

ORDER
on conservation of wild sturgeon populations
and development of sturgeon aquaculture in Romania

Considering the scientific studies that show a continuous decline of populations of sturgeon species,

Considering the worrying evolution of sturgeon catches registered in Romania after year 2000,

Considering the actual unsatisfactory development of sturgeon aquaculture in Romania comparing with other European countries and even countries of Lower Danube region,

Considering the precedent of extinction of sturgeon species from other European rivers during the last century,

Considering the importance and the international protection given to the endangered sturgeon species by the Convention on International Trade in Endangered Species of Wild Fauna and Flora, adopted in Washington on 3rd March 1973 (**CITES**),

Based on art. 12² align. (1) and align. (2) lett. d) from Law No. 192 / 2001 on fish fund, fishing and aquaculture, with later modifications and additions, art. 27 lett. b) and e) from Government Urgency Ordinance No. 236 / 2000 on the status of natural protected areas, the conservation of natural habitats, wild flora and fauna, approved with modifications and additions through Law No. 462 / 2001,

Considering the Scientific Report no. 222 / 2006 of the Danube Delta National Institute and the approval of the Commission for the Preservation of Natural Monuments of the Romanian Academy, No.

Considering the joint Approval Report No.....

Based on art. 9 align. (6) of the Government Decision No. 155 / 2005 on the organization and functioning of the Ministry of Agriculture, Forests and Rural Development, with later modifications and additions,

Based on art. 5 align. (8) of the Government Decision No. 408 / 2005 on the organization and functioning of the Ministry of Environment and Water Management, with later modifications and additions,

The Minister of agriculture, forests and rural development and the Minister of environment and water management put forward the present order:

CHAP. I – General dispositions

Art. 1 – (1) The object of the present order is the conservation of wild sturgeon populations in various degrees of endangerment and the development of sturgeon aquaculture.

(2) The sturgeon species that art. (1) is referring to are:

- a) Ship sturgeon (*Acipenser nudipectus*) – critically endangered / extinct;
- b) Danube sturgeon (*Acipenser gueldenstaedti*) – endangered;
- c) Stellate sturgeon (*Acipenser stellatus*) - endangered;
- d) sterlet (*Acipenser ruthenus*) – vulnerable;
- e) Beluga sturgeon (*Huso huso*) – endangered.

Art. 2 - The purpose of present order is the conservation and rehabilitation of sturgeon populations of the species in art.1, align. (2), through temporary prohibition on commercial fishing and implementation of special actions for the development of sturgeon aquaculture.

CHAP. II – Conservation and rehabilitation of sturgeon populations of the North – West Black Sea and lower Danube region

Art. 3 – (1) In order to conserve sturgeon populations, starting with ...April 2006, it is forbidden:

- a) commercial fishing of wild sturgeon species for a ten years period;
- b) trading of products and sub – products obtained from wild sturgeons captured in Romania;
- c) using any gears or equipments for capture of sturgeons, including fixed gill nets for sturgeons (ohane) and unbaited hook lines (carmace) in fishing areas of natural waters of Romania;

(2) Any sturgeons captured accidentally shall be released in their natural environment, regardless of their condition.

Art. 4 – (1) At the proposal of CITES Scientific Authority for Acipenseriformes and the National Agency for Fishing and Aquaculture (NAFA) the central public authority of environment protection and water management and central public authority of agriculture, forests and rural development will adopt restocking programmes and / or supportive stocking programmes with young sturgeons from species mentioned in art. 1 align. (2) which had deficient natural spawning.

(2) The main purpose of restocking and / or supportive stocking programmes with young sturgeons is the conservation of sturgeon populations and their genetic diversity by establishing the number of live specimens to be captured annually, the methods used to capture them, the methods used for their artificial propagation and the procedures to mark and register the broodfish and the young of the year used in restocking and / or supportive stocking programmes.

CAP. III – Developing of sturgeons aquaculture

Art. 5 - (1) The fishing of live sturgeon broodfish from the wild is admitted for artificial propagation in order to obtain young sturgeons for supportive stocking of natural water bodies, only when following rules are respected:

- a) the capture of a limited number of live sturgeon specimens of species mentioned in art. 1, align. (2), using non-destructive fishing methods only with special authorization issued by NAFA;
- b) ensure the implementation of programmes outlined in art. 4 align. (1) by conditioning the special authorization to capture live sturgeon specimens needed in sturgeons aquaculture by the participation in these programmes;
- c) annually, until 15 November, at the recommendation of the CITES Scientific Authority for Acipenseriformes, NAFA will establish the number of live specimens from each sturgeon species to be fished in the next year which will be regionally agreed and transmitted to the CITES Secretariat until 30 November;
- d) compulsory use of artificial propagation methods that ensure the surviving of broodfish;
- e) compulsory employment of personnel qualified for aquaculture and fishing;
- f) purchasing by NAFA of equipment needed for marking with Passive Integrated Transponders (PIT) of all wild sturgeons captured;
- g) when wild sturgeons breeders are captured, they are marked with PIT tags by regional fishing inspector;
- h) young sturgeons obtained for restocking or supportive stocking will be marked with coded wire tags (CWT) before releasing them in the river;
- i) purchasing by NAFA of equipment that allow reading of tags PIT and CWT, as well as subsequent survival of young sturgeons and wild breeders after releasing in the river;
- j) growing in licensed units for producing young sturgeons of young sturgeons needed for Danube stocking to the minimal total length of 10 cm / specimen;
- k) producing of young sturgeons for restocking and / or supportive stocking by propagation of a minimal number of breeders, as detailed in **Annex 1**, that is integrated part of the present order;

(2) The central public authority of environment and water management assures the financial support to the Romanian CITES Scientific Authority on Acipenseriformes, to conduct annual scientific studies for the evaluation of status of wild sturgeon populations.

Art. 6 – In order to obtain special an authorization to capture live sturgeon broodfish from the wild aquaculture companies must possess aquaculture license for production of young sturgeons.

Art. 7 – The number of sturgeon broodfish , by species and sexes, will be attributed based on the capacity of each hatchery.

Art. 8 – A recording file for sturgeon breeders captured will be filled in, in the presence of regional fishing inspector, who will transmit a copy of this document to the Aquaculture Department of NAFA. The template of recording file for live sturgeon breeders captured is presented in **Annex 2**.

Art. 9 – Each breeder will be recorded in a special register where all steps, from capturing to spawning will be mentioned. The template of the special register is presented in **Annex 3**.

Art. 10 – The method used for artificial propagation of sturgeons must guarantee the survival of wild sturgeon breeders and subsequently their release in the natural environment where they were captured, in the presence of representatives of NAFA.

Art. 11 – (1) In order to monitor the results of implementation of programmes presented in art. 4, align. (1) the DDBRA establishes the Danube Migratory Fish Monitoring Station (DMFMS), situated at Isaccea (River Km 100).

2) The objective presented in align. (1) will be realized until the end of the first semester of year 2007 and the annual budget needed for functioning of DMFMS will be provided by the central public authority for environment and water management.

(3) DMFMS will be operated with participation of specialists from Lower Danube River countries managing jointly under CITES the sturgeon populations of the N-W Black Sea and Lower Danube region.

Art. 12 – The results of DMFMS monitoring will be presented in an annual report sent to interested authorities and institutes and to the CITES Secretariat.

Art. 13 – The Danube Delta National Institute Tulcea is the CITES Scientific Authority for Acipenseriformes of Romania.

Art. 14 – Non-compliance with the present order will be sanctioned according to Law No. 192 / 2001 on fish fund, fishing and aquaculture, with later modifications and additions and the Government Urgency Ordinance No. 236 / 2000 on the status of natural protected areas, the conservation of natural habitats, wild flora and fauna, approved with modifications and additions by Law No. 462 / 2001.

Art. 15 – Annexes 1 – 3 are part of this Order.

Art. 16 – The present order is published in the Official Monitor of Romania Part I.

The Minister of Agriculture, Forests
and Rural Development,

Gheorghe FLUTUR

The Minister of Environment
and Water Management,

Sulfina BARBU

Effective breeding number (N_e)

of sturgeons [of one endangered sub-population / population] to be used
 in all propagation activities for supportive stocking (rehabilitation) or reintroduction
 when producing the progeny generation for one year-class
 (to achieve a generational effective population size $N_{e(GEN)} = 100$ and
 an inbreeding rate / generation $\Delta F \max = 0,50 \%$)
 (after ASMFC, 1996¹)

Species	Average age of first spawning females [years]	Effective Breeding number N_e	N_e / generation	No. females / No. of males* captured in the same zone of Danube River recommended to be used / year for artificial propagation
Beluga sturgeon	14	100	7	5 / 3 3 / 5 3 / 4 4 / 3
Russian sturgeon	12	100	12	6 / 6 8 / 5 5 / 8
Stellate sturgeon	8	100	14	7 / 7 9 / 6 6 / 9
Sterlet	5	100	20	10 / 10 11 / 9 9 / 11
Ship sturgeon	12	100	8	4 / 4 3 / 6 6 / 3

- Sperm from multiple male donors should not be mixed for artificial fertilization. The eggs of each female will be divided in a number of portions equal to the number of males and will be each separately fertilized with sperm of one male.

Where: $1 / N_e = 1/(N_m) + 1/(N_f)$ and $\Delta F = 1/(2 N_e) = 1/(8N_m) + 1/(8N_f)$

with N_m = effective number of males and N_f = effective number of females

N_e / generation = $\Delta (N_{e,1} + N_{e,2} + N_{e,3} + \dots + N_{e,GI})$, where

GI = generation interval

¹ Atlantic Sturgeon Aquaculture and Stocking Committee (1996). ASMFC Breeding and Stocking Protocol for Cultured Atlantic Sturgeon. NOAA

Series No. 000001

Hatchery

Manager

Sanctioned by
Fishery Inspector
Name and surname

.....

Badge No.....

Signature

**CAPTURE RECORDING FILE
FOR STURGEON BROODFISH**

No. Date.....

Name and surname of fisher	Permit No.	Authorization No.	External marking of fishing boat	Fishing gear

Fishing zone / site where it was captured

Characteristics of specimen captured:

Specification	Unit	
Species		
Sex	M / F	
Standard Length	Cm	
Total Weight	Kg	
Tag. No.		

Signatures of fishermen:

1.....

2.....

3.....

Signature of Hatchery representative

Name and Surname:

.....

Signature:

Hatchery

Name of hatchery manager.....

Annex 3

REGISTER FOR THE ARTIFICIAL PROPAGATION OF STURGEON

Crt. No.	Specification			Date of capture / No. of capture rec. file	Amount of eggs [Kg]/ milt obtained [ml]	Date of stripping / amount of eggs obtained [Kg]	Hatching date / Number of larvae	Date / Number of fingerlings	Date / site of releasing the broodfish into natural environment	Remarks
	Species / Tag No.	Weight [Kg]	Sex							
1										
2										
3										

Name and Surname of Hatchery manager

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Signature

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