



## **Nurata Ridge Streams And Their Rational Use**

**Bekzod Bekpulatovich Khakimov**

**Lecturer Department of Geography and Fundamentals of Economics Jizzakh State Pedagogical Institute, Uzbekistan**

### **ABSTRACT**

The saturation and morphometric parameters of the rivers on the northern and southern slopes of the Nurata ridge have been studied and measures for their rational use have been developed.

### **KEYWORDS**

Nurata ridge, northern slope, southern slope, river network, morphometric indicator, flood, “mejen” status, water flow, streams.

### **INTRODUCTION**

Surface water is extremely unevenly distributed in the Nurata ridge and foothills. There is no permanent water supply network in the foothills. The short length of the ridge and the dry climate allowed the formation of small rivers or streams that did not cost much water. The river network on the southern slope of the Nurata ridge is larger than on the northern slope. The reason is that the northern slope of the mountain is short and steep, while the southern slope is much flatter and wider. That is why the river network is much more developed here.

There are more than 50 streams of different lengths and different water costs from the southern slope of the Nurata ridge. The

beginnings of the streams that start from this mountain lie at an altitude of 1500 m. The source of water collection of some rivers (Tosinsoy, Oktepasay, etc.) starts from the height of 1800-2000 m, from the watershed of the mountain. The water flow of the rivers of the Nurata ridge consists mainly of seasonal melting of snow, rainwater and groundwater. In the low mountain and foothill plains, the role of atmospheric oil in the formation of river flow is negligible. Most of the precipitation is spent on evaporation.

### **THE MAIN FINDINGS AND RESULTS**

The distribution of water flow costs in rivers throughout the year is characterized by floods

and floods. The floods mainly coincided with the period when the snow melted and the maximum spring rains fell. Therefore, 50-60% of the annual water flow of many rivers falls in the spring months. At this time, the maximum cost of water flow will be 15-20 times higher than the average annual water flow.

The water flow on the southern slope is distributed according to the seasons: 39.2-50%

in spring, 22.0-30.4% in summer and 14.0-21.0% in winter. On the southern slope of the ridge, April is the wettest period (16-25.5%). For example, the maximum daily water consumption in Tosinsoy was 1.8 m<sup>3</sup> / sec in April 1959, and in Oktepasay it was 2.97 m<sup>3</sup> / sec. From May, the water flow in all rivers decreases, (except Tosinsoy and Oktepasay) the mejen state begins and is saturated only with groundwater (see Table 1).

**Table 1**

**Morphometric indices of the rivers on the southern slope of the Nurata ridge**

No	Streams	Length, km	Basin, km <sup>2</sup>	Average annual
1	Jonichaksoy	12	14,1	0,02
2	Qorasuvsoy	62	1137	0,81
3	Sabriksoy	40	30,7	0,05
4	Saganaksoy	30	59,8	0,10
5	Narvonsoy	32	32,7	0,10
6	Sochishmasoy	17	39,3	0,19
7	Kattasoy	-	89,4	0,27
8	To'sinsoy	84	718,5	1,50
9	Nakrutsy	-	151,0	0,18
10	Qizilbuqsoy	38	309,5	0,43
11	Yuqorisoy	-	267,0	0,29
12	Oqtepasoy	60	715,3	1,15

The rivers in the Nurata Range also play an important role in the annual distribution of water flow, the height of the catchment basins, and which side the slopes face. Flooding in rivers is observed in the second half of February on the southern slope and in March on the northern slope. The absolute height of Mount Nurata to the west decreases, and as a result the water flow in the streams decreases rapidly from July to September.

Due to the lack of forests, the sparse vegetation cover, the very steep slopes of the mountains and the bare rocks in many places, floods are often observed after heavy rains or torrential rains.

According to A. Saidov (1972), on the southern slopes of Mount Nurata in 1905, 1917, 1922, 1921, 1930, 1933, 1949, 1963 there were strong floods. The strongest floods were in 1922, 1929, 1940, 1963 and 1969. In 1940, the floodwaters in Tosinsoy reached 179 m<sup>3</sup> / sec and flooded the village of Mitan. The maximum rise of this flood lasted 5-6 hours, after which the level dropped and flowed for 2

days. Floods most often occur in April and March. However February can be observed even in December. Floods are observed in almost all rivers every year.

Various floods are also observed in Osmonsay, Kolbasay, Uchmasay, Majrumsay, Ukhumsay and others on the northern slope of the Nurata ridge. Especially in 1969, a strong flood came in Osmonsoy and its maximum flow reached 180 m<sup>3</sup> / sec. On the southern slope of Mount Nurata, the maximum modulus flow reaches 5 l / sec. The height of the module and the height of the flow depend on the amount of atmospheric precipitation. For example, the Sochishmasoy flow module reaches

5 l / sec.

It should be noted that 45 rivers flow from the northern slope of the Nurata ridge, the largest of which are Osmonsay, Kolbasay, Uchmasay, Majrumsay, Ukhumsay and Sentabsay. Because these streams are mainly saturated with groundwater, the amount of water varies little throughout the year but floods can occur when it rains and the snow melts quickly (see Table 2).

Table 2

Morphometric indices of rivers on the northern slope of the Nurata ridge

№	Streams	Length, km <sup>2</sup>	Basin kv <sup>2</sup>	Average annual water consumption, m <sup>3</sup> / sec
1	Osmonsoy	13	30	0,200
2	Kulbasoy	10	33	0,140
3	Uchmasoy	10	40	0,200
4	Uhkumsoy	11	73	0,430
5	Majrumsoy	15	47	0,140
6	Sintabsoy	16	74	0,170
General indicators of streams		75	297	1,280

**CONCLUSION**

Above is information about the largest streams in the Nurata ridge. Large streams, in turn, are formed by the addition of small streams or streams. For this reason, small streams or ravines in the Nurata ridge should be studied in detail.

Today, a number of scientific, organizational and economic problems related to the rational use of river water in the Nurata ridge area have emerged. These include:

-detailed study of river water, full accounting of its resources, scientific substantiation of ways of its effective use;

-river water management and construction of reservoirs;

-reduction of evaporation of river water, absorption into the soil, consumption of transpiration;

-prevent springs from being blocked;

-implementation of flood control measures;

-use of river water in arable farming;

- development of river fishing;
- combating river water pollution.

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