

ATES Descriptive Model

	0 - Non-Avalanche (optional)	1 - Simple	2 - Challenging	3 - Complex	4 - Extreme
Slope angle <i>and</i> Forest density	Very low angle < 10° open terrain or steeper areas of dense forest	Low angle < 20° terrain or steeper slopes of dense forest with openings for runout zones or short slopes	Moderate angle < 30° open or gladed terrain <i>with some open slopes or glades > 35°</i>	Moderate to high angle < 35° terrain <i>with large proportions > 35° open slopes</i> and some isolated glades or tree bands	High angle, open terrain averaging > 35° <i>with a large proportion > 45° and few or no trees</i>
Slope shape	Straightforward, flat or undulating terrain	Straightforward undulating terrain	Mostly planar with isolated convex or unsupported slopes	Convoluted open slopes with intricate and varied terrain shapes	Intricate, often cliffy terrain with couloirs, spines and/or overhung by cornices
Terrain traps	No avalanche related terrain traps	Occasional creek beds, tree wells or drop-offs	Single slopes above gullies or risk of impact into trees or rocks	Multiple slopes above and/or risk of impact into trees, rocks or crevasses	Steep faces with cliffs, cornices, crevasses and/or risk of impact into trees or rocks
Frequency-magnitude (events: years)	Never	< 1:30 for ≥ size 2	1:1 for < size 2 1:30 to 1:3 for ≥ size 2	1:1 for < size 3 1:1 for ≥ size 3	~10:1 for < size 3 ~2:1 for ≥ size 3
Starting zone size and density	No known starting zones	Isolated small starting zones with < size 2 potential	Isolated starting zones with ≤ size 3 potential or several start zones with ≤ Size 2 potential	Multiple starting zones capable of producing avalanches of all sizes	Many very large starting zones capable of producing avalanches of all sizes.
Runout zone characteristics	No known runout zones	Well-defined path boundaries with smooth terrain where deposits fan out	Channelled terrain where deposits concentrate	Multiple runout zones converge into deep, confined gullies and/or steep tracks overhead	Fans, snow cones, deep gullies, cliffs and/or bergschrunds
Interaction with avalanche paths	No known exposure to avalanche paths	Minimal exposure crossing low frequency runout zones or short slopes only	Intermittent exposure managing a single path or paths with separation	Frequent exposure inside or under starting zones or to multiple overlapping paths	Sustained, continuous exposure inside or under starting zones
Route options	Designated trails or low angle areas with many options.	Numerous, terrain allows multiple choices, route often obvious	A selection of choices of varying exposure, options to avoid avalanche paths	Limited options to reduce exposure, avoidance not possible	No options to reduce exposure