Agenda Item 4.4 Viable populations of species

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PAST, CURRENT STATUS AND THE FUTURE OF THE BALTIC STURGEON *ACIPENSER OXYRHYNCHUS OXYRHYNCHUS* MITCHILL . INFORMATION ABOUT THE REINTRODUCTION WORKS CARRIED OUT ON THE BALTIC STURGEON

The Polish and German (in Odra River basin) and Polish (in Vistula River basin) projects aiming at reintroduction of Baltic sturgeon are progressing. Last year more than 7000 of specimens of Baltic sturgeon (*Acipenser oxyrhynchus oxyrhynchus* Mitchill) were released into the Odra and the Vistula tributaries. After a few weeks from the release, fishermen were able to caught first sturgeon specimens in the Gulf of Gdansk. By-caught specimens have showed significant increase in weight and size. The results got so far, enables to think that there is a big chance for the success of the future reintroduction works. Fry of the Baltic sturgeon can adapt easily to the natural conditions, and it finds good environmental conditions in the rivers and in the Gulf of Gdansk.

The Meeting is invited to take note of the information.

The Contracting Parties are requested to consider joining the project.

Starting from a year 2004, different kind of reproductive material: hatch, fry, fertilized spawn was brought from Canada to Poland. That restock material comes from the spawners from the natural population of the St. John's river. During the last three years we brought fertilized spawn coming from the artificial spawning of sturgeons caught directly before spawning in the river. Due to the agreement signed with the Acadian Sturgeon and Caviar Inc., it is possible to participate in catches as well as to take reproductive material. It gives opportunity to control genetic variability not only reproductively mature fish but also their offspring, through ensuring large number of specimens, to take restocking material. Moreover, from the fish participating in the reproduction, a samples of biologic material are taken for the genetic research. Older selected fish from Canadian hatch and fry obtained on a basis of exchange with colleagues from Germany, were also subjected to that research. In the future, after obtaining own shoals of reproductively mature fish, it will be possible to prepare exact information about cross-fertilization for each specimen, in order to maintain high genetic variability of their offspring (Stankovič i in. 2007).

Fig. 1,2. Catches of reproductive mature fish directly before spawning.

Together with activities aiming at rising own shoal of spawners, we carry out research on behavior of young sturgeons in natural conditions. To meet this aim, from 2006 pilot restock activities on mainly two rivers the Drawa (the Odra's tributary) and the Drwęca (the Vistula's tributary) have been carried out. In the past, these rivers were sturgeon's rivers, and right now still maintained good ecological conditions for the growth of fry as well as, in the future, for the spawning of sturgeons. Restocking activities as well as research are carried out on the Drawa river together with colleagues from Germany, on a basis of

agreement about co-operation between Inland Fisheries Institute in Olsztyn, and Institute of Freshwater Ecology and Inland Fisheries in Berlin.

Within that co-operation more than 7 thousand specimens of different restocking material of Baltic sturgeon were released into the rivers (tab.1).

Fig.3,4 Taking biological material from adult female, young sturgeons released during the pilot restocking activities.

Table 1 Characteristics of pilot restocking activities using restock material from Baltic sturgeon (Kolman 2008).

River basin	Name of river for restock activities	Date	Type of material Age/Weight (g)	Amount (number)	Type of mark
Vistula	Drwęca	9.10.2006	0+ / 7-9	1500	-
	Drwęca	12.06.2007	1+/ 400-500	12	Carlin+T-M
	Drwęca	15.06.2007	1+/ 400-500	200	Carlin
	Drwęca	29.10.2007	0+ / 7-9	700	-
	Drwęca	30.10.2007	0+/ 20-40	250	Carlin
	Drwęca	30.10.2007	0+/ 30-50	20	Carlin+T-M
	Drwęca	30.10.2007	1+/ 500-650	10	Carlin+T-M
Odra	Drawa	10.05.2007	0+/150-250	140*	Carlin
	Drawa	10.05.2007	0+/150-250	10*	Carlin+T-M
	Drawa	28.10.2007	2+/1600-1800	200	Carlin
	Gwda	29.10.2007	2+/1600-1800	238	Carlin
	Warta	29.10.2007	2+/1600-1800	200	Carlin
	Warta	29.10.2007	0+/5-7	4000	-

T-M Telemetric mark.
* - Hatch obtained from Germany.

The data in table 1 show that the restocking activities were carried out in different seasons of the year and using restocking material of different size. Part of these fish were bred in natural conditions (ponds with floating water) with the access to the natural sources of food, and another part were kept in artificial ponds and fed using artificial food (fodder). Differential of restocking material and environmental conditions, enabled to carry out interesting observations which made characterization of the behavior of fish in the river

possible. Very helpful was telemetric technique used in the experiment. Part of the released fish except for external marks of the Carlin type, were equipped with the telemetric marks (micro-transmitters) (tab.1), implanted inside the body of the fish.

The most representative results were collected after restocking activity carried out from 12 to 15 of June 2007 (Kapusta i in. 2007).

Fig. 5
Solemn restocking of the Drweca river.

Observations were carried out from the boat drifted along the river. Each specimens was differential taking into account the character of their movements in the river, especially the speed was different and varied from few to around 50 km/a day. All marked sturgeons had tendency to migrate to the Vistula river and next to the Gulf of Gdansk and the Baltic Sea. The presence of the first sturgeon in the Gulf of Gdansk had been noted only 10 days after the release. It was caught in the flounder net close to Gdynia, that means that it migrated through about 400 km. After the next couple of weeks from the release, the last sturgeons left the Drwęca river. During the days 10-17.07.2007 close to town Świecie, 4 sturgeons marked by marks of the Carlin type, were caught in the fishing nets (Mrowiński 2007). At the beginning of July they quite numerously appeared at the Vistula river mouth where they were caught by several fishing nets. According to the information got from the fishermen, sturgeons spent about two weeks at the river mouth foraging intensively for prey what was proven by the speed their of growth (tab.2).

Tab.2 Characteristics of the specimens of the Baltic sturgeon caught (Kolman 2008)

Number of mark	Total length (cm)		The length of the body (cm)		Weight (g)		Place of catch
	Restock	Catch	Restock	Catch	Restock	Catch	
P620AC	66,5	67,5	52,0	54,5	925	931	The Vistula river mouth
P891AC	58,0	59,0	45,5	48,5	465	502	The Vistula river mouth
P934AC*	53,0	53,5	42.0	42,5	400	396	The Vistula river mouth
P862AC	66,0	-	51,5	-	589	-	The Vistula - Grudziadz
P808AC	59,0	81,0	46,5	-	536	2450	Gulf of Gdansk - Mikoszewo

* fish with the telemetric mark.

The specimen caught in the middle of November in the Gulf of Gdansk, close to the Mikoszewo town at the deep around 30 m was a spectacular example of the high speed of the growth. Through the time period of around 5 months it achieved about 360% of its weight on release. According to the information got from the fishermen fishing close to the Vistula river mouth, in the Gulf of Gdansk 23 sturgeons have been caught so far. Most of them were released back to the water.

The results got so far, let us to think that there is a big chance for the success of the future reintroduction works. Fry of the Baltic sturgeon can adapt easily to the natural conditions, and it finds good environmental conditions in the rivers and in the Gulf of Gdansk. Sturgeons released into the rivers were not only in a good condition, but also were able to grow very quickly.

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