

UZBEKISTAN ON THE TERRITORY FLOOD FLOWS AND THEIR CAUSES IT TO COME OUT

¹D.V. Nazaraliev - assistant professor, ¹J.S. Hamroqulov – doctoral student, ²Mkhanna Aaed - assistant professor, ¹Sh.Sh. Shoergashova – doctoral student, ¹Sh.I. Ismoilov – student

¹“Tashkent institute of irrigation and agricultural mechanization engineers ”National Research University. Uzbekistan, Tashkent.

²Russian State Hydrometeorological University. Russia, Saint Petersburg.

Abstract: In this article, which is formed in the territory of the republic of Uzbekistan flood flows, their description, which produced flooding that is formed of natural events, the event of flooding, spread of the term to track them, the number of dangerous regions studied his quotes from floods and flooding protection methods negative effects are briefly described.

Keywords: floods, snow, the rain, the river, streams, lakes, forecasting, mountainous regions.

Introduction

Information about flood events in Central Asia, including Uzbekistan, appeared at the end of the XIX century. Among the first is a reference to the flood phenomenon observed in Namangan uyezd in 1880 P. Cited by Averyanov. The following years were published in May 1896 in Shakhrikhonsoy, writings on the floods observed in the 1878-1890 Fergana Valley shadows.

A flood is a strong current, that is, a temporary stream of water with large volumes of rock, sand and rock-solid materials that suddenly forms in the mountains themselves. The rapid melting of heavy and continuous precipitation, snow and glaciers is the reason for the occurrence of flooding. Unlike normal flows, the flood is not as a continuous flow, but in the manner of individual waves. It also brings with it hundreds of tons, in some cases millions of cubic meters of adhesive mass. The size of individual stones and fragments reaches 3-4 m in the transverse. Once the flood has hit the barrier, it will overtake them and become more powerful [1].

Materials and methods

The natural phenomena which produced flooding that is formed to:

- clouds rain;
- rapid pounded in the rain are high;
- continues the long run, the rain;
- snow, glaciers and mountain ranges;
- results can show the rest of lakes to be washed.

General information on various natural phenomena formed as a result of the flooding that has a 1-in the table identifies.

Table-1. The number of different events, which is formed as a result of flooding

n	The form factors of flooding	Be observed in relation to the number of total, %
1	Brilliant, high-toned as well as long-term and continued in the rain	84
2	Snow melt	6,0
3	Rain and hail	4,4
4	Snow melt and rain	3,5
5	Dam washout	0,9

6	Hail	0,7
7	Of ice lakes washing	0,4
8	Other events	0,1
	Total	100

The spread of flood events in the conditions of Uzbekistan, the term of to track them, dangerous regions, such as the number of flood events differs. Here's pieces t. a., d. d. Nurbaev, V. Trofimov and a. g. n. E. S. chu and Merkushin, Yu.A. Cited by Plotniskaya until 2006, Uzbekistan flood events, and to track their spread of the period, the data on dangerous regions follows.

Table-2. Flood risk zones in the territory of Uzbekistan, and the number of pools of water that are available in their area.

n	Regions and geographic areas	Number of pools of water	The area of the water km ²
1	Surkhandarya	128	1100
2	Kashkadarya	154	1350
3	South fergana valley	25	720
4	North of the ferghana valley	55	3570
5	Tashkent, Syrdarya and Jizzakh	160	15000
6	Samarkand and Navoi	187	3500
	Total	709	53770

As can be seen from the table, we can see that the total area of Uzbekistan is 448 thousand km², of which the "active" regions of flooding 12%. At the same time, let's show that the number of water bodies in which flood formation is observed is 709 [1].

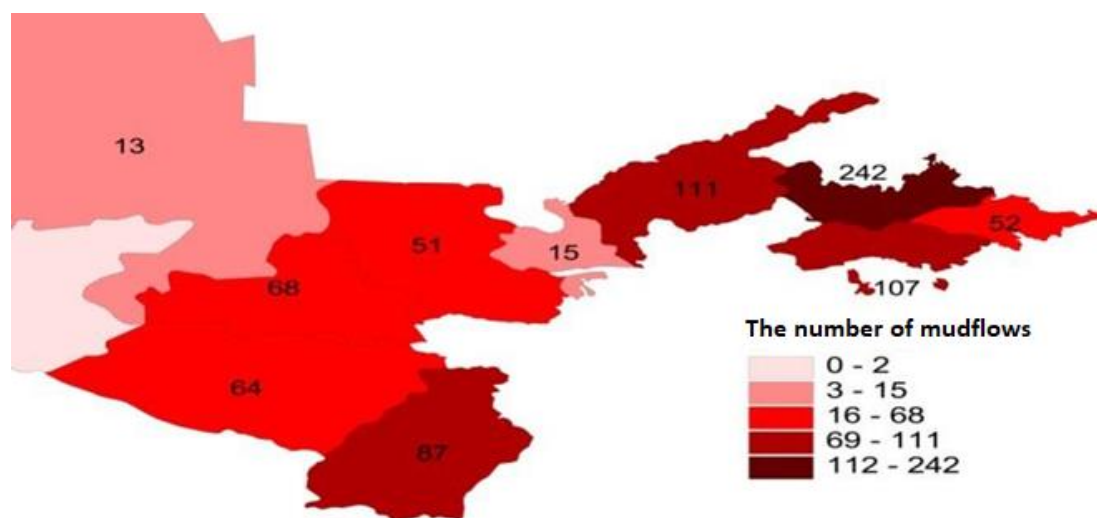


Figure-1. Areas under floodplain in the Republic of Uzbekistan

In order to prevent various damage and risks from flooding of human and farm objects, Uzgidromet specialists annually register settlements, farms and various structures located on the territory of Uzbekistan. Information about such flood risk areas is presented in the table below.

Table-3. The risk of flooding in the territory of Uzbekistan that are available economic, technical objects and the number of observed floods, (%)

n	Regional	The observed flood, %	Agriculture	Technical objects
1	Andijan	7	10	51

2	Djizzak	7	49	4
3	Kashkadarya	12	18	34
4	Navoi	2	502	-
5	Namangan	19	76	-
6	Samarkand	12	14	8
7	Surkhandarya	13	42	-
8	Sirdarya	2	33	-
9	Tashkent	12	76	16
10	Fergana	14	185	7
	Total	100	936	120

The description of the change in the time unit of flood floods of rivers and streams in the mountainous and slope regions has not been sufficiently studied, despite the fact that it is of practical importance. One of the main reasons for this is the lack of automated hydrometric measuring instruments that currently record flood flows, it can be explained that due to the randomness of the formation of flood floods from the second side and its unexpectedly short observation, it is impossible to measure the change (hydrography) of the flood flow over time. At the same time, the river in the regions of the Highlands and adyr was able to measure the flood flows in the shadows by specialists their hydrographs near it (North Fergana Valley mountain rivers and Andijan small mountains, including Beshbuz slope).

The analysis of hydrographs of these flood flows is characterized by a sharp rise in flood consumption in a short time from their ordinary floods and a long-lasting decrease. This ratio is markedly different from floods in rivers with stream. If the rise in water consumption from ordinary floods is 1:1 or 1:3 compared to the decrease, then in the slope streams this amount is equal to 1:3-1:6 and in the mountain rivers 1:7-1:11 [2].

Results

As a result of the feedback mentioned above and the processing of data from existing hydrographs, it was found that the hydrograph has a link between the observation time (T) and the maximum consumption Q_{cm} of the flood.

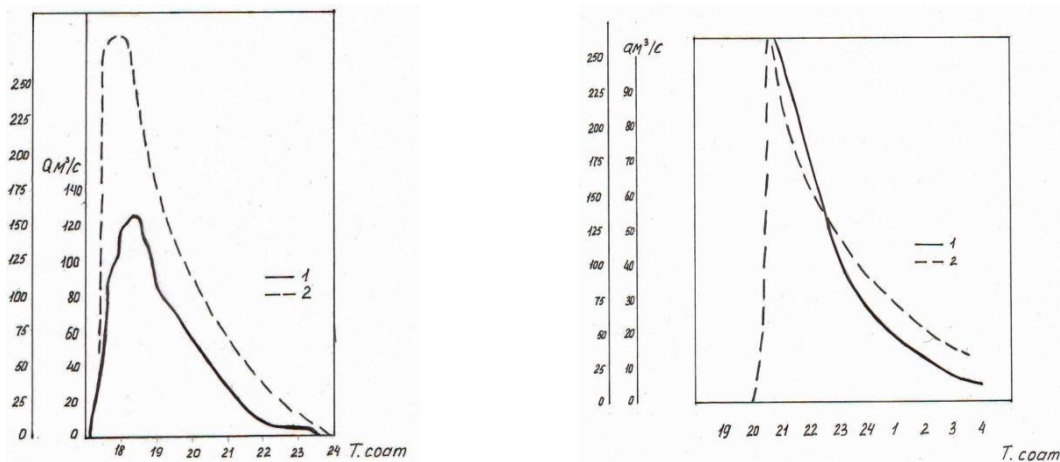


Figure-2. Hydrographs of floods observed on the 13th (may 5, 1973) of the Pentateuch slope (June 24, 1967):
1-flood flow consumption; 2-turbidity of flood flow.

In the conditions of Uzbekistan, it is important to choose ways to protect against floods in places where the land used in lowland lands is mainly developed, the mountainous lands are involved in agricultural work, the territories are located mainly at altitudes of 900-2000m. Including the establishment of floodplains on the banks of rivers and streams, the use of agrotechnical equipment in the conduct of flood floods on the slopes of the Highlands and small mountains the construction of mountain ditches and the use of carcass fences and flood warehouses built on the plains [3].



Figure-3. 2012-happened in the territory of the republic of the year on May 10-16 flood flows

For the purpose of evaluating flood flows and quantitative indicators of specific floods in objects affected by flood events, including hydrotechnical structures and water-conducting structures in them, it is recommended to select control points in Rivers and streams where the flood is observed and conduct seasonal and regular hydrological, hydrometric, geological and geodesic monitoring in these nuances.

Conclusion

To fully ensure the forecast of flood events in Uzbekistan, it is necessary:

1. Hydrometeorological stations and posts (145 hydropost and stations, 78 meteorological stations, 30 agrometeorological posts), including 18 international exchange Meteorological stations, 9 Hydrometeorological data exchange stations with CIS countries, the creation of a network of 10 cross-border monitoring.
2. Visual observations from the air with the aim of identifying lakes that are likely to crack in areas bordering the neighboring Republics of Kyrgyzstan and Tajikistan, where there is a risk of flooding.
3. Organization of specialized Expeditionary research.
4. The use of remote sensing techniques (space images of the NOAA 17, 18 satellites).

References

1. A.H. Paylaganov, S.H.Tulaganov. hydrology of floods and protection of highways from flood flows. Tashkent. 2014.
2. G.N.Trafimov, A.Ya.Isakova, R.T.Pirnazarov. Flood survey. T.2008.
3. F.K.To Kocher. Mudflow control in Uzbekistan. T. 1933.
4. Salikhova, D.X. Forecast povodkov I Fight against flood flows in Uzbekistan
5. D.X. Salikhova, L.F. Lyakhovskaya / / Tr. V All-Union. hydrol. congress T. 7. - L.: Hydrometeoisdat, 1989. - S. 350– 356.
6. Brief overview of floods and floods in Central Asia, 2006. – 44 p.