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## **COMPARATIVE STUDY ON THE USE OF NEW STURGEON MIGRATION MONITORING SYSTEMS ON THE LOWER DANUBE**

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### **Abstract**

The hydrotechnical works (bottom sills, banks protections, and guiding wall) performed during 2011 -2017 period on the Danube river, between Calarasi and Braila (km 375-175), aimed to improve the fluvial navigation, and have imposed a continuous monitoring of biotic and abiotic environmental factors. The aim of these hydraulic works is to identify the possible negative effects which might appear and find the alternative solutions to eliminate the risks. The sturgeons, which are migratory species protected by Romanian law and closely monitored by international organizations, can be affected by these works, in the sense that the newly constructed bottom sills would prevent the migration to the breeding habitats. For the migration monitoring, ultrasonic receiver stations and ultrasonic transmitters developed by the Vemco Canada Company were used. The novelty of this work is attributed to the characteristics and efficiency of two monitoring systems developed and patented by the National Institute for Research and Development in Environmental Protection and applied along the Danube River.

*Key words:* monitoring systems, receiver stations, sturgeons, ultrasonic transmitters

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