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Anthropogenic pressure in mountain environment and related changes in snow avalanches and debris flows activity

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The anthropogenic change of underlying surface, as well as of quantity and quality of snow, related to construction and use of mountain resorts, affects various aspects of environment. The change in water balance of the mountain slopes due to artificial snow production results in change of vegetation. Wood cutting and slope preparation for ski runs affects snow avalanches and debris flows regimes. Analysis of examples of anthropogenic changes in heavily used mountain regions of Russia (Khibiny Mts., the Northern Caucasus) the conclusion is made that the anthropogenic effects on the snow cover, snow avalanches and debris flows activity are more pronounced than the possible effects of the climate change. It is necessary to take such effects into account in planning of future developing of existent and newly constructed infrastructure in mountain regions.