



Natural And Technological Risk Assessment And Mapping In Russian Federation

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Natural and technological disasters are serious threat for residents and infrastructures in urban areas of the Russian Federation and many other countries. Disasters' risk assessment and mapping is the first step to minimize the negative consequences of such events. The paper analyzes different approaches for risk assessment: mathematical simulation and empirical one based on statistic data of past events' consequences. Special attention is paid to verification of vulnerability functions of elements at risk against natural disasters. Numerical modeling of the impact of landslides on the building with various design elements and foundation with CAD systems PLAXIS 3D application was used to identify additional loads on buildings. The results of simulation were taken into account when assessing risk for the Russian Federation territory.

The examples of natural and technological risk maps for some regions of the country are given. Verified vulnerability functions of buildings on pier foundation in tabular forms against landslides are presented, as well as verified vulnerability functions for different buildings type against floods.