



Mr. Robert Gabel
Chief, Division of Scientific Authority
U.S. Fish and Wildlife Service
4401 N. Fairfax Drive, Room 750
Arlington, Virginia 22203

October 28, 2002
By Federal Express

Dear Mr. Gabel:

The Natural Resources Defense Council (NRDC), SeaWeb, and the Wildlife Conservation Society (WCS), submit the following comments in support of the U.S. Fish and Wildlife Service's ("FWS") proposed rule listing beluga sturgeon (*Huso huso*) as an endangered species under the Endangered Species Act ("ESA"). See 67 Fed. Reg. 49657 (July 31, 2002) ("Proposed Rule").

As documented in the Proposed Rule, beluga sturgeon is a species on the brink of extinction. The source of the world's most prized caviar, these remarkable fish have been decimated by overfishing and poaching to supply the caviar trade, loss of critical spawning habitat, and ineffective management. International action to date has failed to halt beluga's downward spiral, and the point is rapidly approaching where the species may no longer be recoverable. Urgent action is necessary. We therefore request that the Service proceed with an endangered listing on an emergency, expedited basis.

II. Background

On December 11, 2000, NRDC, WCS and SeaWeb filed a petition with the Service to list beluga sturgeon as an endangered species pursuant to the ESA and its implementing regulations. See Natural Resources Defense Council, *et al.*, "A Petition to List Beluga Sturgeon (*Huso huso*) as an Endangered Species" (Dec. 11, 2000) ("Petition"). The Petition presents extensive information on the precipitous decline of beluga sturgeon, which have suffered a 90% population loss in the last two decades. After the Service failed to respond to the Petition within the



statutorily required 90-day and 12-month timeframes, NRDC sued the Service in April, 2002.

In response to the lawsuit, the Service proposed to list beluga sturgeon as an endangered species on July 31, 2002. In its proposal, the Service reiterated information presented in the Petition, and provided additional information in support of its proposal.

II. An Emergency Listing of Beluga Sturgeon is Warranted

Section 4(a)(1) of the ESA sets forth the criteria for listing a species as endangered or threatened. 16 U.S.C. § 1533(a)(1). A species may be determined to be endangered or threatened due to one or more of five factors.¹ On the basis of the information presented in the petition and the proposed rule, beluga sturgeon clearly qualify under all five factors for listing as an endangered species. Under the normal course of rulemaking we would expect the Service to finalize its decision to list beluga sturgeon within a year. 16 U.S.C. § 1533(b)(6)(A).

However, due to 1) alarming new information regarding the status of beluga sturgeon, 2) the resumption in international trade in beluga caviar, 3) the lack of progress on the part of the range states in developing effective management and enforcement regimes, 4) the major role U.S. demand for beluga caviar plays in contributing to the problem, and 5) the fact that the Service delayed issuing the proposed rule by more than a year past the statutory deadlines, we believe an emergency listing before the start of the spring fishing season is warranted. *See* 50 C.F.R. § 424.20(a) (empowering the Secretary to list species on an emergency basis). Each of these issues is discussed in more detail below.

1. Beluga's accelerating spiral toward extinction.

A fisheries survey conducted by the Caspian Sea range states in late 2001 found only 28 beluga sturgeon in the entire survey area. More than 85% of those fish were immature, suggesting that this population is highly depleted. These alarming results were subject to a flawed scientific analysis that was then used to justify resumption of the sturgeon fishery in 2002 that had been suspended by the CITES Secretariat in July 2001.

While the 2001 survey marked an important first step toward cooperative assessment of Caspian Sea sturgeon, its results and the analysis of those results were too deeply flawed scientifically to be used as the basis for quota management. As the Service's own reviewers concluded, the survey lacked crucial information on sampling effort, spatial and temporal distribution of that effort, number of fish taken per trawl in each specified area, and size and age distribution of fish captured in the survey (67 *Fed. Reg.* 49661).

Furthermore, the results of the survey were inappropriately used to justify total allowable catch (TAC) levels for *H. huso* for the 2002 fishing season. An attached analysis by WCS highlights

¹ Specifically, section 4(a)(1) provides: "The Secretary shall . . . determine whether any species is an endangered species or a threatened species because of any of the following factors: (A) the present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence." 16 U.S.C. § 1533(a)(1).

some of the scientific flaws underlying the TAC justification, and several of these points are reiterated in the proposal by the Service's outside reviewers. They include the use of a scientifically unreasonable catchability coefficient in extrapolating survey results to a population estimate; reliance on an overly optimistic estimate of survivability; and a failure to recognize the reduced number, size and fitness of beluga spawners and loss of spawning grounds in the Caspian system.

2. *The lack of progress in improving fisheries management and enforcement among the Caspian range states.*

In June, 2001, the Standing Committee of the Convention on International Trade in Endangered Species (CITES) reached an agreement with sturgeon range states of the Caspian Sea (the "Paris Agreement" CITES SC45 Doc.12.2, attached). This agreement temporarily suspended fishing for sturgeon in the Caspian Sea and established deadlines for addressing various management, scientific and enforcement issues related to Caspian sturgeon fisheries. These deadlines have long past, with very little progress achieved on any front, as documented by a recent report prepared by the Secretariat on behalf of the CITES Animals Committee in preparation for the CITES Conference of the Parties to be held next month in Santiago. *See*, CoP12 Doc. 42.1, attached. The most important of the Paris agreement obligations, the limitations of those obligations, and the failures to date in achieving them, are briefly described below.

By December 31, 2001, the range states were to have "conducted a comprehensive survey of sturgeon stocks in the Caspian Sea involving representatives of all States that conduct commercial fishing of sturgeon in the Caspian Sea;" and "requested Interpol to conduct an analysis of illegal trade in sturgeons." Paris Agreement, Section 1(d)(ii) and (iii).

As discussed above and in the attached analysis, the survey of sturgeon done in the fall of 2001 can hardly be called comprehensive, did not involve representatives of all states conducting commercial fishing, and most importantly, was seriously flawed. Independent reviewers also found that the report that used the survey results to justify 2002 TAC levels was "lacking important data necessary in the formation of fishery stock estimations." (67 *Fed. Reg.* 49661) As described in the attached analysis, the interpretation of the survey results was overly optimistic and failed to acknowledge population declines that have been documented in the peer reviewed literature.

With respect to Interpol, according to the Secretariat, "the data currently available on illegal harvesting, trade and enforcement are too limited for analysis by Interpol." COP 12 Doc 42.1 at 3. Thus, the problem has yet to be adequately described, let alone addressed.

By June 20, 2002, the range states were to have:

- a. "Adopted a collaborative basin-level management system for sturgeon fisheries in the Caspian Sea as the basis for sustainable commercial exports of sturgeons." Paris Agreement, Section 1(e)(iii).

This requirement has clearly not been achieved. Indeed, the range states have reportedly been unable to agree on a scientific basis for establishing and allocating sturgeon quotas, let alone a comprehensive management plan. *See, e.g., Caspian Business News, Oct 16-23, 2002.* The Secretariat recently termed catch limits “largely arbitrary,” (COP 12 Doc 42.1 p.10) and last week shut down beluga caviar exports from the Caspian range states due to the failure of governments to cooperate to set quotas for beluga sturgeon. *See CITES Notification to the Parties No. 2002/059: Trade in specimens of *Huso huso* from the Caspian Sea (attached).*

- b. “Established a long-term survey programme as the basis for future management of sturgeon stocks in the Caspian Sea, incorporating up-to-date technology and techniques.” Paris Agreement, Section 1(e)(i).

In the words of the Secretariat, “catch quotas have traditionally been based on stock assessments in the marine environment, but stock assessments have seldom been satisfactory in terms of basin-wide coverage and sampling intensity.... In some cases, sampling trawls have produced such limited catches of sturgeons, probably because of the currently reduced densities of most sturgeon stocks, that little can be inferred about the age structure and recruitment of stocks, and statistical variation in most demographic and biological parameters remains unknown.” COP 12 Doc 42.1 p.9.

Indeed, the Secretariat warns that questionable stock assessments may be part of the problem: “significant volumes of sturgeons are also caught as part of stock assessments, research and monitoring. Greater transparency in large-scale non-commercial or research-related fisheries is required to avoid concerns that such fisheries are merely a subterfuge for commercial fisheries and trade.” *Id.*

- c. “Significantly increased efforts to combat illegal harvesting and illegal trade, and to regulate domestic trade” Paris Agreement, Section 1(e)(iv).

The Secretariat reports that “much more vigorous enforcement is needed, in parts of the Eurasian region in particular, in order to combat illegal fishing and illegal trade.” COP 12 Doc 42.1 p.9. Thus, despite efforts, illegal fishing and trade remain a major problem.

- d. “Fully implemented all other recommendations of the [CITES]Animals Committee made in accordance with Resolution Conf. 8.9(Rev.)” Paris Agreement, Section 1(e)(viii).

The many ways in which the range states have failed to implement the recommendations made by the Animals Committee are documented by the Secretariat in COP 12 Doc 42.1, attached.

In summary, despite legitimate and important efforts, the range states have not met the requirements laid out in the Paris agreement. Even if those requirements had been met, moreover, they would be insufficient to resolve the nearly intractable problems that face beluga sturgeon. Unfortunately, beluga sturgeon do not have the luxury of time and cannot wait for the profound reforms necessary to render Caspian sturgeon fisheries sustainable. Immediate action to

halt the international trade in beluga caviar is necessary to help preserve the species while long term solutions are developed and implemented.

3. The resumption of international trade in beluga caviar

In March, 2002, the CITES Secretariat approved resumption in the international trade in beluga caviar, despite the lack of progress in meeting the objectives laid out in the Paris agreement. *See*, CITES SC 46 Inf.5: Caspian Sea states to resume caviar trade (attached).. The resumption in trade poses a major and immediate threat to beluga sturgeon by increasing international demand for beluga caviar. The announcement last week that CITES is once again suspending trade in beluga caviar is not sufficient to restore beluga sturgeon, particularly in light of the fact that the 2002 fishing season is largely over. Slow to mature and reproduce, recovery of beluga sturgeon is likely to require many years, if not decades, of relief from the pressure of international trade in beluga caviar.

4. The role of the United States

The U.S. imported roughly 80% of all the beluga caviar exported from the region in 2000, the latest year for which complete figures are available. UNEP-World Conservation Monitoring Center, 2002. As the number one importer of beluga caviar, the United States is playing a major role in the decline and potential extinction of beluga sturgeon.

5. Extensive delays by FWS in issuing the proposed rule have deepened the threat to beluga sturgeon.

By failing to act expeditiously and in accordance with the ESA's mandatory deadlines, FWS has already delayed the protections offered under the ESA to species listed as endangered. Beluga clearly qualify as an endangered species as outlined in the Petition and in the Proposed Rule. Yet these delays have meant that the U.S. continues to import most of the available beluga caviar exports, further jeopardizing beluga sturgeon.

For all these reasons, we request that the Service list beluga sturgeon as an endangered species on an emergency basis.

III. Beluga sturgeon should not be listed as endangered, not threatened

We understand that some parties have suggested that beluga sturgeon be listed as a threatened species. Beluga sturgeon, however, clearly qualify as an "endangered" species, not a threatened species, under both the plain letter of the ESA and FWS's regulations. Moreover, listing beluga sturgeon as threatened is unlikely to succeed in protecting it from extinction.

- 1. Beluga sturgeon face clear and imminent danger of extinction due to all of the five factors specified in the Act.*

First, beluga sturgeon clearly meet the definition of an “endangered” (not a “threatened”) species. Section 3 of the ESA defines an “endangered species” as “any species which is in danger or extinction throughout all or a significant portion of its range.” 16 U.S.C. § 1532(6). A threatened species, by contrast, is defined as “any species which *is likely to become* an endangered species within the foreseeable future.” *Id.* at § 1532(20). As both the Petition and the Proposed Rule make clear, beluga sturgeon are clearly an endangered species *now*. Indeed, one would be hard pressed to identify a species that is more in danger of extinction. A summary of the factors affecting beluga sturgeon appears below.

- a. Habitat: dams, river channelization and other man-made changes to flow regimes have reduced the species’ historic spawning habitat by at least 85%-90%. *67 Fed. Reg.* 49657.
- b. Overutilization: overfishing to fuel the legal and illegal trade in beluga caviar is the most significant factor in the rapid decline of beluga sturgeon. *67 Fed. Reg.* 49659.
- c. Disease: tumors, reproductive abnormalities and large fish kills have affected beluga sturgeon throughout their range. These are associated with heavy metals, pesticides, and organic pollutants resulting from oil and gas extraction, untreated sewage discharges, industrial effluents, and agricultural runoff. *67 Fed. Reg.* 49660.
- d. Inadequacy of existing regulations: the failure of regulatory oversight is a key factor contributing to the rapid decline of beluga sturgeon. Catch limits are largely arbitrary. CITES COP12 Doc. 42.1. No maximum size limits, which would protect spawners, have been established. *Id.* Scientifically rigorous fishery surveys and stock assessments have not been conducted. Bycatch mortality is poorly controlled and very high. *Id.* Existing penalties do not act as a sufficient deterrent to poachers or illegal traders. *Id.* The listing of beluga sturgeon on Appendix II of the Convention on International Trade in Endangered Species in 1998 has not been sufficient to halt the accelerating decline of beluga sturgeon.
- e. Other Natural or Man-Made Factors: Genetic alteration and hybridization of sturgeon stocks is a major problem. Most hatcheries in the region base their operations on very limited numbers of parents, in some cases on fewer than 10 adult females per species per year. The release of large numbers of closely related offspring may swamp smaller numbers of offspring produced through natural spawning and may therefore reduce the genetic fitness of the population as a whole and of each successive spawning cohort. *Id.*

As indicated in the Proposed Rule, all of these factors and others have led to the drastically depleted state of beluga sturgeon today. Current hypotheses indicate that natural reproduction is no longer sustaining wild beluga sturgeon populations, and many believe we are rapidly approaching the point where the species will no longer be recoverable. Under these circumstances, it is indisputable that beluga is in clear and imminent danger of extinction and its listing as an endangered species is thus legally required.

2. Conditioning US trade in beluga caviar on conservation progress in the region will not be effective.

Second, even if the law allowed beluga sturgeon to be listed as threatened, which it does not, the likelihood that such an approach would succeed in restoring beluga sturgeon is remote. For example, an approach advocated by some is to list beluga sturgeon as threatened accompanied by a special rule under section 4(d) that would permit importation of beluga caviar as long as certain conditions are met. Such conditions could include progress in habitat restoration, improvements in enforcement, or stock assessments.

The lack of progress in implementing the Paris agreement, discussed above, indicates that this type of approach is of very limited utility, particularly within the time frame required to rescue this species from extinction.

Moreover, given the pressing demands on the Service's existing resources, we question the ability of the Service to monitor compliance with the kinds of conditions that it might impose under a 4(d) rule (e.g., enforcement improvements, habitat restoration, scientific studies, etc.). The small budget and limited number of staff devoted to international species conservation are barely sufficient to undertake current obligations, let alone major new monitoring projects involving remote locations, different languages, and complex legal and technical issues.

Indeed, much larger and well funded organizations have failed in similar efforts. For example, the CITES Secretariat reports that Interpol could not find enough data to determine what enforcement improvements are necessary in the region. We doubt the Service, with far fewer employees and no presence in the region, could effectively monitor enforcement of quotas or other conservation measures. Similar constraints pose towering obstacles to surveillance and evaluation of the other management measures (habitat restoration, establishment of a science based management plan, etc.) necessary to restore beluga sturgeon.

Some have argued that halting trade in beluga caviar will deprive hatcheries in the Caspian region of needed revenue. However, listing beluga sturgeon as endangered under the ESA will have no effect on trade in the two other commercially important species that produce Caspian Sea caviar, the stellate sturgeon (*sevruga caviar*) and the Russian sturgeon (*osetra caviar*). Trade in these species will be allowed to continue and will help support the continued operation of hatcheries on the Caspian Sea that are crucial to the recovery of beluga sturgeon populations.

IV. Hybrids of beluga sturgeon should be listed as endangered.

Three small experimental aquaculture operations in Florida and one in Hawaii have been experimenting with producing caviar from bester, an artificially obtained hybrid of beluga sturgeon and *Acerpensisiformes ruthenus*, for commercial purposes. This raises the question of whether hybrids of beluga sturgeon should be included in the listing. We conclude they must, based on the following considerations.

- a. The first generation of the cross to produce bester is fertile. However, the F1 generation fails to cross with itself spontaneously, and problems with F2 generations are many. This means that bester and presumably other hybrid operations require a regular infusion of beluga spawners. A related problem is that bester operations must obtain enough different

beluga females to maintain a decent amount of genetic variability in the population and prevent the detrimental effects of inbreeding, which again requires new spawners.

Production of bester or similar hybrids does not contribute to the conservation of beluga sturgeon, but rather of the hybrid. In fact, bester production may be to beluga's detriment, by removing spawners from the wild population. At a time when Caspian Sea hatcheries are having difficulty finding enough beluga spawners to fend off extinction of the species, the idea of allowing aquaculture operations to import beluga spawners for commercial operations that produce a hybrid would be seriously misguided.

- b. In the bester hybrid, *Huso huso* is always the female in the cross and *A. ruthenus* always the male. This means that the current tests used by FWS in caviar trade enforcement, which only look at maternal lineages (mitochondrial DNA), would not be able to distinguish hybrids. Thus allowing continued trade in hybrids would complicate an already difficult enforcement problem.
- c. The economic harm that would result from including bester and other hybrids in the listing would be very small. A very small number (<10) of commercial aquaculturalists are pursuing the development of bester as a profitable investment. Production of this hybrid has yet to become commercially viable.

V. Conclusion

The benefits of an endangered listing for beluga sturgeon include the following:

Reducing the pressure: Listing beluga sturgeon as endangered under the U.S. Endangered Species Act will help reduce the pressure on beluga sturgeon by banning the importation of beluga caviar into the United States. The United States is by far the largest importer of beluga caviar, accounting for 80% of the beluga caviar exported in 2000.

Setting a precedent for conservation: Such a listing will also set an important precedent for other nations, and encourage international action to promote management and recovery of this species. A final listing will boost proposals for a basin-wide zero quota for beluga caviar, and will send a signal that the U.S. is serious about sturgeon conservation.

Improving U.S. enforcement: Beluga caviar already is illegally imported into the United States in violation of existing CITES labeling and certification requirements. Law enforcement officials have confronted the difficult task of distinguishing between legal beluga caviar and illegal beluga caviar. By banning the sale of any caviar from beluga or its hybrids, enforcement will be rendered less complex.

Suspending trade in beluga caviar through an endangered species listing is just one step along the road to rebuilding beluga sturgeon. Other needed actions include the conduct of regular and scientifically sound stock assessments, strengthening management and enforcement programs, and maintaining the operations of sturgeon hatcheries in the Caspian region. Eliminating US

consumption of beluga caviar will buy time for such actions to take effect, and is a critical first step toward setting this species on the road to recovery.

Thank you for considering these comments.

Lisa Speer
Andrew Wetzler
Natural Resources Defense Council

Ellen Pikitch
Liz Lauck
Wildlife Conservation Society

Vikki Spruill
Shannon Crownover
SeaWeb

Attachments:

1. Natural Resources Defense Council, *et al.*, “A Petition to List Beluga Sturgeon (*Huso huso*) as an Endangered Species” (Dec. 11, 2000)
2. Scientists letter
3. 69 Chef’s letters, compiled by Seafood Choices Alliance
4. 465 web petition signatories
5. Wildlife Conservation Society, A Scientific Response to the CITES Justification for Setting the 2002 Total Allowable Catch of Beluga Sturgeon (*Huso huso*) in the Caspian Sea
5. B-roll: Caspian Sea sturgeon (with original only)
6. CITES SC45 Doc.12.2: Paris Agreement
7. CITES COP12 Doc 42.1: Implementation of Resolution Conf. 10.12(REV.) on Conservation of Sturgeons
8. CITES Notification to the Parties No. 2002/059: Trace in specimens of *Huso huso* from the Caspian Sea
9. CITES SC46 Inf.5: Caspian Sea states to resume caviar trade
10. Dr. Arne Ludwig, Institute for Zoo and Wildlife Research, Berlin (letter dated 10/28/02)



Mr. Robert Gabel
Chief, Division of Scientific Authority
U.S. Fish and Wildlife Service
4401 N. Fairfax Drive, Room 750
Arlington, Virginia 22203

December 23, 2002
By facsimile

Dear Mr. Gabel:

The Natural Resources Defense Council, Wildlife Conservation Society and SeaWeb submit the following supplemental comments on the U.S. Fish and Wildlife Service's proposal to list the beluga sturgeon (*Huso huso*) as endangered pursuant to the Endangered Species Act (67 Fed. Reg. 49657 *et seq.*). Our comments respond to issues raised by other commenters in writing and at the public hearing held by the Service on December 5, 2002.

As noted in our original comments dated October 28, 2002 on the proposed rule, beluga sturgeon is on the brink of extinction. Urgent conservation action is necessary, and our organizations have asked the Service to implement an emergency rule listing beluga sturgeon as endangered as soon as possible. The basis for this request is extensively discussed in our October 28 letter. The following comments respond to four basic arguments submitted by other commenters who oppose the proposed rule.

1. Sturgeon aquaculture

Mr. Paul Zajicek of the Florida Department of Agriculture and Dr. Frank Chapman of the University of Florida argued in their oral presentations that aquaculture promotes beluga sturgeon conservation. Therefore, they argue, sturgeon aquaculture operations should be exempt from the ban on imports of beluga sturgeon that would result from an endangered listing.

We agree that aquaculture can promote beluga sturgeon conservation. Clearly this is the case in the Caspian region, where most reproduction of beluga sturgeon is taking place in hatcheries. In addition, aquaculture operations in the United States involving non-endangered sturgeon species

are providing environmentally preferable alternative caviars that, as Mr. Zajicek points out, can relieve the pressure on wild stocks, help sustain the economy and provide jobs and income to local communities. For all these reasons, Caviar Emptor has actively promoted caviar produced through aquaculture of non-endangered sturgeons in the United States. A thriving industry using non-endangered sturgeons has developed, indicating that highly profitable commercial caviar production can go hand in hand with environmental conservation.

Unfortunately, however, this is not the case with the Florida operations described by Mr. Zajicek and Dr. Chapman involving beluga sturgeon. Instead of using only relatively healthy species of sturgeon, as is done elsewhere in the United States, they propose to continue to use highly endangered beluga sturgeon. This might be justifiable if such operations were designed to foster the recovery of beluga sturgeon by actively restoring natural populations. But the testimony indicates that the goal of the operation is to produce commercial quantities of caviar. Moreover, that caviar would come not from beluga, but from a hybrid between beluga and sterlet. According to the testimony, this will require the continued import of broodstock from the wild beluga population. Rather than promote recovery, the operation will further deplete an already endangered species.

In essence, Mssrs. Zajicek and Chapman propose to be allowed to remove reproductive-age beluga females from the highly endangered wild population at a time when there are barely enough females to maintain restocking hatcheries in the Caspian region, in order to facilitate commercial production of a hybrid. It is exceedingly difficult to discern how this will benefit beluga sturgeon. Indeed, their proposal to exempt aquaculture operations from the proposed listing of beluga sturgeon as an endangered species is clearly contrary to the conservation interests of the species as well to the letter and spirit of the Endangered Species Act. As such, it must be rejected.

Listing beluga sturgeon as endangered will not affect the ability of Mr. Chapman or others to conduct commercial caviar operations with non-endangered species. It will not prevent the development of technologies to culture sturgeons, even beluga, as aquaculture research in this species will continue in range state countries, offering opportunity for these scientists to engage in collaborative research efforts.. And it will neither undermine efforts to promote domestic sturgeon aquaculture nor destroy lawful commercial production of sturgeon products. All of these goals and activities can continue to be pursued using non-endangered sturgeon species.

2. Current conservation efforts by CITES and the range states

A theme echoed in several of the comments (Petrossian, TRAFFIC) that conservation efforts by CITES and the range states are sufficient to address the problems facing beluga sturgeon is unfortunately not borne out by the facts.

As described in detail in our October 28, 2002 letter (pages 3-5), efforts to date by both CITES and the range states, while laudable, are insufficient to address the problems of poaching, poor management, habitat loss and pollution that threaten beluga sturgeon. The profound reforms necessary to render Caspian sturgeon fisheries sustainable will take many years. Unfortunately, beluga sturgeon cannot wait. Immediate action to halt the international trade in beluga caviar is

necessary to help preserve the species while long term solutions are developed and implemented. The two temporary suspensions in trade imposed by CITES in 2001 and again this year are clearly not sufficient to restore beluga sturgeon. Slow to mature and reproduce, recovery of beluga sturgeon is likely to require many years, if not decades, of relief from the pressure of international trade in beluga caviar.

3. Poaching and illegal trade

We agree that suspending the legal U.S. trade in beluga caviar through an endangered species listing will not completely stop poaching and overfishing in the range states. But as the world's largest importer of beluga caviar (80% in 2000), U.S. consumption plays a major role in the demand that fuels overfishing and poaching. By removing that demand, we can help buy time for this remarkable fish. In addition, a U.S. ban will set a precedent for other caviar consuming nations, and will provide a powerful incentive to the range states to improve management and enforcement to avoid similar trade restrictions on the other sturgeon species of the Caspian Sea.

Here in the United States, beluga caviar is routinely imported in violation of existing CITES labeling and certification requirements. By eliminating the need to distinguish between legal beluga caviar and illegal beluga caviar, banning the sale of any caviar from beluga or its hybrids may render enforcement more straightforward and effective.

4. Beluga sturgeon population in Kazakhstan waters

Biological indicators that have been published in peer-reviewed scientific literature suggest that beluga sturgeon are very depleted throughout the Caspian Sea. Caviar Emptor has based its policy recommendations on overwhelming scientific evidence that shows the beluga sturgeon population has declined by more than 90 percent in the past 20 years and cannot withstand any amount of fishing pressure now or in the foreseeable future. The only published Caspian sturgeon survey in the past two years confirmed once again this precipitous drop and is consistent with results of earlier scientific investigations. That survey, conducted by the Caspian range states in late 2001, found only 28 beluga sturgeon in the survey range and 85% of those fish were immature. The small number of reproductively mature fish is of major concern.

These mature fish not only form the basis for caviar production, but are needed to produce the next generation of beluga sturgeon – through either natural spawning or by providing broodstock for hatchery production. The lack of mature beluga sturgeon signals a severely overfished population that will take decades to recover. The scientific information used to justify our call for an ESA listing is the most up-to-date peer-reviewed information available. Studies conducted since submission of our petition in December 2000 confirm earlier results: that the beluga sturgeon population in the Caspian Sea continue to decline, that the demographic structure of the population continues to shift to younger and younger fish, and that the population is too depleted to support fishing pressure.

The sturgeon fishery in Kazakhstan could be one spot of hope for beluga recovery. Kazakhstan's Ural River, as the last free-flowing river feeding the Caspian Sea, could be a key area to concentrate restoration efforts. However, as described in detail in the previously submitted

Executive Summary, Research Trip to Kazakhstan (Crownover, October 29, 2002), beluga sturgeon in Kazakhstan are not exempt from serious population decline as a result of overfishing, loss of natural spawning grounds, underfunded hatcheries and poaching. Siltation is a major and ongoing threat to sturgeon habitat and spawning grounds in the Ural River. Kazakh officials report that the Ural becomes more silted every year and that dredging is not being done on wide scale. According to KazNirkh senior scientist Yelena Bokina, “A third of the spawning grounds have been covered by mud and grass between 1970 and 1994.” (Personal communication, October 23, 2002, Atyrau, Kazakhstan).

According to Askar Kamelov, Chairman of KazNirkh Laboratory, the number of beluga spawners in the Ural River dropped from 4,300 in 1997 to 2,700 in 2001. The magnitude of the decline (almost a 50 percent drop) in just four years is very alarming. This point was echoed by Kazakh fishermen who said they were very concerned about the beluga sturgeon. Sanat Tlepberge nov, chairman of Amangeldy Fishing Cooperative, remarked that in the 1980s he once caught 54 beluga in a three-hour period, but now there is “almost nothing” (Personal communication, October 22, 2002, Atyrau, Kazakhstan). And Kadyrzhan Demeuov, head of Atyrau Fisherman’s Union, said he was in support of a Caspian-wide moratorium on fishing of all sturgeon species, saying that all are in jeopardy (Personal communication, October 22, 2002, Atyrau, Kazakhstan).

Kazakhstan’s two hatcheries hold promise for the future, but they have only been in operation for five years. Thus, the beluga fingerlings that have been released into Caspian waters, if they survive, will not reach maturity for at least another decade and are not yet contributing to recovery of the species. Hatcheries estimate a 0.8 or 1 percent survival rate for the fingerlings, yet this figure is nothing more than a guess because the hatcheries do not have a monitoring program.

In closing, as documented in our October 28, 2002 comments, and in the Proposed Rule itself, beluga sturgeon is a species on the brink of extinction. The source of the world’s most prized caviar, these remarkable fish have been decimated by overfishing and poaching to supply the caviar trade, loss of critical spawning habitat, and ineffective management. International action to date has failed to halt beluga’s downward spiral, and the point is rapidly approaching where the species may no longer be recoverable. Urgent action is necessary. We therefore request that the Service proceed with an endangered listing on an emergency, expedited basis.

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