

Values at Risk Due to Avalanche and Rock Fall Hazard in Norway

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More than 6.7 % of the Norwegian land area features terrain steeper than 30 degrees. It is commonly assumed that these areas can be the source for both avalanches and rock fall. The building code in Norway states that new residential houses must not be built where the annual probability of avalanches exceeds 1/1000. During the last 20 years most of the exposed areas in the country were mapped with regards to the potential hazard. The maps show three zones of potential hazard with annual probability > 1/1000, not hazardous and not mapped. These maps cover ca. 80% of all areas that are exposed to hazards. In this analysis the maps were used together with the register of residents and houses to quantify the number of houses in and close to the hazardous areas. It was then assumed an average value per house to produce the total number of values at risk. Human lives and other values in the hazard zones were not included in this analysis. The results show that a considerable number of houses are exposed and that a slight change in the hazard zone extent will lead to a significant change in the number of exposed buildings. With regard to a potential climate change, this is an important issue for the evaluation of the societies future vulnerability.