

Presentation on the topic "Flooding"





Flooding is the significant flooding of a certain territory of the earth as a result of an increase in the level of water in a river, lake, reservoir or sea, causing material damage to the economy, the social sphere and the natural environment.



There are four main types of floods:

1. FLOOD IS A RECURRING, FAIRLY PROLONGED RISE IN WATER LEVEL IN RIVERS, USUALLY CAUSED BY SPRING MELTING OF SNOW ON PLAINS OR RAINFALL. IT FLOODS LOW AREAS OF THE TERRAIN. FLOOD CAN TAKE A CATASTROPHIC CHARACTER IF THE INFILTRATION PROPERTIES OF THE SOIL ARE SIGNIFICANTLY REDUCED DUE TO OVERSATURATION WITH MOISTURE IN THE FALL AND DEEP FREEZING IN THE SEVERE WINTER.
2. FLOODING IS AN INTENSIVE RELATIVELY SHORT-TERM RISE IN THE WATER LEVEL IN THE RIVER, CAUSED BY HEAVY RAINS, DOWNPOURS, AND SOMETIMES BY THE RAPID THAWING OF SNOW DURING THAWS. UNLIKE FLOODS, FLOODS CAN BE REPEATED SEVERAL TIMES A YEAR. A SPECIAL THREAT IS THE SO-CALLED FLASH FLOODS ASSOCIATED WITH SHORT-TERM, BUT VERY INTENSE DOWNPOURS, WHICH OCCUR IN THE WINTER DUE TO THAWS.
3. MOORING - CLOGGING THE CHANNEL WITH A FIXED ICE COVER AND A HEAP OF ICE FLOES DURING A SPRING ICE DRIFT IN THE CONSTRICTIONS AND ON THE BENDS OF THE RIVER BED, RESTRAINING THE CURRENT AND CAUSING A RISE IN THE WATER LEVEL IN THE PLACE OF THE ACCUMULATION OF ICE AND ABOVE IT. MASH FLOODS ARE FORMED AT THE END OF WINTER OR EARLY SPRING, AND ARE DUE TO THE NON-SIMULTANEOUS OPENING OF LARGE RIVERS FLOWING FROM SOUTH TO NORTH. THE EXPOSED SOUTHERN SECTIONS OF THE RIVER IN THEIR CURRENT ARE FLOODED BY THE ACCUMULATION OF ICE IN THE NORTHERN REGIONS, WHICH OFTEN CAUSES A SIGNIFICANT INCREASE IN THE WATER LEVEL. MASH FLOODS ARE CHARACTERIZED BY A HIGH AND RELATIVELY SHORT-TERM RISE IN THE WATER LEVEL IN THE RIVER.
4. ZAZHOR - ICE CORK, ACCUMULATION OF INTRA-AQUATIC, LOOSE ICE DURING WINTER FREEZE-UP IN THE NARROWINGS AND ON THE BENDS OF THE CHANNEL, CAUSING WATER TO RISE IN SOME AREAS ABOVE THE LEVEL OF THE MAIN RIVER BED. ZAZHORNIE FLOODS ARE FORMED AT THE BEGINNING OF WINTER AND ARE CHARACTERIZED BY A SIGNIFICANT, BUT SMALLER THAN IN THE MASH, RISING WATER LEVEL AND A LONGER DURATION OF FLOODING.



Classification of flood damage:

Low (SMALL)

THEY ARE OBSERVED MAINLY ON FLAT RIVERS. ALMOST DO NOT DISTURB THE RHYTHM OF THE POPULATION'S LIFE, BUT CAUSE MINOR MATERIAL DAMAGE. THE FREQUENCY OF THEIR RECURRENCE APPROXIMATELY ONCE IN 5-10 YEARS.

High (LARGE)

THEY CAUSE TANGIBLE MATERIAL DAMAGE, COVER RELATIVELY LARGE LAND AREAS OF RIVER VALLEYS. SIGNIFICANTLY VIOLATE THE ECONOMIC AND HOUSEHOLD WAY OF LIFE. MAY LEAD TO PARTIAL EVACUATION OF PEOPLE. REPEATABILITY IS ABOUT 20-25 YEARS.

PARTICULARLY DANGEROUS

THEY CAUSE GREAT MATERIAL DAMAGE, COVERING ENTIRE RIVER BASINS. SOME SETTLEMENTS ARE FLOODED. THEY PARALYZE ECONOMIC ACTIVITY AND SHARPLY DISRUPT THE WAY OF LIFE OF THE POPULATION. THEY LEAD TO MASS EVACUATION OF THE POPULATION AND PROTECTION OF THE MOST IMPORTANT ECONOMIC OBJECTS. REPEATABILITY IS ABOUT 50-100 YEARS.

CATASTROPHIC

THEY LEAD TO DEATH OF PEOPLE, IRREPARABLE ECOLOGICAL DAMAGE, CAUSE MATERIAL DAMAGE, COVERING HUGE TERRITORIES WITHIN ONE OR SEVERAL WATER SYSTEMS. MANY SETTLEMENTS, INDUSTRIAL ENTERPRISES AND UTILITIES ARE FLOODED. AT THE SAME TIME, ECONOMIC AND PRODUCTION ACTIVITIES ARE COMPLETELY PARALYZED, THE LIFE STYLE OF THE POPULATION IS CHANGING TEMPORARILY. THE EVACUATION OF HUNDREDS OF THOUSANDS OF PEOPLE, THE INEVITABLE HUMANITARIAN CATASTROPHE THAT REQUIRES THE PARTICIPATION OF THE ENTIRE WORLD COMMUNITY, THE PROBLEM OF ONE COUNTRY BECOMES A PROBLEM OF THE WHOLE WORLD.



Causes of floods



LONG-LASTING RAINS

SUMMER RAINS FALLING ON THE ABYSSINIAN PLATEAU LEAD TO THE FACT THAT THE NILE ANNUALLY FLOODS, FLOODING THE ENTIRE VALLEY IN THE LOWER REACHES - THIS FEATURE WAS NOTICED EVEN IN ANCIENT EGYPT AND WAS TAKEN INTO ACCOUNT IN AGRICULTURE, AS SPILLS BROUGHT FERTILE SILT AND FRESH FRESH WATER, BUT DESTROYED NOT HARVESTED BY THAT TIME. IT OCCURS MOST OFTEN IN EXTREMELY WET REGIONS WITH A HIGH LEVEL OF PRECIPITATION (FOR EXAMPLE, CHERAPUNJI), DRY REGIONS (DESERTS AND STEPPES), THIS PROBLEM IS EXTREMELY RARE, AS ARE REGIONS WITH MODERATE HUMIDITY.

THE MELTING OF THE SNOW


INTENSIVE MELTING OF SNOW, ESPECIALLY WHEN THE GROUND IS FROZEN, LEADS TO FLOODING OF ROADS. THE STRENGTH OF SUCH A FLOOD STRONGLY DEPENDS ON MANY FACTORS, SO IT CAN BE DIFFERENT - FROM THE MOST INSIGNIFICANT TO CATASTROPHIC. IT IS MOST OFTEN COMBINED WITH OTHER FACTORS.

THE TSUNAMI WAVE

ON THE COASTS AND ISLANDS, FLOODS CAN OCCUR AFTER THE TSUNAMI, AS A RESULT OF FLOODING OF THE COASTAL STRIP WITH A WAVE - FORMED DURING EARTHQUAKES OR VOLCANIC ERUPTIONS IN THE OCEAN. SUCH FLOODS ARE NOT UNCOMMON ON THE SHORES OF JAPAN AND OTHER ISLANDS OF THE PACIFIC OCEAN. IN LAKES AND BAYS, SUCH WAVES CAN ARISE AS A RESULT OF LARGE LANDSLIDES.

RAISING THE BOTTOM

ONE OF THE CAUSES OF FLOODS IS THE RISE OF THE BOTTOM. EACH RIVER GRADUALLY ACCUMULATES SEDIMENTS, IN RECESSES, IN ESTUARIES AND DELTAS. FLOODING IN THIS CASE OCCURS A FEW YEARS AFTER THE START OF THE PROCESS, HAS A SLOW NATURE, BUT IS EASILY PREDICTABLE AND REMOVABLE BY DREDGING AND CLEANING WORKS.



Ways to prevent floods

THE MOST EFFECTIVE WAY TO COMBAT FLOODING ON RIVERS IS TO REGULATE RIVER FLOW BY CREATING RESERVOIRS. THEY EVEN OUTFLOW OF THE RIVER, MAKING IT LONGER IN SUMMER AND LESS IN SPRING THAN IN ITS ABSENCE. TO COMBAT FLOODS ON THE SEASHORE, DAMS ARE USED. ANOTHER WAY TO DEAL WITH FLOODS IS TO DEEPEN THE ROLLING OF OTHER SHOALS. TO PROTECT AGAINST FLOODING, WHEN MELTING ICE ON RIVERS, DYNAMITE (OR OTHER EXPLOSIVE) IS MOST OFTEN USED, WHICH IS EXPLODED IN CERTAIN PLACES OF THE RIVER, WHICH, BY DESTROYING HUMMOCKS, ALLOWS WATER TO FLOW FREELY AND TO DIRECT IT IN THE RIGHT DIRECTION.





Thank you for watching.