



Social factors of avalanche catastrophes and mapping of avalanche hazard and risk

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The analysis of world statistics of the data on snow avalanches shows, that quantity of catastrophes, at least, is not reduced. The reasons can be both features of avalanche regime (avalanche activity) of different regions, and character of behavior of the person in mountain countries.

Two groups of countries are recognized in social structure of victims. In the first group tourists predominate among avalanche victims. This is the countries with old traditions of struggle with avalanches, where the serious attention is given to the measures of protection of the local population both economic complex and countries, in which the economic activity is not distributed highly in the mountains. There is no direct relationship between the quantity of victims and a total number of people located in mountain regions. In the second group of countries the local inhabitants predominate among avalanche victims. It is more often the countries that have no capabilities to conduct expensive anti-avalanche measures. In this group the essential factors are density of population and roads, intensity of the transport moving.

The problem of avalanche hazard and risk estimation and mapping is not finally solved. Great amount of death's, associated with avalanches have been reported in different mountain regions. Separate events, for example, the winter of 1998-99, when a couple of avalanche accidents happened in the Alpine countries, have shown the imperfection of modern methods of the avalanche danger estimation. This problem appears to be more serious especially in the conditions of the climatic changes.

We have analyzed the content of avalanche maps and its accordance to their titles and it was determined that these maps do not correspond to the real danger and a lot of necessary parameters were not taken into account. As far as risk estimating and

mapping is held for people's sake, it is necessary to consider the human factor while mapping, such as population density, distribution of different linear objects and so on. So we offered the new approach to the avalanche hazard estimation and mapping taking into account the level of the territory industrial development. For this purpose we compiled the new avalanche map of Russia. One of the contemporary methods of the map legend creation was used.

The composed maps give an indication of the character of influence of avalanches on activity of the person and allow to reveal regions of prime realization of anti-avalanche measures.