Mapping exposure to avalanche terrain

Cam P. Campbell

Canadian Avalanche Cantre, Vancouver, BC, Canada

During the winter of 2009-10, several signs were created in collaboration with British Columbia government agencies for winter trailheads. The centerpiece of these signs is a regional-scale map of surrounding terrain with slope- to basin-scale polygons shaded according to the Avalanche Terrain Exposure Scale (ATES). The use of ATES for slope- to basin-scale terrain classification is a departure from its intended use as a descriptor of the overall seriousness of a particular route. The ATES technical model is designed at basin- to regional- scales and needed to be supplemented for use at different scales.

Adequate accuracy was maintained on the low precision and large scale trailhead maps solely through supplementary subjective terrain assessments using expert judgement. But there is a demand for similar Google Earth based maps with limitless scale requiring much higher precision. So there is a need for a more deterministic method to apply ATES at slope- to basin-scales, instead of relying solely on judgement. This paper presents work done to-date, and discusses experiences and ideas for future noncommercial backcountry recreation avalanche terrain exposure maps.