Proceedings of International Scientific-Practical Conference «Sustainable Development Goals: Youth Policy and Innovative Technologies», February 15-16, 2023, Oguz Han Engineering and Technology University of Turkmenistan, Ashgabat, Turkmenistan

IMPACT OF TURKMEN LAKE "ALTYN ASYR" ON PASTURE PRODUCTIVITY

Kaka Soyunmyradov[1*], Aybek Tajiyev[2]

[1]*Oguz Han Engineering and Technology University of Turkmenistan, Ashgabat, Turkmenistan.*
[2]*Turkmen Agricultural Institute, Dashoguz, Turkmenistan.*

[*]Corresponding author

DoI: https://doi.org/10.5281/zenodo.7779301

The President of Turkmenistan is making tireless efforts to turn our motherland and vast desert into a wonderland by effectively using the country's water reserves. "Altyn Asyr" Turkmen Lake, created in the Garashor Basin, located in the northwest of Turkmenistan, is a clear evidence of the ongoing reforms in Turkmenistan.

The artificial lake being created in the Karashor basin is an innovative project. This is a clear example of Turkmenistan's continuous contribution to solving important problems related to the preservation of the world's water resources.

"Altyn Asyr" Turkmen Lake is 103 km long, 18.6 km wide, and 132 km3 in volume. Salt water is brought to the lake through two large aqueducts - the main saline aqueduct and the Dashoguz aqueduct. The total length of the main saline aqueduct is 720 km, and the length of the Dashoguz aqueduct is 381 km [2]. The construction of Turkmen Lake is being carried out in 3 stages. The construction of its first phase began in 2000 and was completed in 2009.

Thus, as a result of the natural purification of drainage water and the use of modern technologies in purification, a reserve fund of water is created that can be used for the needs of the agricultural industry - for the development of new lands, irrigation of pastures, as well as for irrigation of forest zones, technical needs.

As stated in the "Social and Economic Development Program of the President of Turkmenistan in 2019-2025", the construction of the "Altyn Asyr" Turkmen Lake made it possible to improve the ecological condition of the desert, as well as the melioration of irrigated lands [1]. In the future, the treatment of the water that collects here allows it to be reused.

As a result of the connection of the Main water aqueduct and the Dashoguz aqueduct, the improvement of the agricultural land will be improved, and the level of problems in the irrigated areas will be significantly reduced. Improvements in irrigated land reclamation through water balance adjustments will also allow for reductions in the need to impound washwater. This will significantly reduce irrigation water productivity losses and ultimately groundwater levels. As a result, it will contribute to the rapid reduction of irrigation water and increase the yield of agricultural crops, prevent the flooding of pasture areas, and improve the ecological and meliorational condition of the land. In recent years, large-scale work has been carried out in Turkmenistan to turn vacant land into a forest, and to maintain forest zones [4]. In the case of afforestation of Karakum desert, the importance of the lake's salt water streams is relatively large.

The new water facility is of great importance for the fauna of Turkmenistan, primarily for migratory birds. In Lake Turkmen, in the Central and Eastern Karakum areas, where the aqaba system passes, a favorable ecology and forage base for birds is created. In the future, these areas will be a breeding ground for wetland birds. New places for nesting and wintering will be created here. In particular, it will allow to increase the area and number of valuable bird species.

Thus, irrigation of the central part of the Karakum will contribute to the conservation of biological diversity. This will have a positive effect on the breeding status of the rare ungulates

included in the Red Book of Turkmenistan - mountain goats, gulans, gerenas. The number of aquatic fauna living on the shores of reservoirs will also increase.

The construction of "Altyn Asyr" Turkmen lake in the middle of the Karakum desert, the drawing of many water pipes from the agricultural lands to the lake, not only affects the flora and fauna of the Karakum, but also affects the condition of the pastures, the water supply of the fields, the method of use, cattle breeding and camel breeding. it also has a positive effect on their methods. Currently, the amount of pastures in the desert has reached 8 million 640 thousand hectares. This makes it possible to keep 4.6 million head of cattle and 60 thousand camels here, to grow sorghum, water grass, barley, wheat and other forage crops [5].

"Altyn Asyr" Turkmen Lake has great importance in increasing the economic potential of the country, in developing the agricultural and livestock sectors, in increasing the production of food products and in ensuring the stable food security of the state, in improving the social and economic conditions of the people, and in creating thousands of new jobs [3]. New towns and villages will be built on its shores in the near future.

As we mentioned above, the creation of an artificial water reservoir in the Karakum desert is intended for the collection of rainwater , which does not take into account the extraction of water from Amyderia and other irrigation sources. Thus, the construction of Lake Turkmen is carried out together with a set of nature protection measures. The water collected in "Altyn Asyr" Turkmen Lake will be a source for secondary use in the future after special purification and desalination.

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