



## CENTRAL ASIA OF RIVERS SATURATION SOURCES ACCORDING TO CLASSIFICATION

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**Abstract.** In this article, the sources of saturation of rivers, the ongoing work on the study of these sources, the classification of rivers and in particular the rivers of Central Asia according to the sources of saturation, the annual water flow of rivers that arise in the mountains of Central Asia about Shults V.L. and R.Mashrapov's information, information about the types of saturation of rivers is given.

**Абстрактный.** В данной статье источники насыщения рек, работы, проведенные по изучению этих источников, классификация рек и, в частности, рек Средней Азии по источникам насыщения, годовой сток рек, берущих начало из показаны горы Средней Азии. Шульц В.Л. и сведения Р.Машрапова, приведены сведения о типах насыщения рек.

**Annotatsiya.** Ushbu maqolada daryolarning to'yinish manbalari, bu manbalarni o'rganish bo'yicha olib borilayotgan ishlar, daryolar va xususan O'rta Osiyo daryolarini to'yinish manbalari bo'yicha tasniflash, O'rta Osiyo tog'larida vujudga keladigan daryolarning yillik suv oqimi to'g'risida Shults V.L. va R.Mashrapov ma'lumotlari, daryolarning to'yinish tiplari haqida ma'lumotlar keltirilgan.

**Key words:** M.I.Lvovich, rivers fed by glacier-snow waters, rivers fed by snow-glacier waters, rivers fed by snow waters, rivers fed by snow-rain waters, Shults V.L., R.Mashrapov .

**Ключевые слова:** М.И.Львович, реки ледниково-снегового питания, реки снегово-ледникового питания, реки снегового питания, реки снегово-дождевого питания, Шульц В.Л., Р.Машрапов.

**Kalit so'zlar:** M.I.Lvovich, muzlik - qor suvlaridan to'yinadigan daryolar, qor - muzlik suvlaridan to'yinadigan daryolar, qor suvlaridan to'yinadigan daryolar, qor-yomg'ir suvlaridan to'yinadigan daryolar, Shults V.L., R.Mashrapov.

The initial work on studying the sources of river saturation was carried out by MILvovich in the 40s of the last century. As a result, he developed a classification of rivers according to their sources of saturation. In this classification, Lvovich divides rivers on the surface of the Earth into 38 types. 20 of them are found in the territory of the CIS.

In quantifying each source of saturation-snowpack, rainwater, and groundwater M.I.Lvovich adopted the following ranges: greater than 80 percent, 50-80 percent, and less than 50 percent.

Only in very few cases does the weight of glaciers exceed 50 percent in rivers whose saturation is caused by the melting of glaciers. Therefore, taking into account the specific characteristics of this source of saturation, a separate limit is given for them: more than 50 percent, 50-25 and less than 25 percent.



If more than 80% of the annual flow corresponds to one of the three sources of saturation, for example, due to snow, this river belongs to the type of rivers that are saturated due to snow waters in a clean state according to the Lvovich classification.

If one of the sources of saturation, for example, the weight of snow water in the annual flow is around 50-80 percent, then the river is included in the type of rivers that are saturated mainly from snow water.

Finally, if the weight of each of the three sources of saturation in the river flow is less than 50 percent, then this river is classified as saturated due to mixed sources.

The rivers of Central Asia mainly take water from its mountainous part. In the mountainous part of Central Asia, which collects water, the amount and mode of flow formation and distribution are not the same in all parts. It depends on the orographic structure of the mountains, their height, and the amount of precipitation.

affects the formation of its flow and regime. There are no rivers in Central Asia that receive water from only one source. Most of the rivers flowing from the territory of Central Asia collect water from the melting of permanent snow and glaciers located in the territory of Kazakhstan, Tajikistan and Kyrgyzstan. According to VLShults, the contribution of glacial waters to the saturation of rivers in Central Asia is much smaller than that of snow. According to his information, ice water is only 10-15% of the total flow. The contribution of snow and underground water is significant in keeping the rivers of Central Asia saturated with water.

In addition to ice and snow water, rainwater in the hot season also contributes a lot to the saturation of Central Asian rivers. The contribution of rainwater is about 5-15% of the annual flow of rivers. Another source of water for rivers in Central Asia is groundwater. This source is the main source of water in winter. Thus, according to Shults VL and R.Mashrapov, the annual water flow of rivers in the mountains of Central Asia is 10% ice water, 5% rainwater, 40% surface water, 45% and it is due to the waters created by the melting of permanent and seasonal snows. Its contribution varies depending on where and at what heights the rivers begin. Therefore, VLShults Central Asia is divided into 4 types according to the saturation characteristics of rivers:

1. Glaciers are rivers fed by snow.
2. Snow - rivers fed by glacial waters.
3. Snow fed rivers.
4. Rivers fed by snow and rainwater.

Rivers of the first type 4500 m start from the highest part of the mountains, they are mainly fed by melting glaciers and snow. Such rivers include Amudarya, Zarafshan, Isfaramsoy, Sokh, Isfara. The rivers of the second type are 3400 above sea level 4500 m in the mountains of Central Asia. It includes rivers such as Sirdarya, Norin, Karadarya, Chirchik, Surkhandarya, and Tanhoz. The flow rate of these rivers is high in May-June due to heavy melting of snow, 30-40% of the annual flow falls on these months. The third type 3400 m belongs to the rivers, that is, the rivers that start below the permanent snow line. The water of such rivers corresponds to the months of March-May, when many seasonal snows begin to melt.

On the other hand, 4 types of rivers 2000 m are from the low mountains below starts. They are mainly fed by rainwater. The peak season is March - April. 80% of the annual flow flows in these months. In the second half of summer, water decreases and sometimes dries up. This includes rivers such as Zominsuv, Sheraboddaryo, Ohangaron, Keles.



The temperature and freezing phenomenon of Central Asian river waters are important in the life of its organic world and national economy. The temperature of the river water depends first of all on the water mass and atmospheric conditions, then on the amount and temperature of the underground water flowing into the river, and from what sources the rivers are fed. Due to the fact that the rivers of Central Asia receive water from different sources, the temperature indicators are different in places. The annual temperature of the rivers rises by 14-15%.

**.Summary.** Rivers are fed by ice, snow, rain, and underground water and are divided into 4 types according to the form of saturation, the source of water. The source of saturation of rivers affects the formation and mode of its flow.

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