Discussion of possible forecasts of a multifactorial emergency situation

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Abstract

Recently, great tragedies have occurred, which are caused by the coincidence of various factors in time and in locations. Failure to take into account the fact that different events will coincide in time and location is an error in the forecasting method, since such situations require the use of parallel data, which we will discuss here. The article gives a specific example of the coincidence of 5 natural geological and hydrometeorological events and shows how a natural disaster could have been avoided using a new forecasting method.

The relevance of the problem is determined by the fact that the modern period is characterized by the development of global problems, potentially leading to emergency situations, both in the natural, man-made, and social spheres. These include global climate change, the permanent growth of the technogenic sphere, the problems of terrorism, the negative phenomena caused by globalization, and others. It is necessary to pay considerable attention to the issues of life safety, technosphere safety, ecology, environmental protection and, in this regard, forecasting of crisis and emergency situations of a natural and man-made nature and their consequences. Planning and making adequate management decisions in the field of ensuring safety, preventing and reducing the consequences of emergency situations is impossible without solving forecasting problems.

We consider a new system for predicting the risks of natural processes, which is based, on

the one hand, on parallel data, and on the other hand, on models for predicting events belonging to different areas, but coinciding with each other in time and locations. In addition, it should be noted that if there are no models of different areas, then experts are used for forecasting, who estimate the risk of certain events in%. When using parallel data, a fairly high reliability of the forecast is obtained, which makes it possible to reduce risks or avoid them altogether.

Keywords: forecasting, risk analysis, emergency situation, forecasting methods, expert assessment.

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