



Risks of natural-technological accidents in the Russian Federation: analyzing the database

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In recent years, the number and severity of natural-technological accidents is increasing in many countries including Russia. The term “natural-technological” applies to both human-induced intensification of natural risks and any accidents in the technosphere triggered by natural processes or phenomena. The growth of natural-technological events is caused by the observed increasing in the activity and dimensions of various natural hazards as well as by the much more complicated structure of modern technological systems prone to natural hazard impacts and by increasing advancement of economic activities and population into areas at natural risk. We divided all natural hazards into two groups according to their distribution in space and time and their impacts on the technosphere and population. The first group includes global-scale solar disturbances and geophysical field anomalies. They can influence on the technosphere directly by causing electronic errors and automatic machinery failures and indirectly by inducing so called a “human factor”. Geological, climatic, hydrological, and other natural hazards belong to the second group. They mostly cause mechanical impacts on infrastructure and technological systems. The author created a database of natural-technological accidents occurring in Russia. The collected information allows us to analyze the main causes and triggers of accidents, their distribution within Russian regions and change in time and reveal “weak spots” to cope with. More than 90% of all natural-technological accidents in the RF are caused by hydro-meteorological hazards. The risk of natural-technological accidents was assessed within regions of the RF. Sakhalin region, Krasnodarsky and Primorsky territories are at the most risk.