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Natural hazard risk depending on the temporal variability of damage potential

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In recent years, risk analyses emerged as the appropriate method to assess natural hazards in mountain regions. The methodology is comparatively reliable in determining the hazard potential and the related probability of occurrence of defined design events, even if modelling approaches differ. So far, little attention has been given to the damage potential affected by those design events, especially concerning temporal changes. The damage potential, particularly the tangible asset, is subject to long-term changes due to the socio-economic development of mountain regions since the outgoing 19^{th} century. These long-term changes lead to variations in the resulting risk, dependent on the dimension of the individual hazard impact. Due to seasonal and diurnal variability of intangibles, short-term changes of damage potential interfere with those long-term developments. Since intangibles form an essential part of damage potential, significant differences in the values at risk could be observed. In this study, long-term as well as short-term shifts in the values at risk are presented for different study areas and on different scales. A conceptual framework for the consideration of those changes in risk analyses is developed, and possible explanations for different trends in different study areas are discussed. The spatial sensitivity of the results is highlighted.