



Observations of avalanches that have hit deflecting dams in Iceland in recent years

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Several dams for the protection of settlements have been constructed in recent years in Iceland as a part of a government plan to improve the safety of people in avalanche prone areas. A number of deflecting dams have been hit by avalanches in the few years that have elapsed since their construction. Altogether 11 avalanches have hit 6 deflecting dams since 1999. The avalanches have in all cases been successfully deflected away from the settlements. The outline of the tongue has been measured by GPS for all the avalanches. Most of the avalanches have struck during harsh weather and measurements of run-up on the dam sides have only been possible in two cases. Additional observations such as measurement of snow thickness in the tongue or fracture thickness in the starting zone were carried out for four of the avalanches. The deflecting dams have proven to be an effective protection against medium sized avalanches and they have completely changed the hazard situation for the respective settlements during severe avalanche cycles that have struck Iceland since their construction.