

Natural Disaster Risks

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The article presents a modern assessment of the danger and risks of natural disasters in the world. At the same time, the causes of catastrophic victims and damage are highlighted and the dynamics of damage caused by natural disasters is presented. The statistics of the occurrence of natural disasters in the territory and dynamics of emergency situations of a natural nature are presented. Global climate change and its turbulence, causing ice melting and rising ocean levels, reducing Earth's biodiversity, desertification, unlimited consumption of natural resources along with pollution of water, soil, air, clearly indicate serious threats to the planet caused by uncontrolled human activities.

We humans willingly believe that we have conquered our planet. At first glance, this is so indeed. We have laid an endless network of convenient roads and steel highways across the earth, biting into its bowels and extracting ore, oil, gas and coal, flying high on airplanes and rockets, there has never been any gravity. And the earth patiently endures all this. Currently, there are many natural disasters all over the world - large or small, causing the destruction of residential buildings, industrial facilities, agricultural land, destroying cultural monuments and bringing a lot of human suffering and sacrifice. These disasters occur around the world - in Europe, Asia, America, and Australia. They occur in a variety of countries - rich and poor, highly developed and developing, in countries with stable situation and in countries where the socio-political situation is turbulent.

All over the world, natural disasters lead to the destruction of material assets, injuring and killing people. Elemental forces not controlled by humans cause catastrophes and enormous damage to the Earth's population. According to the UN, on our planet, the elements have claimed more than 3 million human lives over the past 20 years. During this period about 1 billion people have experienced the effects of natural disasters on our planet. Up to 1,500 earthquakes occur on Earth every year, 300 of which are devastating. There are 1,500 active volcanoes in the world. About fifty volcanoes erupt every year, throwing steam, ash, toxic gases and lava into the environment. The most common natural hazards in the world are floods and tropical storms (32%), as well as earthquakes (12%). Other natural hazards constitute 24%. Tsunami is the most terrible natural disaster with regard to tragic consequences. Asia (38%) and North and South America (26%) are the continents the most exposed to dangerous natural processes, followed by Africa (14%), Europe (14%) and Oceania (8%).

To realize the horror that comes from natural disasters, it is enough to cite data on the largest of them that occurred in the twentieth century and the beginning of the XXI century. According to the regulation of the UNESCO International Rescue Organization, deaths are considered to be deaths from 1,000 to 1 million people, and on a particularly large and catastrophic scale, more than 1 million people. Over the past century 3 million people have died from floods, earthquakes - 1 million people, hurricanes, cyclones, typhoons - 1 million people according to UNESCO. These figures are the sum of the large victims of the earthquake in China (more than 300 thousand dead), Armenia (more than 20 thousand), we add to them the number of victims of the earthquake on the island of Haiti (230 thousand), from the tsunami on the coast of Indonesia



(more than 100 thousand). According to official figures, every one hundred thousandth person dies from natural disasters on the whole planet. Other estimates show, the number of victims from them in the past 100 years is 16 thousand annually. Is it a lot or a little? From the point of view of impartial statistics, the numbers would seem to be scanty: that there are one million deaths from earthquakes and hurricanes in a hundred years per planet population, which is predicted to exceed 7 billion in the near future. Extreme drought in 2002, 2003 and especially the catastrophic drought in 2007 caused a great deal of damage, when the amount of property damage amounted to about 1 billion US dollars. The 2012 drought also caused significant damage to the national economy.

Each year, 50–70 volcanoes erupt in the world. In total, 1343 volcanoes erupted over the past 10 thousand years have been identified in the world. Catastrophic volcanic eruptions change the terrain, affect the climate, destroy vegetation, wildlife, destroy cities and cause death. In recent years, volcanologists have discovered “super volcanoes” on Earth that can erupt hundreds and thousands of times more powerful than the most powerful volcanoes. The power of eruptions of "super volcanoes" can vary, radically change the landscape and significantly affect the global climate, causing disastrous consequences for life. The last eruption of the "super volcano" occurred 27 thousand years ago on the North Island of New Zealand. It formed Lake Taupo; 1170 km³ of ash were thrown out.

The territory of Moldova, in terms of its geographical location and natural features, is most often exposed to such natural risks as earthquakes, landslides, floods, heavy rains accompanied by hail and thunderstorms, heat, droughts, heavy snowfalls, early frosts in the fall or late spring, massive ice deposits. Hurricanes, severe drought and extreme floods occurred in the summer of 1994 resulted in numerous casualties (47) and large material losses in the national economy, which, according to official estimates, amounted to more than 2 billion Moldovan lei. In 2008, catastrophic floods due to torrential rains occurred in Moldova. They caused serious damage to households and the infrastructure adjacent to the Prut and Dniester rivers. Significant damage was caused by floods in the summer of 2008 and 2010, when Moldova experienced the most severe floods in the last two centuries. Large agricultural areas that were a source of income for hundreds of people are still under water.

The ultimate goal, disaster risk reduction, should be achieved through a combination of structural and non-structural measures that are aimed at preparing for emergencies (e.g. raising awareness, early warning systems, etc.), integrating risk information into long-term land use planning and identification of the most cost-effective risk reduction measures

In conclusion, it should be noted that a person, in any case, needs to think about preserving and improving his biological nature in the face of an ecological crisis already threatening the life of people. Meanwhile, the ways and means of accomplishing this task, which the humanity will face in the near future, are completely unknown, they are little affected by scientists, politicians and the public. But it is quite clear that the impending ecological catastrophe requires the development of fundamentally new strategies for the scientific, technical and social development of mankind, and strategies for activities that ensure co-evolution of man and nature.