



The criteria of heavy snowfalls in Russia

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Nowadays, unfortunately, the number of victims of natural hazards doesn't decrease in Russia. There are many reasons of that situation – both geographical and human. Russia is one of the most spread countries in the world and it has the big number of different types of natural phenomena, which can cause natural disaster.

One of the reasons is the fact that the criteria of which meteorological or hydrological hazards can cause an emergency situation are equal for the whole territory of Russia.

.And that's why many dangerous situations are underestimated. The analysis of the distribution of criteria in Russia shows that only temperature phenomena (such as frost or heat) have really space differentiation.

According to directive documents in Russia, the criteria of heavy snowfall in all the territory of Russia is 20 mm per 12 hours – from subtropical to arctic regions. But the socio-economical and climatic conditions are so different, that using this one criteria is not rational at all.

In the investigation held the author developed the method of differentiation the territory of Russia and proposed different criteria of heavy snowfalls for chosen regions. The method is based, on one hand on analysis of 30-years statistics of natural disasters in Russia, and on other hand on the analysis of the density of population and the mean quantity of precipitation in the cold period in Russia.

The geographical zoning of Russia was conducted and clusters with equal parameters were determined. That means that in these areas the same hydro meteorological characteristics can be used for. The new criteria for the number of natural phenomena (such as hail, snowfalls etc) were found.

The analysis of this criteria of heavy snowfalls showed, that on 70% the territory of Russia this criteria (20 mm per 12 hours) is overstated. In the most of the big cities (according to the statistics and calculated data) in different climatic regions this criteria should be much lower – from 8 to 10 mm per 12 hours.