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A regional hazard model for landslide into Norwegian lakes and fjords

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In Norway the possibility for landslides reaching lakes or fjords with a consequent tsunami is of major concern. Indeed three such events have taken place in Norway during the last century, resulting in the loss of 174 lives (Loen 1905, 1936 and Tafjord 1934). A regional model for analysis of this kind of hazard must consist of three main components: 1) Identifying potential release areas; 2) calculation of possible slide paths and; 3) estimation of slide properties at the points of impact. Since the model is a regional one it should rely on commonly available data. This, together with requirements for computational efficiency, greatly constrains the physical sophistication of our model. Using existing slides as field data the effect of various physical simplifications in regionally applicable flow routing algorithms is evaluated in order to asses the overall reliability of the model results.