

**THE FLOOD PHENOMENON OBSERVED IN THE TERRITORIES OF OUR REPUBLIC
AND THE FIGHT AGAINST THIS PHENOMENON****Mamadaliyev Adkhamjon Tukhtamirzaevich***Namangan Institute of Engineering and Construction**I. Karimov street, Namangan district, 160103*

Abstract: *This article describes possible floods in our republic and measures to protect the population from them, as well as how the population should act in the event of such an emergency.*

Key words: *Flood, heavy downpour, damage to reservoirs, damage to hydrotechnical structure, snowmelt, flood risk.*

In mountainous areas, runoff from rainfall and melting of existing snowpack moves rock fragments and begins to flow downwards. As a result of such water flows coming out of streams and rivers and merging with each other, they create a single flow with great power, which is known in the literature as a flood. Approximately 50-60 percent of the mass of the flood consists of various rock fragments, mineral particles, salt solutions, and various plant bodies, and it moves rapidly from the mountain to the foothills. So, the occurrence of a flood flow depends on the amount of rain that falls in this region, its speed, and the amount of sedimentary rocks collected on the mountain slopes. At the same time, the main reason for the emergence and development of the flood phenomenon is the steepness of the mountain slopes compared to the river valley (the slope should not be less than 0.1°) and the lack of vegetation on the mountain slopes. Because the steeper the mountain slopes and the poorer the vegetation, the less rain is captured, the greater the speed and erosion force of the resulting water flow.

Various emergency situations lead to the death of people, damage to their health or the natural environment, cause serious material losses, and disrupt people's living conditions. Of the natural disasters that can occur in our republic, we pay special attention to floods, floods, snow and landslides, because the geographical location and climatic conditions of the territory of Uzbekistan create the basis for the occurrence of floods, avalanches, landslides and floods.

In order to timely and effectively organize work on the protection of the population and territories from emergency situations related to floods and torrents, as well as to quickly end their possible consequences, the President of the Republic of Uzbekistan dated February 19, 2007 "Prevention of emergency situations related to floods and torrents and on measures to eliminate their consequences" with Decision PQ-585 "Regulation on the procedure for organizing work on the prevention of emergency situations related to dangerous hydrometeorology and the termination of their consequences" and "On the safe passage of flood waters and flood flows organization of

the main tasks and activities of the government commission against floods in order to ensure the protection of ministries, departments and local authorities in relation to floods, torrents, avalanches and landslides the functions of preventing fire situations and eliminating their consequences were defined.

A natural disaster is an emergency situation that occurs suddenly in nature, as a result of which people's normal living and working conditions are disturbed, people die, farm animals and property are lost. will be observed. Flooding is also the most dangerous natural disaster. A flood is a flooding of lands, settlements and roads in certain areas as a result of a sudden rise in the water level of rivers, lakes and reservoirs due to atmospheric precipitation exceeding the norm.



Figure 1. Negative consequences of floods

Heavy rains, sudden melting of snow, strong winds, accumulation of ice in rivers and damage to water reservoirs are the factors that cause floods. Taking this into account, before the flood occurs, the population should carry out construction works in places where there is a risk of flooding only with the permission of the state authorities, after receiving information about the flood, turn off the gas and electricity networks and take valuables to safe places. , they will have to pay attention to prepare food, clothes, medicines and rescue equipment and to get to safe places quickly according to the predetermined route.

Electricity, communication transmitter and ameliorative in case of flood systems also fail, livestock, agricultural crops, raw materials, fuel, food, mineral fertilizers disappear or become unusable. Floods are also frequent in Uzbekistan. For example, in 1992-1995, in Khorezm, Bukhara, Surkhandarya, Kashkadarya, Jizzakh, Syrdarya and other regions, very large cultivated areas were flooded, causing great material damage.

On the first day of May 2021, at around 555 am, after five days of rain, the Sardoba reservoir in the Syrdarya region collapsed and flooded the surrounding cotton fields and inhabited villages. As a result, it was said that six people died, 35 thousand hectares of land were flooded in Uzbekistan and Kazakhstan, and at least 111 thousand people were moved to safe places. During the next 10 years, floods caused by heavy rains are also frequently observed in European countries.

Flooding is also observed as a result of the failure of canals and reservoirs for various reasons. Today, there are about a thousand reservoirs with a total water capacity of more than 1 million m³ in the territory of the CIS countries, and their water level is equal to 116,000 km². There are also 53 reservoirs in the territory of Uzbekistan, 10 of which are located on the

borders of neighboring countries. For example: Qairaqum and Rogun are located on the border with Tajikistan, Tuyamoyin with Turkmenistan, Tokhtagul with Kyrgyzstan, Chordarya with Kazakhstan.

More than 55.5 billion cubic meters of water are stored in reservoirs located in the territory of our republic, which are used to irrigate agricultural crops. If such hydrotechnical structures are damaged for some reason, a lot of damage can be caused by its water. For example: 2.1 km³ of water is stored in Charvoq reservoir. If this reservoir breaks, the 8-meter-thick water in it will move at a speed of 46 km per hour and will completely flood Bektemir, Hamza, and Sergeli districts of Tashkent city, and partially flood Mirabad, Mirzo Ulugbek, and Yakkasaray districts. Also, if the Qairokqum reservoir is damaged, 4 km³ of water in it will flood Jizzakh, Syrdarya, Samarkand and Bukhara regions. If the Mobodo Togtagul reservoir is damaged, the 19 km³ of water stored in it may flood the entire regions of the Fergana Valley. The same can be said for other reservoirs.

Therefore, it is necessary to take all kinds of precautionary measures to protect reservoirs from various disasters. Such precautions can include protective measures such as the construction of primary and secondary dams, the use of reinforced concrete structures in the construction of dams.

Hydrotechnical structures can be damaged for the following reasons. These include damage caused by strong natural events (earthquakes, landslides, heavy floods, dam washes caused by heavy rains), wear and tear of hydraulic equipment, and errors in the design and construction of hydraulic structures. .

Before evacuation, every citizen should leave the house where he lives in a safe condition and take with him the necessary documents, money, food and drinking water. A person caught in a flood should swim across the current to a low-lying shore without losing himself, that is, without getting confused.

After the flood has passed, citizens should return to their permanent places of residence and take measures to eliminate the consequences of the flood. Such measures may include:

- removing water from flooded areas;
- removing water from the basement of houses;
- restoration of household and energy networks, roads, bridges, etc.;
- demolition of irreparable structures, houses and cleaning of those places;
- cleaning crops from water.

Humans have always struggled with floods and their damage since the distant past. In order to protect the areas that are expected to be damaged by the flood disaster, they threw branches, beams, and piles, and built stone walls, dams, and dams. Current flood control measures are based on scientific and practical conclusions based on long-term observations and are mainly divided into two types:

1. Engineering measures, including:

It is true that it limits the spread and overflow of the flood flow including shafts, steel, concrete walls, ditches, as well as the construction of flood barriers along the slopes of the mountain, retaining stones and mud.

2. Agromelioration, agrotechnical measures, including:

In the first zone where the flood occurs, planting trees and planting forests, strictly prohibiting the cutting of existing trees, dividing the mountain slopes into terraces, and carefully draining the rain and snow water collected on these terraces into the river valley through ditches.

In conclusion, it can be said that in the event of a flood, if the movement of the population is organized as mentioned above, first of all, people will survive, electricity, communication transmitters and meliorative systems will also fail, agricultural crops, raw materials, fuel, food, mineral fertilizers are prevented from disappearing or becoming unusable

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