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THE HISTORY OF THE CONSTRUCTION OF THE HISORAK WATER RESERVOIR AND ITS SIGNIFICANCE IN THE COUNTRY

Abstract: in this article, we tried to talk about the history of the Hisorak Reservoir, built in the heart of the ancient Kashkadarya, and its importance in the country. We thoroughly analyzed the role of this reservoir in the country's economy and tourism. You can get answers to its construction techniques and construction methods, history, and other questions you may be interested in through this article.
Key words: Hisorak Reservoir, Shahrisabz, Gilan, Miroqi town, Kitab district, HPP.

Hisorak Reservoir is located 35 km from Shahrisabz district of Kashkadarya region in the town of Miroqi.[1] In 1988, the construction was completed and commissioned. Shahrisabz district is located 1.5 km from Miroqi town. Hisorak hydrotechnical facility was built in the valley of Aksuv river, a tributary of Kashkadarya in Kashkadarya region. In the year of commissioning, the area connected to irrigation was 46.8 thousand km². A recreation area has been established around the reservoir, which is visited by many tourists every year. The total volume of the reservoir is 170 million m³, the used part is 161.6 million m³. The surroundings of Hisorak reservoir are almost covered with grass. The reservoir is 1.7 km from north to south and 4.0 km from east to west.

The length of the stone-earthen dam is 666 meters, the height is 138 meters, the water surface is 4.2 km², the capacity of the water supply structure is 200 m/s, and the discharge structure is 130 m/s. The Hisorak Reservoir is equipped with a dam, water release, water discharge facilities, water supply and discharge channels, and drainage networks.

On March 15-28, 2021, within the framework of the agreement reached with the Embassy of Uzbekistan and the United States Army Corps of Engineers (USACE), American experts with many years of practical experience in monitoring the safe operation of hydrotechnical facilities, Together with representatives of the Ministry of Water Management, "Uzbekgidroenergo" JSC, "Davsuvhojaliknzorat" state inspection, they studied the condition of "Hisorak" and "Topalang" reservoirs located in Kashkadarya and Surkhondarya regions.

On June 8, 2022, President Shavkat Mirziyoyev, in his presentation on the projects of modernization of water reservoirs and improvement of drinking water supply in Surkhandarya region, decided to build 2 new small hydroelectric power plants with an annual capacity of 22 million kilowatt hours in Hisorak and Ohangaron reservoirs.[2]

The main purpose of the construction of the reservoir was to prevent the Aksuv river from flowing in vain in autumn, winter and spring, and to use it in agriculture during the abundant summer vegetation.

[1] "American experts came to Uzbekistan to jointly assess the safety of reservoirs." Archived from the original on August 17, 2023. Accessed: August 17, 2023. P-21

[2] Peel, MC; Finlayson, B L. "Updated world map of the Köppen-Geiger climate classification". Hydrology and Earth System Sciences 11: 1633-1644. doi:10.5194/hess-11-1633-2007. ISSN 1027-5606. Viewed: 2016. Hisorak Reservoir. P-32

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The construction lasted more than 10 years and the reservoir was completed in 1988. After tests and additional strengthening of the dam, Hisorak was commissioned in 1990.

The design water capacity of the reservoir is 170 million cubic meters, and it is able to irrigate 49 thousand hectares of cultivated land located in Shahrisabz, Kitab, Chirakchi and Yakkabog districts of Kashkadarya region.

When the Hisorak reservoir was first built, there were no hydroelectric facilities in it. Later, in the years of independence, a hydroelectric power plant producing 80.9 million kilowatts of electricity per year was built in the reservoir, and it was commissioned in 2011.

This HPP has two aggregates, which have the capacity to transfer 45 cubic meters of water per second.[3]

The construction of the Hisorak dam has a core, stone-soil embankment, the height is 138.5 m, the length is 660 meters, the width of the dam is 16 meters. The upper part of the dam is covered with reinforced concrete slabs. The annual average capacity of the HPP is 80.9 million kW.

Hisorak Reservoir is a very important facility for Kashkadarya region. In addition to providing drinking water for the region's agriculture, the area around the reservoir is a very convenient place for the development of tourism in the oasis.

In recent years, many recreation centers have been opened in the town of Miroqi near the reservoir. Entrepreneurs have also organized various recreation areas on the shores of the reservoir, boating in Hisorak, and a ropeway.

On June 5, 2024, a video selector meeting was held under the chairmanship of Shavkat Mirziyoyev to discuss measures to improve the tourism infrastructure in the regions and increase the flow of foreign tourists.

At the same meeting, it was mentioned that a tourism cluster will be established in the district and city of Shahrisabz, and the 33-kilometer Hisorak-Ghelon and Hisorak-Sarchashma road will be expanded and repaired.

It was also reported that a number of works are planned to be carried out in the town of Miroqi near the reservoir, and the construction of a 3,000-hectare ski complex between the villages of Gyelon and Sarchashma of the Shahrisabz district has been started by foreign investors.

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