

GENERAL CONSIDERATIONS REGARDING THE IMPACT OF THE VIDRARU LAKE HYDRO FACILITIES ON THE ENVIRONMENT

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Rezumat. În articol, după prezentarea parametrilor morfometrici, a condițiilor fizico-geografice inițiale ale bazinului hidrografic în care este situat lacul de acumulare Vidraru de pe Argeș, se analizează succint impactul acestuia asupra mediului riveran și regional.

Abstract. After presenting the morphometric parameters and the initial physical-geographical conditions of the drainage basin where the Vidraru Reservoir is located, on the bank of the Argeș River, this article briefly analyses the impact of the basin on the riverine and regional environment.

Keywords: Vidraru Reservoir, impact, environment, analysis

1. General Considerations

The first studies on the region where the Vidraru Reservoir is located, i.e. Făgăraș Mountains, were conducted by the French geographer, Emmanuel de Martonne, in the 19th century, when he made his first remarks on the Southern Carpathians (or the *Transylvanian Alps*, as he called them) and, consequently, on the Făgăraș Mountains.

Later on, after 1950, remarkable studies on the Făgăraș Mountains have been published by Gh. Niculescu (in 1959 and 1961), E. Nedelcu (in 1959, 1962, and 1966), M. Florea (in 1998), etc. Studies on glacial lakes, reservoirs and the Vidraru Reservoir have been conducted by P. Gâștescu (in 1971, 1996 and 2003), I. Pișota (in 1972), I. Ujvari (in 1972), and Al. Nedelea (in 2006).

The Vidraru Reservoir is located in the Southern Carpathians, in Făgăraș Mountains. A major surface of the Reservoir is located in the Lovișteea Basin, in a graben, in the east side. The lake dam has the following geographical coordinates: 45°22' N and 24° 37' E (fig. 1.).

The lake covers an area of 870 ha, and has a total water volume of about 473 million m³, and a normal level of retention volume of 469 million m³ [12], and the dam has a height of 166 meters.

The dam construction began in 1960 and was completed in 1966. At that time (in 1967), the Vidraru Dam was, by height, the fifth arch dam in Europe and the ninth in the world [9]. The dam is a double-arched concrete construction with a length of 307 meters, and a base width of 25 meters and a crown width of 6 meters.

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