustainable collection methods and quantities.

From the local harvesters comments, one of the

Figure Map of the project area and wild medicinal plants of the area



Left: Fruit of *Schisandra sphenanthera* ©Liu Xueyan/TRAFFIC
Right: Sclerotium of *Polyporus* spp. ©Liu Xueyan/TRAFFIC

biggest perceived benefit of introducing the sustainable harvesting standard was that it brought buyers to purchase their produce on a regular basis. For people whose livelihood is closely tied to wild plants, the presence of buyers who will consistently purchase the plants they have harvested is very important.

To promote FairWild, securing reliable markets is important and expanding demand for FairWild certified products in destination markets provides the prime motivation for producer communities and regions to adopt the FairWild Standard.

For a large consuming and importing nation of medicinal plants like Japan, increasing awareness of the FairWild Standard by the private sector in the marketplace can have a direct influence on the production (growth and supply) of medicinal plants, and therefore benefit not only the sustainability of wild plant populations but also the livelihood of the people in the producing regions.

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International Trade and Resource Management of Precious Corals (Coralliidae) in Japan

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Introduction

There are approximately 31 species in the family Coralliidae spp. found throughout the world in tropical, subtropical and temperate oceans. Among these species, Sardinia Coral *Corallium rubrum* of the Mediterranean Sea has a particularly long history of use dating back to the Roman Empire, with records of beads made of this coral being traded to India and North Africa (Torntore, 2002). The start of precious coral harvesting in Japan in the latter half of the 19th century brought foreign buyers to Japan, primarily from Italy, and Pacific precious corals subsequently came to be traded on the European market (Torntore, 2002). Presently, there is a growing international demand particularly for the precious corals Aka Coral *Paracorallium japonicum* and Momo Coral *Corallium elatius* from the Pacific, not only due to their inherent beauty but also due to the decline in populations and capture production of Sardinia coral (Tsounis, 2009). According to a Food and Agriculture Organization (FAO) report, approximately 70% of the precious corals used in Torre del Greco in southern Italy, in the world center of the precious coral-processing industry are harvested in Japan or Taiwan (FAO, 2007)[1].

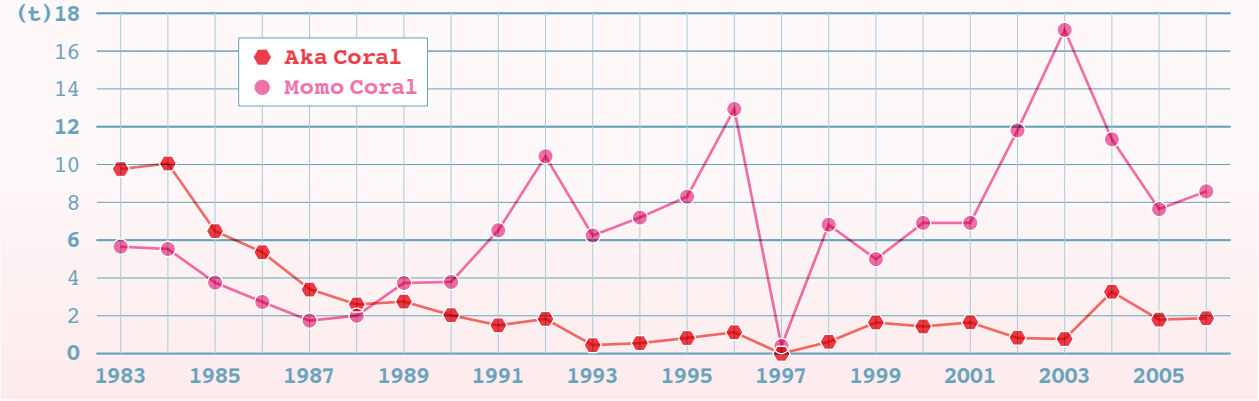
The concern about a decline in populations of precious corals made it a subject of discussion at the 14th and 15th meetings of the Conference of Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES CoP14 and CoP15). This article focuses on Japan as one of the major harvesting and processing countries for precious corals, to clarify the status of Japan' s international trade and resource management.

Precious Coral Production Volumes and Japan

FAO compiles statistics on world precious coral capture production, based on information from the governments of the harvesting countries. **Figure 1** shows world capture production volumes for Aka coral and Momo coral harvested in the Pacific, according to FAO statistics. **Figure 1** shows that Aka Coral capture production dropped to 1.9 t in 2006, representing just 20% of the 1983 production of 9.7 t. This means that production dropped by 80% during this 23-year period. In contrast, the approximately 5.5 t of Momo coral recorded as produced in 1983 dropped by approximately 70% in just four years, to a level of 1.9 t in 1987. Since then, the trend has been towards an overall increase in production. However the production levels are unstable, with drastic increases or decreases recorded in some years. In the period from 1992 to 2006 there were three recurring cases of rapid increases and decreases in production, and these fluctuations are thought to be the result of several factors, including the discovery of new harvesting grounds and subsequent intense harvesting, and price

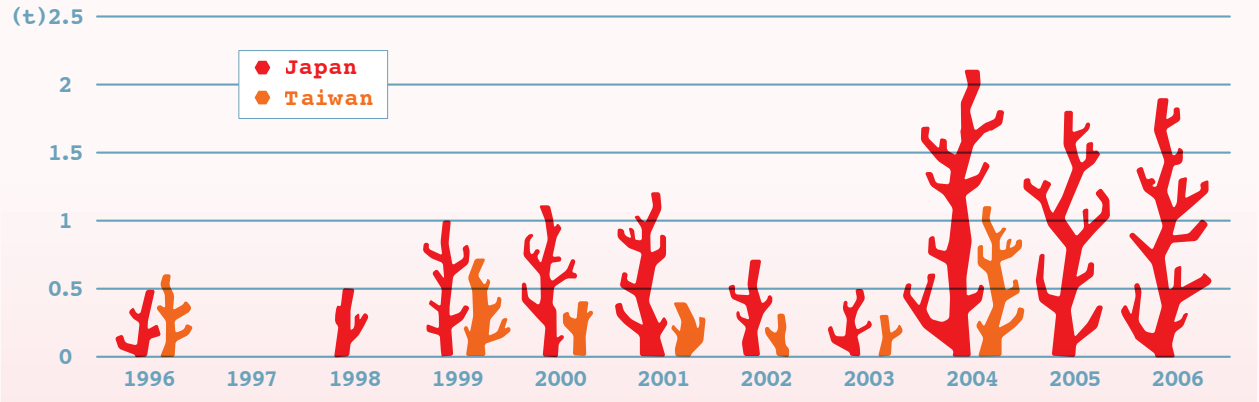
[1] FAO materials are used as the reference for English names. Search Aquatic Species Fact Sheets http://www.fao.org/fishery/species/search/en

Figure 1 **World catch of Aka Coral and Momo Coral**



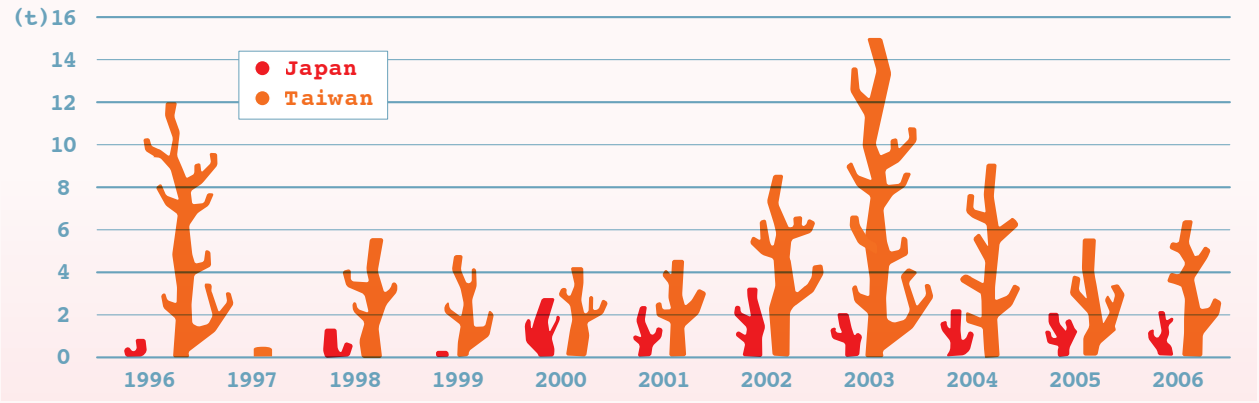
Source: FAO. (1983-2006). FAO Fishstat Capture Production Datebase 1983-2006. www.fao.org/fishery/statistics/software/fishstat/en. Accessed on 1 December, 2009

Figure 2 **Production of Aka Coral by country / territory (1996-2006)**



Source: FAO, (1996-2006). FAO Fishstat Capture Production Datebase 1996-2006, www.fao.org/fishery/statistics/software/fishstat/en. Accessed December 2009.

Figure 3 **Production of Momo Coral by country / territory (1996-2006)**

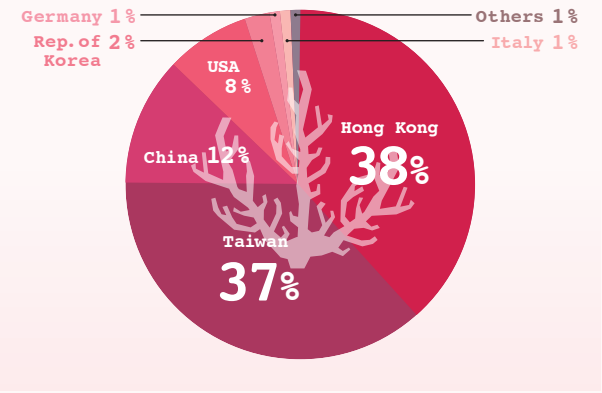


Source: FAO, (1996-2006). FAO Fishstat Capture Production Datebase 1996-2006, www.fao.org/fishery/statistics/software/fishstat/en. Accessed on 1 December, 2009.

fluctuations in the international market (TRAFFIC-IUCN, 2010).

Figures 2 and **3** show the production of Aka Coral and Momo Coral by countries. From these figures it can be seen that only Japan and Taiwan are the harvesting locations for these corals. Particularly for Aka Coral, Japan accounts for a large percentage of the production, and has been the only harvesting country since 2005. In 1996, Japan' s harvest was 0.5 t, but this quadrupled to 1.9 t by 2006. On the other hand, Taiwan has been the major harvester of Momo Coral, accounting for approximately 60% of the total production in 2006. Japan' s

Figure 4 World share of total exports of coral (unworked) from Japan, by monetary value (1999-2008)



Source: Ministry of Finance. (2009). Japan Trade Statistics (1999-2008). Available at; http://www.customs.go.jp/toukei/srch/index.htm. Accessed on 15 December 2009.

annual production of Momo coral has stayed around two tonnes since 2000.

International Trade

As of July 2010, there was no HS Code specifically for precious corals in Japan's trade statistics. Because the data for unprocessed precious corals are grouped together in the general category "corals" , along with reef corals, it is difficult to get an overall picture of the international trade in precious corals. Furthermore, because the export HS Code for coral products is a category that also includes such products as *bekko* (marine turtle shell) and water buffalo horn, it is not possible to get export figures for precious corals exclusively.

Despite these data limitations, it is worth examining the countries to which unprocessed corals from Japan are exported. **Figure 4** shows the shares by country of the total value of coral exports for the 10-year period from 1999 to 2008. Hong Kong, Taiwan and mainland China are the recipients of about 87% of Japan' s coral exports. It can thus be estimated that these three trading partners constitute the major international markets for Japan' s coral production.

Figure 5 shows Taiwan's coral product export volumes to Japan, and Japan's import volumes from Taiwan[2]. The figures for 2004 and 2006 show minor differences in these trade figures, but 2002, 2005 and 2007 show big discrepancies in the corresponding figures. According to Japan' s trade statistics for 2005, Japan supposedly imported only nine kilogrammes of coral products from Taiwan, but Taiwan' s trade figures show exports of 4313 kg to Japan. The reasons for these types of statistical discrepancies cannot be determined from simply analysing the trade statistics alone. Japan' s Ministry of Finance statistical protocols exclude figures for transactions of under JPY200 000 (USD 1994). Even considering this factor, however, it is still possible to conclude that the Customs procedures between these two countries are not being conducted appropriately (Wu and Takahashi, 2009).

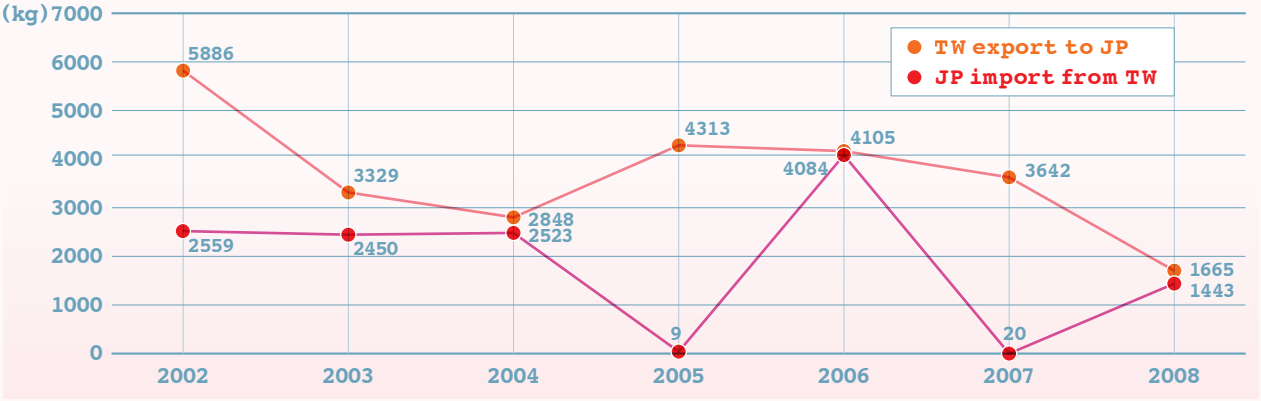
Management Measures

As of July 2010, harvesting of precious corals from international waters is not regulated from a fisheries management perspective by any international organization [e.g. Regional Fishery Management Organizations (RFMOs)]. In East Asia, China listed precious corals as national fauna in category I of *the Law of the People's Republic of China on the Protection of Wildlife* in 1988 and banned all coral fisheries in their waters. Also, in July 2008, four species of Coralliidae spp. were listed in CITES Appendix III, effectively alerting China's trading partners that assistance was needed to manage international trade in these species.

Taiwan placed new regulations on the harvesting and export of precious corals in January 2009. All fishing boats involved in the coral fishery are now required to be licensed and fitted with VMS (vessel monitoring

[2] Among the countries of East Asia that are the main destination for exports of corals produced in Japan, Taiwan is the only producer that has an HS Code for this trade. Coral imports from Japan fall under Taiwan's HS Code 9601.90.100, which includes "worked *bekko* and coral, and articles of *bekko* or coral." The Hawksbill Turtle Eretmochelys imbricata used for making turtle shell products is a species listed in CITES Appendix I and therefore banned as the object of international trade for commercial purposes. However, international trade for use in scientific research or joint preservation projects is permitted, in which case CITES parties are required to submit reports of such trade transactions to the United Nations Environment Programme World Conservation Monitoring Center (UNEP-WCMC). According to the current UNEP-WCMC database, no imports [of hawksbill] to Japan from Taiwan have been reported since 2000 (UNEP-WCMC, 2009). As a result, it is assumed that only coral products and processed coral are shown in Japan's HS Code records since 2000.

Figure 5 Trade volumes of coral products between Japan and Taiwan



Source: Ministry of Finance (2009), Japan Trade Statistics(2002-2008). Available at: http://www.customs.go.jp/toukei/info/index.htm, Taiwan Customs Statistics. Available at: http://tcs.taiwantrade.com.tw/stap/main.asp?lang=1. Accessed on 15 December 2009.

system) devices in order to monitor if the licensed coral-fishing boats harvest from the five designated areas. Furthermore, a limit of total allowable catch (TAC) for boats harvesting precious corals was set at 200 kg per year and a limit of 120 kg per year was set on exports per vessel (Wu and Takahashi, 2009).

In Japan, precious coral fisheries are regulated at the prefecture level, using *the Fishery Adjustment Rule* and the *regional fishery adjustment commission* of each prefecture, based on *the national Fisheries Law and the Fisheries Resources Protection Law*. TRAFFIC conducted a questionnaire survey regarding fishery management regulation and reporting requirements for the coral fishery, with the co-operation of the Fisheries Divisions of the four major producing prefectures for precious corals, Kochi, Kagoshima, Nagasaki and Okinawa (**Table 1** and **Figure 6**).

The survey results revealed big gaps and inconsistencies between regulations in the four prefectures. For example, none of them has established a TAC per vessel, but one prefecture, Kochi, has established a closed

Figure 6 Prefectures operating a coral fishery in Japan

Table 1 Japan's Coral Fishery Regulations and Fisheries Management Regulations (Kochi, Kagoshima, Nagasaki, Okinawa prefectures)

Regulation	Kochi	Nagasaki	Kagoshima	Okinawa
Licence period	3 years (Renewals: Muroto FCA July 9; Ashizuri, Sukumo FCA : Oct. 1)	1 year (Jan. 1 – Dec. 31)	1 year (Apr. 1 – Mar. 31)	3 years
Fishing method restrictions	Coral net only, bottom seine prohibited	None	Only the fishing method approved by application	Only fishing methods such as submarine vessel and gear that make coral selection possible. Bottom seine prohibited
Fishing net size restriction	Yes	None	None	None
Fishery prohibited period set	Yes, two months per year (1 Jan. – end of Feb. off Muroto Cape)	None	None	None
Operating water area set	Yes (off Muroto Cape, Ashizuri Cape, Sukumo Bay)	Yes	Yes	None (Approved in all waters off Okinawa prefecture coasts)
Prohibited fishing waters set	Yes (All waters besides those operating water area)	Yes (All waters besides those operating water area)	Yes (Including some areas within the approved operating areas	None
Total allowable catch set	None	None	None	None

FCA = Fisheries Cooperative Association
Sources: Based on interview and questionnaires answers from the Fisheries Divisions of the four prefectures (TRAFFIC East Asia-Japan survey)

season (i.e. no harvest) in Muroto Cape for the purpose of precious coral conservation and to accommodate other fisheries. The other three prefectures have no closed season for precious coral harvest, making year-round operations possible.

Harvesting of corals in Japan's waters is characterized by two fishery technologies, that of traditional harvesting with nets, and by submarine vessel, as a contemporary method. Concerning the regulation of fishing/harvesting methods, Kochi prefecture specifies the use of traditional coral nets, while Okinawa only allows the use of submarine vessels and gear that allow the corals to be harvested selectively by visual means. In the cases of Kagoshima and Okinawa prefectures, the only operator licensed to harvest corals is a boat-owning company with an office in Tokyo that uses submarine vessels to harvest precious corals selectively.

In terms of reports, all prefectures require reports of total catch/harvest, but Kagoshima and Okinawa are the only prefectures that require vessels to report the harvesting volumes at species level. However, the Japanese government must report at species level for FAO capture production statistics. Therefore, until the harvests of precious corals from the various harvesting areas in Japan are reported by species, it cannot be said that Japan is providing reliable capture data for precious corals. Furthermore, considering the fact the prefectures do not require reports on the population status of the coral and the conditions in which they are sold (i.e. alive or dead), the information required must be considered limited and insufficient for determining the status of the precious coral fishery and the impact on the wild population.

Recommendations

Precious corals are a rare biological resource that is traded on international markets and therefore requires not only domestic but also international co-operation for its management. As a major producer of precious corals from Pacific waters, Japan must establish and implement measures for the domestic conservation and sustainable use of these corals, based on reliable scientific data and species-specific statistics on the volumes of these corals being harvested and traded. Furthermore, information about these measures and practices must be made available not only to a few researchers and related stakeholders, but also to the wider international community, so that it can serve as an example for a wide range of areas and encourage debate about conservation and sustainable coral fishery practices. Precious corals have inspired people with their beauty since ancient times and today Japan has a responsibility to take measures to ensure the sustainable use of this valuable resource from a long-term perspective.

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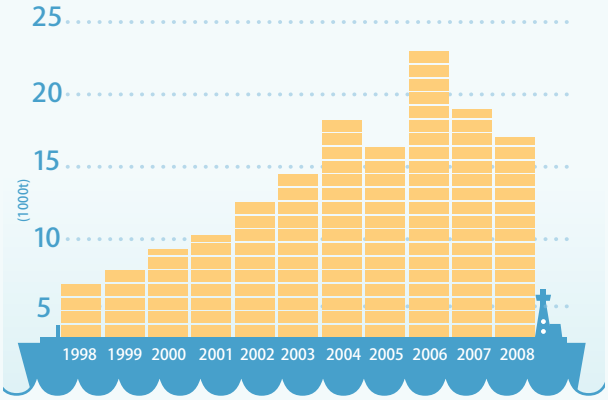
Atlantic Bluefin Tuna and CITES

Soyo Takahashi, Fisheries Officer

At the 15th meeting of the Conference of Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES CoP15) held in Doha, Qatar, in March 2010, the Principality of Monaco submitted a proposal to list Atlantic Bluefin Tuna *Thunnus thynnus* in CITES Appendix I, which would have meant a ban on international commercial trading of the species. Some Parties, such as the 27 Member States of the European Union (EU) [which include some Parties to the International Commission for the Conservation of Atlantic Tunas (ICCAT), which is responsible for managing Atlantic Bluefin Tuna stocks] and the USA, stated their support of the proposal, but several other CITES Parties involved in the *T. thynnus* fishery, such as Japan and Libya, opposed the proposal, arguing that fisheries resources should be administered within the specialized framework of a Regional Fishery Management Organization (RFMO), rather than by CITES. A majority on the FAO Expert Advisory Panel for Assessment of Listing Proposals to CITES for Commercially-Exploited Aquatic Species concluded that *T. thynnus* satisfied the CITES biological criteria for a CITES Appendix I-listing. However, the result of the vote at CITES CoP15 on the listing proposal was for it to be rejected. Despite this result, it is important to review once again the background behind the problem that led to this debate on Atlantic Bluefin Tuna at the CITES conference.

A 2009 survey of Japanese households revealed that in monthly purchases of fresh fish, spending on tuna averaged JPY4631, making it the leading fish purchased, followed by salmon and shrimp (Ministry of Internal Affairs and Communications figures, 2010). It is clear how popular tuna is for the Japanese diet. However, a number of fish species are managed by RFMOs. Among these are the bluefin tunas: Pacific Bluefin Tuna *Thunnus orientalis* and Atlantic Bluefin Tuna *T. thynnus*, Southern Bluefin Tuna *T. maccoyii* and the Bigeye Tuna *T. obesus*, all of which have high percentages of fatty meat, preferred for raw consumption as sashimi (toro). Also managed by RFMOs are the Yellowfin Tuna *T. albacares* and Albacore *T. alalunga* that are used for red-meat *sashimi* and as the material for canned tuna fish (Nakano, 2010). The total supply of Japanese fishery catch and imports of tunas (except Skipjack) to the Japanese market for 2008 was 410 000 t, which represents approximately 24% of the 2007 world catch of tunas except Skipjack (Ministry of Agriculture, Forestry and Fisheries, 2010; FAO, 2010). Atlantic Bluefin Tuna represents only about 3.5% of the total world tuna catch, not including Skipjack (FAO 2010b, FAO 2010c). That leads to the question of why it was

Figure 1 **Volume of imports of ranched Atlantic Bluefin Tuna to Japan (1998-2008)**



Source: Japan Fisheries Agency figures, 2010 (compiled by TRAFFIC)

singled out for international conference debate and attracted so much attention.

A few decades ago, bluefin tuna was an expensive delicacy that few Japanese could afford. However, since the late 1990s, the ranching of Atlantic Bluefin tuna has grown rapidly in the coastal regions of the Mediterranean Sea in particular, leading to the importation into Japan of relatively inexpensive bluefin tuna that could be sold at affordable prices in supermarkets and popular "conveyor" *sushi* restaurants throughout.

The Atlantic Bluefin Tuna ranching industry is an aquaculture method that involves catching populations of juvenile fish in the purse seine fishery and feeding them high-nutrient feed in holding pens for several months or years. This process, also known as ranching, produces tuna with a large portion of "*toro*" meat with a high fat content that Japanese prefer in *sushi*. For this reason, some Japanese tunatrading companies have invested actively in the development of this industry in the Mediterranean coastal countries (Ono, 2008).

Figure 1 shows the volumes of this ranched Atlantic Bluefin Tuna imported to Japan. From the figure it can be seen that there has been a general increase in the volumes of this ranched Atlantic Bluefin Tuna imported to Japan. Particularly notable is the roughly four-fold increase in these imports from 5700 t in 1998 to 22 600 t in 2006. The 16 700 t imported in 2008 represent approximately 38.8% of the total supply of Atlantic Bluefin Tuna to the Japanese market from Japanese catch and imports combined (Japan Fisheries Agency, 2010).

The development of this Atlantic Bluefin Tuna ranching industry and increase of ranched production have damaged the wild Atlantic Bluefin Tuna population. Farmed Atlantic Bluefin Tuna has relied on offtake from spawning populations, and when the juvenile tuna to be raised are caught by the purse seine fishery, almost the whole population is caught just as they gather to spawn. According to ICCAT statistics, there has been a sharp increase in the purse seine catch since the mid-1990s, and it can be assumed that one of the reasons for this increase is the rise in demand for juvenile bluefin tuna to supply the rapidly developing Atlantic Bluefin Tuna ranching industry. In 2009, the Standing Committee of Research and Statistics (SCRS) of ICCAT considered that there was a greater than 90% probability that both East and West stocks had declined to less than 15% of their unexploited population sizes. Furthermore, over the past 10 years it was reported that there have been catch levels 60% over the Total Allowable Catch (TAC) by ICCAT members (ICCAT, 2009). The existence of overfishing and IUU (Illegal, Unreported and Unregulated,) fishing is having a serious effect on Atlantic Bluefin Tuna population size and is preventing its recovery. As a result, the ineffectiveness of the ICCAT fishery management capability came into focus at CITES CoP15 and the proposal was made to institute a ban on commercial international trade of Atlantic Bluefin Tuna.

As a measure to combat IUU fishing, ICCAT introduced a Catch Documentation Scheme (CDS) for Atlantic Bluefin Tuna in June of 2008, requiring the export country to issue letters of certification identifying the boat of catch and production and the circumstances of trade transactions for all exports. However, due to the fact that the purse seine fishery operators often put the catches directly into store with no verifi-

cation of numbers of catch, it is difficult to evaluate the size of catches and the numbers of fish going into the holding pen. Evaluating the state of compliance with regulations is difficult therefore and, as a result, implementing this management measure is incomplete. At the end of February 2010, just prior to the holding of CITES CoP15, the Japanese government announced that it had halted the import of 2300 t of ranched Atlantic Bluefin Tuna between November 2009 and February 2010 due to reasons such as the failure of traders to produce proper catch documentation, including certification dates of the catches involved. If tuna enters the domestic market without the CDS being properly enforced, consumers cannot verify if the tuna is of IUU fishing origin, because as of 2010, there is no traceability system for Atlantic Bluefin Tuna from point of production to the final point of retail.

Japan's Act on Standardization and Proper Labelling of Agricultural and Forest Products (JAS law) sets quality labelling standards and requires that producers and retailers of fish and other seafood products display the name of the product, where it was produced and whether it was wild-caught or a product of aquaculture. However, from this labelling alone, it is not possible to tell the countries of the fishing boats that caught the juvenile bluefin tuna harvested for ranching by the Atlantic Bluefin Tuna ranching industry at the initial stage of production.

As one of the major tuna importers and consumer countries in the world, Japan should improve effectiveness of import procedures based on CDS and send a clear message not to allow any imports of IUU fishing product.

Until now, TRAFFIC has recommended to ICCAT and other RFMOs involved in the regulation of tuna fisheries to set a TAC and implement resource recovery plans based on scientific advice; to introduce an international registration system for fishing boats; to reduce fishing effort; and to improve data-gathering systems through means such as rapid reports of catch by fishery operators. The 17th Special Meeting of ICCAT will be held in Paris in November 2010. Can ICCAT restore its fishery management measures as Japan and the other fishing countries promised the international community it would at CITES CoP15? TRAFFIC will continue to monitor Atlantic Bluefin Tuna conservation and the implementation of fishery management measures and hopes that it will not see the same lack of progress by ICCAT as there has been since the last attempt was made to list Atlantic Bluefin Tuna at CITES CoP8 in 1992, held in Kyoto. The proposal was withdrawn amid commitments to ensure better management by ICCAT members, but they failed to translate into the same.

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COLUMN Sharks Conservation and Japan's international role


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At the 15th meeting of the Conference of Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES CoP15) there were several fish species proposed for listing under the provisions of the Convention. Not only was there the proposal to move Atlantic Bluefin Tuna *Thunnus thynnus* to CITES Appendix I, but there were also proposals to list eight species of commercially used sharks in CITES Appendix II, including Spiny Dogfish *Squalus acanthias*, Porbeagle *Lamna nasus*, Scalloped Hammerhead *Sphyrna lewini* and Oceanic Whitetip *Carcharhinus longimanus*. These are shark species whose meat is used for consumption as "fish and chips" , while fins are used for shark fin cuisine. Despite the fact that the Food and Agriculture Organization (FAO) Expert Advisory Panel for Assessment of Listing Proposals to CITES for Commercially-Exploited Aquatic Species concluded that the drop in size of the resources of all these shark species (with the exception of Spiny Dogfish) meant they warranted CITES listing, all of these proposals were rejected.

Due to the slow growth rate and lateness of sexual maturation for shark species, they are said to be especially vulnerable to the effects of overfishing. Furthermore, most shark species are predators at the top of the food chain and thus play an important role in the marine ecosystem. Fishing pressure on shark resources results from by-catch in tuna fisheries as well as targeted overfishing for their fins. In addition, the problem of a lack of information on shark catches and trading has made the conservation and management of shark species the subject of ongoing discussions at international fora including the UN General Assembly, the FAO and CITES.

In 2009, TRAFFIC conducted a survey (Lack and Sant, 2009) to identify the major shark fishing countries and territories, and the fishery management mechanisms and laws in place. **Table 1** shows the average volume of annual catch for the major shark fishing countries and territories from 2000 to 2007 based on FAO fishery statistics[1]. The largest annual average catch of sharks was reported by Indonesia, followed by India, Spain and Taiwan. Japan was

[1] Concerning the identification fishing nations and survey methods, refer to the TRAFFIC report "*Trends in Global Shark Catch and Recent Developments in Management*" by Mary Lack and Glenn Sant (2009).

Table 1 **Major shark fishing countries and territories and average annual catch volumes 2000–2007 (t)**

rank	contry ／ territory	average catch volume
1	Indonesia	110 528
2	India	70 758
3	Spain	57 685
4	Taiwan	48 493
5	Mexico	34 535
6	Pakistan	34 270
7	Argentine	33 639
8	USA	29 909
9	**Japan**	**25 930**

rank	contry ／ territory	average catch volume
10	Malaysia	24 500
11	Thailand	24 156
12	France	22 328
13	Sri Lanka	22 029
14	Brazil	20 498
15	New Zealand	18 260
16	Portugal	15 137
17	UK	14 301

Source: Compiled by TRAFFIC using FAO Fishstat Capture Production Datebase 2000-2007. (Lack and Sant, 2009)

found to be the ninthlargest shark-fishing country. The FAO statistics record catches with regard to 100 shark species and 30 generic groups. This survey revealed that Japan and the other main shark-fishing countries and territories report their catches in terms of the generic groups. Lack and Sant (2009) also found that they do not report catches by species and that they only include retained sharks in their catch records and do not count those that are dumped back into the sea. In order to determine the effect of fishing on shark populations, it is important that these record-keeping practices be improved.

Japan has a long history of using sharks as a biological resource. In the late 17th century, dried shark' s fin was one of the three prize export products for trade with China along with dried sea cucumber and dried abalone. In the Meiji Period (1867-1912) the shark fishery was designated a valuable industry for strengthening the national economy and the sharks were used for their meat and cartilage, liver oil and fins (TRAFFIC East Asia-Japan, 1998). Although sharks have long been an important resource for the Japanese, today there are statistics only for shark fin, due to its high product value, and otherwise there are no import records kept. As a result, it is not possible to rank Japan accurately among the countries of the world in terms of volumes of imports or national consumption of shark products. **Table 2** shows export volumes for dried shark fin. Japan's largest export volumes during the period from 2000 to 2009 were to Hong Kong, accounting for 82% of the total. Hong Kong is followed by Singapore, China, South Africa, Indonesia and Viet Nam as the most significant export destinations for shark fin exports from Japan. Exports to South Africa grew four-fold in 2009. Also, although the volumes are not large, Spain, Taiwan and Guam (USA) can be considered important export destinations, and Japanese exports of dried shark fin are destined not only for Asia, but also for markets around the world.

Since the mid-1990s, TRAFFIC has encouraged the FAO, CITES and RFMOs to adopt manage-

Table 2 **Japan's export volumes for dried shark fin (2000-2009)**

(Unit: kg.)

year / country / territory	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	subtotal (2000-2009)
Hong Kong	203 113	188 408	146 010	158 851	173 529	144 418	161 990	175 135	134 565	112 009	1 598 028
Singapore	22 401	13 463	29 172	18 544	18 180	2562	13 146	19 369	13 097	16 307	166 241
China	14 808	25 389	31 491	41 421	11 558	12 906	600	270	3800		142 243
South Africa							214		4313	18 034	22 561
Indonesia					290	5445			2349	8096	16 180
Viet Nam							1776	1638	3141	1941	8496
Canary Islands (West)			411			1309			984	4119	6823
Spain					570	800	2376		407	1500	5653
Malaysia	500	2897									3397
Uruguay										1840	1840
Taiwan	260		135	788	186	150	250				1769
Guam (USA)	215	172	297	12	184	126	161	188	162	92	1609
Northern Mariana Islands (USA)			40	125	177	81	41				464
Republic of Congo	400										400
Australia	175										175
Canada		120									120
Thailand			50								50
North Korea			20								20
Total	241 872	230 449	207 626	219 741	204 674	167 797	180 554	196 600	162 818	163 938	1 976 069

Source: Customs data from Ministry of Finance Japan, 2010

ment mechanisms including requirements that shark catches be landed as whole individuals with fins intact to enable identification of species, and management mechanisms to enable international trade monitoring as a means to provide the necessary information to reduce IUU (Illegal, Unreported and Unregulated) fishing and evaluate resource status. At the joint tuna RFMOs workshop on improvement, harmonization and compatibility of monitoring, control and surveillance measures held in Barcelona (Spain) in June 2010, three months after CITES CoP15, the Japanese government made a proposal that a Catch Documentation Scheme (CDS) be put in place not only for tuna species but also for shark species, in order to prevent catches that did not comply with tuna RFMO conservation management regulations from entering the legal market. This and other proposals will be debated at RFMO meetings scheduled to be held later in 2010 and beyond. Japan and the other RFMO signatory nations must recognize that shark resource management and conservation are not only problems of sovereign fishing fleets but also an issue of marine ecology that must be dealt with urgently. A holistic approach, including systems to ensure traceability from catch to distribution and all the way to retail and end-consumers, is needed so that IUU shark products can be eliminated from the marketplace.

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Sturgeon Conservation and the Role of Japan

Soyo Takahashi, Fisheries Officer

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Introduction

Since 1998 , all species of sturgeon Acipenseriformes spp. are listed either in CITES Appendix I or Appendix II and their international trade is regulated. The order including sturgeons is a group of some of the largest freshwater fishes and also some of the oldest, said to date back to the Jurassic period. There are 25 species of sturgeon and two paddlefish species. The habitats for sturgeon species range through the cold-water areas of the Northern Hemisphere in North America, Europe and Asia. Salted sturgeon roe, known as caviar, is famous as one of the three great delicacies of the world along with truffles and *foie gras*. Sturgeon stocks have decreased rapidly in the 20th century due to factors including overfishing and poaching for the high-valued caviar, and the decreasing habitat and spawning grounds as a result of dam construction and water pollution (CITES, 1997).

When CITES took effect in 1975, two species, including Shortnose Sturgeon *Acipenser brevirostrum*, were listed in Appendix I and after several amendments of the listing, all sturgeon species were CITES-listed by the time of the 10th meeting of the Conference of the Parties (CoP10) in 1997. From the time the CoP10 amendments came into effect, in April 1998, CITES permits issued by the governments of the export countries were necessary for all international trade of the 25 sturgeon species listed in CITES Appendix II.

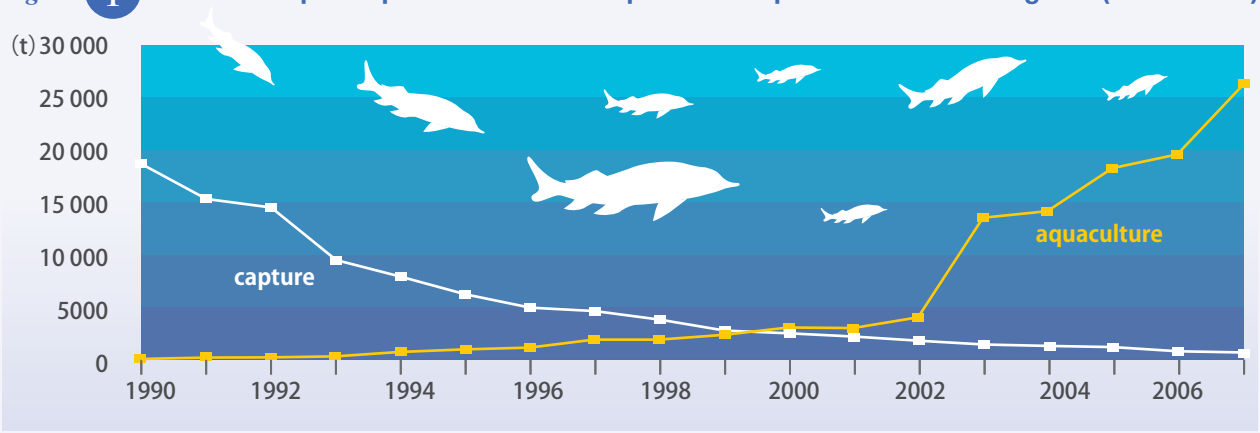
Sturgeon catch production and aquaculture production

Figure 1 shows the Food and Agriculture Organization (FAO) figures for catches from wild sturgeon fisheries and for aquaculture production, based on reports from the countries. The total capture production of 18 192 t in 1990 had decreased to just 835 t 17 years later, in 2007, a mere 4.5% of the 1990 level. In contrast, aquaculture production has increased rapidly since 2003. From a level of 323 t in 1990, aquaculture production grew approximately ten-fold to 3158 t in the 10-year period to 2000, at which point it surpassed the fishery catch from the wild for the first time. By 2007, aquaculture[1] production was reported at 25 705 t, representing approximately 79 times the level of 1990.

Rises and falls in catch production are not necessarily a reflection of changes in the amount of the fishery resource, however. This is because it is difficult to determine whether catch production decreases are due to decreases in the wild population or, for example, a result of decreased fishing quotas due to strengthened regulation of sturgeon fisheries in range States. Further, with regard to aquaculture production, not all countries report their production, so reported figures

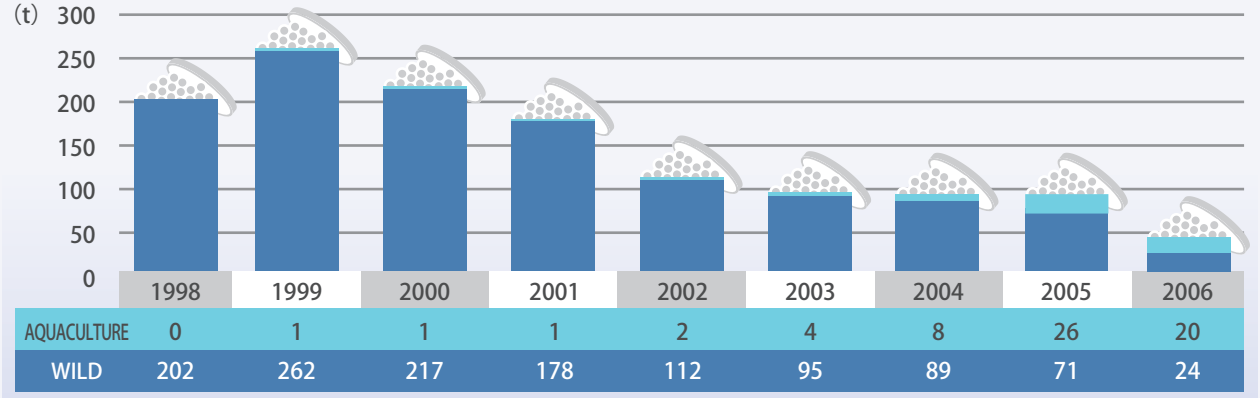
[1] There are two types of sturgeon aquaculture: ranching, inwhich fry are born and caught in the wild, and closed-cycle aquaculture, in which fry are born from adult fish ranched in the farm.

Figure 1 **World's capture production and aquaculture production of sturgeon (1990-2007)**



Source: FAO Fishstat capture production 1990-2007, FAO Fishstat aquaculture production 1990-2007. (Accessed on 29 June 2010.)

Figure 2 **Reported annual global caviar imports, wild vs. aquaculture, 1998-2006**



	1998	1999	2000	2001	2002	2003	2004	2005	2006
AQUACULTURE	0	1	1	1	2	4	8	26	20
WILD	202	262	217	178	112	95	89	71	24

Source: Compiled by TRAFFIC using UNEP-WCMC CITES Trade Database figures (TRAFFIC Europe, 2008)

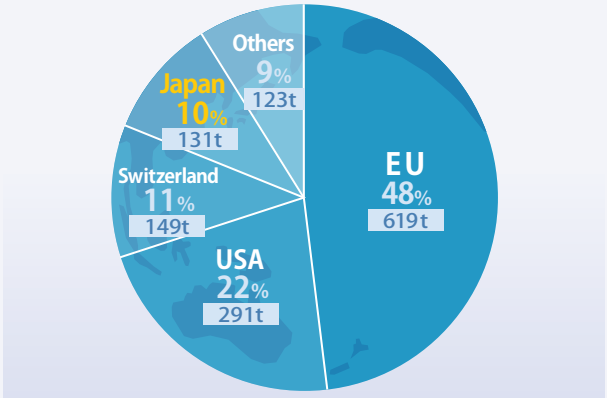
cannot be considered an accurate reflection of the actual world production (FAO, 2010). In Japan, sturgeon ranching (aquaculture) has been conducted since the late-1980s, but Japan' s production is not counted in the FAO statistics for aquaculture production.

Japan and International Trade in Sturgeon

Figure 2 shows world import volumes for caviar, based on trade data reported by CITES Parties, since all species of Acipenseriformes became CITES-listed in 1998. Compared to the 263 t of world import volumes of caviar in 1999, imports had dropped to a level equivalent to about 16.7% of that amount by 2006. It is noteworthy that import volumes of caviar from aquaculture production have been on the increase since 2002. A major factor in this increase in caviar from aquaculture is the previously mentioned increase in sturgeon aquaculture production during the 21st century in exporting countries. In 2006, imports of caviar from aquaculture reached 20 t, while caviar imports from capture production stood at a nearly equivalent 24 t.

Figure 3 shows the global shares of world caviar imports by country from 1998 to 2006. The European

Figure 3 **Global share of caviar imports, 1998-2006**



Source: Compiled by TRAFFIC using UNEP-WCMC CITES Trade Datebase (1998-2006) (TRAFFIC Europe, 2008)

Table 1 **Japan's imports of sturgeon products by description**

Description	1998	2007
caviar	52 t	6 t
specimen	744.7 kg	-
live sturgeon	1600 fish	2150 fish
skin	8 pieces	-
meat	-	12 t
extract	-	0.3 kg

Source: Compiled by TRAFFIC East Asia-Japan based on CITES annual reports (Ministry of the Economy, Trade and Industry) for 1998 and 2007

Union (EU) countries have the largest share of imports, accounting for approximately 48% of imports since all species of sturgeon became CITES-listed in 1988 to 2006, with a total of 619 t. The USA and Switzerland account for the next-highest shares after the EU, and Japan ranks fourth in the world.

Table 1 shows Japan' s import volumes of live sturgeon and sturgeon products by description for the years 1998 and 2007, based on CITES annual report statistics, revealing a reduction of approximately 88% in caviar imports to Japan from the 52t in 1998 to only six tonnes in 2007. In contrast, imports of live sturgeon increased from 1600 fish in 1998 to 2150 fish in 2007. According to CITES annual reports (2005-2007) compiled by the Ministry of the Economy, Trade and Industry (METI), there were big fluctuations in the amounts of live sturgeon by species imported between 2002 and 2007, but Siberian Sturgeon *Acipenser baerii*, Sterlet *Acipenser ruthenus* and Russian Sturgeon *Acipenser gueldenstaedtii* remained the main imported species. In 2006, there was a three-fold increase in imports of Siberian Sturgeon compared to 2005. All the imports of live sturgeon after 2005 were fish bred in captivity, imported from Germany (METI, 2005-2007).

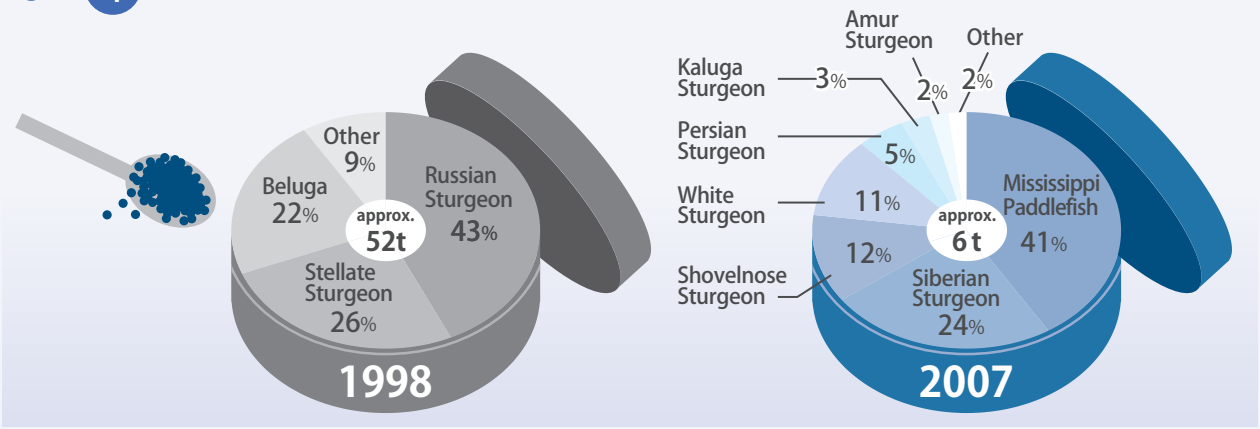
Figure 4 shows shares of caviar imported to Japan, by volume and by species. When comparing figures for 1998 and 2007, one can see a big change in the species composition of imports. For example, in 1998 the main species were Russian Sturgeon, Stellate Sturgeon *Acipenser stellatus* and Beluga *Huso huso*, all known for their high-quality caviar. However, roughly 10 years later in 2007, Mississippi Paddlefish *Polyodon spathula*, Siberian Sturgeon, Shovelnose Sturgeon *Scaphirhynchus platorynchus* and White Sturgeon *Acipenser transmontanus* accounted for 88% of imports. The North American species Mississippi Paddlefish and White Sturgeon together accounted for 50% of the total. Thus, one can note a major change in supply to the Japanese domestic market in this 10-year period.

From annual reports, it is clear that the countries exporting the largest volumes of caviar to Japan in 2007 were the USA, with 39% of the total, followed by Italy, the UAE and Germany. Furthermore, approximately 63% of the caviar imported to Japan was of wild origin. All of the caviar exported or re-exported to Japan from its largest trade partner, the USA, was produced from sturgeon captured in the wild, and the breakdown in terms of species was 1553.85 kg from Mississippi Paddlefish and 706 kg from Shovelnose Sturgeon (METI, 2007).

Japan and conservation measures for sturgeon

One of the conservation measures for sturgeon species adopted by CITES Parties is the introduction of a standardized labelling system that aims to facilitate the trade in sturgeon caviar and allows easy identification of the source of the caviar. CITES *Resolution Conf. 11.13 Universal labeling system for the identification of caviar*, adopted at CITES CoP11 in 2000 (and repealed at COP14), specified that a non-reusable label showing that the product was legally produced had to be attached to all caviar containers, regardless of the country of origin, export country, volume of contents or whether it was traded domestically or internationally. Furthermore, at CoP14 in 2007, *Resolution Conf. 12.7 Conservation of and trade in sturgeons and paddlefish (Rev. COP14)* was adopted, which

Figure 4 **Shares of caviar import volume to Japan by species for 1998, 2007**



Source : CITES annual reports (METI) for 1998, 2007

expanded requirements for labelling among Parties and added amendments requiring that information about species name, codes identifying species hybrid, country of origin and year of harvest, and an official registered code of the processing factory, be posted on all caviar containers, regardless of whether they were for import, export/re-export or domestic market trade.

This Resolution also specified that all Parties involved in import, export or re-export had to revise their domestic laws to create a registration system for caviar-processing factories, including aquaculture operations and re-packaging operations, and required that this information be reported to the CITES Secretariat.

This labelling system assists enforcement officers in controlling trade in caviar and also enables consumers to determine if a product is legally produced and traded, and to make informed choices about the caviar to purchase. However, as of 2010, Japan has not introduced the registration system for aquaculture facilities and processing factories, nor the universal labelling system specified in CITES *Resolution Conf. 12.7*. As a result, it is rare to see caviar products bearing the CITES label on the domestic Japanese market, irrespective of whether the product has been imported or domestically produced.

According to an interview with Japan's Fisheries Agency conducted by TRAFFIC, there is no system that requires sturgeon aquaculture operations in Japan to be registered or to report on their production. For this reason, there are no official statistics on sturgeon aquaculture operations and caviar production in Japan, which makes it difficult to reveal the overall picture of domestic sturgeon aquaculture operations. According to interviews with sturgeon aquaculture operators conducted by TRAFFIC, as of 2010 there are at least three operations in Japan producing sturgeon fry for aquaculture and there are at least seven aquaculture operators raising sturgeon for caviar commercially. Of these, some use domestically produced fry and some use fry from imported live sturgeon. The aquaculture operators interviewed said that stable production of sturgeon raised in captivity domestically achieved in the last few years has allowed plans to increase the number of roe-bearing sturgeon in the next five years to a level where export to foreign markets may be viable. However, according to a telephone interview conducted by TRAFFIC with METI in June 2010, because Japan has not so far complied with the requirements of CITES *Resolution Conf. 12.7*, the government will not be able to issue CITES export permits for Appendix II-listed species of sturgeon reared in captivity in Japan. In short, under the present system, caviar produced and processed in Japan cannot be exported abroad.

Recommendations

In February of 2006, TRAFFIC communicated to METI several recommendations, noting that Japan had not yet established a labelling and registration system for sturgeon products as specified by CITES *Resolution Conf. 12.7*, and requesting that such a system be implemented. However, as of July 2010, Japan had not yet adopted the systems necessary for implementing the CITES universal labelling system specified under CITES *Resolution Conf. 12.7 (Rev. CoP14)*. If the universal labelling system is adopted, consumers will be able to determine whether they are buying caviar products that have been properly produced and traded. Furthermore, domestic sturgeon aquaculture and processing operators will be able to export their products in accordance with CITES regulations. In order to prevent illegal fishering of wild sturgeon aimed at producing high-priced caviar, Japan should fulfill its responsibilities as a CITES Party and as a major caviar-consuming nation by establishing the necessary domestic law necessary to implement the universal labelling system as soon as possible.

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East Asia as a Key Determinant in the African Elephant's Future

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牙

For many Japanese, ivory is still a familiar presence in their lives in the form of hanko (personal name seals) or other arts and crafts. Many people now understand that ivory is no longer a commodity that can be used without limitation, even though controlled legal trade is permitted in Japan.

Twenty years have passed since the enactment of the 1989 ban on trade in African Elephants or their ivory and other parts and derivatives. At the Seventh meeting of the Conference of Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES CoP7) in 1989, the African Elephant *Loxodonta africana* was transferred to Appendix I of CITES, joining the Asian Elephant *Elephas maximus* as a species strictly protected from international commercial trade.

Over the last two decades, Japan has been the only country that has been approved by the CITES Parties to import two legal shipments of ivory, totalling approximately 90 t.

How to deal with ivory trade and elephant conservation is a complex challenge. The two legal shipments since 1989 have been conducted pursuant to specific guidelines. Of primary conservation significance is the specification that the financial proceeds of the strictly controlled legal trade are used exclusively for elephant conservation, and community conservation and development programmes, within or adjacent to the elephant range. The use of revenue from this controlled ivory trade for the conservation of African Elephants sets out a new paradigm to achieve effective and sustainable coexistence between humans and African Elephants in four important range countries in southern Africa.

African elephant numbers were roughly estimated to be 1.34 million in 1979, but by 1989 the population estimate had fallen to 620 000. Currently the best estimate suggests between 470 000 and 690 000 elephants on the African continent (Blank, J.J. *et al.*, 2007).

As an ivory-consuming nation, Japan has a responsibility to contribute to the conservation of elephants. And, because responsible consumption on the part of consumers is a key element to the success ivory trade control systems in Japan, the Japanese public also plays a direct role in the conservation of elephants.

Use of Ivory in Japan

In the *Shoso-in* imperial treasure repository, established in the middle of Japan' s Nara Period (715-806), numerous items made of ivory are found, such as rulers, knife scabbards, plectrums for musical instruments and "*Go*" pieces, indicating that ivory was already a treasured material in Japan over 1000 years ago. Today,

Figure 1 **Japan's import of raw ivory**

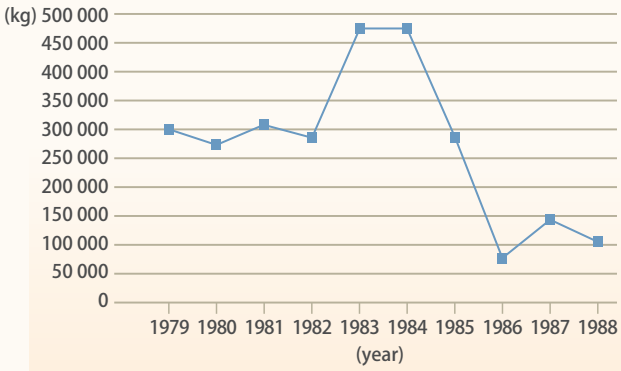
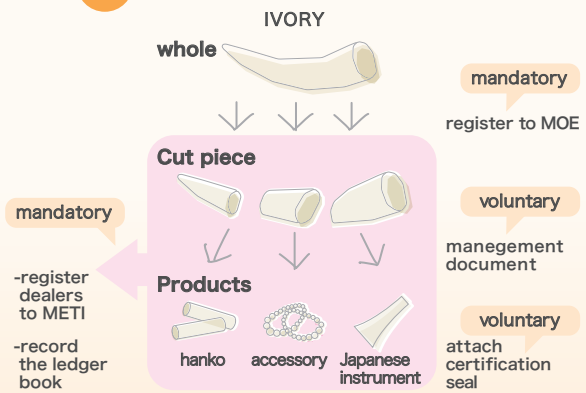


Figure 2 **Japan's Control System**



ivory is most commonly used as personal name seals known in Japan as *hanko*, for plectrums for Japanese instruments like the *shamisen*, for artistic craft items such as figurines known as *netsuke* and as fashion accessories like broaches. Among these uses, the greatest volume of ivory is believed to be for the production of *hanko* name seals.

Ivory Imports to Japan

During Japan's Meiji Period (1868-1912), available records show that about eight tonnes of ivory was imported annually from Southeast Asia between the years 1882 to 1888. Ivory imports to Japan soared from the 1970s to the mid-1980s. The 285 t imported to Japan in 1982 represented 61% of the entire world trade in ivory at the time, and in 1985 increased to 474t which clearly made Japan the world's largest importer of ivory year-on-year. After that importation decreased in accordance with the CITES regulations (**Figure 1**).

After protracted international debate, certain populations of African Elephant were down-listed to CITES Appendix II in 1997. Subsequently, Japan was allowed to import CITES-sanctioned government-held ivory stocks in 1999 after meeting strict qualifications regarding domestic ivory market controls. About 50 t of ivory (5,446 tusks) were imported in the first one-off sale agreement with Botswana, Namibia and Zimbabwe, fetching an export price of USD 4.18 million (approx. JPY500 million).

In 2009, as the result of a second one-off sale agreement approved by the Parties to CITES, Japan together with China was allowed to import a combined total of 107.8 t of ivory from Botswana, Namibia, South Africa and Zimbabwe. Approximately 40t (worth approx. JPY600 million (USD 5.98 million)) of this total was imported to Japan.

Trade Control System

Japan became a Party to CITES in 1981. Since then, Japan has abided by CITES regulations governing international wildlife trade, even the decision to ban commercial trade in all elephants species, including their parts and derivatives, in 1989.

Domestic stockpiles, beginning with accumulated pre-1989 stocks of ivory in Japan, have made it possible for the domestic sale of ivory in Japan to continue. This internal trade is regulated under the provisions of Japan's *Law for the Conservation of Endangered Species of Wild Fauna and Flora (LCES)*. Domestic trade in ivory that was legally imported in the two "one-off sales" of 1999 and 2009 is also regulated under *LCES*.

Status of the Ivory Stock

Under *LCES*, the Ministry of the Environment (MOE) and the Ministry of the Economy, Trade and Industry (METI) have compiled records concerning the domestic volume of registered raw ivory tusks, and scraps, cut pieces and numbers of ivory products held in stock. It is also required that all dealers handling ivory be registered.

According to the data compiled under the law, 13 800 whole tusks were registered between 1995 and 2008. When the 7125 tusks that are recorded as having been removed from the stock for processing are subtracted, a net stock of 6,675 tusks was registered as of 2008.

In addition, the stock of all of ivory (scraps, cut pieces) in the possession of manufacturers and wholesalers of ivory products totalled 51.1 t at the end of March 2006 (MOE, *in litt*., August 2009; METI, *in litt*., September 2009). This represents a 48% reduction in the stock compared to the 98 t registered in 1995 when Japan' s domestic control system was first implemented. During the five-year period from 2002 to 2006, the registered stock decreased at an annual rate of two tonnes per year. The largest numbers of ivory products in stock are accessories/jewellry such as beads and earrings, followed by *hanko* seals.

Japan' s recorded stock consists only of whole tusk intended for transfer of location or ownership. For example, if a person has an ivory tusk in their home with no intention to move its physical location or change ownership, that tusk does not require registration in the stock control system. If the intent to sell arises on a later occasion, only then does it become necessary to register the ivory in question. For that reason new items can come into the registered stock without being newly imported. Such cases result in a continuing increase of registered ivory in Japan.

Status of Enforcement

In addition to ivory stock management and the registration for ivory dealers, the *LCES* also contains mechanisms that seek to improve control by providing the consumers with a means to choose certified products. A government-issued certification seal can be attached to individual products by retailers on a voluntary basis. This is a system by which a manufacture can apply to the government authority and receive certification seals with a separate number for each product, allowing for the traceability from individual raw ivory tusks to end products. The underlying principle is to make this seal a brand (i.e. environmental labelling) that consumers can look for when purchasing a product and, thus create an incentive for retail dealers to offer products with such seals. The seals provide information that enables tracing to the origin of the raw ivory from which the product was made, guaranteeing its legality, and with the intention of preventing illegal items from entering the market. In a survey TRAFFIC conducted in 2008, it was found that 52 of the 80 ivory-handling shops surveyed (65%) sold products bearing these seals. This represented an increase in seal-bearing products compared to an earlier survey. A survey was also conducted of ivory-selling e-commerce sites and Web auctions, which revealed that 28 of the 70 sites (40%) handled products with the seals. This was a lower rate than off-line retail shops.

The seal system is meaningless, however, if the seals are not applied properly to the registered products and is thus a system based on trust in the manufacturers and retailers. Therefore, it is important that the system operates to an optimum level of participation by the private sector.

Japan' s Ivory Trade Characteristics

The Elephant Trade Information System (ETIS) is a system for monitoring the illegal trade of elephant products by investigating and analyzing trends in illegal trade in ivory and elephant products. According to the latest ETIS report released in October 2009, in general, Japan is identified as a positive example of effective ivory trade law enforcement in the ETIS analysis. However, Japan can still be classified as one of the countries in which cases of illegal ivory trade continues to be an issue.: The fact that Japan is home to one of the world' s major ivory processing industries and consuming markets means there continues to be a need for vigilance against any illegal ivory trading.

Because it is one of the ivory importing nations recognized by CITES, Japan's market has a direct responsibility for protection and conservation of wild elephant populations. The domestic market is

controlled to enable consumers to choose legal products bearing seals that are a form of environmental labeling to ensure products are in compliance with international regulations. Providing consumers with the means to avoid purchasing products that may be illegal, and to verify the legality of products they wish to buy, is a key method for excluding illegal activity that would have negative consequences for the conservation of elephants in the wild.

TRAFFIC has had a long history of working in Japan with the goal of eliminating illegal ivory trade and providing recommendations to help improve the management of any permitted legal trade. For Japan's ivory trade management system to operate at an optimal level of effectiveness, thorough implementation of regulations governing ivory trader registration is needed. This would ensure that consumers can see clearly whether a trader is licensed or not. The process depends greatly on METI to effectively communicate with all ivory traders regarding their legal obligation to register with the authorities. Active monitoring of points of sale, including on-the-spot inspections, will also help to increase compliance. The public listing of all registered ivory traders would also help ensure good linkages between METI and MOE, as responsible government agencies, with the private sector. It would thus enable end-consumers to confirm, via a quick internet check, whether a trader is registered before making a purchase.

The current trust-based system in Japan means that registered traders also have a responsibility to clearly display their registration details at their place of business (whether a 'physical' bricks-and-mortar shop or an internet-based opertion) so that consumers can verify that they are registered traders.

To improve the reliability of the certified seal (sticker) system for ivory products in Japan, TRAFFIC believes that improvements should be made in the seal application method and the seal attachment method. The certified seal application form should be improved so that the precise raw material (individual tusk) can be identified. As a result, the responsible government agencies of METI and MOE need to conduct further outreach activities aimed at retailers, and consider doing so in collaboration with the manufacturers and wholesalers. In addition, the role and importance of certified seals for ivory products should also be explained clearly to end-consumers as well. This is particularly important to ensure, for example, that consumers understand that when retailers sell so-called certified products, the appropriate certified seal should be physically attached to the product.

To ensure the overall ivory trade management system is working effectively in Japan, the current status of the volume of ivory stocks should be actively monitored. In order to exert effective control over ivory in Japan, it it important to expand the LCES registration requirement to all members of the public who possess whole ivory tusks, even in cases where they remain personal effects. Also, if METI and MOE have up-to-date integrated tracking of stock control (number of tusks, pieces) of ivory held by each trader, the overall system will benefit. As a result of these improvements, Japan's ability to contribute to responsible international trade partnerships with ivory range countries would be enhanced by having more robust and transparent market controls.

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Virtual Trade in Real Wildlife

Kahoru Kanari, Programme Officer

Use of the internet for wildlife trade

Use of the internet in Japan has grown eight-fold in the last 12 years and now has in excess of 90 million users, about 78% of the population (Ministry of Internal Affairs and Communications, 2009). One of the forms of internet use that has become especially popular in Japan is internet auction. By simply registering with one of the auction site providers, such as Yahoo or Rakuten, anyone can participate in the "Net auctions" and purchase or sell ("offer for sale") goods on the internet. This easily accessible service has caused a mushrooming of growth in user numbers in Japan, to the point where the number of goods being offered for sale can reach tens of millions at any time of searching (Aucfan, 2010). Wildlife is also being offered (advertised) and purchased (by the winning bidder) on these internet auction sites. Animals and plants listed in the Appendices of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), including live specimens, their products and derivatives, are also offered for sale on some auction sites.

Surveys in several countries and languages have also revealed that illegal wildlife products are also being sold on the internet (Wu, 2007) and, in Japan, when cases of illegal trade in wildlife are found, it is sometimes revealed that use of the internet has been involved. The dramatic growth in E-commerce involving wildlife has created the need for measures to deal with the problem of illegal trade. To confront this issue, the CITES Secretariat has formed a working group consisting of representatives from Parties to the Convention and international organizations, to begin investigating scientific methods for information-gathering and monitoring of this trade (CITES, 2010a). At the 15th meeting of the Conference of the Parties to CITES (CITES CoP15), an amendment was made to Resolution Conf. 11.3 calling for Parties to establish domestic measures and put a monitoring system in place for effective control and information-sharing systems for E-commerce involving CITES-listed species (CITES, 2010b).

Present status of Japan's internet auction sites

TRAFFIC conducted a one-point survey and two one-week monitoring surveys within four months during 2009 in an effort to document the status of wildlife trade via internet auctions on Japanese-language websites. This survey focused on the two auction websites with the largest numbers of offers (goods) in Japan, to document the status of several species of CITES-listed animals and plants being sold via the internet in the Japanese market.

For research consistency, the focal species and key

Figure 1 **Bids of CITES-listed fauna and flora on two auction websites (excluding live fauna) (Survey period: Mar. – June 2009)**

name of items (keyword)	Hit counts		Result (counted)		Average new offers per week	
	Site 1	Site 2	Site 1	Site 2	Site 1	Site 2
象牙、ぞうげ、ゾウゲ (ivory)	3650	143	1306	41	177.5	1.5
鼈甲、べっ甲、ベッコウ、べっこう (bekko)	2710	110	543	10	49	1
ワニ、鰐、わに／革、皮 (crocodile/skin)	1344	92	278	14	52	19.5
キャビア、 チョウザメ (caviar) (sturgeon)	1674	64	11	0	43.5	0.5※
麝香、じゃ香、じゃこう、ジャコウ (musk)	79	59	3	0	0	0
アロワナ (arowana)	138	68	18	17	1	24.5
虎骨、 虎肉 (tiger bone) (tiger meat)	1	4	1	0	0	0
虎、トラ、とら／毛皮、剥製 (tiger / fur, stuffed specimen)	39	3	6	0	0.5	0
ヒョウ、豹／毛皮 (leopard / fur)	32	2	9	0	0	0
豹 骨 (leopard) (bone)	6	6	0	0	0	0
ビクーニャ、ビクーナ、ビキューナ (vicuna)	8	0	5	0	1.5	1
ブラジリアンローズウッド (Brazilian Rosewood)	5	0	5	0	3.5	0
トリバネアゲハ (birdwing butterfly)	7	4	4	4	0	6.5
犀角 (rhino horn)	5	0	2	0	0	0
スローロリス (slow loris)	0	1	0	1	0	0

Hit count: the number of search results produced at any given time for a given keyword
Result counts: the number (count) of results (hits) determined to have a high possibility of relevance with regard to CITES-listed species/products based on an independently devised set of criteria.
Average offers per week means the number of new offers in a week determined to be relevant results.
The following products are excluded from results due to identification difficulties: cosmetics which include 'caviar' in the name or description; perfume which includes 'musk' scent; perfume which includes 'Brazilian rosewood' scent.
※including live sturgeon for pet

words for searching the availability of species and their products were first decided and then used in research across different internet auction websites (**Figure 1**). These searches produced a large number of offers of products related to wildlife. Among these were ivory, *bekko* (marine turtle shell), alligator/crocodile skin products and caviar, offered with high frequency. The survey showed that, on average, more than 20 new offerings of ivory products could be found every day and nearly 50 new offerings of caviar and *bekko* could be found every week. These data show that, in particular, ivory and *bekko* products are being offered on these Japanese-language sites at higher levels compared to the case in previous surveys for auction sites operating in other languages (e.g. Chinese: Wu, 2007 and English: IFAW, 2008; Williamson, 2004). In terms of live animals, at least 56 CITES-listed species of live reptiles and birds were found from one of two studied websites (site 2), while the other website did not allow the advertisement of trade in live reptiles and birds.

The origins and destinations of wildlife traded

Many of the CITES-listed fauna and flora being offered via internet auctions with Japan as the final consumption destination are originally imported from other countries. Although in general it is rare to find information about the country of origin or export country for items offered via internet auctions, one exception is offers of live fauna, in which case 36% of the advertisements mentioned the country of origin or export country when details were investigated. TRAFFIC' s survey results found 27 countries and six regions around the world listed as the country of origin or point of export for reptiles and birds offered via internet auctions.

Furthermore, the survey revealed that 10% (11 advertisements) of the sampled ivory offerings (109 advertisements) from one auction website (site 1) provided a service for delivery of the shipment to customers in

Japan and abroad. This suggests that Japan's internet auctions are also being used for international trade. International trade of ivory is regulated by CITES and re-exporting from Japan is prohibited for certain specimens of ivory. It is unclear to what degree the sellers and consumers on the internet auction sites are aware of national or international regulations. Insufficient knowledge of the regulations by sellers and consumers could be part of the reason behind any illegal shipments if they have occurred.

The need for amending the laws involved

It is under discussion whether sales conducted on the internet are more conducive to illegal trade than sales conducted in real "bricks and mortar" stores. The CITES Secretariat has called for scientific research to examine the correlations between the use of the internet and the rate of illegal trade in wildlife (CITES, 2010c).

One of the important factors that can be noted in the case of Japan is that the country's laws are not yet updated to deal effectively with the new style of trade that is taking place over the internet. To address the characteristics of internet trade, the laws governing wildlife trade in Japan, especially *the Law for the Conservation of Endangered Species of Wild Fauna and Flora (LCES)*, needs to be amended to provide appropriate regulation. While *LCES* was first adopted in 1993, and has been through few major amendments, Japan's internet user population has increased eight-fold in 12 years, as mentioned above (Ministry of Internal Affairs, 2009), and modes for purchase and sale of wildlife have changed greatly.

It needs to be understood that wildlife products offered for sale on the internet only come with limited information provided by sellers. It should be a requirement for sellers to provide sufficient information, including that relating to the legality of products on offer and details of any documents needed to validate legality (such as legal import documents or registration documents), when posting offers of wildlife and wildlife products, to prevent illegal trading.

At the same time, because internet auctions are platforms for trade not only for business operators but also for private individuals, comprehensive measures must be developed, and included in *LCES*. The responsibility of government regulators should also include a requirement to ensure that the necessary knowledge concerning international conventions and domestic laws is disseminated to a broader audience, including internet users. The government and the providers of internet auction sites must co-operate to strengthen the effective distribution of this knowledge.

It is vital that efforts be made to take advantage of the ability of the internet to reach a larger number of people over a broader range than real "bricks and mortar" stores and use it to disseminate and increase awareness of CITES regulations and national laws. Protection of endangered species from unscrupulous internet business transactions is necessary to create a strong deterrent against illegal internet E-commerce, and this can be achieved through public awareness outreach, diligent monitoring and law.

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TRAFFIC, the wildlife trade monitoring network, works to ensure that trade in wild plants and animals is not a threat to the conservation of nature.

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