The results of the impact assessment on sturgeons.

Information on the results of sturgeon monitoring programs and conservation action plans.

The responses are based on the materials of the EIA Report contained in Chapters 7, 12, Annexes L and M, as well as in the responses to the comments and observations of the Romanian Party to this report.

Monitoring program.

Sturgeon monitoring has been carried out on an ongoing basis since 2005 as part of ichthyological monitoring as part of the integrated environmental monitoring program.

In the process of monitoring, it is investigated:

- gender, size and mass composition;
- growth rate of different age groups;
- state of gonads, fertility and efficiency of spawning;
- population dynamics.

Full-scale ichthyological surveys are carried out in a number of areas downstream of the Danube River and along the Danube-Black Sea DWNR in accordance with standard ichthyological research methods adopted by the State Fisheries Agency and the National Academy of Sciences of Ukraine.

Ichthyoplankton from shallow vessels is selected with an ichthyoplankton net, according to the "Methodical Guide to Collecting Fish Eggs, Larvae and Fry" (Russ, Casanova; 1966). Juveniles of transient fish species are caught using special small-mesh fishing tools: fry trawls, fry dragnets and small-mesh nets.

Scientific and research ichthyological fishing is carried out in accordance with the "Methodical instructions for estimating the abundance of fish in freshwater reservoirs" (VNIIPRH, 1990), Methods of collecting and processing ichthyological and hydrobiological materials (IRKH, 1998) and is carried out with pond and floating nets, nets, etc. tools.

Results of recent research

In 2021, a total of 96 cases of bycatch of juvenile sturgeon in various fishing gear were recorded: sterlet - 75, stellate sturgeon - 14, beluga - 7. there was no bycatch of Russian sturgeon.

The indicator of the frequency of bycatch of sturgeon fish based on one drowning of drift nets in 2021. (1.10 individuals/drowning) was significantly higher than in the 3 previous years, but, however, 1.7 times lower than in 2017. (2017 – 1.85; 2018 – 0.65; 2019 – 0.35; 2020 – 0.61). In the by-catch in 2021, in contrast to last year 2020, sterlet again absolutely prevailed - 78.1%. The share of starry sturgeons was 14.6%, and belugas - 7.3%.

Study of sturgeon fish of the Kilia delta. Danube in 2022 was held on the basis of studying their bycatch in research fishing gear (swimming nets with a 20-45 mm mesh, fry beam trawl with a 10 mm mesh). In 2022, a total of 98 cases of

bycatch of sturgeon juveniles in various fishing gear were registered: sterlet - 80, starry sturgeon - 11, sterlet and starry sturgeon hybrids - 4, beluga - 1, Russian sturgeon - 2. The sizes of the Russian sturgeon caught (L - 34 and 44 cm) and the dates of their capture (end of November - December) suggest their artificial origin, although no external markings were found. All sturgeon and juveniles of other fish species were released into the water alive after the measurements.

In bycatch in 2022 just like 2021 and unlike In 2020, the sterlet absolutely prevailed - 81.7%. The share of starry sturgeon was 11.2%, and beluga - 1.0%, sturgeon - 2.0%, hybrids - 4.1%.

The exceptionally shallow water of the Danube in 2022 led to an extremely weak spawning stock of passing sturgeon fish and low efficiency of their spawning.

In 2022, apparently, only sterlet spawned relatively well. Favourable conditions for grazing of young people in the area of Kilia arm near town Vylkove formed in July, this area was used mainly by young sterlets. In 2022, the number of young stellate sturgeon stingrays was slightly lower than the long-term average values. Beluga spawning success can be considered very weak. This should cause alarm, because the beluga spawning in the Danube was extremely unsuccessful in the two previous years as well.

Weak indicators of juvenile migration of sturgeon fish, the appearance of hybrids are due to the low number of spawners entering the Danube River for spawning, and indicate the depressed state of their populations. The situation with the reproduction of the Danube herd of Russian sturgeon can be assessed as the worst.

Mitigation measures

The Kilia arm is of particular importance for the protection of sturgeons, and more than half of the adult breeders migrate to spawn and more than two-thirds of the juvenile sturgeons spawn along it. The Pryamyi arm is of particular importance for migrations.

With the massive run of juvenile sturgeon, their bycatch in this arm is the largest among all areas of the Ukrainian delta. Both bycatch and adults going to spawn are the largest.

As for the negative experience of deepening the Sulina canal at the end of the nineteenth century, it cannot be compared to the consequences of dredging in the Bystre Arm because it is preserved as a natural watercourse.

The Ministry of Environmental Protection and Natural Resources of Ukraine, by Order No. 391 dated 28.12.2020, approved an action plan for the conservation of sturgeon (family Acipenseridae) in Ukraine for 2021-2030. The plan provides for the protection of wild sturgeon populations, maintaining the population structure, and increasing the number of fish.

One of the main preventive measures is the active development of sturgeon aquaculture.

Over the past 15 years, fishing in the Pryamyi arm has been banned completely for a period of time. Starting in 2022, fishing on the Pryamyi arm was banned throughout the year, which was reflected in the corresponding limit of the Ministry of Ecology of Ukraine.

Ukraine has unilaterally taken a number of measures to protect sturgeons, which have proven to be highly effective. They stem from the Sturgeon Conservation Action Plan, which was approved by the Order of the Ministry of Ecology of Ukraine No. 391 dated 28.12.2020.

The mitigation measures listed in the EIA Report (Section 7), which are aimed at protecting and conserving sturgeons, include:

- ensuring, under normal conditions, a distance of at least 0.8-1.3 m between the bottom and the keel of the design vessel with a 7.2 m draft in the load, which protects adult sturgeon from mechanical damage due to shipping;
- failure to carry out hydraulic works during the period of mass spawning of the main commercial fish;
- Restrict, if possible, the passage of vessels near the reserve during daylight hours;
- cessation of works with an increased level of acoustic impact during the silence periods established by local authorities;
- development of aquaculture
- sturgeon farming and stocking of water bodies;
- comprehensive monitoring of the environment (including post-project monitoring as provided for in the Law of Ukraine "On Environmental Impact Assessment"), which is performed to timely identify trends in possible negative effects of the reconstruction of DWNR facilities and determine whether the measured values of environmental impact parameters of the implemented activities are consistent with the forecasted ones.

Regarding sturgeon conservation action plans.

Today, Ukraine and Romania are developing joint approaches to stocking the Danube with sturgeon. This was discussed during a meeting between Deputy Minister of Agrarian Policy and Food Vitalii Holovnia and Ambassador Extraordinary and Plenipotentiary of Romania to Ukraine Alexandru Victor Micula on 23 May 2023. The parties discussed cooperation between Ukraine and Romania to restore and develop the biodiversity of the Danube. They also discussed areas of cooperation between the countries in the fisheries sector. In particular, they discussed cooperation between Ukrainian and Romanian scientists in common water bodies - the Danube River and the Black Sea, exchange of experience and best practices in researching populations of valuable fish species.