Caviar Report to the European Commission

Part I.

Engler, M & Knapp, A. (2008). *Briefing On the Evolution of the Caviar Trade and Range State Implementation of* Resolution Conf. 12.7 (Rev. Cop 14). A TRAFFIC Europe Report for the European Commission, Brussels, Belgium.

Part II.

UNEP-WCMC (2008). *Analysis of EC Trade in Caviar by Species and Tracking of Caviar Permits within the UNEP-WCMC Caviar Database.* A Report to the European Commission. UNEP-WCMC, Cambridge.

This report was prepared in two parts by TRAFFIC and UNEP-WCMC for the European Commission. Part I, prepared by TRAFFIC, examines trends in the reported legal caviar trade globally and in the EC since the listing of all Acipenseriformes in 1998, based on reported import and export data from the CITES Trade Database, as well as examining the illegal trade in caviar in the EC through seizures reported in EU-TWIX. Additionally, the briefing focuses on the implementation in main caviar range States of the main measures set out in CITES *Resolution Conf. 12.7 (Rev.CoP14)*, including the labelling of caviar containers, registration of processing, (re-)packaging, and exporting facilities, and range State communication of this registration information to the CITES Secretariat. Part I also presents a brief overview of issues examined in more detail in Part II, including range State quota compliance and requirements regarding the provision of copies of export permits and re-export certificates for the inclusion in the UNEP-WCMC Caviar Database.

Part II, produced by UNEP-WCMC, includes a brief summary of EC caviar trade trends and takes a species-based approach to assessing EC imports and range State quota compliance. Results of tracking caviar permits held within the UNEP-WCMC Caviar Database are presented to highlight any incidences of potentially illicit trade. Finally, compliance with the permit reporting requirements of *Resolution Conf. 12.7(Rev. CoP14)* is assessed in depth for EC Member States and main exporting range States. Parts I and II are presented together as a comprehensive overview of the caviar trade both globally and within the European Community.

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PART I.

BRIEFING ON THE EVOLUTION OF THE CAVIAR TRADE AND RANGE STATE IMPLEMENTATION OF CITES *RESOLUTION CONF. 12.7 (REV. COP 14)*

Maylynn Engler and Amelie Knapp

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INTRODUCTION

Caviar is produced from the roe of sturgeon and paddlefish, in the Acipenseriformes family. There are 27 species of Acipenseriformes, including 25 sturgeon species and 2 paddlefish species. This briefing will focus mainly on the Eurasian species from which significant quantities of caviar are produced and found in international trade. These include sturgeons from the Caspian basin; the Russian Sturgeon *Acipenser gueldenstaedtii*, Fringebarbel Sturgeon *A. nudiventris*, Persian Sturgeon *A. persicus*, Sterlet *A. ruthenus*, Stellate Sturgeon *A. stellatus*, and Beluga *Huso huso*, as well as the two Amur River sturgeon species Amur Sturgeon *A. schrenckii* and Kaluga *H. dauricus*.

Populations of wild sturgeon have declined over the course of the 20th century and continue to be under significant threat from a variety of factors such as overexploitation, poaching and illegal trade, habitat destruction, migratory barriers and pollution of waterways[1]. In 1997, all species of sturgeon and paddlefish were listed in the CITES Appendices. Since this listing came into force in April 1998, all CITES Parties have been required to report their trade in specimens of Acipenseriformes, including caviar, in their CITES Annual Reports.

The purpose of this briefing document is to illustrate the evolution of the caviar trade since 1998, and to assess the implementation of certain measures by selected range States, as laid out in *Resolution Conf. 12.7 (Rev. CoP14)*, on the conservation of and trade in sturgeons. Selected range States have been chosen based on significant reported quantities of wild caviar exported from those countries since 1998.

This briefing illustrates the reported wild catch and aquaculture production of sturgeon in range States, and presents an overview of the analysis of CITES trade data for the legal caviar trade into the EU, including information about the main EU importers, main countries of origin, main trade routes and the source of the caviar (e.g. whether sourced from the wild or from aquaculture). Additionally, exports of caviar by range States as reported to the CITES Trade Database are compared with CITES export quotas, to assess whether any range States have exceeded their quotas.

This briefing also presents information on caviar seizures in the EU, in order to identify Member States in which the most seizures have taken place and the main countries from which illegally-traded caviar is entering, or is destined for, the EU.

Information has also been compiled on the main measures implemented by major range States relating to the caviar trade as detailed in CITES *Resolution Conf. 12.7 (Rev. CoP14)*, focusing on the labelling of caviar containers, registering of legal exporters and processing plants including aquaculture operations and repackaging plants. In 2000, a universal caviar labelling system was introduced through *Resolution Conf. 12.7 (Rev. CoP14)*, requiring range States to implement a uniform marking system for caviar containers, using non-reusable labels. Since 2002, *Resolution Conf. 12.7 (Rev. CoP14)* has been amended to require range States to register processing and repackaging plants in their territories and provide a list of these facilities and their official registration codes to the Secretariat. Also since 2002, it has been obligatory for CITES Parties not to accept the import of sturgeon species from stocks shared between different range States unless export quotas have been established for that year by the range States concerned and have been communicated by the Secretariat to the Parties.

[1] Ludwig, A. (2008). Identification of Acipenseriformes species in trade. *Journal of Applied Ichthyology*. 24 (Suppl. 1), pp. 2-19.

As of 2000, range States have also been required under *Resolution Conf. 12.7 (Rev. CoP14)* to provide copies of each export permit for caviar to the Secretariat, and to the UNEP-WCMC Caviar Database after its launch in November 2007. This briefing also presents a compilation of information on the provision of copies of all export permits and re-export certificates by range States to the CITES Secretariat or UNEP-WCMC, for the inclusion in the UNEP-WCMC Caviar Trade Database and whether this has occurred within specified deadlines.

UNEP-WCMC has produced a complementary caviar report for the European Commission which is presented as Part II to this briefing, using the UNEP-WCMC Caviar Database to access detailed caviar information, including data in the Caviar Database that is not publicly available, undertaking permit by permit analysis to investigate any discrepancies, a detailed analysis of quota compliance, and the identification of potential illegitimate use of CITES export permits based on information in the Caviar Database. Where information in the UNEP-WCMC report complements that which is presented here, references to the UNEP-WCMC report *Analysis of EC Trade in Caviar by Species and Identification of Potential Illegitimate Uses of CITES Permits* are provided (hereafter referenced as UNEP-WCMC, 2008).

METHODS

Sturgeon wild catch and aquaculture production in range States

Wild catch and aquaculture production quantities of sturgeon for main range States[2] exporting caviar were derived from the FAO Fishstat Plus database for the years 1998-2006. Figures are reported in tonnes.

Evolution of the caviar trade

Legal trade in caviar

For the purposes of this briefing, the term caviar was interpreted as per the definition given in *Resolution Conf. 12.7 (Rev. CoP14)*, which defines caviar as the processed unfertilized eggs (roe) of Acipenseriformes species. An analysis of trade data from the CITES Trade Database was conducted for reported caviar trade into the EU-27[3] from 1998 to 2006, the most recent year for which comprehensive data are available. Since the listing of sturgeon species in CITES Appendix II only came into effect on 1 April 1998, trade data for 1998 only cover April-December 1998. Only data with the import term "eggs", and only units of grams (converted to kg for consistency) or kilograms (kg) were included. This excludes live, fertilized eggs used for aquaculture purposes as these are generally classified as "eggs (live)". Additionally, data with the source code for confiscated or seized specimens (I), pre-Convention specimens (O), and source unknown (U) were excluded. The source codes for animals and parts or derivatives thereof which were bred in captivity (C) or born in captivity (F), and specimens originating in a ranching operation (R), were grouped into the term "C" to include all caviar produced in aquaculture operations.

Data were analysed to determine the main EU importers, and main countries of origin for wild caviar and caviar produced from aquaculture, main trade routes into the EU, the source of reported caviar imports (whether wild or aquaculture), and trade trends from 1998-2006 for wild caviar and caviar produced from aquaculture both globally and focusing on reported EU imports. Reported exports from main range States were compared with EU import records, and also with CITES export quotas for these years. Since 2000 was the first year that caviar export quotas were implemented under CITES, caviar export quotas are only available for 2001 onwards.

An analysis was also conducted to determine trends in the reported import value of caviar, using data derived from the external Trade Database of Eurostat, using the CN8[4] commodity code for caviar. The EU-27 grouping was used to determine the total reported import value to the EU, as well as reported import value from outside the EU (extra-EU trade) and within the EU (intra-EU trade).

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[2] I.e. range States with the highest global exports of caviar in recent years: Azerbaijan, China, the Islamic Republic of Iran (referred to hereafter as "Iran"), Kazakhstan, and the Russian Federation.

[3] The EU-27 was used for all analyses, and for the purposes of this document will be referred to simply as the EU.

[4] CN8 codes are 8-digit Combined Nomenclature (CN) Customs codes, which are used to classify different categories of Customs commodities.

Illegal trade in caviar in the EU

Information on reported caviar seizures in the EU was compiled from the EU-TWIX[5] database, for the years 1998-2006. Data with the description "CAV", and units of mass (in kg) were analysed.

This analysis of illegal trade in caviar in the EU focused on total seizures per year in the EU, as well as Member States in which the most seizures have taken place, and the main countries of origin for caviar seized in the EU. Species of sturgeon for which the most seizures have been reported were identified, as well as the most common routes between country of origin and Member State of destination.

It should be noted that trends in seizures derived from EU-TWIX data are only indicative of patterns of illegal trade, because Member States differ in their enforcement effort, in their reporting efficiency to EU-TWIX, and in addition methods of entering seizure data can vary among Member States (e.g. some data are not recorded at the species level).

Range State compliance with *Resolution Conf. 12.7 (Rev. CoP14)*

To determine range State compliance with the recommendations of *Resolution Conf. 12.7 (Rev. CoP14)* on the conservation of and trade in sturgeons and paddlefish, information on registration of caviar exporting, processing, and repackaging facilities in range States was compiled from the *CITES register of licensed exporters and of processing and repackaging plants for specimens of sturgeon and paddlefish*, at **http://www.cites.org/common/resources/reg_caviar.pdf**, consulted on 23 May, 2008.

The CITES Secretariat was consulted in order to determine which of these range States have taken administrative and legal measures to allow for the labelling of caviar processed, packaged, or re-packaged in their country. Information was similarly obtained on whether one or several labels have been designed for these range States.

Additionally, information was obtained through consultation with UNEP-WCMC on whether range States have been submitting export permits and re-export certificates to UNEP-WCMC or the Secretariat, for the inclusion in the UNEP-WCMC Caviar Database as required under *Resolution Conf. 12.7 (Rev. CoP14)*.

[5] EU-TWIX is the European Union Trade in Wildlife Information Exchange, a database and mailing list developed as a tool to facilitate information exchange and international co-operation between law enforcement officials across the EU.

STURGEON WILD CATCH AND AQUACULTURE PRODUCTION IN RANGE STATES

Range State wild catch, or capture production, of sturgeon from 1998-2006 is illustrated in Table 1. Aquaculture production of sturgeon is given in Table 2. These tables give a general overview of quantities of sturgeon caught and produced by aquaculture in main range States (where data is available), however it should be noted that these quantities refer to all sturgeon caught or produced, rather than being limited to quantities caught or produced for caviar.

There is a significant difference between quantities of wild catch compared with quantities of sturgeon produced by aquaculture, with the latter being significantly greater. In addition, sturgeon wild catch has significantly decreased in quantity since 1998, in the majority of cases (Table 1). Conversely, aquaculture production in European inland waters has greatly increased over the same time-period, although the data do not indicate quantities at the species level and are unavailable for Asian aquaculture of sturgeon prior to 2003 (Table 2).

Wild catch data were unavailable for Kazakhstan from 1998-2004, and for China for the entire 1998-2006 time period (Table 1). While Azerbaijan has historically reported small quantities of caviar produced from aquaculture (e.g. pre-1998), no caviar aquaculture production was reported from 1998-2006 (Table 2). For China, data on caviar aquaculture production were unavailable until 2003 onwards (Table 2). For the Russian Federation, aquaculture production was reported for both freshwater (European inland waters) and marine (Mediterranean and Black Sea) environments, however the vast majority of Russian caviar from aquaculture was produced in the freshwater environment, with marine aquaculture production only reported in 1999 (Table 2).

Table 1: Sturgeon wild catch in main range States, by quantity (t) 1998-2006

Range State	Species	Fishing area	1998	1999	2000	2001	2002	2003	2004	2005	2006
Azerbaijan	*Acipenseridae* spp.	Asia – Inland waters	61	69	70	76	76	105	89	85	9
Iran	*Acipenseridae* spp.	Asia – Inland waters	1200	1000	1000	870	643	463	500	411	330
Kazakhstan	*Huso huso*	Asia – Inland waters					58	64	6	2	36
	Acipenser nudiventris	Asia – Inland waters								1	1
	Acipenser stellatus	Asia – Inland waters								4	84
	Acipenseridae spp.	Asia – Inland waters	270	240	215	282	185	196	232	227	55
Russian Federation	*Huso huso*	Europe – Inland waters	78	40	44	40	32	24	13	17	8
	Acipenser gueldenstaedtii	Europe – Inland waters	646	359	250	251	219	189	121	139	69
	Acipenser stellatus	Europe – Inland waters	336	234	176	172	136	113	29	38	10
	Acipenser ruthenus	Europe – Inland waters	1	1		1	2	1	2	1	1
	Acipenseridae spp.	Europe – Inland waters	169	118	124	133	69	56	77	41	41
		Mediterranean and Black Sea	284	181	54	18	15	8	3	2	2

Note: Blanks or omissions indicate no data available.
Source: Derived from FAO Fishstat Plus database

Table 2: Sturgeon aquaculture production in main range States, by quantity (t) 1998-2006

Range State	Species	Fishing area	Environment	1998	1999	2000	2001	2002	2003	2004	2005	2006
Azerbaijan	*Acipenseridae* spp.	Asia – Inland waters	Freshwater	-	-	-	-	-	-	-	-	-
China	*Acipenseridae* spp.	Asia – Inland waters	Freshwater						10 871	11 269	15 407	17 424
Russian Federation	*Acipenseridae* spp.	Europe – Inland waters	Freshwater	1100	1560	2050	1800	2100	2208	2400	2470	2100
		Mediterranean & Black Sea	Marine	-	10	-	-	-	-	-	-	-

Note: Blanks or omissions indicate no data available, "-" indicates zero quantity.
Source: Derived from FAO Fishstat Plus database

EVOLUTION OF THE CAVIAR TRADE

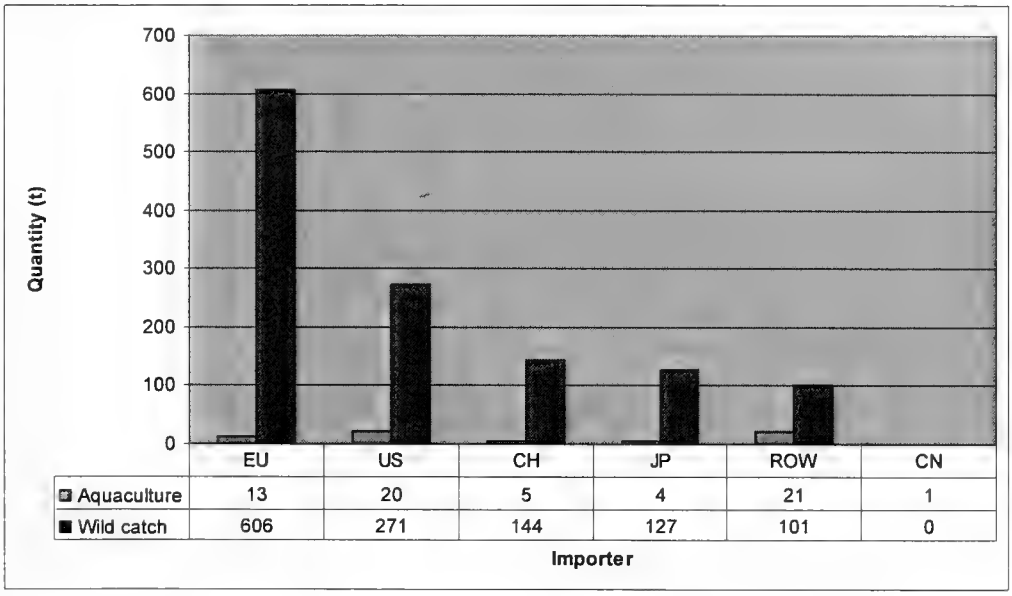
The legal trade in caviar

The following tables and graphs illustrate the legal reported global and EU trade of caviar from 1998-2006. All tables and figures in this section are derived from caviar data taken from the CITES Trade Database.

Import trends

The 27 EU Member States as a group represent the largest global importer of legal caviar, considering total tonnes (t) imported from 1998-2006 (Fig. 1). Over 97% of the EU's reported caviar imports were sourced from the wild. After the EU, the US, Switzerland, and Japan are the next largest importers.

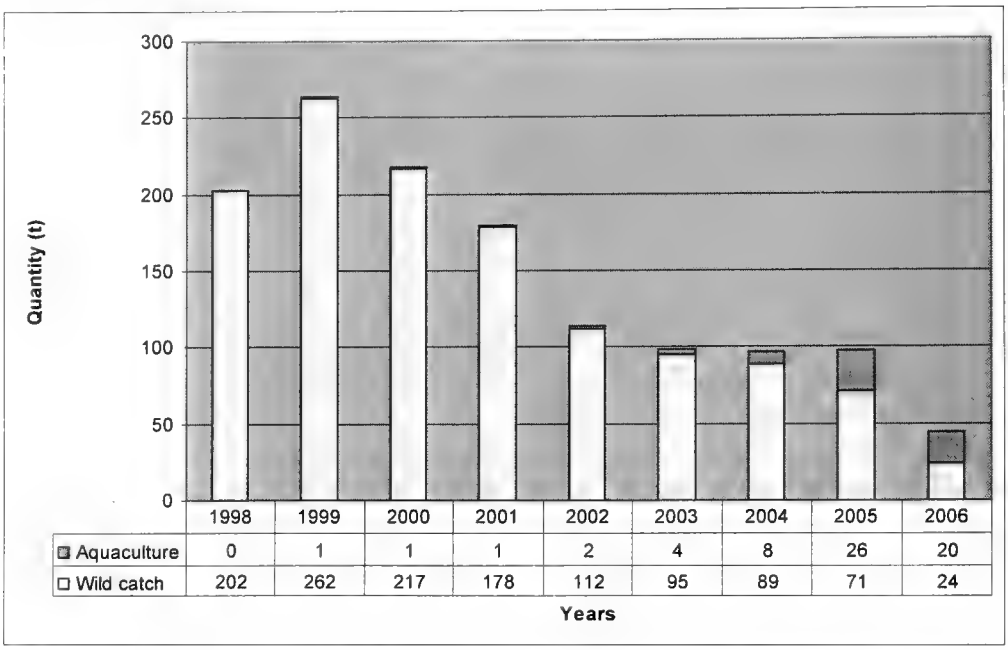
Fig. 1: Reported imports of caviar from wild catch and aquaculture production by importer and source code (t), 1998-2006



	EU	US	CH	JP	ROW	CN
Aquaculture	13	20	5	4	21	1
Wild catch	606	271	144	127	101	0

EU = EU-27, US = USA, CH = Switzerland, JP = Japan, RoW = Rest of World, CN = China.
Source: Data derived from the CITES Trade Database.

Fig. 2: Reported annual global caviar imports, wild vs. aquaculture (t), 1998-2006



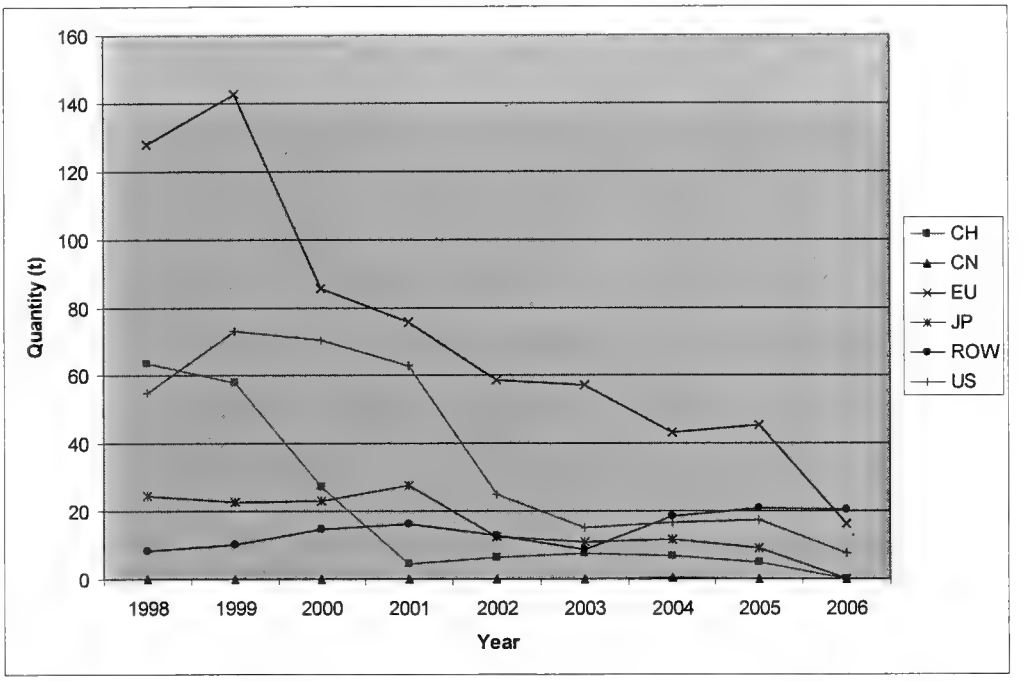
Source: Data derived from the CITES Trade Database.

Despite an increase in reported global imports of caviar from aquaculture, reported global caviar imports have declined from 1999-2006 (Fig. 2). Between 2001 and 2005, reported global imports of caviar from aquaculture have at least doubled every year (Fig. 2). Reported quantities of caviar from aquaculture in trade in 2006 were somewhat lower than in 2005, but this may be due to late reporting of 2006 trade data. Data for 2006 should be verified in 2009 or once data for more recent years are available, to determine whether this has been the case. It would also be interesting to see if this trend continues after 2006, when caviar trade data for 2007 and 2008 become available. It should be noted that trade in caviar produced from aquaculture within the EU and that is not exported outside of the EU would not appear in international trade data, because of the absence of internal border controls.

This increase in the reported trade in caviar from aquaculture is consistent with the increasing trend in reported sturgeon aquaculture production (see Table 2, p. 11).

Reported caviar imports to the EU and to other major importers have significantly decreased in quantity from 1998 to 2006 (Fig. 3).

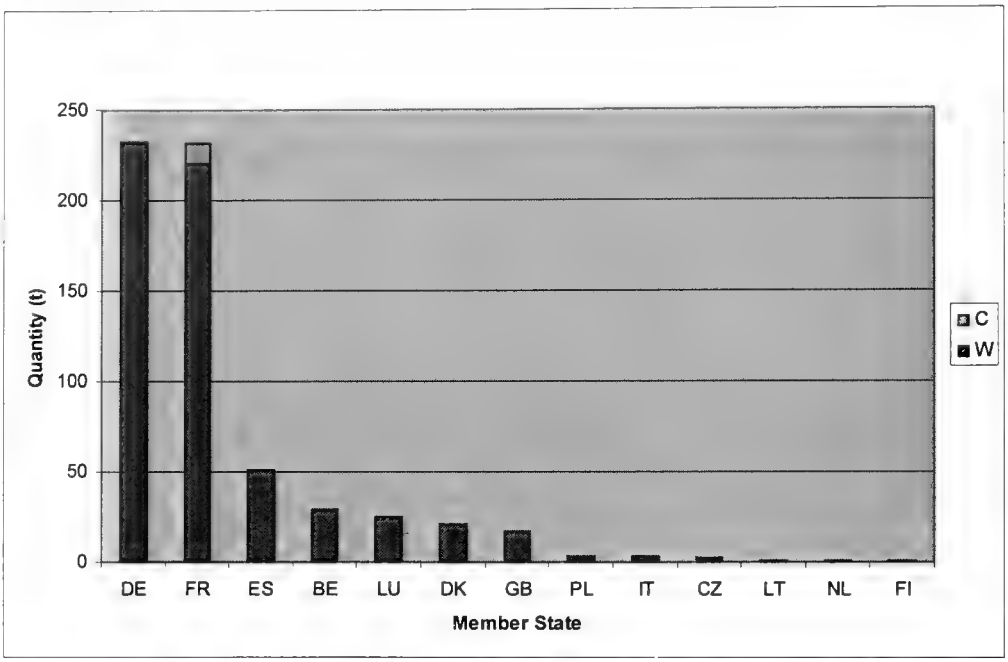
Fig. 3: Reported imports of caviar from wild catch and aquaculture production by importer and year (t), 1998-2006



CH = Switzerland, CN = China, EU = EU-27, JP = Japan, RoW = Rest of World, US = USA.
Source: Data derived from the CITES Trade Database.

Within the EU, Member States that have imported the largest quantities of caviar from 1998-2006 are Germany and France, together accounting for about 75% of all reported EU imports, followed by Spain, and Belgium (Fig. 4). Almost all of these reported imports are of wild-sourced caviar, although France has the highest volume of reported imports of caviar produced by aquaculture, at 11 t.

Fig. 4: EU Member State reported caviar imports by quantity and source code, (t), 1998-2006



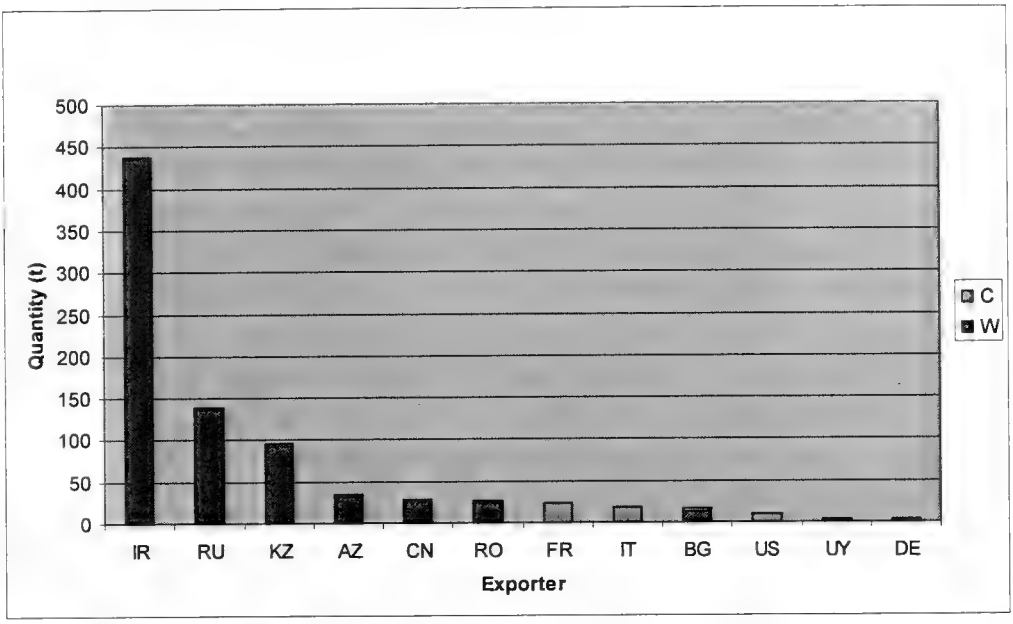
DE = Germany, FR = France, ES = Spain, BE = Belgium, LU = Luxembourg, DK = Denmark, GB = United Kingdom, PL = Poland, IT = Italy, CZ = Czech Republic, LT = Latvia, NL = The Netherlands, FI = Finland.
C = caviar from aquaculture, W = wild catch.
Note: Country omissions indicate zero quantity.
Source: Data derived from the CITES Trade Database.

Export trends

The main direct exporters of wild and aquaculture-derived caviar, according to exporter records, are the Caspian States: Iran, the Russian Federation, Kazakhstan and Azerbaijan (Fig. 5). Iran is by far the largest global exporter of wild caviar at 438 t, with no reported exports of caviar from aquaculture. The Russian Federation (138 t), Kazakhstan (95 t) and Azerbaijan (35 t) are the next three largest exporters by quantity, also with no reported direct exports of caviar from aquaculture.

The main direct exporters globally of caviar derived from aquaculture operations are France (23 t), Italy (17 t), and the USA (9 t) (Fig. 5).

Fig. 5: Direct exports by reported exports (t), 1998-2006



IR = Iran, RU = Russian Federation, KZ = Kazakhstan, AZ = Azerbaijan, CN = China, RO = Romania, FR = France, IT = Italy, BG = Bulgaria, US = USA, UY = Uruguay, DE = Germany.
C = caviar from aquaculture, W = wild catch.
Note: Country omissions indicate zero quantity.
Source: Data derived from the CITES Trade Database.

Direct caviar exports reported by species, range State, and year are presented in Table 3. More detailed information by species is presented in UNEP-WCMC, 2008. The Russian Federation had the highest total quantity of reported exports of caviar from *A. gueldenstaedtii*. Kazakhstan had the highest total export quantity of caviar from *A. nudiventris*, although exports from this species were only reported over a three-year period from 2000-2002, in both exporter and importer records. For *A. persicus*, Iran was the only range State with reported direct exports of this species, and has exported a total of 202 402 kg from 1998-2005. China had the highest total of reported direct exports of *A. schrenckii*. Iran had the highest reported exports of *Acipenser* spp. (which is mixed, pressed caviar) and is the only range State to have traded this product in any significant quantities. Iran also had the highest total reported export quantity of *A. stellatus*, followed by the Russian Federation and then Kazakhstan, although if only exporter records are considered, Kazakhstan reported more exports than the Russian Federation, who did not report exports of any species after 2001. Similarly, China had the highest reported total quantity of caviar exports from *H. dauricus* based on exporter records only, however when importer records are considered, the Russian Federation appears to have exported a higher quantity than China. Finally, for *H. huso*, Kazakhstan had the highest reported exports of caviar from this species, followed closely by Iran.

Table 3: Direct reported exports of wild caviar by taxon and exporter, 1998-2006 (kg)

Taxon	Exporter	1998	1999	2000	2001	2002	2003	2004	2005	Total
Acipenser gueldenstaedtii	AZ		*2*	605	2047	1846	3695	4783	5732	**18 709**
	IR	44 225	9053	6134	1793	2364	1696	587	59	**65 911**
	KZ		*44*	3728	3838	5150	1758	1873	*3911*	**20 303**
	RU	30 398	25 187	18 341	*8152*	*5627*	*3648*	*2413*		**93 766**
***Acipenser gueldenstaedtii* Total**		**74 623**	**34 285**	**28 808**	**15 830**	**14 987**	**10 797**	**9656**	**9702**	**198 688**
Acipenser nudiventris	IR	*11*			916	83				**1010**
	KZ			1691	2417	596				**4704**
***Acipenser nudiventris* Total**		**11**	**0**	**1691**	**3333**	**678**	**0**	**0**	**0**	**5714**
Acipenser persicus	IR	2270	44 380	30 886	40 001	34 545	39 019	10 637	665	**202 402**
***Acipenser persicus* Total**		**2270**	**44 380**	**30 886**	**40 001**	**34 545**	**39 019**	**10 637**	**665**	**202 402**
Acipenser schrenckii	CN	1452	3297	25	2620	1756	1126	914	726	**11 916**
	RU	1385	2976	1774	*837*	*813*	*56*	*500*		**8340**
***Acipenser schrenckii* Total**		**2837**	**6273**	**1799**	**3457**	**2569**	**1182**	**1414**	**726**	**20 256**
Acipenser spp.	IR	*9212*	*2106*		860	916	705	400	*280*	**14 478**
	RU	*75*	9	*53*	*32*	*29*	*2*	*3*		**203**
***Acipenser* spp. Total**		**9287**	**2115**	**53**	**892**	**944**	**707**	**403**	**280**	**14 682**
Acipenser stellatus	AZ			305	817	1278	3510	4849	3744	**14 504**
	IR	34 616	41 599	23 802	25 043	9683	7733	1954	87	**144 516**
	KZ			10 795	18 708	11 176	6837	7758	*13 912*	**69 187**
	RU	17 287	15 103	9419	*13 453*	*13 542*	*694*	*3230*		**72 729**
***Acipenser stellatus* Total**		**51 903**	**56 702**	**44 321**	**58 022**	**35 679**	**18 775**	**17 791**	**17 743**	**300 936**
Huso dauricus	CN	3381	3547	25	4110	2433	1179	1219	845	**16 740**
	RU	2758	3633	5452	*5155*	*1866*	*185*	*570*	*648*	**20 266**
***Huso dauricus* Total**		**6139**	**7179**	**5477**	**9265**	**4299**	**1364**	**1789**	**1493**	**37 006**
Huso huso	AZ		*3*	146	147	332	562	291	373	**1854**
	IR	1926	3530	3454	6082	2641	2566	791	18	**21 009**
	KZ		*867*	6779	7136	3473	1084	693	*4603*	**24 635**
	RU	1840	451	2172	*894*	*910*	*673*	*273*	*2*	**7216**
***Huso huso* Total**		**3767**	**4851**	**12 550**	**14 258**	**7357**	**4885**	**2049**	**4996**	**54 713**
Grand Total		**150 837**	**155 786**	**125 586**	**145 058**	**101 058**	**76 729**	**43 737**	**35 604**	**834 397**

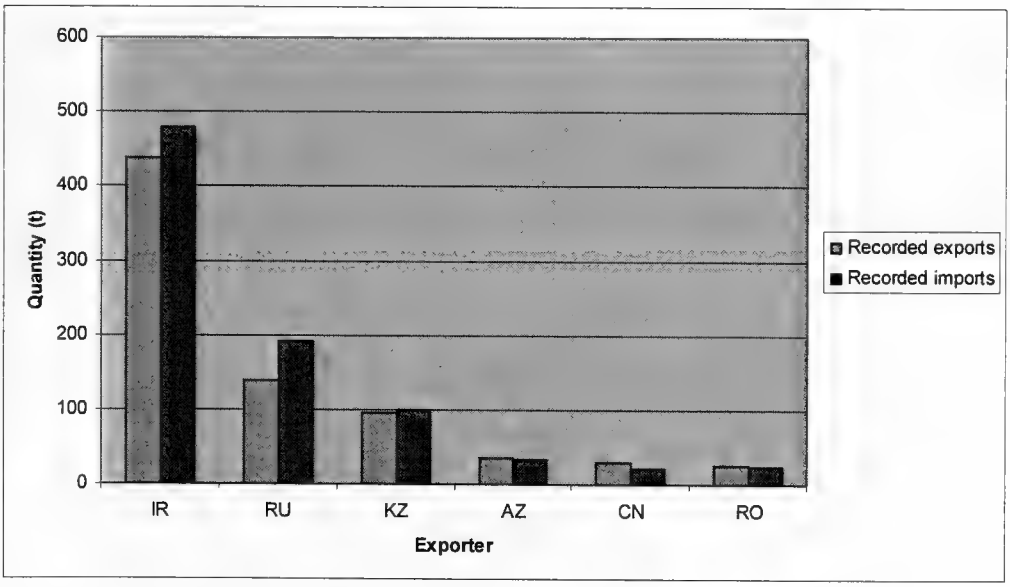
Note: Where exporter records were not available, importer records are used-these figures are in italics. Blanks indicate no importer or exporter records available.
Source: Adapted from the CITES Trade Database.

When total exports of wild caviar reported by direct exporting countries, versus those reported by direct importing countries are compared, there are some discrepancies in amounts declared in trade, as shown in Fig. 6. For Iran and the Russian Federation, importing countries have reported more caviar in trade from these countries than Iran and the Russian Federation have reported as exported. In the case of the Russian Federation, these discrepancies are likely a result of the Russian Federation not reporting exports of caviar after 2001 (Annex 1). Although the Russian Federation has submitted Annual Reports over this time period, it is unknown why exports have not been reported.

Significant quantities are concerned, with discrepancies of 41 t from Iran and 54 t from the Russian Federation from 1998-2006. Given that countries should not be importing more than the quantity stated on the export permit, it is unclear as to how these discrepancies could have occurred. While these discrepancies may suggest that illegal trade could be occurring, it is also possible that lower amounts of exports are reported by exporting countries, compared to importing countries, for other reasons such as the inconsistent or erroneous recording of mass between Customs in different countries, purposeful under-declaration of quantities exported in order to incur lower tariff rates or duties, or the failure of exporting countries to report exports for certain years.

Reported imports from Kazakhstan are also slightly higher, however for Azerbaijan, China and Romania importer records show lower quantities than export records. This may be as a result of importing countries incorrectly reporting imports; however the amounts concerned (2-7 t) are much lower quantities than the discrepancies for Iran and the Russian Federation.

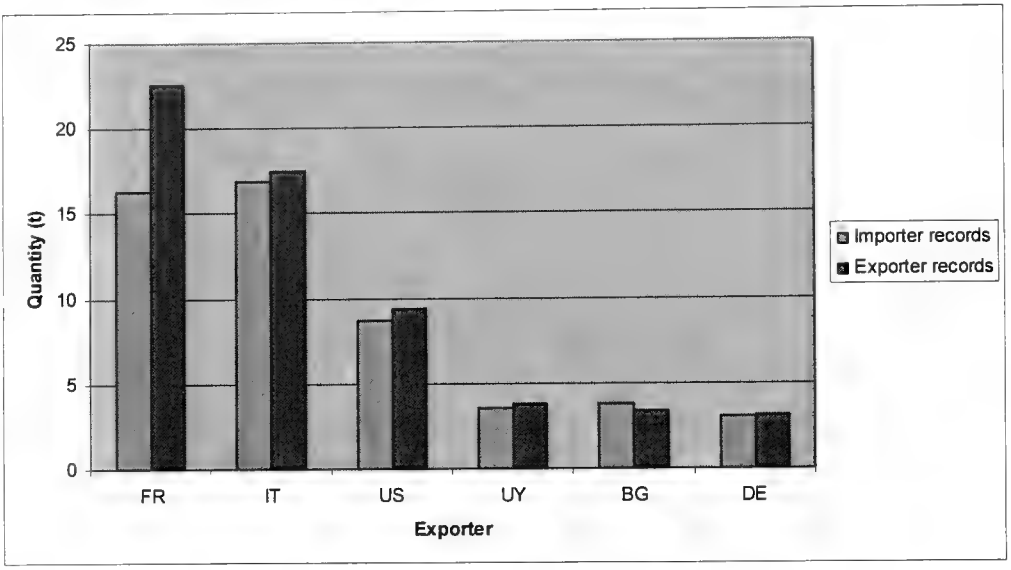
Fig. 6: Direct reported exports of wild caviar from main exporters, based on import vs. export records (t), 1998-2006



IR = Iran, RU = Russian Federation, KZ = Kazakhstan, AZ = Azerbaijan, CN = China, RO = Romania.
Note: Country omissions indicate zero quantity.
Source: Data derived from the CITES Trade Database.

For reported direct exports of caviar from aquaculture operations, quantities in trade are much smaller (Fig. 7). France as a caviar exporter shows the greatest difference between quantities reported in exporter records vs. importer records, at 7 t.

Fig. 7: Reported direct exports of caviar from aquaculture operations (t), 1998-2006

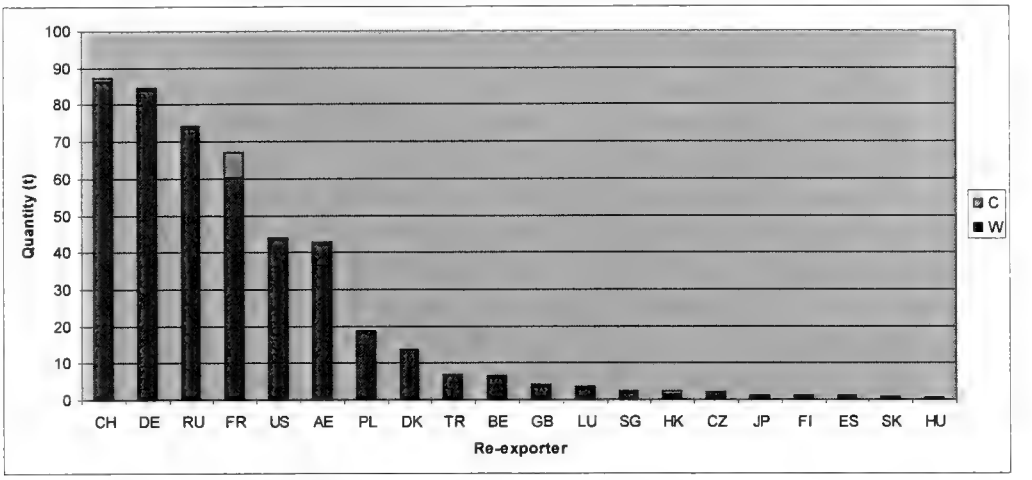


FR = France, IT = Italy, US = USA, UY = Uruguay, BG = Bulgaria, DE = Germany.
Note: Country omissions indicate zero quantity.
Source: Data derived from the CITES Trade Database.

Re-export trends

Fig. 8 shows that Switzerland, Germany, the Russian Federation, France and the USA are the top re-exporters of caviar from 1998-2006, according to re-export records. Although the vast majority of reported re-exports are caviar from wild sources, France, Switzerland and Germany have re-exported a total of 9 t of caviar from aquaculture sources from 1998-2006.

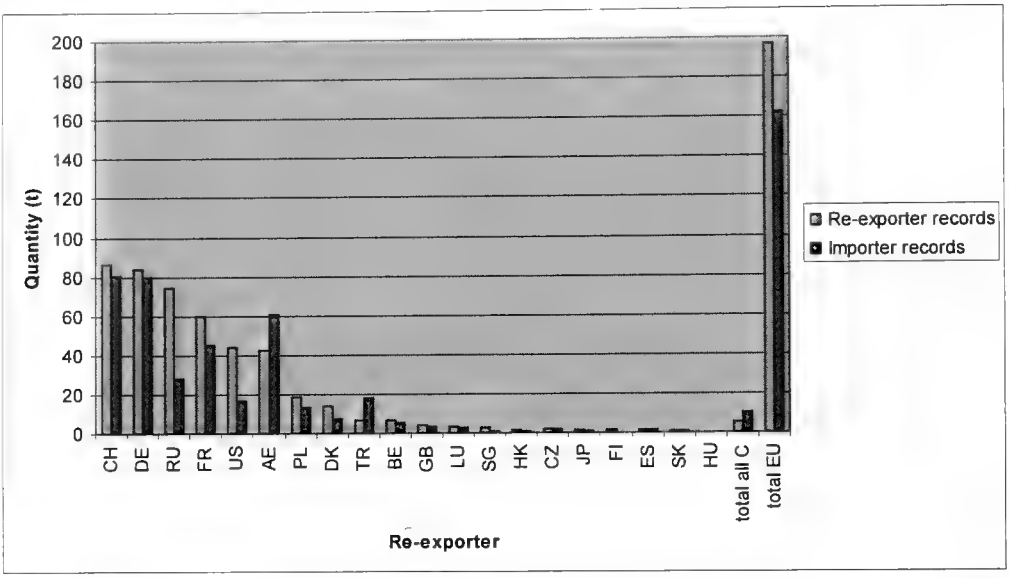
Fig. 8: Re-exports by reported re-exports (t), 1998-2006



CH = Switzerland, DE = Germany, RU = Russian Federation, FR = France, US = USA, AE = United Arab Emirates, PL = Poland, DK = Denmark, TR = Turkey, BE = Belgium, GB = United Kingdom, LU = Luxembourg, SG = Singapore, HK = Hong Kong, CZ = Czech Republic, JP = Japan, FI = Finland, ES = Spain, SK = Slovakia, HU = Hungary.
C= caviar derived from aquaculture, W = wild caught
Note: Country omissions indicate zero quantity.
Source: Data derived from the CITES Trade Database.

When importer and (re-)exporter records are compared for caviar re-exports, additional discrepancies in reported quantities in trade are indicated (Fig. 9). In general, higher quantities of re-exports are reported in re-exporter records compared to importer records, which is the opposite of what is shown in the comparison of direct exports (see Fig. 7). This is especially notable for the Russian Federation, where re-exporter data show that 74 t of caviar was reported re-exported, but importer data shows that only 28 t was reported imported. Since in theory import and re-export records should match, as each specimen should be recorded at the point of re-export and at the point of import, this indicates that misreporting is occurring at some point in the trade chain leading to discrepancy between reported imports and reported re-exports.

Fig. 9: Re-export quantities of wild caviar, reported re-exports vs. reported imports (t), 1998-2006



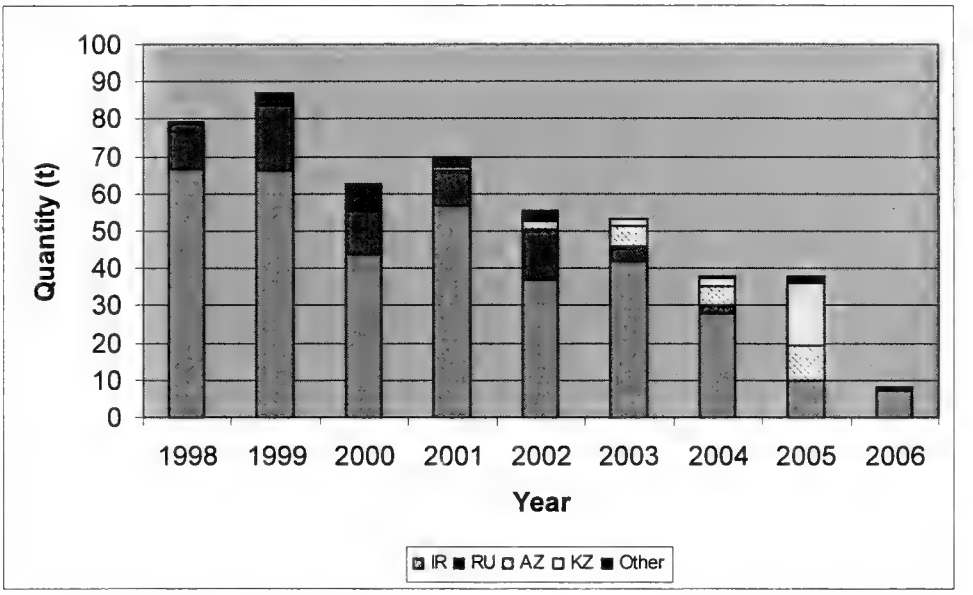
CH = Switzerland, DE = Germany, RU = Russian Federation, FR = France, US = USA, AE = United Arab Emirates, PL = Poland, DK = Denmark, TR = Turkey, BE = Belgium, GB = United Kingdom, LU = Luxembourg, SG = Singapore, HK = Hong Kong, CZ = Czech Republic, JP = Japan, FI = Finland, ES = Spain, SK = Slovakia, HU = Hungary.
C = caviar from aquaculture.
Note: Country omissions indicate zero quantity.
Source: Data derived from the CITES Trade Database.

Other points to note from CITES export data include that over 7 t of caviar has been reported as re-exported to Brazil from 1998-2006, mainly from EU Member States and the USA, however no imports have been reported.

Trade routes into the EU

Reported EU imports have declined since 1999, mirroring declines in the global caviar trade. Apart from in 2005 when there were significant imports from Kazakhstan, Iran was by far the major exporting country for reported imports of wild caviar into the EU, followed by the Russian Federation, (Fig. 10).

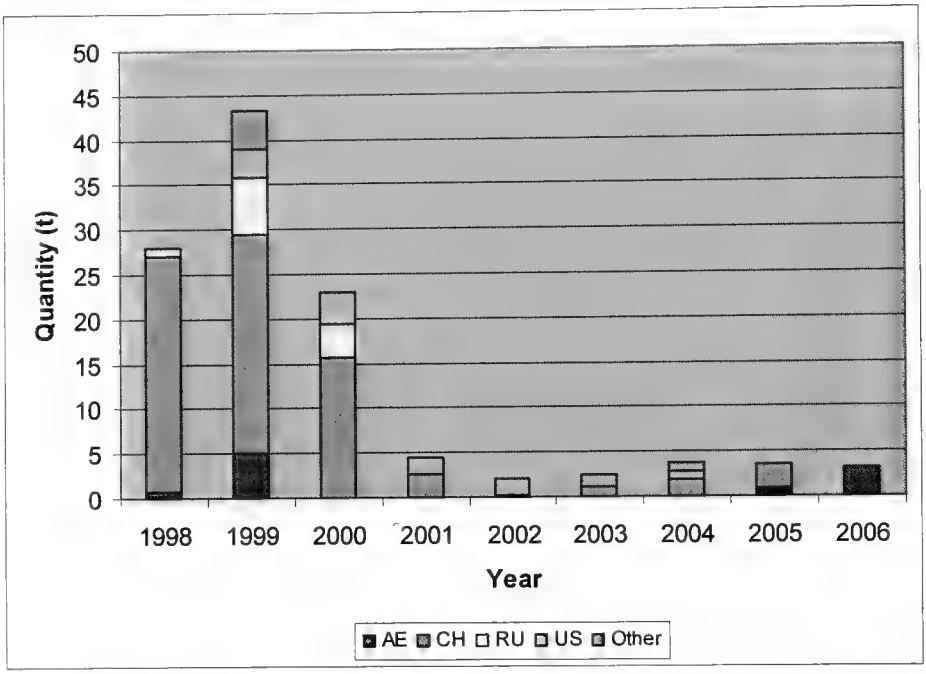
Fig. 10: Reported imports of wild caviar into the EU by exporting country (t)



IR = Iran, RU = Russian Federation, AZ = Azerbaijan, KZ = Kazakhstan, Other = Bulgaria, China, Romania.
Note: Country omissions indicate zero quantity.
Source: Data derived from the CITES Trade Database.

Up until 2001, Switzerland was the main re-exporter of wild caviar into the EU; at its highest the volume re-exported was 26 t (Fig. 11). After 2001, reported re-exports from Switzerland sharply declined and persisted in relatively small quantities (under 3 t) (Fig. 11).

Fig. 11: Reported re-exports to EU by re-exporting country, based on re-exporter data (t)

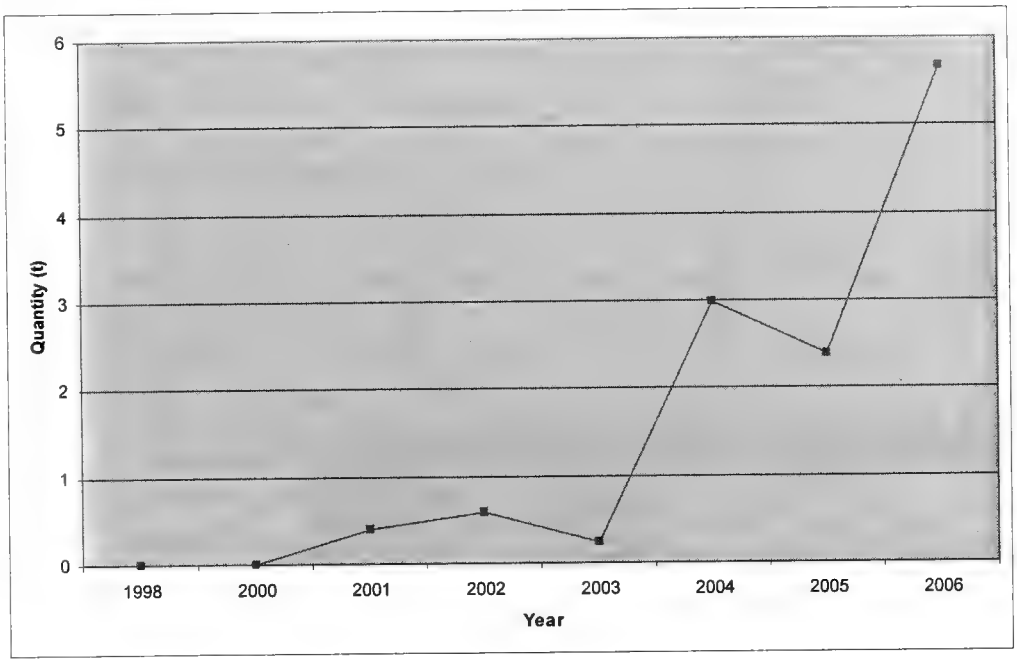


AE = United Arab Emirates, CH = Switzerland, RU = Russian Federation, US = USA, Other = Czech Republic, France, Turkey.
Note: Country omissions indicate zero quantity.
Source: Data derived from the CITES Trade Database.

The EU has reported 12 t of reported direct exports of caviar from aquaculture from 1998-2006, following a roughly increasing trend (Fig. 12).

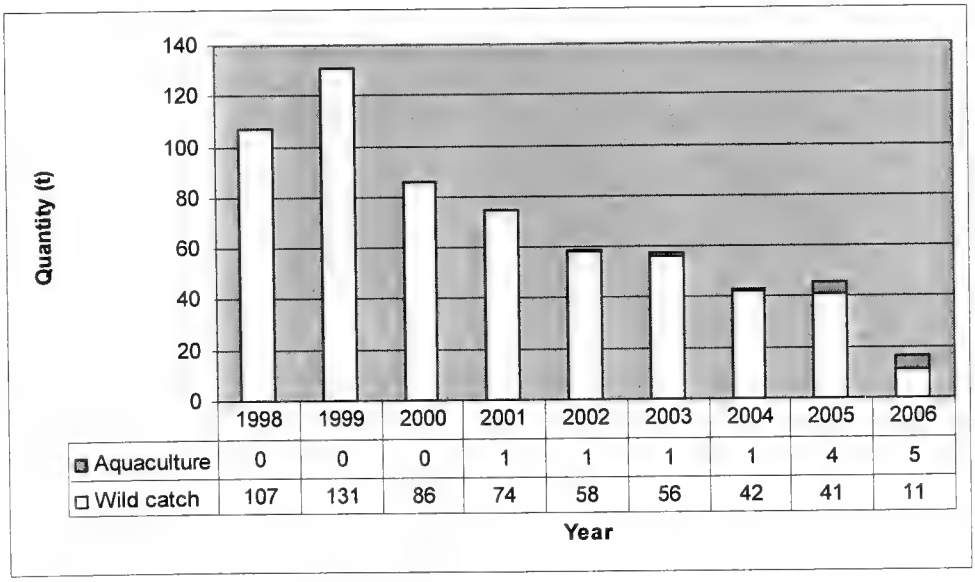
EU reported imports of caviar from aquaculture operations have followed the same trend as global reported imports from aquaculture, increasing since 1998 (Fig. 13). Although reported imports of caviar from aquaculture into the EU are still occurring in relatively small quantities, 5 t at maximum, it is notable that caviar from aquaculture operations represented approximately 31% of all reported caviar imports in 2006.

Fig. 12: Reported direct exports of caviar from aquaculture from the EU (t), 1998-2006



Source: Data derived from the CITES Trade Database.

Fig. 13: EU reported imports by source (t), 1998-2006



	1998	1999	2000	2001	2002	2003	2004	2005	2006
Aquaculture	0	0	0	1	1	1	1	4	5
Wild catch	107	131	86	74	58	56	42	41	11

Source: Data derived from the CITES Trade Database.

Trade data analysis indicates that non-CITES Parties within the EU area are involved in trade. For example, EU Member States report re-exports of caviar to Andorra. However, the role of such countries needs to be investigated as a lower priority for further research. The same is true for some dependant territories such as the Netherlands Antilles, where there are no reported imports, yet re-exports of caviar have been reported. However, it should be noted that many small island countries seem to have poor CITES reporting, possibly due to a lack of capacity.

Exports and quotas

Table 4 shows the CITES export quotas that have been allocated for range State caviar exports from 2006-2008. Quotas for wild caviar were not published in 2006, except for *Acipenser persicus* for Iran, meaning that no trade was permitted for species other than *A. persicus*. For 2006, no export quotas were published by the CITES Secretariat to permit international trade in Amur River sturgeon species *A. schrenckii* and *Huso dauricus*. Commercial fishing of these species is banned in the Russian Federation and no commercial catch quotas are established, meaning that commercial trade in caviar from these species is illegal[6]. However, in 2008, CITES export quotas were published for these species.

Table 4: CITES wild caviar quotas for 2006-2008 (kg)

Exporter	Taxon	2006	2007	2008
AZ	*Acipenser gueldenstaedtii*	NP	3360	3360
	Acipenser stellatus	NP	3000	3000
	Huso huso	NP	300	300
CN	*Acipenser schrenckii*	NP	1337	1337
	Huso dauricus	NP	1672	1595
IR	*Acipenser gueldenstaedtii*	NP	1000	1000
	Acipenser nudiventris	NP	0	0
	Acipenser persicus	44 370	38 000	37 000
	Acipenser spp.		1000	
	Acipenser stellatus	NP	3200	3200
	Huso huso	NP	1000	1000
KZ	*Acipenser gueldenstaedtii*	NP	3270	3070
	Acipenser nudiventris	NP	0	0
	Acipenser stellatus	NP	10 637	8500
	Huso huso	NP	1761	1700
RU	*Acipenser gueldenstaedtii*	NP	20 000	20 000
	Acipenser schrenckii	NP	1900	350
	Acipenser spp.			
	Acipenser stellatus	NP	3500	3500
	Huso dauricus	NP	2560	1280
	Huso huso	NP	700	700

NP = Not published.
Source: Adapted from the CITES website.

Caviar data from the UNEP-WCMC CITES Trade Database indicates that from 2001-2005[7], the Russian Federation has not submitted export data to the Secretariat, for any sturgeon species (Annex 1). Additionally, in 2005, Kazakhstan did not submit export data for any sturgeon species. In 2006, Iran also did not submit export data.

[6] Vaisman, A. and Fomenko, P. (2006). *Siberia's black gold: Harvest and trade in Amur River sturgeons in the Russian Federation.* TRAFFIC Europe. Brussels, Belgium.
[7] For 2006, export quotas were established only for IR.

When export data from range States are compared against CITES caviar export quotas, it appears that in some years range States have exceeded their quotas (Annex 1) (UNEP-WCMC, 2008). Generally, for most range States except for Azerbaijan, incidences of exceeding quotas have decreased after 2003 (Annex 1) (UNEP-WCMC, 2008). The most significant incidences of a range State exceeding its quota occurred in 2006, when Kazakhstan exported 203 kg of *A. stellatus* and 199 kg of *Huso huso*, when no quotas were published that year for those species (Table 4, Annex 1) (UNEP-WCMC, 2008). No international trade is permitted where no quota has been published for a CITES-listed sturgeon species, as in that case there is no established quota against which to regulate trade.

In some cases, such as when Iran exceeded its quota for *A. nudiventris* by 83 kg in 2002, countries do not use the entire export quota in the previous year for a species (in this case, 916 kg used out of a quota of 1000 kg for 2001), so it is possible that exports reported the following year could be a carry-over from the previous year. However, in the cases of Kazakhstan exceeding its quota in 2006, carrying over quantities from the previous year's quota cannot explain the discrepancy as no quota was published in 2005.

By weight, however, the most significant occurrence of exceeding CITES caviar quotas occurred in 2001, when Kazakhstan exceeded the quota for *H. huso* by 2936 kg (Table 5), which is also noted in UNEP-WCMC, 2008. Since no export quotas were published in 2000, it is not possible that this is a case of carrying over remaining quantities under the export quota from the previous year.

Table 5: Mass and percentage by which range State reported exports exceeded CITES caviar quota

		Year											
		2001		2002		2003		2004		2005		2006	
Exporter	Taxon	kg	%	kg	%	kg	%	kg	%	kg	%	kg	%
AZ	*Acipenser gueldenstaedtii*	0	0	0	0	0	0	1003	21	1952	34	-	0
	Acipenser stellatus	0	0	0	0	0	0	2149	44	1044	28	-	0
	Huso huso	0	0	0	0	162	29	41	14	123	33	1*	n/a
IR	*Acipenser gueldenstaedtii*	0	0	264	11	0	0	0	0	0	0	-	0
	Acipenser nudiventris	0	0	83	n/a	0	0	0	0	0	0	-	0
	Acipenser stellatus	1643	7	0	0	0	0	0	0	0	0	-	0
	Huso huso	2132	35	0	0	436	17	0	0	0	0	1	n/a
KZ	*Acipenser gueldenstaedtii*	638	17	270	5	0	0	0	0	0	0	-	0
	Acipenser nudiventris	0	0	187	31	0	0	0	0	0	0	-	0
	Acipenser stellatus	0	0	0	0	0	0	0	0	0	0	203	n/a
	Huso huso	2936	41	0	0	0	0	0	0	0	0	199	n/a
RU	*Acipenser schrenckii*	0	0	463	57	0	0	0	0	0	0	-	0
	Huso huso	0	0	0	0	0	0	0	0	0	0	3	n/a

"-" = no data available

"n/a" = % of quota unavailable since quota not published, or zero quota, meaning that exports should not have occurred in that year.

* = Data indicates that Azerbaijan exported caviar in 2006 when there was no allocated quota, although it should be noted that the 1kg reported in trade was a seizure by the United States.

Note: Year prior to 2001 not included as CITES caviar quotas unavailable.

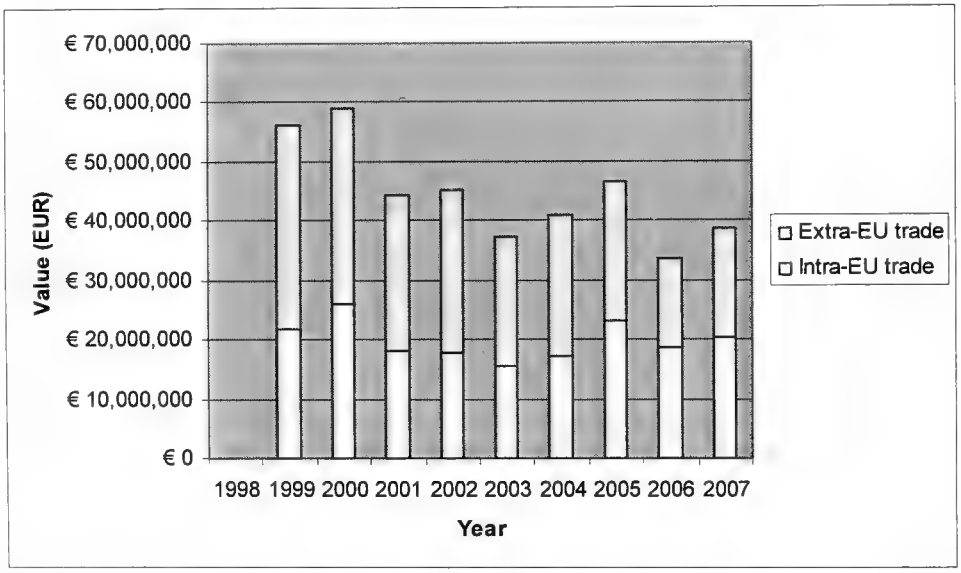
Source: Adapted from the CITES Trade Database and CITES website.

Value of the caviar trade

This section outlines the trends in reported import values for caviar from 1998-2007. The data source for all figures and tables in this section is the external Trade Database from Eurostat, and "EU" refers to the EU-27.

Figure 14 shows the reported value of imports that have been declared by the EU per year from 1998-2007, including a breakdown of values from reported imports originating from outside the EU (extra-EU trade), and reported imports originating from within the EU (intra-EU trade). In general, the reported value from extra-EU trade has been higher than the intra-EU trade. The year with the highest reported import value was 2000, at almost EUR59 million. Reported import values have followed a roughly decreasing trend since then, with intra-EU import values overtaking extra-EU import values since 2005.

Fig. 14: Reported caviar import values into EU by year (EUR)



Source: Adapted from the Eurostat external Trade Database.

Total quantity of reported EU imports of wild-sourced caviar (in tonnes), and reported EU import value in EUR (excluding intra-EU trade) are used to calculate EUR/kg values from 1998-2007 in Table 6. Percentage of global reported imports is also given for each year, which indicates that although a decreasing trend in tonnes of caviar imported into the EU is evident, the EU has consistently imported about half of all global reported imports of caviar by quantity.

Notably, while tonnage of reported caviar imports has decreased, the value of EUR/kg of reported caviar imports has increased greatly over these years, from EUR264 in 1999 to EUR1 359 in 2006 (Table 6).

Table 6: EU reported import quantity and declared EU import value by year, excluding intra-EU trade (EUR), 1998-2007

Year	EU imports (W, t)	% global imports	EU import value*	EUR/kg
1998	107	53%	n/a	n/a
1999	131	50%	€ 34 501 761	€ 264
2000	86	39%	€ 32 965 066	€ 385
2001	74	42%	€ 26 197 683	€ 352
2002	58	52%	€ 27 510 611	€ 474
2003	56	59%	€ 21 464 409	€ 384
2004	42	47%	€ 23 642 604	€ 561
2005	41	58%	€ 23 299 903	€ 566
2006	11	46%	€ 15 014 871	€ 1359
2007	n/a	n/a	€ 18 303 390	n/a

Note: EU values do not include Switzerland (CH).
Source: Adapted from the Eurostat external Trade Database and the CITES Trade Database.
*Values do not include intra-EU trade, and include W and C.

Caviar seizures in the EU

The following tables and graphs illustrate reported caviar seizures in the EU from 1998-2006. All tables and figures in this section are derived from caviar data taken from the EU-TWIX database. It should be noted that trends in seizures derived from EU-TWIX data are only indicative of patterns of illegal trade, because Member States differ in their enforcement effort, in their reporting efficiency to EU-TWIX, and in addition methods of entering seizure data can vary among Member States (e.g. some data are not recorded at the species level).

Table 7 shows that caviar seizures reported in the EU by mass were highest in 2000 with total seizures at 4 325 kg, and in 2003 at 1 373 kg.

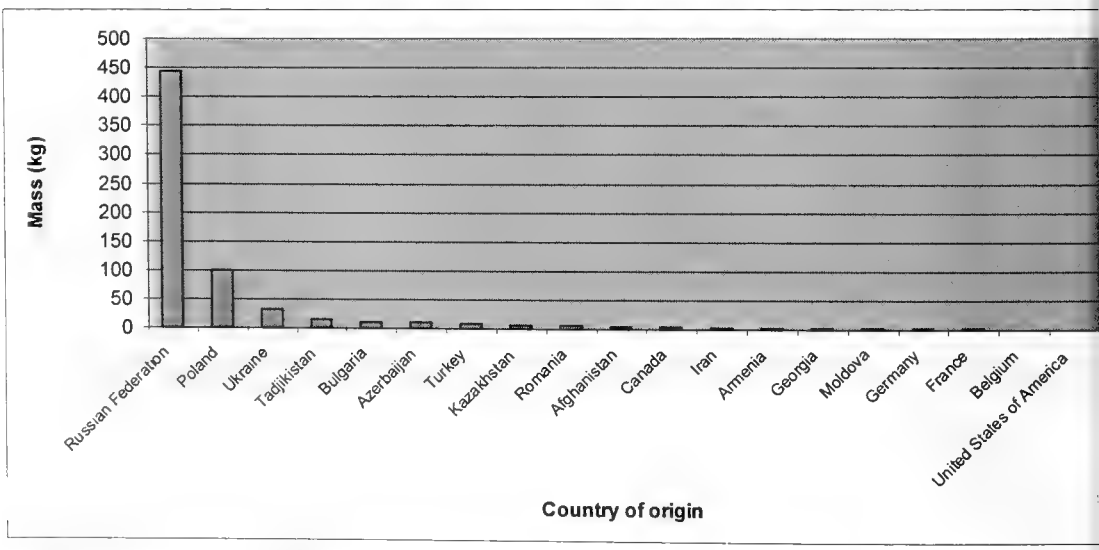
Excluding where the country of origin was declared as "unknown" (which represents the vast majority of seizures by weight at 6 640 kg), the main country of origin for caviar seizures in the EU from 1999-2007 is the Russian Federation at 445 kg (Fig. 15). This is followed by Poland at 100 kg, and the Ukraine at 32 kg (Fig. 15).

Table 7: Total EU caviar seizures by year, 1999-2007

Year	Total (kg)
1999	3
2000	4 325
2001	981
2002	305
2003	1 373
2004	101
2005	236
2006	79
2007	48
Grand Total	7 450

Source: Adapted from the EU-TWIX database.

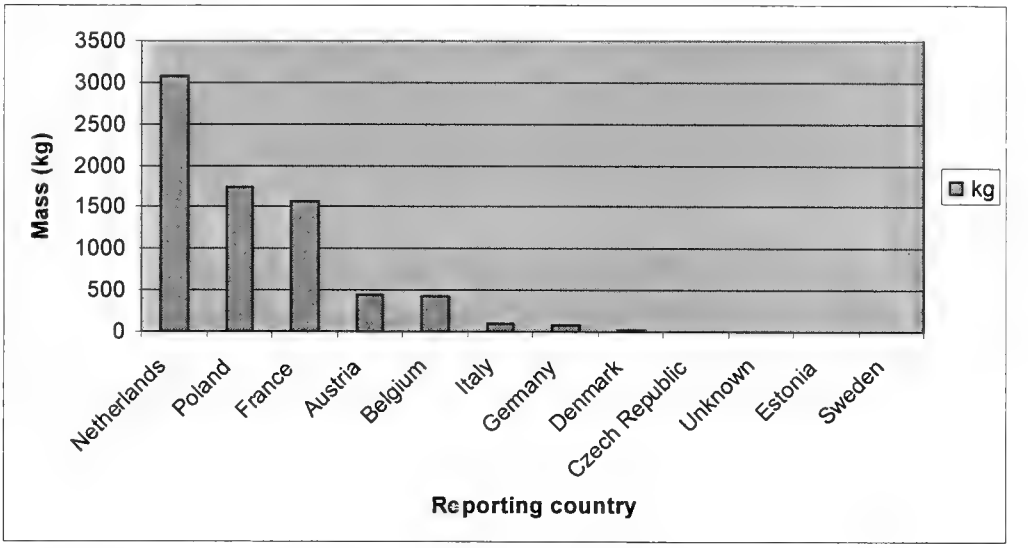
Fig. 15: Seizures by country of origin, 1999-2007 (excluding "Unknown" = 6 640 kg)



Source: Adapted from the EU-TWIX database.

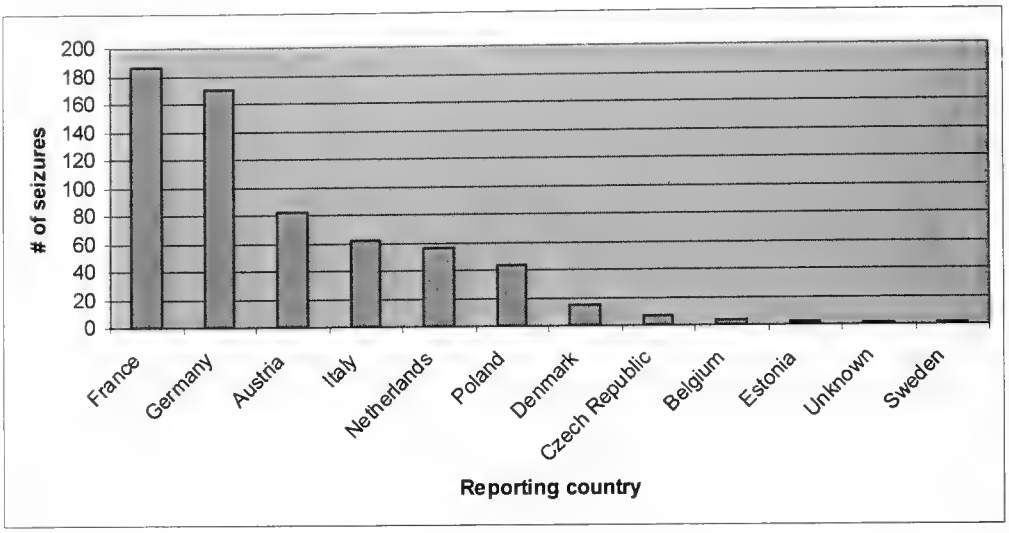
The three EU Member States which have had the highest weight of total seizures from 1999-2007 are the Netherlands (3 073 kg), Poland (1 731 kg), and France (1 573 kg) (Fig. 16). However, the Member States with the highest total number of seizure cases are France (186 cases), Germany (170 cases), and Austria (82 cases) (Fig. 17).

Fig. 16: Total seizures by reporting country (kg), 1999-2007



Note: Reporting country as "Unknown" is a result of an EU-TWIX reporting error.
Source: Adapted from the EU-TWIX database.

Fig. 17: Total number of seizures by reporting country, 1999-2007



Note: Reporting country as "Unknown" is a result of an EU-TWIX reporting error.
Source: Adapted from the EU-TWIX database.

Few records of caviar seizures in the EU contain information about which sturgeon species the caviar was derived from. In fact, Table 8 shows that 7 450 kg (81% of total seizures) of seized caviar did not have information to the species level. Of the 5% of caviar seizures by mass for which these data were available, the most frequently seized caviar products were derived from *H. huso*, followed by *A. stellatus* and *A. persicus*.

Table 8: Total caviar seizures in the EU by species and mass (kg)

Species	Total (kg)
Unknown (-)	6 041
Acipenser baerii	2
Acipenser gueldenstaedtii	144
Acipenser oxyrhynchus	11
Acipenser persicus	150
Acipenser stellatus	206
*Acipenser sturio**	208
Acipenser transmontanus	0
Huso dauricus	0
Huso huso	688
Grand Total	7 450

Source: Adapted from the EU-TWIX database.
*Data recorded in EU-TWIX as caviar from *Acipenser sturio* is likely to be the result of a reporting error, as this species that is not known to be harvested for caviar.

RANGE STATE COMPLIANCE WITH *RESOLUTION CONF. 12.7 (REV. COP14)*

Registration of licensed facilities for caviar export, processing and repackaging

Resolution Conf. 12.7 (Rev. CoP14) recommends that to regulate trade in sturgeon products, as of 2000, range States should license legal exporters of specimens of sturgeon and paddlefish species, maintain a register of these licensed facilities which should be assigned official registration codes, and provide this information to the Secretariat. Table 9 summarizes information on registered caviar exporting, packaging, and reprocessing facilities in range States, as reported to the Secretariat as of 23 May, 2008.

Table 9: Summary of licensed exporters and processing and repackaging plants for caviar, in main range States

	Exporters		Processing/repackaging		
Range State	**Number of facilities**	**Number of registration codes assigned**	**Number of facilities**	**Number of registration codes assigned**	**Total**
Azerbaijan	4	4	0	0	**4**
China	15	15	5	5	**20**
Kazakhstan	1	0	0	0	**1**
Iran*	1	0	1	0	**1**
Russian Federation	0	0	9	9	**9**

*This facility is a caviar exporter/processor/repackager.
Source: CITES register of licensed exporters and of processing and repackaging plants for specimens of sturgeon and paddlefish species, at http://www.cites.org/common/resources/reg_caviar.pdf, consulted on 23 May, 2008.

Some problems are apparent from the CITES register of licensed exporters and of processing and repackaging plants for specimens of sturgeon and paddlefish species:

- CITES Parties have reported 64 t of direct imports of wild caviar from the Russian Federation from 2000-2006, but the Russian Federation has not registered any export facilities from which to export this caviar, although this is a requirement under *Resolution Conf. 12.7 (Rev. CoP14)*. Despite this, the Russian Federation has applied and been granted a CITES export quota for caviar in past years, and also for 2008. However, this issue requires further investigation as it is possible that it could be a technical problem, where Russian processing facilities are also acting as exporters but the Russian Federation has registered such facilities only as processing and (re-)packaging facilities.
- Iran's registered caviar exporting, processing and re-packaging facility has been registered only since 2008, but Iran has applied and been granted significant export quotas for caviar in previous years, and
- Although Iran and Kazakhstan have only one registered facility each, they have not submitted the official registration codes for these facilities.
- Other than the main range States considered above, CITES data indicates that the US and Uruguay are also direct exporters of caviar to the EU (from aquaculture). While Uruguay has registered and assigned registration codes for an exporting, processing and repackaging facility, the US has not registered any facilities.

Range State reporting to Secretariat on the issuance of CITES permits

Since 2000, under *Resolution Conf. 12.7 (Rev. CoP14)* range States are required to submit copies of all export permits and re-export certificates to the CITES Secretariat within one month of issuance. As of 2007, these permits are included in the UNEP-WCMC Caviar Database.

While general levels of compliance to this requirement are good, compliance by Iran and Kazakhstan is poor and copies of export permits and re-export certificates have not been submitted[8] (UNEP-WCMC, 2008). China and Azerbaijan have been sending in permits and certificates to UNEP-WCMC on a fairly regular basis, and the Russian Federation has not exported or re-exported caviar for commercial trade since 2006 due to export quota limitations[9] (UNEP-WCMC, 2008).

Caviar labelling

Under *Resolution Conf. 12.7 (Rev. CoP14)*, range States are required to implement a universal labelling system that involves the application of a non-reusable label on each primary container (i.e. tin, jar, or other receptacle that is in direct contact with the caviar) and applies to all caviar, whether wild or aquaculture origin, produced for commercial and non-commercial purposes, for either domestic or international trade. Minimum requirements for the label are that it should include a standard species code, the source code of the specimen, the ISO two-letter code of the country of origin, the year of harvest (or re-packaging), the official registration code of the processing (or re-packaging) plant, and the lot identification number (or CITES export permit or re-export certificate number in the case of (re-)exports).

The label or mark used by range States should be such that it cannot be removed from the container undamaged, or be transferred to another container. If the non-reusable label does not seal the primary container, caviar should be packaged in a manner that permits visual evidence of any opening of the container. Parties should accept shipments of caviar only if they are accompanied by labels which meet these requirements.

The implementation by range States of the caviar labelling provisions of *Resolution Conf. 12.7 (Rev. CoP14)* is outlined in Table 10.

[8] The source of the information in this section is J. Caldwell, UNEP-WCMC, *in litt.*, 11 June 2008.

[9] CITES data show that in 2006 the Russian Federation exported 3 kg of wild-caught caviar from *Huso huso*, but this was as "personal effects" and therefore not subject to regulation as commercial caviar trade.

Table 10: Information on caviar labelling in main sturgeon range States

Year	Country	Label information	Examples given to Secretariat	CITES Notification number
2002	AZ	New company authorized to process & export caviar, given processing plant code 0003. Labels are used by this company.	Y	2002/068
2003	AZ	Notification about two companies authorized to process and export caviar, given processing plant codes 0002 & 0004.	Y	2003/005
2003	AZ	New company authorized to process & export caviar, given processing plant code 0005. Labels are used by this company.	Y	2003/056
2001	CN	Printed on adhesive paper, non-reusable. Label is fixed to lateral sides of container and extends to upper and lower surfaces. Any attempt to remove the label or open the container will damage the label. Unique two-letter codes used corresponding to the processing and exporting companies. Shaded printing is used to deter counterfeiting. Different colours of labels are used: green for *A. schrenckii* and yellow for *H. dauricus*.	Y	2001/087
2002	IR	Labels coloured blue, red & yellow to indicate Beluga (*H. huso*), Asetra (*A. stellatus* & pressed caviar) & Sevruga (*A. gueldenstaedtii*, *A. nudiventris* & *A. persicus*) respectively. Made from synthetic, non-reusable material. Attempts to remove the label will damage it. Tins are additionally enclosed in plastic netting, sealed by metal seal matching the label colour which splits if tampered with.	Y	2002/019
2004	KZ	Labels designed. Printed on adhesive paper, non-reusable. Attempt to open the container will damage the label. Labels bear company name and logo on the left.	Y	2004/003
2001	RU	Printed on adhesive paper, non-reusable. Attempt to open the container will damage the label. One company authorized to prepare labels by instruction of the MA. Label also bears holographic design to deter counterfeiting. Will begin to use labels for the export of primary and secondary containers containing more than 250g of caviar starting with caviar harvested in 2001. *Note: This notification replaced by Notifcation 2003/066.*	Y	2001/088
2003	RU	Labels are printed on adhesive paper, non-reusable. Attempts to remove label or open container will result in damage to the label. MA attributes lot identification number to each application, once approved. Label also bears holographic design to deter counterfeiting. Labels for caviar from W sturgeon are coloured as follows: Blue for *H. huso* and *H. dauricus*; red for *A. stellatus*; yellow for *A. baerii*, *A. gueldenstaedtii*, *A. schrenckii*, and *A. persicus*; green for *A. ruthenus* and *H. huso* × *A. ruthenus*. Caviar from aquaculture has green labels. Replaces notification 2001/088.	Y	2003/066

Source: Derived from CITES Notifications to the Parties.

Note: Only the sturgeon range States of Iran (IR), the Russian Federation (RU), Kazakhstan (KZ), Azerbaijan (AZ) and China (CN) were considered in this table as the main global exporters of caviar based on export quantities.

Based on information submitted to the Secretariat, the main sturgeon range States, Iran, the Russian Federation, Kazakhstan, Azerbaijan and China, appear to have all taken administrative measures with regard to caviar labelling, and have designed non-reusable labels for caviar containers. Some range States report having taken extra security measures, to deter counterfeiting of the labels, such as the Russian Federation including a hologram on the label, and China which uses shaded printing.

Labelling methods and security features vary. For example, no security measures are specified for Azerbaijan in the CITES Notifications to the Parties (note that security features are not explicitly required under *Resolution Conf. 12.7 (Rev. CoP14)*). Also, registration codes are not in use for labels from Kazakhstan, since facilities have not been registered (see also Table 9). Additionally, the Russian Federation, Iran, and Kazakhstan are the only main range States which have different sizes of labels or labelling methods for use on different sizes of containers (e.g. containers larger or smaller than 250g, or tins). The Russian Federation and Iran also have colour-coded labels depending on which species of sturgeon the caviar is derived from. However, it is unclear whether the Iranian labels applied to smaller containers (where netting is not used) are applied in such a way as to become damaged only when attempts are made to remove the label, or whether the label will also become damaged if attempts are made to open the container. Kazakhstan and Azerbaijan did not implement the caviar labelling provision until 2003 and 2004.

Within the scope of this briefing paper, it was not possible to assess the extent to which the labelling systems described in Table 10 are being implemented in these caviar range States.

SUMMARY AND CONCLUSIONS

General trends

Sturgeon quantities

The reported catch of sturgeon in main range States has decreased since 1998, whereas the quantity of **aquaculture production of sturgeon in European inland waters has increased greatly**. Generally, these trends in sturgeon production (wild catch and aquaculture) are consistent with the trends in quantities of caviar in trade.

Caviar quantities

Global legal reported imports of caviar have significantly decreased in quantity from 1998 to 2006. The 27 EU Member States as a group represent the largest global importer of legal caviar, in total tonnes (t) of wild caviar imported from 1998-2006. Over 97% of reported global caviar imports were sourced from the wild. After the EU, the US, Switzerland, and Japan are the next largest importers of wild caviar. Although a decreasing trend in quantity of caviar imported into the EU is evident, the **EU has consistently imported about half of all reported global imports of caviar by quantity**. Within the EU, Member States that have imported the largest mass of caviar from 1998-2006 are Germany and France, together making up about 75% of all reported EU imports, followed by Spain, and Belgium. Up until 2001, Switzerland was the main re-exporter of wild caviar into the EU.

At the global level, the general increasing trend in the import of caviar from aquaculture operations ("C") has continued since 2002. Reported EU imports of caviar from aquaculture operations have also followed this trend, increasing since 1998. Although reported imports of caviar from aquaculture into the EU have occurred in relatively small quantities, it is notable that **caviar from aquaculture operations represented approximately 31% of all reported caviar imports into the EU in 2006**. Caviar aquaculture production within the EU may also affect these trends, however if such caviar is not exported outside the EU it does not appear in CITES data.

Iran is by far the largest global exporter of wild caviar at 438 t from 1998-2006. The Russian Federation (138 t), Kazakhstan (95 t) and Azerbaijan (35 t) are the next three largest exporters by quantity. The main direct exporters globally of caviar derived from aquaculture operations are France (23 t), Italy (17 t), and the USA (9 t). Switzerland, Germany, the Russian Federation, France and the USA are the top re-exporters of wild caviar from 1998-2006.

Some discrepancies appear when import records are compared with (re-)export records. These discrepancies could be a result of misreporting such as importing countries not reporting imports correctly, or could indicate caviar laundering may be occurring in the trade chain, e.g. illegal caviar could be added to the shipments after re-export, leading to an increased mass of the shipment at point of import. Alternatively, the discrepancies could be a result of the fact that Parties report on permits issued, rather than actual trade. Further research is required in order to determine the cause of these discrepancies, if possible. For Iran and the Russian Federation, importers have reported more wild caviar in trade imported from these countries than Iran and the Russian Federation have reported as direct exports. For caviar from aquaculture, the greatest difference between quantities reported in exporter records vs. importer records occurs where France is the re-exporter. Higher quantities of re-exports are reported in re-exporter records compared to importer records, which is the opposite of what is shown in the comparison of direct exports. This is especially notable for the Russian Federation, where re-exporter data shows that 74 t of caviar was re-exported, but importer data shows that only 28 t was imported.

Value of the caviar trade

In general, the reported import value from extra-EU trade has been higher than the intra-EU trade. The year with the highest reported import value was 2000, at almost EUR59 million. Reported import values have followed a roughly decreasing trend since then, with reported intra-EU import values overtaking extra-EU import values since 2005. **While tonnage of reported caviar imports has decreased, the value of EUR/kg of reported caviar imports has increased greatly over these years, from EUR264 in 1999 to EUR1 359 in 2006,** which could be a reflection of the increased scarcity of the product since reported global and EU imports have also declined.

CITES quotas for caviar

When export data from range States is compared against CITES caviar quotas, it appears likely that **in some years range States have exceeded their quotas** (UNEP-WCMC, 2008). Generally, for most range States except for Azerbaijan, **incidences of exceeding quotas have decreased after 2003** (UNEP-WCMC, 2008). This could be a result of the amendment of *Resolution Conf. 12.7* in 2002 to require CITES Parties to not accept the import of specimens of Acipenseriformes species from stocks shared between different range States unless export quotas for that year have been established by the range States concerned and have been communicated by the Secretariat to the Parties.

Caviar data from the UNEP-WCMC CITES Trade Database indicates that **from 2001-2005, the Russian Federation has not submitted export data to the Secretariat, for any sturgeon species**. Additionally, in 2005, Kazakhstan did not submit export data for any sturgeon species. In 2006, Iran also did not submit export data. If a CITES Party does not submit their Annual Report for three consecutive years, the Secretariat can recommend that other Parties do not trade with the non-reporting Party. However, although the Russian Federation, Kazakhstan and Azerbaijan have submitted Annual Reports, they may not have included sturgeon trade data. This could be partly due to the administrative structure in some countries and the consequent reporting obligations of different administrative bodies (e.g. the CITES Management Authority may be split between different Ministries).

Under *Resolution Conf. 12.7 (Rev. CoP14) Conf. 12.7 (Rev. CoP14)*, range States are required to provide to the CITES Secretariat or UNEP-WCMC copies of all export permits and re-export certificates within one month of having issued them, for inclusion in the UNEP-WCMC Caviar Database, however of the main sturgeon range States considered, **Iran and Kazakhstan have not been complying with this requirement** (UNEP-WCMC, 2008).

Exports of caviar by sturgeon species

It is notable that the Russian Federation did not submit export data for any sturgeon species after 2001. The Russian Federation had the highest total quantity of reported exports of caviar from *A. gueldenstaedtii*. Kazakhstan had the highest total reported export quantity of caviar from *A. nudiventris*, although exports from this species were only reported over a 3-year period from 2000-2002. For *A. persicus*, Iran was the only range State with reported direct exports of this species, and has exported a total of 202 402 kg from 1998-2005. China had the highest total reported direct exports of *A. schrenckii*. Iran had the highest reported exports of *Acipenser* spp. and is the only range State to have traded this product in any significant quantities. Iran also had the highest total reported export quantity of *A. stellatus*, followed by the Russian Federation and then Kazakhstan. China had the highest reported total quantity of caviar exports from *H. dauricus* based on exporter records only, however when importer records are considered, the Russian Federation appears to have exported a higher quantity than China. Finally, for *H. huso*, Kazakhstan had the highest reported exports of caviar from this species, followed closely by Iran. Further information on the trade in caviar by species is provided in UNEP-WCMC, 2008.

Caviar seizures in the EU

Quantities of caviar reported to have been seized in the EU were highest in 2000, with total reported seizures at 5 359 kg, and since then reported seizures have generally decreased in quantity, other than an increase in quantities seized in 2003 to 2 054 kg, from 542 kg in 2002. Trends in seizures derived from EU-TWIX data are only indicative of patterns of illegal trade, because Member States differ in their enforcement effort and in their reporting efficiency to EU-TWIX.

The three EU Member States which have had the highest quantities seized caviar from 1999-2007 are France (3 302 kg), the Netherlands (3 074 kg), and Poland (1 731 kg). However, the Member States with the highest total number of seizure cases are France (349 cases), Germany (170 cases), and Austria (153 cases).

Registration of caviar processing and (re)packaging facilities

According to the CITES register of licensed exporters and of processing and repackaging plants for specimens of sturgeon and paddlefish species, consulted on 23 May 2008, some discrepancies in declared trade and types of facilities registered are evident. For example, the **Russian Federation has declared 138 t of direct exports from 1998-2006, but has not registered any export facilities,** despite this being a requirement under *Resolution Conf. 12.7 (Rev. CoP14)*. Despite having no registered exporters, the Russian Federation has applied for and been granted a CITES export quota for caviar in past years and also for 2008. However, this issue requires further investigation as it is possible that it could be a technical problem, where Russian processing facilities are also acting as exporters but the Russian Federation has registered such facilities only as processing and (re-)packaging facilities. If it is the case that the Russian Federation has not implemented the requirement to register and assign official registration codes and submit these to the CITES Secretariat for inclusion in the register, Parties should not be accepting Russian caviar exports. This recommendation is also true for caviar range States that have not been considered in detail in this briefing, where caviar exporting, processing and (re-)packaging facilities are not registered and codes have not been assigned, such as is the case for the US. **Kazakhstan and Iran have also not reported official registration codes of their registered facilities in the CITES register and it would be useful to know whether these Parties have issued registration codes and not reported them, or whether they have not issued such codes, as required under** *Resolution Conf. 12.7 (Rev. CoP14)*.

Table 11: Summary of issues with Range State implementation of requirements and year requirement was applied under *Resolution Conf. 12.7 (Rev. CoP14)*

Range State	Quotas exceeded or exports when no quotas established (2003)*	Export data not reported (1998)*	Permits submitted to UNEP-WCMC permit database** (2007)	Exporting facilities		Processing & repackaging facilities	
				Registered (2000)	Registration codes assigned (2000)	Registered (2000)	Registration codes assigned (2000)
Year requirement applied	**2003**	**1998**	**2007**	**2000**	**2000**	**2000**	**2000**
AZ	2003 2004 2005 2006	-	Fair	Yes	Yes	No	No
CN	-	-	Fair	Yes	Yes	Yes	Yes
IR	2001 2002 2003 2006	2006	Poor	Yes	No	Yes	No
KZ	2001 2002	2005	Poor	Yes	No	No	No
RU	2002 2006	2001 2002 2003 2004 2005	No quota for exports	No	No	Yes	Yes

* Source: Data adapted from the UNEP-WCMC Trade Database.
** See UNEP-WCMC, 2008 for more detailed information on permits.

Recommendations

The following recommendations would be useful in effectively regulating the caviar trade in the EU:

- Member States should be particularly vigilant when issuing import permits for caviar in particular by ensuring that export quotas are not being exceeded, that the caviar containers are labelled in accordance with *Resolution Conf. 12.7 (Rev. CoP14)* and by checking the caviar trade database to ensure that export permits and re-export certificates are not being used fraudulently.

- Azerbaijan, Iran, Kazakhstan, Russia and the US should be engaged through CITES processes to encourage registration of all caviar exporting and processing/repackaging facilities, and issuance and reporting of official registration codes for these facilities to the CITES register. In the case of the Russian Federation, this issue requires further investigation to determine whether it is a technical problem, where Russian processing facilities are also acting as exporters but the Russian Federation has registered such facilities only as processing and (re-)packaging facilities.

- Iran and Kazakhstan should be engaged through CITES processes to encourage the provision of all caviar export permits and re-export certificates within one month of having issued them, for inclusion in the UNEP-WCMC Caviar Database (UNEP-WCMC, 2008).

- Trade data analysis indicates that non-CITES Parties within the EU area are involved in the caviar trade. For example, EU Member States report re-exports of caviar to Andorra. However, the role of such countries should be investigated.

- At the broader level, data on caviar quantities in trade from the CITES Trade Database should be compared with the data available from the FAO Fishstat database, to determine whether this data is consistent, and if not, the reasons for any discrepancies and how this may be related to range State reporting.

ANNEX 1: RANGE STATE REPORTED EXPORTS COMPARED TO CITES EXPORT QUOTAS 1998-2006

		1998		1999		2000		2001		2002		2003		2004		2005		2006		2007	2008
Exporter	Taxon	Export	Quota	Export	Quota	Export	Quota	Export	Quota	Export	Quota	Export	Quota	Export	Quota	Export	Quota	Export	Quota	Quota	Quota
AZ	*Acipenser gueldenstaedtii*		n/a	*2*	n/a	605	n/a	2047	3450	1846	2770	3695	4200	4783	3780	5732	3780		NP	3360	3360
	Acipenser stellatus		n/a		n/a	305	n/a	817	2840	1278	2470	3510	4500	4819	2700	3 441	2700		NP	3000	3000
	Huso huso		n/a	*3*	n/a	146	n/a	147	520	332	530	562	400	291	250	573	250	*1*	NP	300	300
AZ Total			**n/a**	***5***	**n/a**	**1056**	**n/a**	**3011**	**6810**	**3456**	**5770**	**7767**	**9100**	**9924**	**6730**	**9849**	**6730**	***1***	**0**	**6660**	**6660**
CN	*Acipenser schrenckii*	1452	n/a	3297	n/a	25	n/a	2620	2510	1756	2510	1126	2510	914	n/a	726			NP	1337	1337
	Huso dauricus	3380	n/a	3547	n/a	25	n/a	4110	3430	2433	3430	1179	3430	1219	n/a	845	NP		NP	1672	1595
CN Total		**4832**	**n/a**	**6844**	**0**	**50**	**n/a**	**6730**	**5940**	**4189**	**5940**	**2305**	**5940**	**2133**	**0**	**1571**	**0**	**0**	**0**	**3009**	**0**
IR	*Acipenser gueldenstaedtii*	44 225	n/a	9053	n/a	6134	n/a	1793	3460	2364	2100	1696	1950	587	1755	59	1600		NP	1000	1000
	Acipenser nudiventris		n/a		n/a		n/a	916	1000	83	0		0		0				NP	0	0
	Acipenser persicus	2270	n/a	44 380	n/a	30 886	n/a	40 001	51 000	34 545	55 890	39 019	63 000	10 637	56 700	665	51000	*8661*	44370	38 000	37 000
	Acipenser spp.		n/a		n/a		n/a	860		915	1000	705	1000	400	650		650			1000	
	Acipenser stellatus	34 616	n/a	41 599	n/a	23 802	n/a	25 043	23 400	9683	14 827	7733	11 700	1954	7020	87	6300		NP	3200	3200
	Huso huso	1926	n/a	3530	n/a	3454	n/a	6082	3950	2641	2950	2566	2130	791	1065	18	1065	*1*	NP	1000	1000
IR Total		**83 037**	**n/a**	**98 562**	**0**	**64 276**	**n/a**	**74 695**	**82 810**	**50 231**	**76 767**	**51 720**	**79 780**	**14 368**	**67 190**	**828**	**60 615**	***8662***	**44370**	**44 200**	**42 200**
KZ	*Acipenser gueldenstaedtii*		n/a	*44*	n/a	3728	n/a	3838	3200	5150	4880	1758	4620	1873	3204	*3911*	3100		NP	3270	3070
	Acipenser nudiventris		n/a		n/a	1691	n/a	2417	2500	596	409		0		0		0		NP	0	0
	Acipenser stellatus		n/a		n/a	10 795	n/a	18 708	20 900	11 176	19 770	6837	26 233	7758	11 010	*13 913*	10490	*203*	NP	10 637	8500
	Huso huso		n/a	*867*	n/a	6779	n/a	7136	4200	3473	5956	1084	8531	693	2360	*4603*	2600	*199*	NP	1761	1700
KZ Total			**n/a**	***911***	**0**	**22 993**	**n/a**	**32 099**	**30 800**	**20 396**	**31 015**	**9680**	**39 385**	**10 324**	**16 574**	***22 426***	**16 190**	***402***	**0**	**15 668**	**13 270**
RU	*Acipenser gueldenstaedtii*	30 398	n/a	25 187	n/a	18 341	n/a	*8152*	28 300	*5627*	28 070	*3656*	17 200	*2413*	14 580		14 000	*0*	NP	20 000	20 000
	Acipenser schrenckii	1385	n/a	2976	n/a	1774	n/a	*837*	2140	*813*	350	*56*	350	*500*			NP		NP	1900	350
	Acipenser spp.		n/a	9	n/a		n/a	*32*		*29*		*11*		*8*		*2*					
	Acipenser stellatus	17 287	n/a	15 103	n/a	9419	n/a	*13 453*	27 500	*13 542*	16 850	*694*	13 800	*3230*	8280	*0*	0	*0*	NP	3500	3500
	Huso dauricus	2758	n/a	3633	n/a	5452	n/a	*5155*	7000	*1866*	2300	*185*	1000	*570*		*648*	NP		NP	2560	1280
	Huso huso	1840	n/a	451	n/a	2172	n/a	*894*	3800	*910*	1800	*673*	1600	*273*	800	*2*	600	*3*	NP	700	700
RU Total		**53 668**	**n/a**	**47 359**	**n/a**	**37 158**	**n/a**	***28 523***	**68 740**	***22 787***	**49 370**	***5275***	**33 950**	***6994***	**23 660**	***652***	**14 600**	***3***	**0**	**28 660**	**24 200**

Source: Data derived from UNEP-WCMC Trade Database. Notes: Quotas include Caspian Sea, Azov Sea, Black Sea, and Amur River. Export quantities include reported direct exports only. Trade in products of "*" has been taken to mean "*" from *A. gueldenstaedtii, A. nudiventris, A. persicus, A. stellatus,* and *Huso huso*.. Blanks indicate that no quota/export quantity published or reported for that year. Figures in italics represent data that was not reported to the Secretariat as exports, and is data taken from import records. n/a = quotas not available for these years. NP = not published.

ANNEX 2: CITES *RESOLUTION CONF. 12.7 (REV. COP 14)*

Conf. 12.7 (Rev. CoP14)* Conservation of and trade in sturgeons and paddlefish

RECALLING Resolution Conf. 10.12 (Rev.), adopted by the Conference of the Parties at its 10th meeting (Harare, 1997) and amended at its 11th meeting (Gigiri, 2000), and Resolution Conf. 11.13, adopted by the Conference of the Parties at its 11th meeting;

AWARE that sturgeons and paddlefish of the Order Acipenseriformes represent a valuable renewable biological and economic resource that in recent years has been affected by such negative factors as illegal fishing and illegal trade, regulation of water flow and decrease in natural spawning sites;

RECALLING the concepts endorsed and the progress made toward conservation of Acipenseriformes in the Caspian Sea under the 'Paris Agreement' approved at the 45th meeting of the Standing Committee (Paris, June 2001);

NOTING the need for further research and the importance of scientific monitoring of the status of stocks and an understanding of their genetic structure as the basis for sustainable fisheries management;

CONSIDERING that Eurasian range States of Acipenseriformes species are in need of funds and technical assistance in order to develop regional management and monitoring programmes for conservation, habitat protection, and the combating of illegal fishing and trade;

RECALLING that Article VI, paragraph 7, of the Convention provides that specimens of species listed in the Appendices may be marked to assist in identifying them;

CONSIDERING that the labelling of all caviar in trade would be a fundamental step towards the effective regulation of trade in specimens of sturgeons and paddlefish;

NOTING that, in order to assist the Parties in identifying legal caviar in trade, marking should be standardized and that particular specifications for the design of labels are fundamental, should be generally applied and should also take into account marking systems currently in place and anticipated technological advances in marking systems;

CONSCIOUS that there is a need for improvement of monitoring of caviar re-exports in relation to the original export and the level of exports in relation to annual export quotas;

WELCOMING the establishment of the caviar trade database by the UNEP World Conservation Monitoring Centre (UNEP-WCMC);

RECOGNIZING that Parties take into account domestic markets and illegal trade when issuing export permits, re-export certificates or when setting export quotas;

RECOGNIZING that the setting of export quotas for sturgeon specimens from shared stocks requires transparency;

THE CONFERENCE OF THE PARTIES TO THE CONVENTION

URGES the range States of species in the Order Acipenseriformes to:

a) encourage scientific research and ensure adequate monitoring of the status of stocks[1] to promote the sustainability of sturgeon and paddlefish fisheries through appropriate management programmes;

b) curtail the illegal fishing of and trade in sturgeon and paddlefish specimens by improving the provisions in and enforcement of existing laws regulating fisheries and export, in close

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* *Amended at the 13th and 14th meetings of the Conference of the Parties.*

[1] *The term 'stock' is regarded, for the purposes of this Resolution, to be synonymous with 'population'.*

collaboration with the CITES Secretariat, ICPO-Interpol and the World Customs Organization;

c) explore ways of enhancing the participation of representatives of all agencies responsible for sturgeon and paddlefish fisheries in conservation and sustainable-use programmes for these species;

d) promote regional agreements between range States of sturgeon and paddlefish species aiming at proper management and sustainable utilization of these species; and

e) in the case of range States of sturgeons in the Eurasian region, take into account the recommendations in document CoP12 Doc. 42.1 when developing regional conservation strategies and action plans;

RECOMMENDS, with regard to regulating trade in sturgeon products, that:

a) range States license legal exporters of specimens of sturgeon and paddlefish species and maintain a register of such persons or companies and provide a copy of this register to the Secretariat. The register should be updated when changes occur and communicated to the Secretariat without delay. The Secretariat should distribute this information via a Notification to the Parties and include it in its register on the CITES website;

b) each importing, exporting and re-exporting Party establish, where consistent with national law, a registration system for caviar processing plants, including aquaculture operations, and repackaging plants in its territory and provide to the Secretariat the list of these facilities and their official registration codes. The list should be updated when changes occur and communicated to the Secretariat without delay. The Secretariat should distribute this information via a Notification to the Parties and include it in its register on the CITES website;

c) importing countries be particularly vigilant in controlling all aspects of the trade in specimens of sturgeon and paddlefish species, including the unloading of sturgeon specimens, transit, re-packaging, re-labelling and re-exports;

d) Parties monitor the storage, processing and re-packaging of specimens of sturgeon and paddlefish species in Customs free zones and free ports, and for airline and cruise line catering;

e) Parties ensure that all their relevant agencies cooperate in establishing the necessary administrative, management, scientific and control mechanisms needed to implement the provisions of the Convention with respect to sturgeon and paddlefish species;

f) Parties consider the harmonization of their national legislation related to personal exemptions for caviar, to allow for the personal effects exemption under Article VII, paragraph 3, of the Convention and consider limiting this exemption to no more than 125 grams of caviar per person;

g) all caviar harvested in 2007 from shared stocks subject to agreed export quotas must be exported before the end of 2007. From 2008 onwards, all caviar from shared stocks subject to export quotas should be exported before the end of the quota year (1 March – last day of February) in which it was harvested and processed. For this purpose the export permits for such caviar should be valid until the last day of the quota year at the latest. Parties should not import caviar harvested or processed in the preceding quota year;

h) no re-export of caviar take place more than 18 months after the date of issuance of the relevant original export permit. For that purpose re-export certificates should not be valid beyond that 18-month period;

i) Parties supply to UNEP-WCMC directly or to the Secretariat copies of all export permits and re-export certificates issued to authorize trade in caviar, no longer than one month after they have been issued, for inclusion in the UNEP-WCMC caviar trade database;

j) Parties consult the UNEP-WCMC caviar trade database prior to the issuance of re-export certificates;

k) the Secretariat shall submit a written progress report at each meeting of the Standing Committee on the operation of the UNEP-WCMC caviar trade database;

l) where available, Parties use the full eight-digit Customs code for caviar, instead of the less precise six-digit code which also includes roe from other fish species; and

m) Parties implement the universal labelling system for caviar outlined in Annexes 1 and 2 and importing Parties not accept shipments of caviar unless they comply with these provisions;

RECOMMENDS[2] further, with regard to catch and export quotas, that:

a) Parties not accept the import of caviar and meat of Acipenseriformes species from stocks shared between different range States[3] unless export quotas have been set in accordance with the following procedure:

   i) range States have established export quotas for caviar and meat of Acipenseriformes species for that quota year, which from 2008 onwards starts on 1 March and ends on the last day of February of the following year;

   ii) the export quotas referred to in subparagraph i) have been derived from catch quotas that are based on an appropriate regional conservation strategy and monitoring regime for the species concerned and are not detrimental to the survival of the species in the wild;

   iii) the catch and export quotas referred to in subparagraphs i) and ii) should be agreed amongst all States that provide habitat for the same stock of an Acipenseriformes species. However, where a stock is shared by more than two States, and if one of these States refuses to participate or does not participate in the shared-stock quota agreement meeting convened in accordance with the agreed decision of all these States, the total and country-specific quotas for the shared stock may be agreed by the remaining range States. This situation must be substantiated in writing by both sides to the Secretariat for information to the Parties. The State not having participated may only export caviar and meat from its allocated quotas after it has notified the Secretariat that it accepts them and the Secretariat has informed the Parties. If more than one range State refuses to participate or does not participate in the process mentioned above, the total and country specific quotas for the shared stock cannot be established. In case of a stock shared by only two range States, the quotas must be agreed by consensus. If consensus cannot be reached, they may call upon a mediator, including the CITES Secretariat, to facilitate the process. They shall have a zero quota until such time as they have reached consensus;

   iv) range States have provided to the Secretariat by 31 December of the previous year, the export quota referred to in subparagraph i) as well as the scientific data used to establish the catch and export quotas under subparagraphs ii) and iii);

   v) if the quotas have not been communicated to the Secretariat by the deadline indicated in subparagraph iv) above, the relevant range States have a zero quota until such time as they communicate their quotas in writing to the Secretariat and the Secretariat in turn informs the Parties. The Secretariat should be informed by the range States of any delay and shall in turn inform the Parties; and

   vi) the Secretariat shall communicate the agreed quotas to the Parties within one month of receipt of the information from the range States;

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[2] *At CoP13 it was agreed that this recommendation would not apply to those range States where there is no commercial caviar harvest or export from shared stocks. It was also agreed, however, that the Secretariat or any Party would bring to the attention of the Standing Committee or Conference of the Parties any significant changes in the harvest or export of sturgeon products from such stocks.*

[3] *Quotas do not have to be established for specimens from endemic stocks, i.e. stocks not shared with other countries, and captive-breeding or aquaculture operations. Quotas communicated for such specimens are voluntary quotas.*

b) the Secretariat make all the information mentioned in subparagraph iv) available to Parties upon request; and

c) if a range State of a shared stock of a species of Acipenseriformes decides to reduce its quotas established in accordance with this Resolution under stricter domestic measures, this shall not affect the quotas of the other range States of this stock;

DIRECTS the Secretariat to provide at each meeting of the Animals Committee a written report, including references to relevant documents, on its activities related to the conservation of and trade in sturgeons and paddlefish;

DIRECTS the Animals Committee, in collaboration with the Secretariat, interested Parties, international organizations and relevant experts, to monitor progress on the relevant provisions of this Resolution and to carry out on a three-year cycle starting in 2008, and using information from preceding years, an evaluation of the assessment and the monitoring methodologies used for stocks of Acipenseriformes species subject to the provisions under RECOMMENDS further, paragraph a), above;

URGES range States to cooperate with the Animals Committee and the Secretariat with a view to implementing the provisions under RECOMMENDS further, paragraph a), and the paragraph DIRECTS the Animals Committee above;

DIRECTS the Animals Committee to provide to the Standing Committee its recommendations on actions to be taken based upon the above-mentioned monitoring of progress and three-year cycle evaluation;

CALLS UPON range States, importing countries and other experts and appropriate organizations, such as the IUCN/SSC Sturgeon Specialist Group, in consultation with the Secretariat and the Animals Committee, to continue to explore the development of a uniform DNA-based identification system for parts and derivatives and aquaculture stocks of Acipenseriformes species to assist in the subsequent identification of the origin of specimens in trade and the development and application of methods for differentiating wild from aquaculture origin caviar in cases where DNA-based methods are not useful;

DIRECTS the Secretariat:

a) in collaboration with range States and international organizations from both industry and the conservation community, to assist with the development of a strategy including action plans for the conservation of Acipenseriformes; and

b) to provide assistance with securing financial resources from Parties, international organizations, United Nations specialized agencies, intergovernmental and non-governmental organizations and industry; and

REPEALS the Resolutions listed hereunder:

a) Resolution Conf. 10.12 (Rev.) (Harare, 1997, as amended at Gigiri, 2000) – Conservation of sturgeons; and

b) Resolution Conf. 11.13 (Gigiri, 2000) – Universal labelling system for the identification of caviar.

Annex 1 CITES guidelines for a universal labelling system for the trade in and identification of caviar

a) The uniform labelling system applies to all caviar, from wild and aquaculture origin, produced for commercial and non-commercial purposes, for either domestic or international trade, and is based on the application of a non-reusable label on each primary container.

b) The following definitions apply in relation to trade in caviar:

- Caviar: processed unfertilized eggs (roe) of Acipenseriformes species.
- Lot identification number: a number that corresponds to information related to the caviar tracking system used by the processing or repackaging plant.
- Non-reusable label: any label or mark that cannot be removed undamaged or transferred to another container, which may seal the container. If the non-reusable label does not seal the primary container, caviar should be packaged in a manner that permits visual evidence of any opening of the container.
- Pressed caviar: caviar composed of unfertilized eggs (roe) of one or more sturgeon or paddlefish species, remaining after the processing and preparation of higher quality caviar.
- Primary container: tin, jar or other receptacle that is in direct contact with the caviar.
- Processing plant: facility in the country of origin responsible for the first packaging of caviar into a primary container.
- Repackaging plant: facility responsible for receiving and repackaging caviar into new primary containers.
- Secondary container: receptacle into which primary containers are placed.
- Source code: letter corresponding to the source of the caviar (e.g. W, C, F), as defined in the relevant CITES Resolutions. Note that, among other situations, for caviar produced from a female born in captivity and where at least one parent originated in the wild, the "F" code should be used.

c) In the country of origin, the non-reusable label should be affixed by the processing plant to any primary container. This label must include, as a minimum: a standard species code as provided in Annex 2; the source code of the caviar; the ISO two-letter code for the country of origin; the year of harvest; the official registration code of the processing plant (e.g. xxxx); and the lot identification number for the caviar (e.g. yyyy), for instance:

HUS/W/RU/2000/xxxx/yyyy

d) When no repackaging takes place, the non-reusable label referred to in paragraph c) above should be maintained on the primary container and be considered sufficient, including for re-export.

e) A non-reusable label should be affixed by the repackaging plant to any primary container in which caviar is repackaged. This label must include, as a minimum: a standard species code as provided in Annex 2; the source code of the specimen; the ISO two-letter code of the country of origin; the year of repackaging; the official registration code of the repackaging plant, which incorporates the ISO two-letter code of the country of repackaging if different from the country of origin (e.g. IT-wwww); and the lot identification number, or CITES export permit or re-export certificate number (e.g. zzzz), for instance:

PER/W/IR/2001/IT-wwww/zzzz

f) When caviar is exported or re-exported, the exact quantity of caviar must be indicated on any secondary container in addition to the description of the content in accordance with international Customs regulations.

g) The same information that is on the label affixed to the container must be given on the export permit or re-export certificate, or in an annex attached to the CITES permit or certificate.

h) In the event of inconsistencies between information on a label and a permit or certificate, the Management Authority of the importing Party should contact its counterpart in the exporting or re-exporting Party as soon as possible to establish whether this was a genuine error arising from the complexity of information required by these guidelines. If this is the case, every effort should be made to avoid penalizing those involved in such transactions.

i) Parties should accept shipments of caviar only if they are accompanied by appropriate documents containing the information referred to in paragraph c), d) or e).

Annex 2

Codes for identification of Acipenseriformes species, hybrids and mixed species

Species	Code
Acipenser baerii	BAE
Acipenser baerii baicalensis	BAI
Acipenser brevirostrum	BVI
Acipenser dabryanus	DAB
Acipenser fulvescens	FUL
Acipenser gueldenstaedtii	GUE
Acipenser medirostris	MED
Acipenser mikadoi	MIK
Acipenser naccarii	NAC
Acipenser nudiventris	NUD
Acipenser oxyrhynchus	OXY
Acipenser oxyrhynchus desotoi	DES
Acipenser persicus	PER
Acipenser ruthenus	RUT
Acipenser schrenckii	SCH
Acipenser sinensis	SIN
Acipenser stellatus	STE
Acipenser sturio	STU
Acipenser transmontanus	TRA
Huso dauricus	DAU
Huso huso	HUS
Polyodon spathula	SPA
Psephurus gladius	GLA
Pseudoscaphirhynchus fedtschenkoi	FED
Pseudoscaphirhynchus hermanni	HER
Pseudoscaphirhynchus kaufmanni	KAU
Scaphirhynchus albus	ALB
Scaphirhynchus platorynchus	PLA

Species	Code
Scaphirhynchus suttkusi	SUS
Mixed species (for 'pressed' caviar exclusively)	MIX
Hybrid specimens: code for the species of the male x code for the species of the female	YYYxXXX

Part II. Analysis of EC Trade in Caviar by Species and Tracking of Caviar Permits within the UNEP-WCMC Caviar Database

A REPORT TO THE
EUROPEAN COMMISSION

Prepared by the

United Nations Environment Programme -
World Conservation Monitoring Centre

October 2008
(Revised January 2009)

UNEP WCMC

UNEP World Conservation Monitoring Centre
219 Huntingdon Road
Cambridge
CB3 0DL
United Kingdom
Tel: +44 (0) 1223 277314
Fax: +44 (0) 1223 277136
Email: species@unep-wcmc.org
Website: www.unep-wcmc.org

ABOUT UNEP-WORLD CONSERVATION MONITORING CENTRE

The UNEP World Conservation Monitoring Centre (UNEP-WCMC), based in Cambridge, UK, is the specialist biodiversity information and assessment centre of the United Nations Environment Programme (UNEP), run cooperatively with WCMC 2000, a UK charity. The Centre's mission is to evaluate and highlight the many values of biodiversity and put authoritative biodiversity knowledge at the centre of decision-making. Through the analysis and synthesis of global biodiversity knowledge the Centre provides authoritative, strategic and timely information for conventions, countries, organisations and countries to use in the development and implementation of their policies and decisions.

The **UNEP-WCMC** provides objective and scientifically rigorous procedures and services. These include ecosystem assessments, support for the implementation of environmental agreements, global and regional biodiversity information, research on threats and impacts, and the development of future scenarios.

CITATION

UNEP-WCMC (2008). *Analysis of EC Trade in Caviar by Species and Tracking of Caviar Permits within the UNEP-WCMC Caviar Database.* A Report to the European Commission. UNEP-WCMC, Cambridge.

PREPARED FOR

The European Commission, Brussels, Belgium

DISCLAIMER

Table of Contents

I. Introduction

This report was prepared in two parts; Part I was produced by TRAFFIC (hereafter referenced as Engler and Knapp, 2008) with a focus on global caviar trends and with an EC emphasis on importing and exporting Member States. This report (Part II), was produced by UNEP-WCMC, and takes a species-specific approach to analysing caviar trade trends within the European Community. It includes an initial analysis of data held within the Caviar Database and presents the results of complex data queries which enable related caviar permits to be tracked over time to highlight any incidences of potentially illicit trade. This preliminary report is the first of two that will be produced by UNEP-WCMC under the service contract with the European Commission on the caviar trade within the European Community.

At the 10th Conference of Parties to CITES, all Acipenseriformes, or species of sturgeon and paddlefish, were listed in Appendix II of CITES. The listing, which came into force in April 1998, added a further 23 species to the four species already listed in the Appendices. Accordingly, the entire Order is listed in Annex B of the EC Wildlife Trade Regulation[1], with the exception of two species, *Acipenser brevirostrum* and *Acipenser sturio*, that are listed in Appendix I and Annex A. There is concern about the status of all species of Acipenseriformes, whose eggs are processed into valuable caviar. Wild stocks have substantially declined in recent decades (Pikitch *et al.*, 2005). Contributory factors include the decrease in natural spawning sites, changes in regulation of water flow, pollution, over-exploitation, poaching and illegal trade. Accordingly, the IUCN has classified six species as Critically Endangered, eleven as Endangered, six as Vulnerable, two are considered Near Threatened and six are of lower risk, Least Concern (IUCN, 2007). Provisional status assessments for five European sturgeon species have been elevated to Critically Endangered: *Acipenser persicus, A. stellatus, A.gueldenstaedtii, A.nudiventris,* and *Huso huso* (Kottelat & Freyhof, 2007).

Caviar Database

A database of caviar trade was established by UNEP-WCMC in 2007 to monitor the legal origin of caviar in international trade, check export quota compliance, track shipments of caviar across the world and identify any potential illegitimate use of CITES permits. The Caviar Database records the details of permits issued for caviar reported by exporting and re-exporting Parties on a near-real time basis. Resolution Conference 12.7 (Rev. CoP14), specifically relating to the conservation and trade in sturgeon and paddlefish, recommends that all CITES Parties submit copies of caviar permits and certificates no later than one month after they have been issued either directly to UNEP-WCMC or via the CITES Secretariat for inclusion in the database. This enables importing Parties to verify the validity and authenticity of export or re-export permits recently issued prior to issuing a corresponding import permit. It also allows analyses to be conducted in near real-time. This

[1] EC Regulation No. 338/97

is in contrast to the CITES Trade Database, which is compiled following the 31st October submission deadline for annual reports by the Parties[2]. Trade data included within the Caviar Database were reported by exporters and in some case by importers where the (re-) exporter has not submitted details of their exports. Management Authorities of EC Member States may access the online Caviar Database securely by password only via the CITES forum at: http://www.cites.org/forum/forum.php

The Caviar Database electronically links a permit from the country of origin to subsequent re-export permits, and, if previously re-exported, to the re-export permit from a third Party. Consignments of caviar within trade can thus be tracked from the country of origin via any other exporter to the latest country of import. Quantities can be checked to see whether the amount of caviar re-exported by any country (or collectively by the EC) exceeds the quantity imported, as indicated on the previous (re-)export permit. This may enable fraudulent permits to be detected and may be of particular relevance to the EC, where a re-exporting Member State may not be the same Member State which imported the caviar. Quota excesses by range States can also be detected.

The analysis outlines the importance of the EC caviar trade in the global context, and also provides an overview of the trends in caviar trade within the EC by analysing the information submitted by Member States of the European Community (EC), hereafter referred to as Member States, in their annual reports (1998-2006). This analysis includes countries which acceded to the European Community within the 'EC' from the year they acceded onwards, but did not include Bulgaria and Romania, which acceded to the EC in 2007. The trade within both the CITES trade and Caviar databases was analysed to determine firstly if range State export quotas had been adhered to, and secondly whether quantities of caviar re-exported by Parties remained lower than the quantities reported imported, by tracking permits. This included trade within the Member States of the European Community, which are large importers and re-exporters of caviar, and are also producer countries. Consideration is also given to the reporting requirements of Conference Resolution 12.7 (Rev. CoP14) and whether EC Member States and other Parties have submitted copies of caviar export and re-export permits within the deadlines specified to either UNEP-WCMC or the CITES Secretariat.

II. Methods

An analysis of the volume of imports of caviar from Acipenseriformes (under the term 'eggs (kg)' or 'caviar') to the EC Member States over the nine year period 1998-2006 was undertaken to identify the key species and the relevant sources within EC trade. For EC

[2] Parties are required to submit annual reports under the provisions of Article VIII, paragraph 7 (a) of the Convention. The Conference of the Parties and Secretariat have recommended that annual reports be submitted by 31 October following the year for which they are due, and following the guidelines for the preparation of such reports.

imports, the analysis selected only trade under the source codes W (wildtaken), C (captive bred), and F (born in captivity). Trade in ranched specimens (source code R) was excluded from the analysis of imports, as only three transactions of ranched caviar were reported by EC Member States during the period 1998-2006. Trade with source codes U (unknown), I (confiscated or seized) and O (Pre-convention) were also excluded from the analysis. For the analysis of EC (re-)exports, source code R (ranched) was included, as trade was reported at notable levels.

Species were selected for in-depth analysis if they were imported to the EC at levels totalling 100kg or more over for the period 1998-2006. For each species, export quota compliance was assessed for each range State which had established a quota, for either wild or captive produced caviar (source C or F). Secondly, permits were tracked to ensure quantities of re-exports remained lower or equal to the quantity that was reported imported.

Quota Compliance

To determine range State quota compliance, exporter and importer reported trade data for caviar of wild and captive sources (C or F) was extracted from the CITES Trade Database for the period 1998-2006. Additional data for 2005 to 2007 were extracted from the Caviar Database to complete the analysis. To minimise double-counting end-of-the-year trade (where exports are reported by importers in the following calendar year), permits were consulted. Import data was included as part of the previous year's trade when the corresponding export permit was issued in the previous year. Where export quotas had been exceeded, as declared by either the exporting range State or the collective importing Parties, EC importer data was consulted to determine whether any caviar was imported to the EC during that year. EC import data was also corrected to avoid end-of-year discrepancies. Quotas for shared stocks were required following adoption of Conference Resolution 12.7 in 2003. Where a quota was not established but exports were reported by the range State, these data were included. It was also noted where EC importer data exceeded that reported by the exporter.

Permit Tracking

To identify potential illegitimate uses of CITES permits, data within the Caviar Database from wild and captive sources for the years 2005 to 2007 were analysed to check that quantities of caviar (re)-exported by Parties (including EC Member States) remained lower than the quantities reported imported by tracking individual CITES permits. Trade data for 2008 is also included within the database and permit tracking was also undertaken for 2008 trade so far reported. Quota compliance checks for 2008 are, however, not yet possible as the reporting year is incomplete. All trade data within the Caviar Database are recorded in kg (converted from grammes if necessary) and all permits entered to date have been issued with purpose code T (commercial). The source of caviar imported to the EC for each species selected was analysed for the period 1998-2006. If trade was reported from captive sources

during this period, then permit analysis was also undertaken for those species for source codes C and F.

Mixed caviar, which combines eggs from several species of sturgeon or paddlefish, may be reported within trade as Acipenseriformes spp. or *Acipenser* spp., and whilst the relevant species may be listed individually on the (re-)export permit, relative quantities of each species are not recorded which makes analysis of trade recorded at higher taxon levels difficult. As a result, mixed caviar will not be covered in depth as part of this analysis.

Since the adoption of Conference Resolution 12.7, quotas for caviar are published annually if the CITES Secretariat is satisfied that the criteria within the resolution (and its subsequent revisions) have been complied with. Export quotas generally relate to a calendar year (1 January to 31 December); however, from 2008 onwards export quotas for caviar from shared stocks are subject to export quotas with the quota year 1 March – last day of February.

III. EC Caviar Imports and (Re-)Exports in the Global Context

Imports

As declared by importers, the EC imported 46% of caviar (654601 kg) from all sources during 1998-2006 and is clearly a major global market (Figure 1). When exports to the EC and the rest of the world ('RoW') as reported by the exporters are compared, the EC represents 33% of the market (Figure 2). There is often a tendency for exporting countries to report greater quantities of species (or their parts and derivatives) as exports than importers report as imports. This is because trade is often reported on the basis of permits issued rather than actual trade. For the caviar trade however, the reverse trend appears to be true. Exporters of caviar consistently reported exporting smaller quantities than importers reported importing during 1998-2006. The discrepancies between importer and exporter trade can, to some degree, be attributed to a lack of reporting by key caviar exporters, which is discussed further in Section V.

Overall, trade in caviar to both the EC and the RoW appears to be declining over this nine-year period according to both importers and exporters. Whilst the vast majority of EC caviar imports during 1998-2006 were from a wild source (Engler & Knapp, 2008), there has been a shift in the source of caviar in trade to the EC, with declining volumes of wild caviar imported and proportionally greater volumes of captive produced caviar imported. An analysis of 2006 EC annual reports to CITES indicates that in 2006, 4203 kg (27%) of all caviar imported to the EC comprised captive produced specimens, compared to 9% of imports in 2005 and only 2% in 2004 (UNEP-WCMC, 2008[3]). Reported imports from all countries suggest that this trend is a global phenomenon (Engler & Knapp, 2008). All EC Member

[3] UNEP-WCMC (2008). Analysis of the European Community, Accession and Candidate Countries' Annual reports to CITES 2006. A Confidential Report to the European Commission.

States except Estonia, Ireland and Slovakia reported imports of caviar (from any source) during 1998-2006. The main EC importing nations for both wild and captive produced caviar are, in order of importance, Germany and France (Engler & Knapp, 2008). The species imported to the EC in highest volumes are considered in depth in section IV.

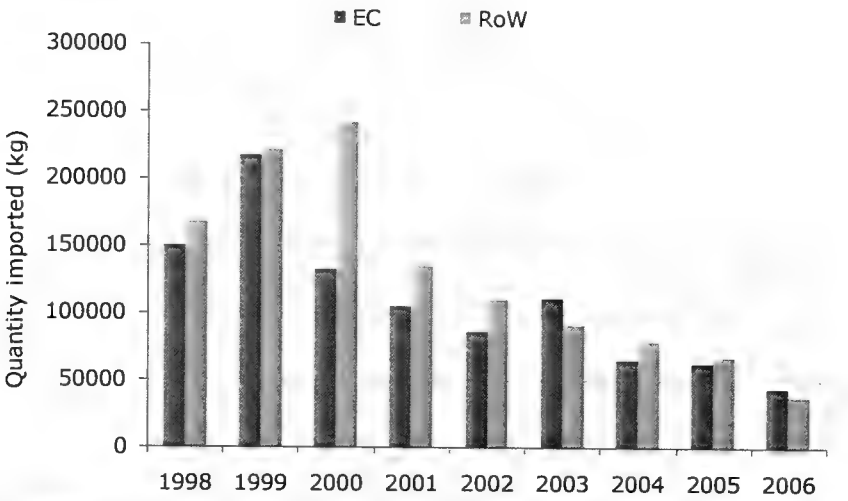

Figure 1. Importer-reported imports of caviar by the EC and the rest of the world (RoW), 1998-2006 (all sources, all Acipenseriformes)

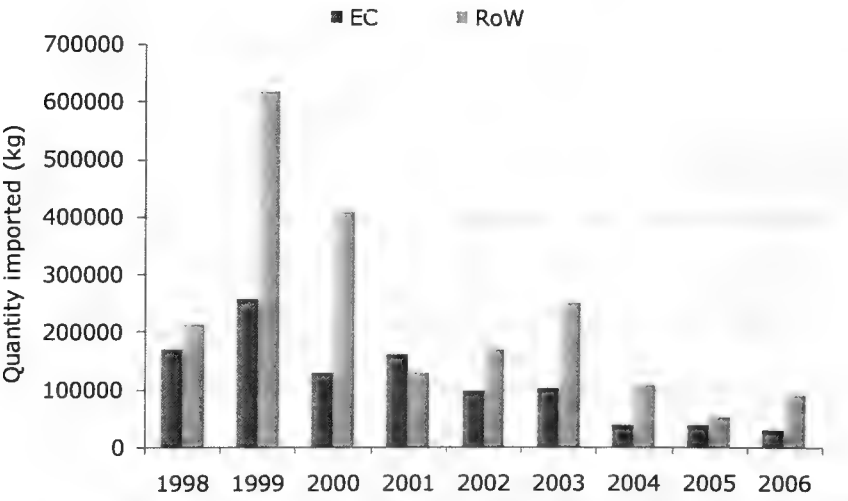

Figure 2. Exporter-reported exports of caviar to the EC and the rest of the world, 1998-2006 (all sources, all Acipenseriformes)

EC Exports and re-exports

The total volume of caviar exported and re-exported from the EC during 1998-2006 was 239560 kg, roughly a third of the quantity imported. Until the accession of Bulgaria to the

European Community in 2007, the EC was not a 'range State' for Acipenseriformes, and it did not export wild caviar originating within the EU. Trade from the EC comprised re-exports of wild caviar or direct exports of captive produced or ranched caviar (Figure 3). Overall trade volumes were variable during 1998-2006; but there has been a shift in sources. During 2004-6 the EC (re-)exported decreasing volumes of wild-sourced caviar and increasing volumes of caviar produced in captivity.

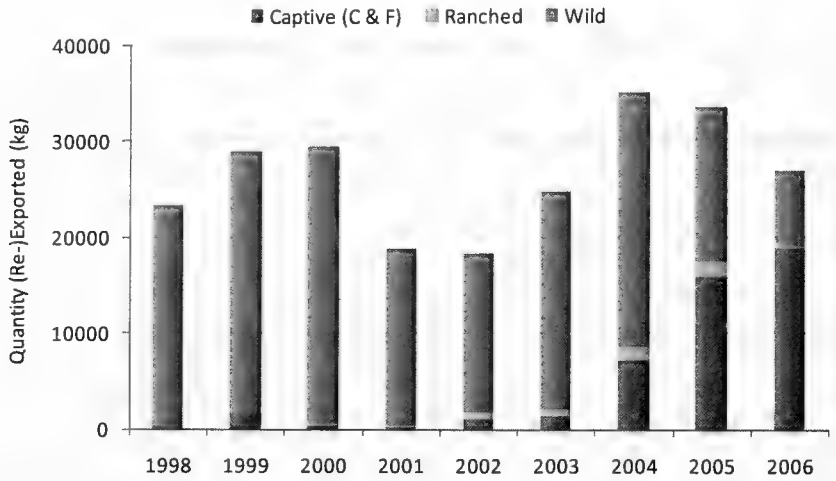

Figure 3. EC-Reported Exports and Re-Exports of Wild, Captive (Source C & F) and Ranched caviar, 1998-2006

Wild-taken Re-exports

Corresponding to a decrease in imports of wild caviar to the EC over the nine year period, re-exports of wild caviar from the EC diminished substantially after 2004 (Figure 4). Ossetra caviar (derived from *A. persicus*) was re-exported in the largest volumes (59713 kg). Re-exports of sevruga caviar (from the species *A. stellatus*) were 56458 kg over this period.

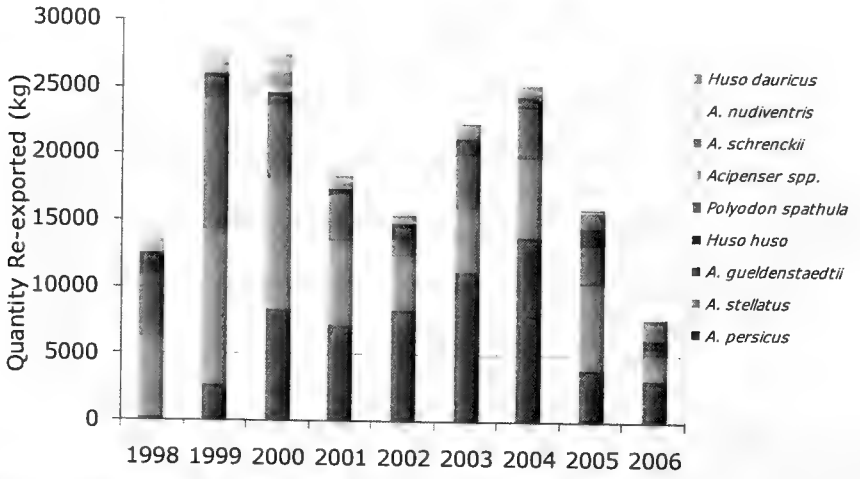

Figure 4. EC-reported re-exports of wild-sourced caviar originating outside the EC, 1998-2006

Included within the wild caviar re-exported by the EC countries in the figure above is 274 kg of wild-sourced caviar originating from Bulgaria and 3902 kg of wild-sourced caviar from Romania.

Captive Production within the EC

Caviar produced from aquaculture (source C, F, or R) within the EC for the export market substantially increased between 1998 and 2006, from 280 kg in 1998 to 18100 kg in 2006. France, Italy and Germany, in order of importance, were the main Member States of export. While several species of sturgeon and paddlefish (and hybrids thereof) are bred in aquaculture within the EC, two species in particular are predominantly produced for the caviar export market: *Acipenser baerii* and *Acipenser transmontanus*.

Direct exports of *Acipenser baerii* accounted for 64% of EC exports of caviar (excluding re-exports) and have increased markedly since 1998 despite a slight decrease in 2006 (Figure 5). This species was primarily exported by France, the Member State of origin. *Acipenser transmontanus* accounted for 34% of EC direct exports, with three other species accounting for the remaining 2% (*Acipenser gueldenstaedtii, Acipenser naccarii,* and *Acipenser* hybrids) (Figure 6). While direct trade in *Acipenser baerii* decreased slightly between 2005 and 2006, the direct exports of *Acipenser transmontanus* have steadily increased since 2002. These two species combined account for the overall increasing trend in captive-produced direct exports from the EC.

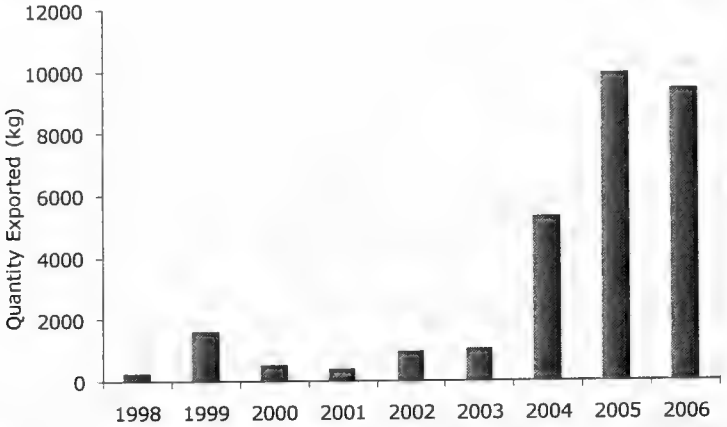

Figure 5. EC-reported direct exports of *Acipenser baerii*, Source: C, F, R, 1998-2006

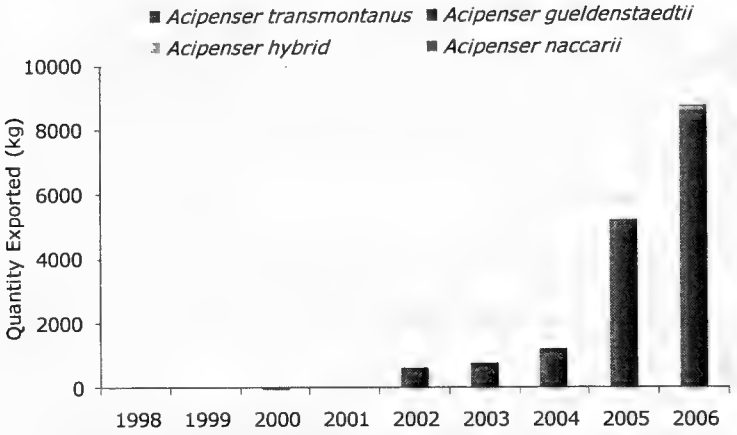

Figure 6. EC-reported direct exports of remaining four taxa traded (excluding *A. baerii*), source C, F, R, 1998-2006.

Italy reported exports of 4351 kg of ranched caviar during 1998-2006, predominantly of the species *Acipenser transmontanus*. Source code R could be appropriate where wild specimens are reared to sexual maturity then eggs are removed from adult females to be processed into caviar. However, there is a need to re-define the word 'ranching' within the Convention, as the current definition (Conf. Res 11.16 Rev. CoP14 relating to populations transferred from Appendix I to II) implies this production system is appropriate for only range States, where the ranching programme is beneficial to the conservation of the local population. Italy is not a range States for this species, however, no ranched trade has been reported exported by Italy since 2005.

IV. Species Analysis

Twelve taxa were imported to the EC at levels above 100 kg from all sources 1998-2006 and were selected for in depth review (Table 1). Species level analysis was undertaken for ten species identified, but *Acipenser* spp. and Acipenseriformes spp. are discussed together as meaningful analysis at the genus level is difficult. Incidences of any quota excesses for wild caviar are listed for each species, including where trade was reported but no quota was published. These cases are shaded within the tables. Prior to 2003 and the adoption of Conference Resolution 12.7, quotas for shared stocks were not required. Where a quota was not required, but importer data exceeded that reported by the exporter, this data was also included.

Permit tracking was undertaken for trade in all species in Table 1 from wild sources and additionally for captive bred (C or F) sources if species had been reported to the EC for those source codes during 1998-2006. Global trade routes for consignments of caviar can be complex; a single shipment can transit through several EC countries before reaching its final destination and after each individual re-export, a check is required to ensure the quantities of caviar re-exported do not exceed the quantity imported. One shipment of *Acipenser baerii*, for example, was captive produced in France, re-exported by another EC Member State (Germany) to the United Arab Emirates, re-imported to the EC via Luxembourg before being re-exported from the Community for the second time to Iceland. Whilst a tool to detect whether re-export quantities exceed the quantities imported at each level of re-export is being developed by UNEP-WCMC, an automated tool is currently only available for the first level of re-export. For this review, re-exports at subsequent levels were checked visually by eye, but not systematically totalled for the exact figures.

Table 1. EC-Reported imports of caviar (kg) for taxa imported at levels above 100 kg from wild and captive-bred sources (source codes W, F and C), 1998-2006

Taxon	EC-reported Quantity Imported (kg)	Relative percentages of sources codes (%) 'W'	'F'	'C'	IUCN Red listing
Acipenser persicus	212798.2	100	0	0	Endangered*
Acipenser stellatus	206195.7	99.8	0	0.2	Endangered*
Acipenser gueldenstaedtii	124868.1	98	0.1	1.9	Endangered*
Huso huso	39525.6	99	0	1.0	Endangered*
Polyodon spathula	9267.3	99.97	0.03	0	Vulnerable
Acipenser transmontanus	8516.6	1.2	98.8	0	Least Concern
Acipenser spp.	7606.5	99.9	0	0.01	
Huso dauricus	6932.5	100	0	0	Endangered*
Acipenser nudiventris	4146.7	100	0	0	Endangered*
Acipenser schrenckii	3776.9	100	0	0	Endangered*
Acipenseriformes spp.	1375.0	99.99	0	>0.01	
Acipenser baerii	1004.0	0.3	0.5	99.2	Vulnerable*

W= wild F = captive born, C = captive bred in accordance with Article 54 of EC Regulation 865/06
*with annotation by the IUCN that the listing requires updating

Of the species selected, caviar from two species was imported from primarily captive sources, *Acipenser transmontanus* and *A. baerii*. For the remaining species, EC imports of caviar were primarily from wildtaken specimens. Global threat status, according to the IUCN, is also listed in Table 1.

Where appropriate, individual permits comprising multiple species are compared in Annex A. Export and import data, as well as range State quotas are also presented by country in Annex B.

1. *Acipenser persicus*

The EC-reported imports of *Acipenser persicus* between 1998-2006 were entirely from wild sources (Figure 7). Reported imports in 2005-6 were substantially less than in previous years.

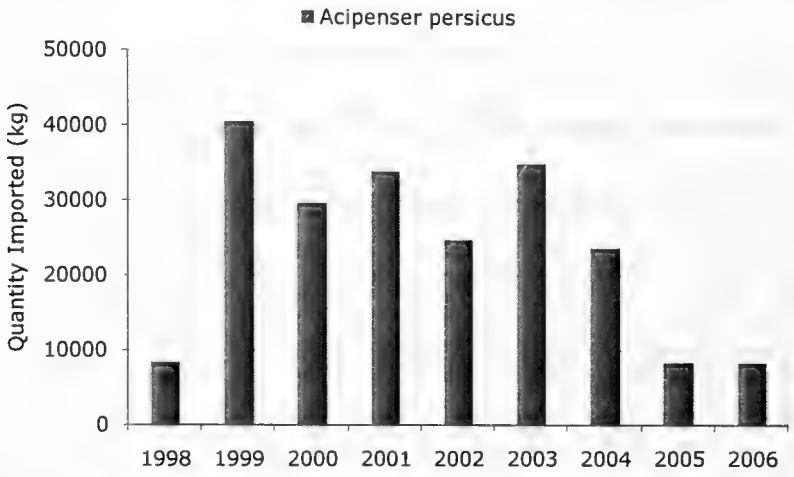

Figure 7. EC-reported imports of *Acipenser persicus* caviar (kg), all from wild sources, 1998-2006

No instances of quotas being exceeded were recorded in the CITES Trade Database for *Acipenser persicus* (Table 2). However, while export quotas for *Acipenser persicus* from range States appear to have been complied with, it should be noted that the Islamic Republic of Iran (hereafter referred to as Iran) did not published a quota in 1998. In that year, importer data far exceeded that reported by the exporter, by a factor of more than three. The main EC importer, of 6127kg, was France.

In 2000, Iran published a combined quota of 5200kg for *A. persicus* and *A. gueldenstaedtii* and whilst the combined quota was not reported exceeded by Iran, the total importer-reported imports for these two species exceeded the quota with 53087kg reported imported. As an example, the EC reported importing a quantity 4612kg more than Iran reported exporting for *A. persicus* in 2000. Iran has, however, published separate quotas for this species since 2001; for 2008 the quota is 37000kg.

Table 2. Incidences of importer data exceeding exporter data for wild *Acipenser persicus*, as reported by the exporters and importers, 1998-2007.

Country	Year	QUOTA (kg)	Export data (kg)	Import data (kg)	Exceeded by exporter (kg)	Exceeded by importer (kg)	Importer data exceeds Exporter data	EC reported direct imports (kg)
Iran	1998	N/R	2269.8	8442.9			6173.1	7913.5
Iran	2000	52000*	30886.1	35498.9			4612.8	24518.1

*In 2000, Iran had a combined quota of 52000 for *A.persicus* and *Acipenser gueldenstaedtii*. According to exporter reported data, the combined quota for the two species was not exceeded. According to importers however, the combined imports of *A. persicus* (35498.9kg) and *A. gueldenstaedtii* (17588.28kg) exceeded the combined export quota by 1087 kg.

N/R denotes a quota was not required

Permit tracking for *A.persicus* did not reveal any instances of re-exporters exporting greater quantities of caviar than were reported on the relevant import permits.

2. *Acipenser stellatus*

All EC reported imports of *Acipenser stellatus* caviar between 1998 and 2006 were from wild sources (Figure 8), with the exception of 104 kg in 2005 and 334 kg in 2006 imported from captive sources.

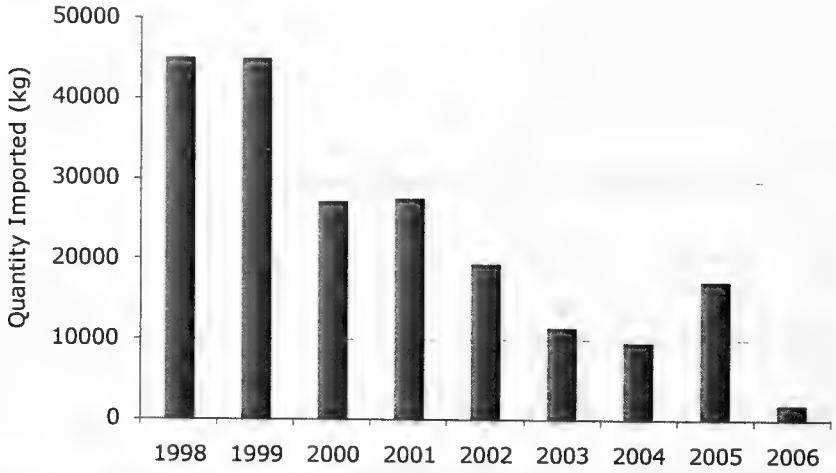

Figure 8. EC-reported imports of *Acipenser stellatus* caviar (kg), from wild sources, 1998-2006

There were five years where either the importer or exporter reported quotas being exceeded for wild *A.stellatus* during 1998-2006 (Table 3). Romania, now an EC Member State, reported exceeding their quota slightly for *Acipenser stellatus* from the NW Black Sea and Lower Danube River in 2000, but exports have since remained within quota (Annex B). Azerbaijan, Kazakhstan and Iran export caviar from shared Caspian Sea stocks of *A. stellatus*. The EC was a major importer of caviar direct from these ranges States during 1998-2006. Collectively, range States reported exceeding their quotas for *A. stellatus* over that period by 4809 kg. Iran reported exceeding their quota (by almost 1600 kg) in 1999 and Azerbaijan reported a total quantity of 3193 kg over its published quotas for 2004 and 2005.

Kazakhstan, however, did not report exports in 2005 nor have they done so since. Importer data indicates that in 2005 alone, Kazakhstan exceeded their export quota by 3423 kg. As identified by Engler & Knapp (2008), Kazakhstan also exported 203kg of *A. stellatus* caviar in 2006, yet an export quota had not been established. No EC Member States reported imports of this species from Kazakhstan in 2006 (Table 3.) It is therefore possible, that the true extent of exports beyond the quotas levels set for this species from the three Caspian Sea States over this period was 8417.5 kg.

Table 3. Incidences of range States exceeding their export quotas (blue highlight) for wild *Acipenser stellatus*, as reported by the exporters and importers, 1998-2007.

Country	Year	QUOTA (kg)	Export data (kg)	Import data (kg)	Exceeded by exporter (kg)	Exceeded by importer (kg)	Importer data exceeds Exporter data	EC reported direct imports (kg)
Iran	1998	N/R	36466.9	41847.7			5380.9	26299.0
Romania	1998	N/R	326.0	327.0			1.0	2.0
Iran	1999	40000	41598.7	38269.5	1598.7			24187.9
Azerbaijan	2000	N/R	305.0	205.0				
Romania	2000	2100	2117.0	1941.0	17.0			
Azerbaijan	2004	2700	4849.4	4549.9	2149.4	1849.9		2953.5
Azerbaijan	2005	2700	3743.7	3323.0	1043.7	623.0		2789.4
Kazakhstan	2005	10490		13912.6		3422.6	13912.6	9316.0
Kazakhstan	2006	N/P		203.1		203.1	203.1	
TOTALS					**4808.8**	**6098.6**		

N/R denotes a quota was not required; N/P denotes no quota published.

Permit tracking revealed a number of incidences where re-export permits apparently exceeded the quantities on the original import permits. Analysis of re-export permits of *A. stellatus* originating from Kazakhstan in 2005 highlighted a discrepancy with the quantities of caviar reported re-exported from the United Arab Emirates ('UAE'), (Table 4). On permit denoted as "B", Turkey reported re-exporting 1249.74 kg of *A. stellatus* to the UAE. The UAE, however, reported re-exporting a total of 1621.29kg originating from the same Turkish re-export permit to six other Parties (Luxembourg, Singapore, Saudi Arabia, Japan, the United States and Kuwait). The cumulative total of the nine permits issued by the UAE up to 25/9/06 were within the quantity of caviar reported imported. However, it appears that a further ten permits (highlighted in blue) were issued until 12/04/07 for a total amount of 371.55kg beyond the amount of caviar imported on the relevant Turkish permit. The cumulative quantity of caviar imported by Luxembourg alone apparently exceeds the quantity of caviar on the original re-export permit from Turkey to the UAE.

Secondly, it appears that Switzerland re-exported a greater quantity of *A. stellatus* acquired from Azerbaijan on the permit denoted as "A", than was originally imported from the country (Table 1, Annex A). It is notable that the quantity exceeded (20.38kg) equals exactly the quantity re-exported on permit "F" to Belgium, issued on 20/01/2008. This amount is also identical to the quantity of caviar issued on Swiss permit "C", to Italy on 12/12/07.

Individual permit tracking for other species identified in this review also revealed similar discrepancies for two additional species, *Acipenser gueldenstaedtii* and *Huso huso*, on the same original Azerbaijani export permit, "A". These are presented in Annex A to enable a comparison of importing and exporting Parties (Tables 1-3). It is clear that only one re-export permit caused the irregularity for all three species. This permit (highlighted in blue) was issued by Switzerland on 20/01/08, with destination Belgium. In each case, the

quantities re-exported are identical to a previous permit "C" issued on 12/12/07, with destination Italy.

Detection of such cases could indicate that an attempt has been made to re-export more caviar than was originally imported. The discrepancies highlighted above were brought to the attention of the Management Authorities of the United Arab Emirates and Switzerland. The Swiss Management Authority confirmed that the re-exports from Switzerland to Italy did not take place, and the caviar was alternatively re-exported to Belgium in identical quantities. The Management Authority of the UAE confirmed that one re-export permit for 449kg of *A. stellatus* imported from Turkey on the above permit number had been cancelled, and that the quantity of a second re-export permit had been reduced. Following clarification of these details, the quantities of *A. stellatus* re-exported were all within the amounts specified on the original import permits.

It is therefore important that Management Authorities inform UNEP-WCMC of the details of any caviar permits which are cancelled or returned to them unused, so that the caviar database can be updated and reflect the actual quantities in trade.

Table 4. Re-export Permit ("B") for *Acipenser stellatus* caviar from Turkey, apparently exceeded by United Arab Emirates on re-exports

	Origin Country	Importer1	Importer2	Importer3	Permit	Purpose	Source	Date of Issue	Amount	Cumulative Total
Original Export	Kazakhstan	Turkey			A	T	W	13/12/2005	**1249.74**	
Re-export to U.A.E.	Kazakhstan (Permit A)	Turkey	United Arab Emirates		B	T	W	30/01/2006	**1249.74**	
Re-exports from U.A.E.	Kazakhstan (Permit A)	Turkey (Permit B)	United Arab Emirates	Luxembourg	C	T	W	12/02/2006	190	190
				Luxembourg	D	T	W	04/03/2006	449.28	639.28
				Luxembourg	E	T	W	11/03/2006	225.92	865.2
				Luxembourg	F	T	W	10/07/2006	90.21	955.41
				Luxembourg	G	T	W	30/07/2006	158.32	1113.73
				Singapore	H	T	W	06/08/2006	0.1	1113.83
				Singapore	I	T	W	27/08/2006	1	1114.83
				Saudi Arabia	J	T	W	12/09/2006	50	1164.83
				Saudi Arabia	K	T	W	12/09/2006	0.61	1165.44
				Luxembourg	L	T	W	25/09/2006	156.46	1321.9
				Luxembourg	M	T	W	08/11/2006	89.9	1411.8
				Japan	N	T	W	19/11/2006	1.8	1413.6
				Saudi Arabia	O	T	W	18/12/2006	87.5	1501.1
				United States	P	T	W	23/01/2007	22.8	1523.9
				Japan	Q	T	W	15/02/2007	1.2	1525.1
				United States	R	T	W	26/02/2007	90.38	1615.48
				Saudi Arabia	S	T	W	01/03/2007	2.45	1617.93
				Japan	T	T	W	20/03/2007	2.4	1620.33
				Kuwait	U	T	W	12/04/2007	0.96	1621.29

Total re-exported **1621.29 kg**
Amount Exceeded **371.55 kg**

3. *Acipenser gueldenstaedtii*

EC-reported imports of *Acipenser gueldenstaedtii* have been variable over the period 1998-2006 (Figure 9). Imports were primarily from wild sources until 2005, but in 2006, the trade involved predominately captive bred specimens (sources C and F).

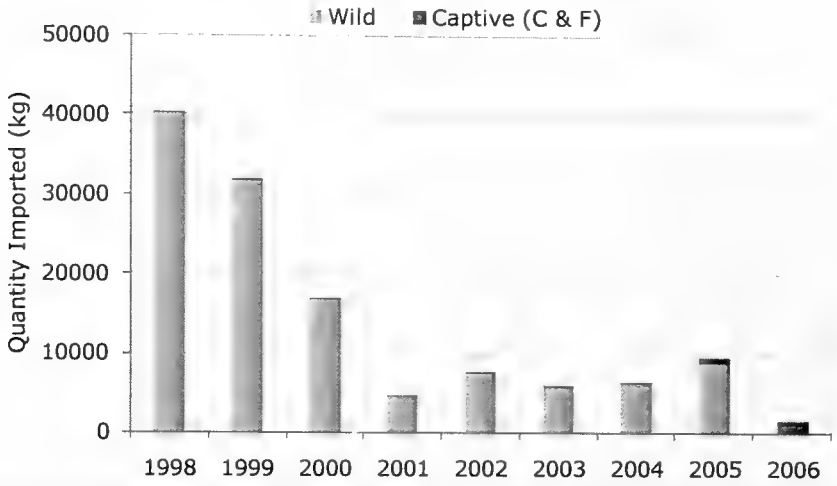

Figure 9. EC-Reported imports of *Acipenser gueldenstaedtii* caviar from wild and captive (Source 'C' and 'F') sources, 1998-2006

There were six years in which exporter and/or importer data show that range States exceeded quotas for wild *A.gueldenstaetii* during 1998-2006 (Table 5, highlighted in blue). Range States exporting *A. gueldenstaetii* from shared stocks of the Caspian Sea (Azerbaijan, Kazakhstan and Iran) collectively reported exceeding their quotas by 4127 kg during the period 1998-2007. Importers reported a comparable quantity of 4085 kg over quota levels. In 2005, Azerbaijan exceeded their quota by 1952kg; the EC collectively imported the entire years' quota plus an additional 745kg of *Acipenser gueldenstaedtii* caviar. Kazakhstan reported no exports for 2005 (as for all species), yet importers recorded 811kg caviar imported above the quota limit of 3100kg for this country; the EC was a significant importer, reporting imports of 3070kg. Also, as discussed *infra*, the 52000 kg joint quota set by Iran in 2000 for *A. gueldenstaetii* and *A. persicus* was exceeded according to importer data (53087 kg), but not according to exporter data.

In accordance with the requirements of Conf. Res. 12.7 (Rev. CoP14), no quotas were published for *Acipenser gueldenstaetii* range States in 2006, but quotas for both Azerbaijan and Kazakhstan were published for 2007. Both Parties have appeared to adhere to quotas set for 2007 (Annex B), based on trade reported by importers and recorded within the Caviar Database.

Table 5. Incidences of range States exceeding their export quotas (blue highlight) for *Acipenser gueldenstaedtii*, as reported by the exporters and importers, 1998-2007.

Country	Year	QUOTA (kg)	Export data (kg)	Import data (kg)	Exceeded by exporter (kg)	Exceeded by importer (kg)	Importer data exceeds Exporter data	EC reported direct imports (kg)
Romania	1998	N/R	389.0	410.0			21.0	4.0
Iran	1998	N/R	54005.6	50894.2				34558.0
Bulgaria	2000	N/R	25.4	3.0				
*Iran	2000	*52000	15186.9	17588.28			2401.38	5832.95
Kazakhstan	2001	3200	3837.8	3224.0	637.8	24.0		
Iran	2002	2100	2363.7	2535.9	263.7	435.9	172.1	1175.6
Kazakhstan	2002	4880	5150.5	3269.5	270.5			
Azerbaijan	2004	3780	4783.1	5016.2	1003.1	1236.2	233.1	2819.0
Bulgaria	2005	0		25.5			25.5	
Azerbaijan	2005	3780	5732.3	5357.7	1952.3	1577.7		4525.5
Kazakhstan	2005	3100		3911.2		811.2	3911.2	3070.0
TOTALS					**4127.3**	**4085.0**		

N/R denotes a quota was not required

*In 2000, Iran has a combined quota of 52000 for *A.persicus* and *Acipenser gueldenstaetii*. According to exporter reported data, the combined quota for the two species was not exceeded. According to importers however, the combined imports of *A. persicus* (35498.9kg) and *A. gueldenstaedtii* (17588.28kg) exceeded the combined export quota by 1087 kg.

Analysis of re-export permits for *Acipenser gueldenstaedtii* revealed one apparent irregularity, a re-export from Switzerland, as previously discussed under *A. stellatus*.

4. *Huso huso*

EC-reported imports over the period 1998-2006 have been almost entirely from wild sources (Figure 10). Collectively, the Caspian Sea range States of Azerbaijan, Kazakhstan and Iran reported exporting 6161 kg of caviar from the species *Huso huso* in excess of the combined export quota quantities published for the period 1998-2006 (Table 6). According to importer reported data, the quotas were exceeded by 6778 kg representing the most significant incidence of quota non-compliance for all species included in this analysis.

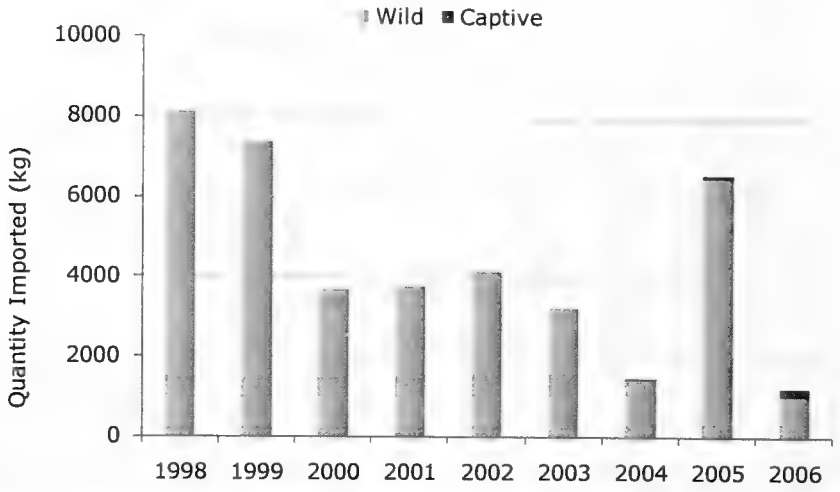

Figure 10. EC-Reported *Huso huso* caviar from wild and captive (Source 'C' and 'F') sources, 1998-2006.

In 2001, exporter data show that Kazakhstan exceeded their quota by 2936 kg. This represents the highest quota excess for an individual species in one quota year (also highlighted by Engler & Knapp, 2008). According to importer data, Kazakhstan exceeded their quota by 2482 kg in 2001. The EC did not report imports from Kazakhstan in 2001. In addition, Kazakhstan also reported exceeding its quota in 2005 by 2002 kg. The EC did however, report imports of 4202 kg in 2005, some 1600kg above the published quota level. Kazakhstan also exported 199kg of *Huso huso* caviar in 2006 yet an export quota had not been established (Engler & Knapp 2008). No EC Member States reported imports of this species from Kazakhstan in 2006 (Table 6).

Iran substantially exceeded their quota of 1720kg for *H. huso* in 2003, notably the EC reported imports of 2048kg for that year.

Bulgaria, which has now acceded to the European Union, exceeded their export quota for *H. huso* from the NW Black Sea and Lower Danube River stock in 2000 and 2002, but has since remained within quota for wild stocks (Annex B). Romania, also now an EC Member State, reported exporting a small quantity of 7 kg over quota in 1999. More significantly, the quota was exceeded (as reported by importers) by 267 kg in 2000 and by 207 kg in 2002, as reported by the exporter. In 2006, Romania adopted a 10 year moratorium on commercial catches of wild sturgeon and there have been no exports of caviar since then.

Table 6. Incidences of range States exceeding their export quotas (blue highlight) for wild-taken *Huso huso*, as reported by the exporters and importers, 1998-2007.

Country	Year	QUOTA (kg)	Export data (kg)	Import data (kg)	Exceeded by exporter (kg)	Exceeded by importer (kg)	Importer data exceeds Exporter data	EC reported direct imports (kg)
Iran	1998	N/R	2951.747	3236.28			284.533	3004
Bulgaria	1998	N/R	2392	1717.2				
Romania	1998	N/R	873	533				20
Iran	1999	3000	3530	3718	530	718	188	2323
Romania	1999	1750	1757	1709	7			974.77
Bulgaria	2000	2500	2747.5	2275.6	247.5			
Azerbaijan	2000	N/R	145.8	90				
Iran	2000	3000	3454	2360	454			1598
Romania	2000	3200	3200	3467		267	267	1584.27
Kazakhstan	2001	4200	7135.61	6681.84	2935.61	2481.84		
Bulgaria	2002	1720	2327.8	1971	607.8	251		70
Romania	2002	2180	2387	1879	207			1388.65
Azerbaijan	2003	400	561.9	362.05	161.9			91.4
Iran	2003	1720	2566.269	2369.388	846.27	649.388		2048.8
Azerbaijan	2004	250	291.48	216.28	41.48			143.28
Azerbaijan	2005	250	372.776	458.976	122.77	208.976	86.2	304.976
Kazakhstan	2005	2600		4602.6		2002.6	4602.6	4202.6
Kazakhstan	2006	N/P		198.934		198.934	198.934	
TOTALS					**6161.33**	**6777.74**		

N/R denotes a quota was not required; N/P denotes no quota published

Individual permit tracking for *Huso huso* revealed one apparent re-export permit irregularity by Switzerland, as discussed earlier under *A. stellatus*.

5. *Polyodon spathula*

This species is endemic to the United States of America. *Polyodon spathula* caviar imported by the EC during 1998-2006 was entirely from wild sources (Figure 11). Whilst EC imports of caviar from wild origin are declining for all other species reviewed, imports of wild caviar derived from this species appear to be increasing.

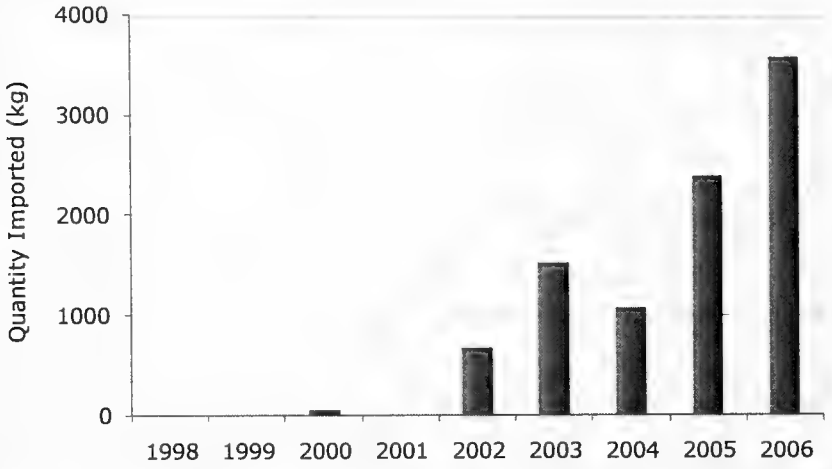

Figure 11: EC-reported imports of wild-sourced *Polyodon spathula* caviar (kg), 1998-2006

No quotas for wild *Polyodon spathula* have been published by the United States, but in several years, notably 2005 and 2007, importer data exceeds that reported by the exporter (Table 7). There are no reported exports of this species for 2007, as the United States has not reported on 2007 caviar trade (see Section V, compliance of reporting requirements of Conf. Res. 12.7 (Rev.CoP14).

Table 7. Incidences of importer data exceeding exporter data for *Polyodon spathula* as reported by the exporters and importers, 1998-2007.

Country	Year	QUOTA (kg)	Export data (kg)	Import data (kg)	Exceeded by exporter (kg)	Exceeded by importer (kg)	Importer data exceeds Exporter data	EC reported direct imports (kg)
United States	1998	N/R		3.99			3.99	
United States	2000	N/R	3065.95	1193.63				42.86
United States	2002	N/R	2627.53	2639.09			11.56	676.18
United States	2003	N/R	4380.79	4476.6			95.81	1525.77
United States	2004	N/R	4401.38	4108.14				1067.7
United States	2005	N/R	4160.34	5017.86			857.52	2387.08
United States	2006	N/R	8591.83	6215.45				3574.26
United States	2007	N/R		7022.94			7022.94	7022.94

N/R denotes a quota was not required – this species is from endemic stock

Analysis of re-export permits for this species within the Caviar Database revealed that during 2006-2007, two Member States of the EC collectively re-exported 88.96kg of wild

caviar in excess of the quantity imported to the EC (via Belgium) on the relevant permit from the United States (Table 8). Spain reported re-exporting 49.09kg to the UAE and Belgium reported re-exporting a total of 414.40 kg back to the country of origin, the United States. The latter represented 39.87kg greater than the amount Belgium reported importing.

The Belgian Management Authority subsequently confirmed that one re-export (permit "C") for 218.6kg of caviar did not take place. The total quantity of caviar collectively re-exported by Member States Belgium and Spain was therefore less than the quantity imported to Belgium.

Table 8: Export Permit "A" for *Polyodon spathula* caviar originally exported from the United States to Belgium, apparently exceeded by EC Member States on re-exports

	Origin Country	Importer1	Re-exporter	Importer2	Permit	Purpose	Source	Date of Issue	Amount (kg)	Cumulative Total
Original Export	United States	Belgium			A	T	W	20/07/06	**374.53**	
Re-exports from the EC	United States (Permit A)	Belgium	Belgium	United States	B	T	W	19/10/06	30.44	30.44
			Belgium	United States	C	T	W	30/10/06	218.60	249.04
			Belgium	United States	D	T	W	30/10/06	57.0	306.04
			Belgium	United States	E	T	W	14/11/06	48.69	354.73
			Spain	United Arab Emirates	F	T	W	21/12/06	49.09	403.82
			Belgium	United States	G	T	W	06/02/07	31.03	434.85
			Belgium	United States	H	T	W	28/02/07	28.64	463.49

Total Re-exported **463.49 kg**
Amount Exceeded **88.96 kg**

6. *Acipenser transmontanus*

EC imports of *A.transmontanus* were predominantly from captive bred sources (Figure 12). A notable increase in reported imports of this species can be seen in 2005 and 2006, compared to no imports during 1998-2000 and moderate imports between 2001 and 2004.

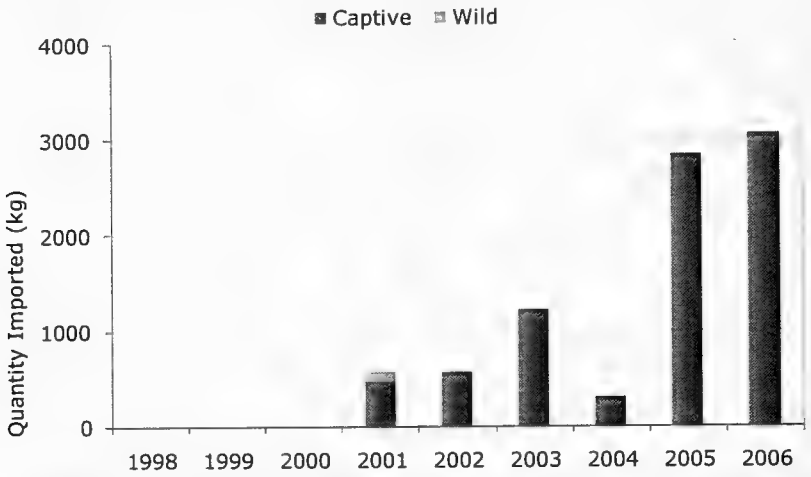

Figure 12. EC-Reported imports *Acipenser transmontanus* caviar from wild and captive (Source 'C' and 'F') sources, 1998-2006

A quota of 3500kg for captive produced caviar of *Acipenser transmontanus* was published by the United States in 2001. The quota was not exceeded, however importer reported data were greater than exporter reported data (Table 9). Import data was higher in a number of instances, the most significant being in 2007. Export quotas were exceeded in 2002 and 2003 and during these years the United States published a zero quota. No export quotas have subsequently been published by the United States.

Table 9. Incidences of range States exceeding their export quotas (blue highlight) for captive produced *Acipenser transmontanus*, as reported by the exporters and importers, 1998-2007.

Country	Year	QUOTA (kg)	Export data (kg)	Import data (kg)	Exceeded by exporter (kg)	Exceeded by importer (kg)	Importer data exceeds Exporter data	EC reported direct imports (kg)
United States	1998	N/R	1					
United States	1999	N/R	23	68			45	
United States	2001	3500	418.34	568.86			150.52	560.86
United States	2002	0	582	564	582	564		560
United States	2003	0	227	1209.79	227	1209.79	982.79	1209.79
United States	2004	N/R	2577	373				305
United States	2005	N/R	2215.57	2993.32			777.75	2840
United States	2006	N/R	3312	3025				3025
United States	2007	N/R		2854.11			2854.11	2854.11
TOTALS					809	1773.79		

N/R denotes a quota was not required – imports of caviar for this species were from captive produced sturgeon

Analysis of permits for this species within the Caviar Database revealed that France apparently re-exported a greater quantity of source F caviar than was imported on permit denoted as "A" dated 06/06/07 from the United States (Table 10). Details of three re-export permits; all issued in 2008 with destination the United States were submitted by France for inclusion in the Caviar Database. The total quantity of these re-exports exceeds the quantity imported to France by 55.26kg. It was notable that the French department of issue was consistent for all (Paris). The French Management Authority confirmed that permit "C"had been issued, however the actual quantity re-exported from France was 18.6kg, not 190kg. Actual French re-exports of *Acipenser transmontanus* from U.S permit "A" totalled 233.4kg, and were therefore less than the quantity of 349.5kg imported.

For the same species, France also apparently re-exported a greater quantity of caviar than was imported on US permit denoted as "A" in Table 11. However on closer examination of the permits submitted to UNEP-WCMC, the two permits issued for 60kg had identical importer and exporter details. The caviar label was also identical indicating that the later permit ("U") may have been a re-issue of a previously issued re-export permit ("Q"). This was confirmed by the French Management Authority.

Table 10. Export Permit "A" for *Acipenser transmontanus* caviar originally exported from the United States to France, apparently exceeded by France on re-exports

	Origin Country	Importer1	Importer2	Importer3	Permit #	Purpose	Source	Date of Issue	Amount (kg)	Cumulative Total
Original Export	United States	France			B	T	F	06/06/07	**349.54**	
Re-exports from France	United States (Permit A)	France	United States		C	T	F	26/05/08	190.0	190.0
			United States		D	T	F	12/06/08	171.4	361.4
			United States		E	T	F	07/07/08	43.4	404.8

Total Re-exported **404.80 kg**
Amount Exceeded **55.26 kg**

Table 11. Export Permit "A" for *Acipenser transmontanus* caviar originally exported from the United States to France, apparently exceeded by France on re-exports

	Origin Country	Importer1	Importer2	Permit #	Purpose	Source	Date of Issue	Amount (kg)	Cumulative Total
Original Export	United States	France		A	T	F	10/10/2007	**130.0**	
Re-exports from France	United States (Permit A)	France	Canada	B	T	F	04/04/2008	9.0	9.0
			Australia	C	T	F	15/04/2008	1.44	10.44
			Switzerland	D	T	F	28/04/2008	2.4	12.84
			Monaco	E	T	F	19/05/2008	0.3	13.14
			Canada	F	T	F	20/05/2008	10.0	23.14
			Thailand	G	T	F	26/05/2008	0.09	23.23
			Monaco	H	T	F	29/05/2008	0.15	23.38
			Republic of Korea	I	T	F	03/06/2008	0.43	23.81
			Japan	J	T	F	03/06/2008	0.23	24.04
			Monaco	K	T	F	13/06/2008	3.89	27.93
			Hong Kong, Special Administrative Region, China	L	T	F	16/06/2008	0.88	28.81
			Republic of Korea	M	T	F	24/06/2008	0.43	29.24
			Japan	N	T	F	24/06/2008	0.23	29.47
			Norway	O	T	F	24/06/2008	5.0	34.47
			Australia	P	T	F	30/06/2008	3.8	38.27
			United States	Q	T	F	07/07/2008	60.0	98.27
			Monaco	R	T	F	08/07/2008	0.06	98.33
			Monaco	S	T	F	08/07/2008	0.09	98.42
			United Arab Emirates	T	T	F	18/08/2008	0.1	98.52
			United States	U	T	F	20/08/2008	60.0	158.52

Total Re-exported **158.52 kg**
Amount Exceeded **28.52 kg**

7. *Huso dauricus*

Caviar from *Huso dauricus* imported to the EC during 1998-2006 was exclusively from wild stocks (Figure 13). The EC was a significant importer in 2000; the export quotas for China and the Russian Federation were 3430kg and 6000kg respectively in that year.

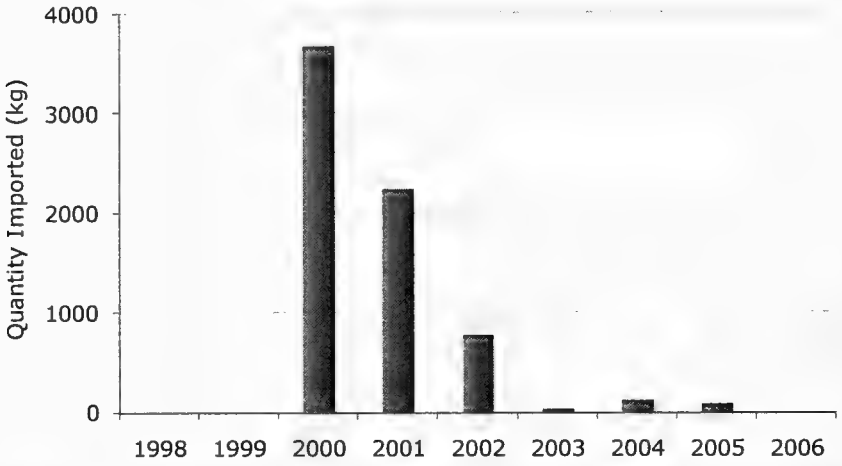

Figure 13. EC-Reported imports *Huso dauricus* caviar (kg) from wild sources, 1998-2006

From the shared Amur River stock of *Huso dauricus*, China and the Russian Federation reported exporting an excess of 929kg caviar beyond their collective quotas during 1998-2001 (Table 12). Since 2001, where quotas have been published by the range States, exports have remained within quota (Annex B).

Table 12. Incidences of range States exceeding their export quotas (blue highlight) for *Huso dauricus*, as reported by the exporters and importers, 1998-2007.

Country	Year	QUOTA (kg)	Export data (kg)	Import data (kg)	Exceeded by exporter (kg)	Exceeded by importer (kg)	Importer data exceeds Exporter data	EC reported direct imports (kg)
China	1998	N/R	4481.3	3841.2				1100.0
China	1999	3430	3546.7	1522.9	116.7			290.0
Russian Federation	1999	3500	3632.8	1092.8	132.8			
China	2001	3430	4110.0	2175.1	680.0			
China	2004	N/P	1219.4	1219.4				112.5
China	2005	N/P	845.4	845.4	845.4	845.4		
Russian Federation	2005	N/P		648.0		648.0	648.0	
TOTALS					**929.5**	**1493.4**		

N/R denotes a quota was not required; N/P denotes no quota published

Permit tracking for *H. dauricus* did not reveal any instances of re-exporters exporting greater quantities of caviar than were reported on the relevant import permits.

8. *Acipenser nudiventris*

Acipenser nudiventris was imported to the EC entirely from wild sources (Figure 14) between 1998-2006.

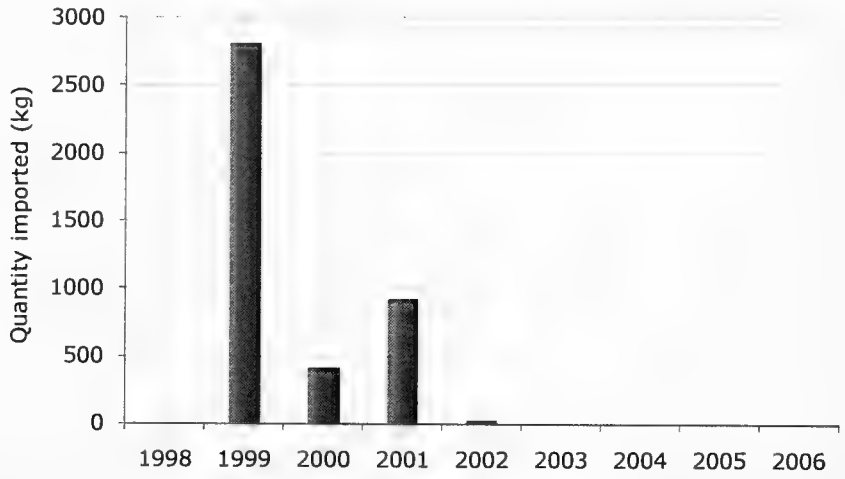

Figure 14. EC-reported imports *Acipenser nudiventris* caviar (kg) from wild sources, 1998-2006

Importer data indicates that Kazakhstan exceeded their export quota in 2001 (Table 13). Kazakhstan's reported exports exceeded their export quota in 2002, the EC did not report any imports of this species in these years.

Table 13. Incidences of range States exceeding their export quotas (blue highlight) for *Acipenser nudiventris*, as reported by the exporters and importers, 1998-2007.

Country	Year	QUOTA (kg)	Export data (kg)	Import data (kg)	Exceeded by exporter (kg)	Exceeded by importer (kg)	Importer data exceeds Exporter data	EC reported direct imports (kg)
Iran	1998	N/R		510.1				
Kazakhstan	2001	2500	2417.0	2520.0		20.0	103.0	
Iran	2002	N/R	82.7	82.7				
Kazakhstan	2002	409	595.7	299.0	186.7			
TOTALS					**186.7**	**20.0**		

N/R denotes a quota was not required

Permit tracking for *A.nudiventris* did not reveal any instances of re-exporters exporting greater quantities of caviar than were reported on the relevant import permits.

9. *Acipenser schrenckii*

EC-reported imports of *Acipenser schrenckii* between 1998-2006 were entirely wildtaken (Figure 15).

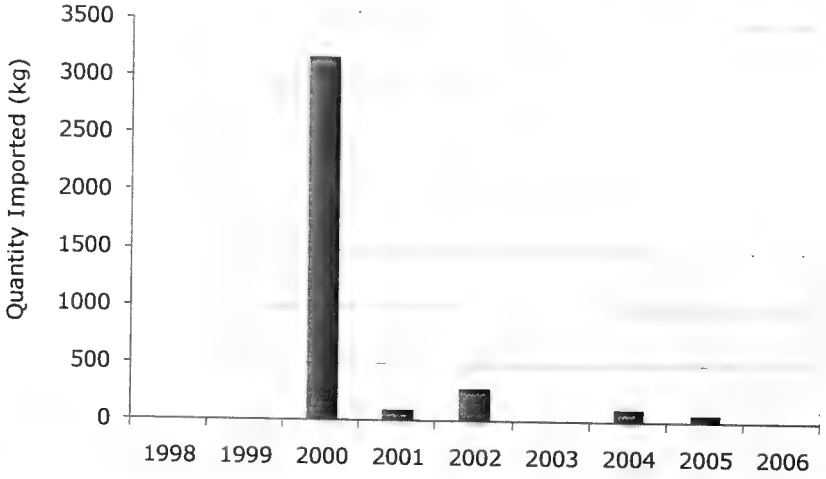

Figure 15. EC-Reported imports *Acipenser schrenckii* caviar (kg) from wild sources, 1998-2006

China and the Russian Federation reported exports of *Acipenser schrenckii* exceeding their quotas. Between 1998 and 2005 this amounted to 4012kg of caviar from the shared stocks of the Amur River, as reported by exporters (Table 14). The EC reported importing 75% of the published quota from the Russian Federation in 2000.

Table 14. Incidences of range States exceeding their export quotas (blue highlight) for *Acipenser schrenckii*, as reported by the exporters and importers, 1998-2007.

Country	Year	QUOTA (kg)	Export data (kg)	Import data (kg)	Exceeded by exporter (kg)	Exceeded by importer (kg)	Importer data exceeds Exporter data	EC reported direct imports (kg)
China	1998	N/R	2351.7	2600.6			248.9	900.0
China	1999	2510	3297.1	711.6	787.1			709.8
Russian Federation	1999	1500	2975.6	2163.8	1475.6	663.8		
Russian Federation	2000	2000	1773.7	2446.0		446.0	672.3	1503.0
China	2001	2510	2620.0	1164.9	110.0			
China	2004	N/P	913.5	913.5	913.5	913.5		123.1
Russian Federation	2004	N/P		150.0		150	150.0	
China	2005	N/P	725.9	725.9	725.9	725.9		69.2
TOTALS					**4012.1**	**2899.2**		

N/R denotes a quota was not required; N/P denotes no quota published

Permit tracking for *A.schrenckii* did not reveal any instances of re-exporters exporting greater quantities of caviar than were reported on the relevant import permits.

10. Acipenser baerii

Imports of *A.baerii* to the EC have been variable, but virtually all of trade reported in 1998-2006 was in captive produced caviar (Figure 16). Imports in caviar from this species increased to 374 kg in 2004 following lower levels of trade, but declined again to 158 kg in 2006. This decrease after 2004 corresponds with the increase in exports of captive produced *A.baerii* caviar from the EC, predominantly by France.

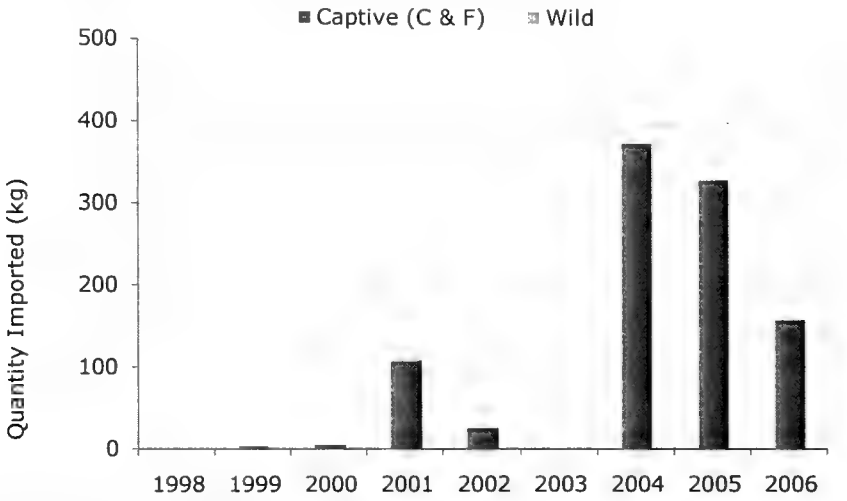

Figure 16. EC-Reported imports of *Acipenser baerii* caviar from wild and captive (Source 'C' and 'F') sources, 1998-2006

Permit tracking for *A.baerii* did not reveal any instances of re-exporters exporting greater quantities of caviar than were reported on the relevant import permits.

11. *Acipenser* spp. & Acipenseriformes spp.

The CITES Trade Database was consulted to identify the Parties which traded in caviar at higher taxon names (*Acipenser* spp. or Acipenseriformes spp.) during 1998-2006. Four exporters were identified: the Russian Federation and Iran traded in both *Acipenser* spp. and Acipenseriformes spp. and Kazakhstan and the United States, which both traded only in *Acipenser* spp.

Table 15. EC-reported imports of caviar at higher taxon levels, 1998-2006 (kg)

Taxon	Imp.	1998	1999	2000	2001	2002	2003	2004	2005
Acipenser spp.		5232	300	2	852	820	100	100	200
Acipenseriformes spp.				1		5	351	320	

It is not possible to determine the basis for reporting at higher taxon levels from CITES trade data. Individual species may simply not be reported by Parties. Alternatively, the caviar may be derived from a hybrid animal, or is "mixed", combining caviar from two or more sturgeon species.

There are no data available within the Caviar Database for *Acipenser* spp. or Acipenseriformes from the exporters, primarily because these countries have not reported any recent caviar trade. It was therefore not possible to track individual permits for caviar traded at higher taxon levels.

V. Compliance with reporting requirements of Conference Resolution 12.7 (Rev. CoP14)

Range States have been required to submit copies of all export permits and re-export permits to the CITES Secretariat or UNEP-WCMC within a month of issue, in accordance with Conf. Res 12.7 (Rev.CoP14), since 2000. In general, the level of compliance for this reporting requirement of the Resolution is good. All EC Member States have apparently been compliant (Table 16). Since accession to the European Community on 01/01/07, Romania has not reported any exports of caviar.

Table 16. Compliance with the reporting requirements for caviar by EC Member States that reported trade

EC Member State	Producer (P) or Re-exporter (R)	Reporting practise	Compliance with Res. Conf 12.7 (Rev. CoP14)
Belgium	R	Submits copies of re-export permits on a regular basis.	Y
Bulgaria	P	Submits copies of export permits regularly.	Y
Denmark	R	Submits copies of re-export permits on a regular basis.	Y
France	P and R	Several regional departments submit permits directly to UNEP-WCMC. Copies of all permits issued for caviar are submitted to UNEP-WCMC on a monthly basis.	Y
Germany	P and R	Submits copies of export and re-export permits on a monthly basis.	Y
Italy	P	Submits copies of export permits on a regular basis.	Y
Luxembourg	R	Permits were submitted to UNEP-WCMC for 2006. No information has been received subsequently, however Luxembourg is a major importer and distributor of caviar within the EU.	Y
Poland	R	Submits copies of re-export permits on a regular basis.	Y
Spain	P and R	Submits copies of export and re-export permits on a regular basis.	Y
United Kingdom	R	Copies of re-export permits submitted to UNEP-WCMC.	Y

Of the main exporting range States, Iran and Kazakhstan and have not complied with the reporting requirements (Table 17). The Russian Federation has not submitted any permit details since 2005, and re-export data suggests that no caviar has been exported from the Russian Federation since 2005. China and Azerbaijan, the other key exporters of wild caviar

have submitted copies of permits to UNEP-WCMC on a fairly regular basis. The United States reports exports only irregularly and upon request; Uruguay does not report their exports of captive produced caviar.

Table 17. Compliance with the reporting requirements for caviar by other key exporting Parties

Country	Producer (P) or Re-exporter (R)	Reporting practise	Compliance with Res. Conf 12.7 (Rev. CoP14)
Azerbaijan	P	Permit details generally emailed to UNEP-WCMC within a few days of issue	Y
China	P	Submits export permits to UNEP-WCMC on a regular basis	Y
Hong Kong, Special Administrative Region, China	R	Copies of re-export permits were submitted to the CITES Secretariat on a quarterly basis throughout 2007 and forwarded to UNEP-WCMC. For 2008, reports have been approximately six monthly.	N
Islamic Republic of Iran	P	Does not submit permits to UNEP-WCMC. An e-mail received by the CITES Secretariat indicated that export permits were attached, but the attachments appeared to be html files with no content.	N
Kazakhstan	P	Does not submit permits to UNEP-WCMC despite the Secretariat meeting with a Kazakhstani official in 2007.	N
Russian Federation	P	Has not submitted permits to UNEP-WCMC since 2005. Re-export data suggests no caviar has been exported from the Russian Federation since that time.	Y
Switzerland	R	Since April 2008 permits have been copied to the CITES Secretariat on a monthly basis. All permits issued for re-export of caviar since 2006 have been provided.	Y
Turkey	R	No permits have been submitted to either the CITES Secretariat or UNEP-WCMC. Turkey re-exported caviar up to early 2006, but there is no indication that this trade has continued	?
United Arab Emirates	R	Submits copies of re-export permits on a regular basis	Y
United States	P	The United States has provided copies of specific export permits at the request of UNEP-WCMC, however there is no mechanism in place for regular transmission of permits	N
Uruguay	P	Does not submit permits to UNEP-WCMC	N

VI. Conclusions

Member States of the European Community are significant importers of caviar; one third to a half of the global market share during 1998-2006 was imported to the EC. Caviar imported in the highest volumes to the EC over this period was derived from the species *Acipenser persicus, A. stellatus* and *A. gueldenstaedtii.* Overall, the majority of imports to the EC during 1998-2006 were of wild sourced specimens (Engler & Knapp, 2008), yet imports of wild caviar over the same period decreased for all species except *Polyodon spathula.* In contrast, EC imports of captive produced caviar during 1998-2006 showed an increasing trend; imports were predominantly comprised the species *A. transmontanus* and *A. baerii.* Export levels from the EC were variable, but 64% of exports during 1998-2006 were captive bred *Acipenser baerii* primarily originating in France, with captive bred *Acipenser transmontanus* accounting for 34% of the remainder.

Several range States exporting wild caviar demonstrated a lack of quota compliance during the period under review. Substantial quantities of caviar were traded over the quota levels, as reported by either the exporting range States or the importing Parties, or both. These were most significant for Caspian Sea sturgeon species, *Huso huso, Acipenser stellatus* and *A. gueldenstaedtii,* and for Amur River *A. schrenckii,* all of which are currently categorized by the IUCN as Endangered. The EC imported a large proportion of the trade in years where quotas for these species were exceeded. In two instances, the EC Member States collectively imported the entire published quota, as well as additional quantities. These were *Huso huso* from Iran in 2003, and *Acipenser gueldenstaedtii* from Azerbaijan in 2005. The difficulty for an importing party is that they are not able to determine if a range State is effectively managing its quota for the current quota year. This highlights the requirement for a near-real time analysis tool for the caviar trade to act as an early warning system to help prevent such incidences from occurring.

The Caviar Database was established in 2007 and allows, for the first time, detailed analysis of the caviar trade to be undertaken. Analysis of trade within the Caviar Database indicates that for 2007, no published export quotas for wild caviar were exceeded, demonstrating increased quota compliance by the range States. However, it is important to note that several exporting Parties, notably Iran and Kazakhstan do not report on caviar exports to either UNEP-WCMC or the CITES Secretariat.

Tracking of CITES permits to identify possible illicit trade in caviar was undertaken as part of this analysis. The volume of trade reported within the Caviar Database for the years 2005-8 and the fact that trade routes for caviar can be convoluted and unpredictable makes analysis particularly complicated. For example, one caviar consignment originating in the EC was exported to the Middle East, re-imported to another EC Party and again re-exported from the EC. Furthermore, it was not possible to determine if all re-exports of caviar were at levels lower than the quantities originally imported to that country (or collectively by the EU) if details of the original permit were not included within the database. This could be due to the exporting Party providing no details of the permits or the original export taking place prior to 2004.

Permit tracking highlighted several apparent occurrences of potential illegitimate use of CITES permits for wild and captive produced caviar. Whilst it was not possible to track all permits within the Caviar Database, this report identified eight discrepancies by focusing only on key species traded to the EC, during the years 2005-2008. All were subsequently clarified by the Management Authorities of EC Member States and other exporting Parties.

The quantity of wild *A. stellatus*, for example, reported re-exported by the United Arab Emirates exceeded the quantity of caviar imported according to the permit data available. Luxembourg alone appeared to have imported a greater quantity of caviar from the UAE than was originally re-exported to the UAE. Subsequently the Management Authority of the UAE clarified that this discrepancy had occurred as a result of the inclusion of a cancelled permit within the Caviar database. It must be recognised that the Caviar Database records permits issued, and not necessarily permits used. It is therefore entirely possible that details of cancelled or unused caviar permits are held within the database. Should UNEP-WCMC or the CITES Secretariat not be notified of the cancellation of permits, the Caviar Database will overestimate the trade accordingly. Similarly, if replacement permits are subsequently issued by the exporter and also included within the Caviar Database, an even greater over-estimation of the re-export trade will result.

The Caviar Database also indicated that Switzerland re-exported greater quantities of *A. stellatus*, *A.gueldenstadtii* and *Huso huso* in 2007-2008 than was originally imported from Azerbaijan including to EC Member States. Again, this was explained by issued permits not being used. Additional discrepancies in re-exports were apparent for wild *Polyodon spathula* originating in the United States and re-exported from two Member States, Belgium and Spain. One cancelled permit explained this discrepancy. Finally, France apparently re-exported a greater quantity of captive produced *Acipenser transmontanus* originating from the United States than was imported. Whilst none of the permits were cancelled or unused, the quantity of caviar re-exported was reduced on one permit. Total re-exports were therefore at a level below the quantities imported.

In addition to the difficulties in obtaining follow-up information on whether a permit issued was cancelled or unused, lack of permit information from key range states also constrained the analysis. Non-compliance of reporting requirements of Conf. Res. 12.7(Rev. CoP14) by key exporting range States such as Iran and Kazakhstan despite regular reminders published by the CITES Secretariat (through notifications 2007/30 and 2008/037) undermines the overall effectiveness of the Caviar Database. Until such time that all exporting Parties report on caviar trade there will be significant gaps within the data, and accordingly any analysis will be incomplete. However, Member States of the EC have been compliant with the reporting requirements of Conf. Res. 12.7 (Rev. CoP14).

Despite increased quota compliance by range States, there remains a need for a tool to track valid caviar permits within global trade in near real-time for both wild and captive produced caviar. It has been demonstrated that the Caviar Database is an effective tool to highlight permit discrepancies. There is a requirement to complete further analysis of all caviar trade data, for all species and all sources held within the Caviar Database, and for

continual monitoring of permits within trade. For a complete analysis, historic data from 2005 onwards will be added to the Caviar Database so that where possible, all re-exports can be traced to previous permits.

UNEP-WCMC is currently further developing the online Caviar Database to enable more effective monitoring and tracking of caviar within trade by CITES Management Authorities. The database will be searchable by species, country of origin, year of (re-)export or permit number. The cumulative quantities of caviar reported (re)-exported from the chosen selection will be displayed, allowing the importing MA to check that quotas have not been exceeded, or quantities re-exported are not greater than those imported.

It is clear that there is some trade, as reported by both exporters and importers, in caviar at higher taxon levels. Permits which simply record caviar at higher taxon levels and do not specify the species concerned should be rejected, in accordance with Conference Resolution 12.3 (Rev. CoP14).

Where UNEP-WCMC or the CITES Secretariat are provided with copies of permits for caviar from hybrid sturgeon that specify the exact species concerned, the specific hybrids can be included within the Caviar Database. If Parties include hybrids in their annual reports, data will also be entered into the Trade Database as such.

It is apparent that trade in mixed caviar requires further discussion to determine the most appropriate way of reporting this trade. Currently, the relative quantities of species are not recorded on permits of mixed caviar.

Recommendations

1. UNEP-WCMC or the CITES Secretariat are informed of the details of caviar permits which are cancelled or returned unused to Management Authorities, so that the Caviar Database can be amended accordingly.

2. Where it is apparent that the actual trade level was less than the quantity issued on the permit, UNEP-WCMC or the CITES Secretariat are provided with the customs stamped copy of the permit so that the Caviar Database can be amended to reflect actual trade levels.

3. Member States issuing semi-complete permits for caviar should submit the details of the completed permits, including country of destination and quantity in kg, to UNEP-WCMC or the CITES Secretariat once they are returned to the Management Authority, for inclusion within the Caviar Database.

4. Member States do not accept or issue permits for caviar at higher taxon levels (e.g. *Acipenser* spp. or Acipenseriformes spp) where permits do not specify the species concerned. Annual reports should report on trade in hybrids for inclusion in the Trade Database, rather than at higher taxon levels. However, the issue of reporting

trade in mixed caviar would benefit from further discussion at a Management Committee meeting.

5. The Commission liaise with the Secretariat regarding range State non-compliance with the reporting requirements of Conf. Res. 12.7 (Rev.CoP14).

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Annex A

Table 1. Export Permit (A) for *Acipenser stellatus* caviar originally exported from Azerbaijan to Switzerland, apparently exceeded by Switzerland on re-exports

	Origin Country	Importer1	Importer2	Importer3	Permit #	Purpose	Source	Date of Issue	Amount (kg)	Cumulative Total
Original Export	Azerbaijan	Switzerland			A	T	W	05/12/07	**115.39**	
Re-exports from Switzerland	Azerbaijan (Permit A)	Switzerland	France		B	T	W	12/12/07	54.29	54.29
			Italy		C	T	W	12/12/07	20.38	74.67
			Germany		D	T	W	12/12/07	20.23	94.9
			Belgium		E	T	W	12/12/07	20.49	115.39
			Belgium		F	T	W	20/01/08	20.38	135.77

Total re-exported **135.37 kg**
Amount Exceeded **20.38 kg**

Table 2. Export Permit "A" for *Acipenser gueldenstaedtii* caviar originally exported from Azerbaijan to Switzerland, apparently exceeded by Switzerland on re-exports

	Origin Country	Importer1	Importer2	Importer3	Permit #	Purpose	Source	Date of Issue	Amount (kg)	Cumulative Total
Original Export	Azerbaijan	Switzerland			A	T	W	05/12/07	**386.52**	
Re-exports from Switzerland	Azerbaijan (A)	Switzerland	Spain		G	T	W	12/12/07	20.65	20.65
			France		B	T	W	12/12/07	121.78	142.43
			Italy		C	T	W	12/12/07	40.58	183.01
			Germany		D	T	W	12/12/07	122.34	305.35
			Belgium		E	T	W	12/12/07	60.88	366.23
			Belgium		F	T	W	20/01/08	40.58	406.81

Total re-exported **406.81 kg**
Amount Exceeded **20.29 kg**

Table 3. Export Permit "A" for *Huso huso* caviar originally exported from Azerbaijan to Switzerland, apparently exceeded by Switzerland on re-exports

	Origin Country	Importer1	Importer2	Importer3	Permit #	Purpose	Source	Date of Issue	Amount (kg)	Cumulative Total
Original Export	Azerbaijan	Switzerland			A	T	W	05/12/07	**3.38**	
Re-exports from Switzerland	Azerbaijan (A)	Switzerland	Italy		C	T	W	12/12/07	3.38	3.38
			Belgium		D	T	W	20/01/08	3.38	6.76

Total re-exported **6.76 kg**
Amount Exceeded **3.38 kg**

Annex B: Quota Compliance for Wild Caviar by Country of Origin based on Permits Issued (not actual trade), 1998-2007. Highlighted areas indicate quotas were exceeded. Data was corrected for end of year trade.

Azerbaijan

	Year	QUOTA (kg)	Export data (kg)	Import data (kg)
Acipenser gueldenstaedtii	2000		604.7	305
	2001	3450	2047.2	2047
	2002	2770	1845.51	1566.51
	2003	4200	3694.54	2693.04
	2004	3780	4783.08	5016.18
	2005	3780	5732.26	5357.68
	2006	N/P		
	2007	3360	2829.7	
	2008	3360	1174.49	
Acipenser stellatus	2000		305	205
	2001	2840	817.2	817
	2002	2470	1278.35	1026.35
	2003	4500	3510.24	2731.29
	2004	2700	4849.42	4549.92
	2005	2700	3743.724	3323.044
	2006	N/P		
	2007	3000	775.82	
	2008	3000	893.98	
Huso huso	2000		145.8	90
	2001	520	146.8	147
	2002	530	332.43	314.43
	2003	400	561.9	362.05
	2004	250	291.48	216.28
	2005	250	372.776	458.976
	2006	N/P		
	2007	300	300	
	2008	300	125.65	

Bulgaria

	Year	QUOTA (kg)	Export data (kg)	Import data (kg)
Acipenser gueldenstaedtii	2000		25.4	3
	2001	50		
	2002	20	9	
	2003	20	15	15
	2004	N/P		
	2005	0		25.05
Acipenser ruthenus	2000		14.8	
Huso huso	1998		2392	1717.2
	1999	2400	2025.4	1937.8
	2000	2500	2747.5	2275.6
	2001	2450	991.55	985
	2002	1720	2327.8	1971
	2003	1720	1548.41	1548
	2004	1720	1008.39	994.83
	2005	1460		1416.66
	2006	1000	666.663	666.663

China

	Year	QUOTA (kg)	Export data (kg)	Import data (kg)
Acipenser schrenckii	1998		2351.686	2600.6
	1999	2510	3297.127	711.59
	2000	2510	25	1200
	2001	2510	2620	1164.87
	2002	2510	1756.08	1756.08
	2003	2510	1126.23	754.33
	2004	N/P	913.505	913.505
	2005	N/P	725.902	725.902
	2006	N/P		
	2007	1337		
	2008	1337		
Huso dauricus	1998		4481.267	3841.2
	1999	3430	3546.693	1522.91
	2000	3430	25	1725
	2001	3430	4110	2175.13
	2002	3430	2432.67	2432.67
	2003	3430	1179.16	787.16
	2004	N/P	1219.356	1219.355
	2005	N/P	845.449	845.449
	2006	N/P		
	2007	1672		
	2008	1595		

Iran*

	Year	QUOTA (kg)	Export data (kg)	Import data (kg)
Acipenser gueldenstaedtii	1998		54005.59	50894.208
	1999	14000	9052.5	9799.97
	2000	**52000	15186.9	17588.28
	2001	3460	1793.36	1900.67
	2002	2100	2363.742	2535.866
	2003	1950	1696.202	1675.483
	2004	1755	586.592	806.155
	2005	1600	58.621	328.106
	2006	N/P		
	2007	1000		299.544
	2008	1000		
Acipenser nudiventris	1998			510.074
	1999			
	2000			
	2001	1000	916	914.34
	2002		82.73	82.73
Acipenser persicus	1998		2269.83	8442.9
	1999	53000	44380.39	34920.08
	2000	**52000	30886.1	35498.855
	2001	51000	39000.99	38779.59
	2002	55890	34544.526	34612.351
	2003	63000	39018.827	37476.598
	2004	56700	10636.65	31439.289
	2005	51000	664.514	11727.66
	2006	44370		8661.367
	2007	38000		3825.45
	2008	37000		
Acipenseridae spp. (pressed caviar)	1998			7976.95
	1999			5381
	2001	1000	860	847.21

Iran*

	Year	QUOTA (kg)	Export data (kg)	Import data (kg)
	2002	1000	915.46	916
	2003	1000	705	390
	2004	1000	400	420
	2005	1000		280
	2006	N/P		
	2007	1000		
Acipenser stellatus	1998		36466.85	41847.718
	1999	40000	41598.65	38269.45
	2000	35000	23801.8	24108.875
	2001	23400	21543	21486.93
	2002	14827	9682.671	9482.92
	2003	11700	7733.3	7234.676
	2004	7020	1953.5	4173.15
	2005	6300	87.029	1393.729
	2006	N/P		
	2007	3200		976.29
	2008	3200		
Huso huso	1998		2951.747	3236.28
	1999	3000	3530	3718
	2000	3000	3454	2360
	2001	3950	2082	2118
	2002	2950	2641.47	2540.266
	2003	1720	2566.269	2369.388
	2004	1065	791	939
	2005	1065	18	676.45
	2006	N/P		
	2007	1000		822
	2008	1000		

*Iran did not report caviar exports in their 2005 Annual Report, but available permits submitted to UNEP-WCMC by Iran have been included;

**Total quota for *A. gueldenstaedtii* and *A. persicus* combined was 52000 kg. This was exceeded according to importers with a reported total of 53087kg.

Kazakhstan

	Year	QUOTA (kg)	Export data (kg)	Import data (kg)
Acipenser gueldenstaedtii	1999			78
	2000	7700	3728.023	3828.68
	2001	3200	3837.801	3224
	2002	4880	5150.46	3269.53
	2003	4620.34	1758.4	382
	2004	3204	1873.03	1253
	2005	3100		3911.165
	2006	N/P		
	2007	3270*	550.236	
	2008	3270*		
Acipenser nudiventris	2000	5600	1691.43	1292.15
	2001	2500	2416.98	2520
	2002	409	595.71	299
Acipenser stellatus	2000	14800	10795.23	13814.215
	2001	20900	18708.496	19007.998
	2002	19770	11176.26	6607.3
	2003	26233.72	6837.2	3510
	2004	11011	7757.273	3709.7
	2005	10490		13912.561
	2006	N/P		203.125
	2007	10637*	1302.781	
	2008	10637*		
Huso huso	1999			1339.91
	2000	8300	6778.702	6364.7
	2001	4200	7135.614	6681.84
	2002	5956	3473.27	2393.52
	2003	8531.78	1084	457.11
	2004	2360	693.094	209
	2005	2600		4602.6
	2006	N/P		198.934

2007	1761*	949.547
2008	1761*	

*Includes quotas for Turkmenistan (non-CITES party); 200kg for *Acipenser gueldstaedtii*, 2137kg for *Acipenser stellatus*, 61kg for *Huso huso*.

Romania

	Year	QUOTA (kg)	Export data (kg)	Import data (kg)
Acipenser gueldenstaedtii	1998		389	410
	1999	1250	1123	1085
	2000	1800	1434	1137
	2001	1750	709	865
	2002	1200	587	376
	2003	900	257	155
	2004	160	80	77
	2005	160	7	7
Acipenser stellatus	1998		326	327
	1999	2000	1710	1501
	2000	2100	2117	1941
	2001	2050	1147	1174
	2002	1470	934	825
	2003	1100	351	287
	2004	900	138	138
	2005	900	56	56
Huso huso	1998		873	533
	1999	1750	1757	1709
	2000	3200	3200	3467
	2001	3100	1789	2009
	2002	2180	2387	1879
	2003	2250	2169	1732
	2004	2250	1786	1529
	2005	2000	1035	815

Russian Federation

	Year	QUOTA (kg)	Export data (kg)	Import data (kg)
Acipenser gueldenstaedtii	1998	69000	40951.218	23175.924
	1999	40000	24920.731	18158.731
	2000	34090	18341.082	21399.788
	2001	28300		8748.723
	2002	28070		9092.571
	2003	17200		2039.201
	2004	14580		1047.669
	2005	14000*		
	2007	20000		
	2008	22619*		
Acipenser schrenckii	1998	1700	1385.05	1385.2
	1999	1500	2975.6	2163.8
	2000	2000	1773.7	2446
	2001	2140		1355.4
	2002	350		350
	2003	350		349.8
	2004	N/P		150
	2007	1900		
	2008	350		
Acipenser stellatus	1998	85000	20580.501	12231.167
	1999	42000	14564.142	12085.561
	2000	39350	9419.328	9610.677
	2001	27500		13525.182
	2002	16850		9693.976
	2003	13800		1600.385
	2004	8280		1694.951

	2005	8000*		
	2007	3500		
	2008	3540*		
Acipenser ruthenus	2005	100		
Huso dauricus	1998	3600	2757.6	1616.2
	1999	3500	3632.8	1092.8
	2000	6000	5451.7	4676.65
	2001	7000		4952.6
	2002	2300		1188.6
	2003	1000		570
	2004	N/P		0
	2005	N/P		648
	2007	2560		
	2008	1280		
Huso huso	1998	5000	2049.52	3029.36
	1999	3000	451.192	961.698
	2000	3500	2171.901	2585.483
	2001	3800		1678.634
	2002	1800		1299.889
	2003	2500		156.79
	2004	800		101.335
	2005	600		
	2007	700		
	2008	700		

*Includes quotas for Turkmenistan (non-CITES party); 1200kg for *Acipenser gueldstaedtii* (2005) and 2619kg (2008), 800kg for *Acipenser stellatus* (2005) and 40kg (2008).

United States

	Year	QUOTA (kg)	Export data (kg)	Import data (kg)
Acipenser transmontanus	1998		1	
	1999		23	68
	2001	3500	418.34	568.86
	2002	0	582	564
	2003	0	227	1209.79
	2004		2577	373
	2005		2215.57	2993.32
	2006		3312	3025
	2007			2854.11
Polyodon spathula	1998			3.99
	1999			
	2000		3065.95	1193.63
	2001	7700	1946.82	1084.47
	2002		2627.53	2639.09
	2003		4380.79	4476.6
	2004		4401.38	4108.14
	2005		4160.34	5017.86
	2006		8591.83	6215.45
	2007			7022.94
Scaphirhynchus platorynchus	2003		20	
	2004		48.454	48.384
	2005			
	2006		208	