

## Avalanche hazard prevention and control above highly frequented places and settlements in Slovakia



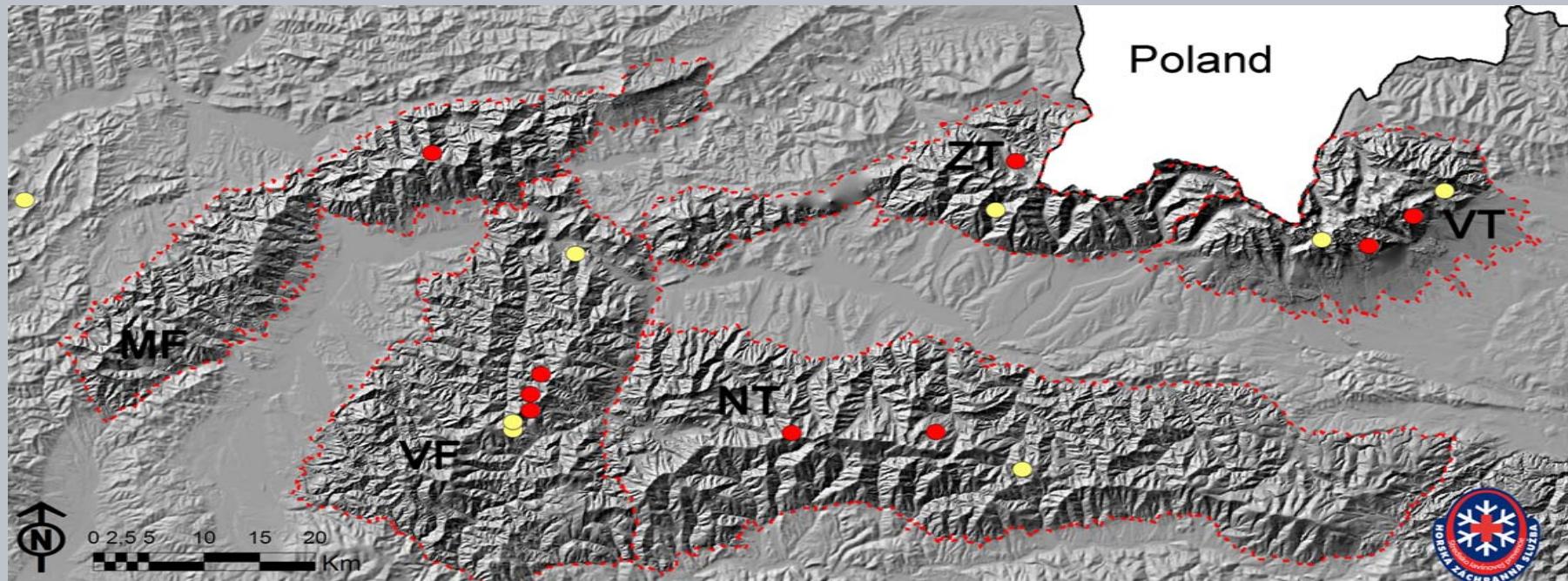
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# Aims

- Describe strategies, applied to mitigate the avalanche hazard above frequented places
- Introduce areas where avalanche hazard prevention is necessary
- Avalanche control by explosives



- Frequented places affected by avalanches
- Avalanche control with explosives

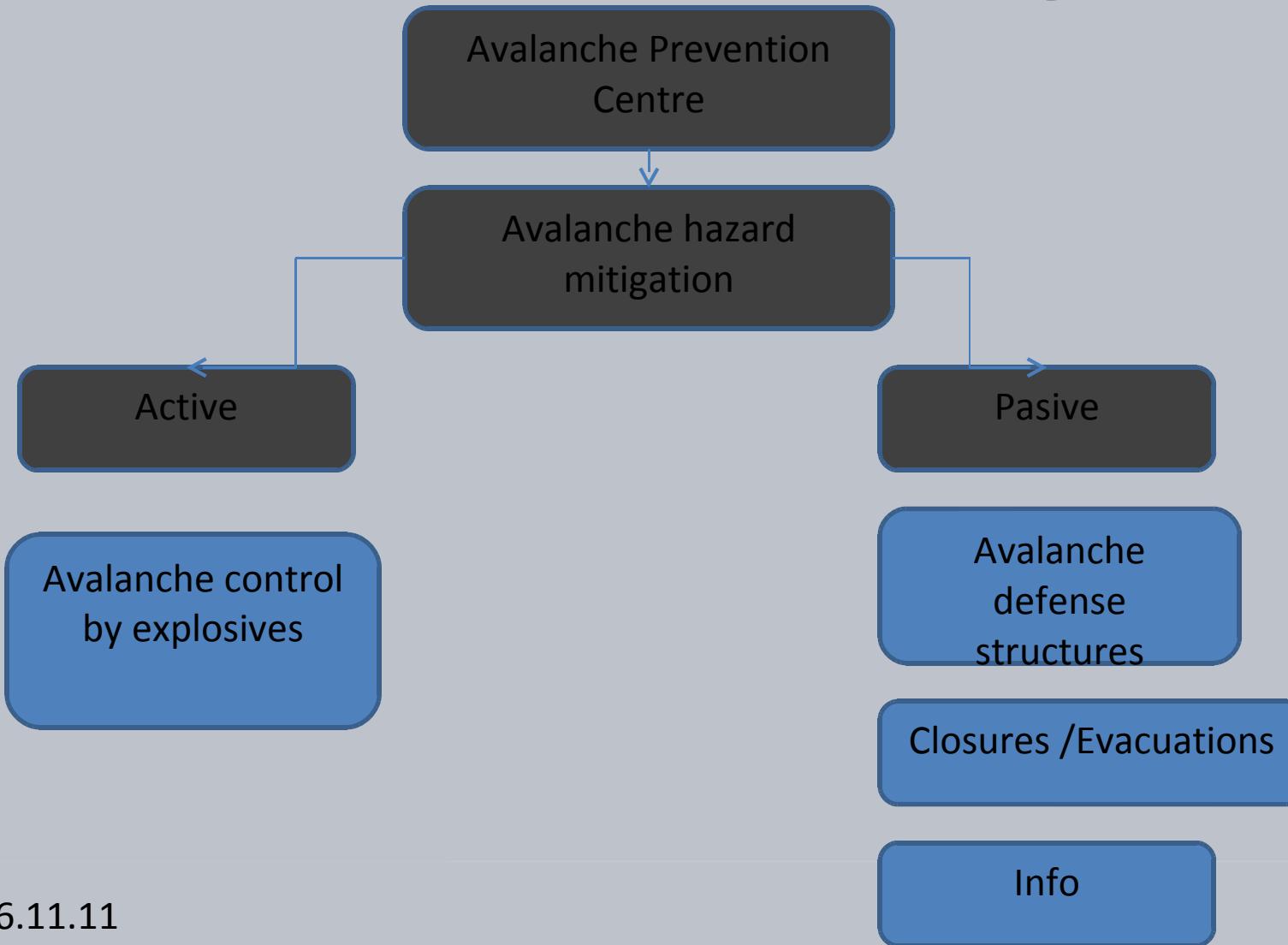
**Mountain areas:**

VT - Vysoké Tatry, ZT - Západné Tatry  
NT - Nízke Tatry, MF - Malá Fatra, VF - Veľká Fatra

[www.avalanches.sk](http://www.avalanches.sk)



# Avalanche hazard mitigation



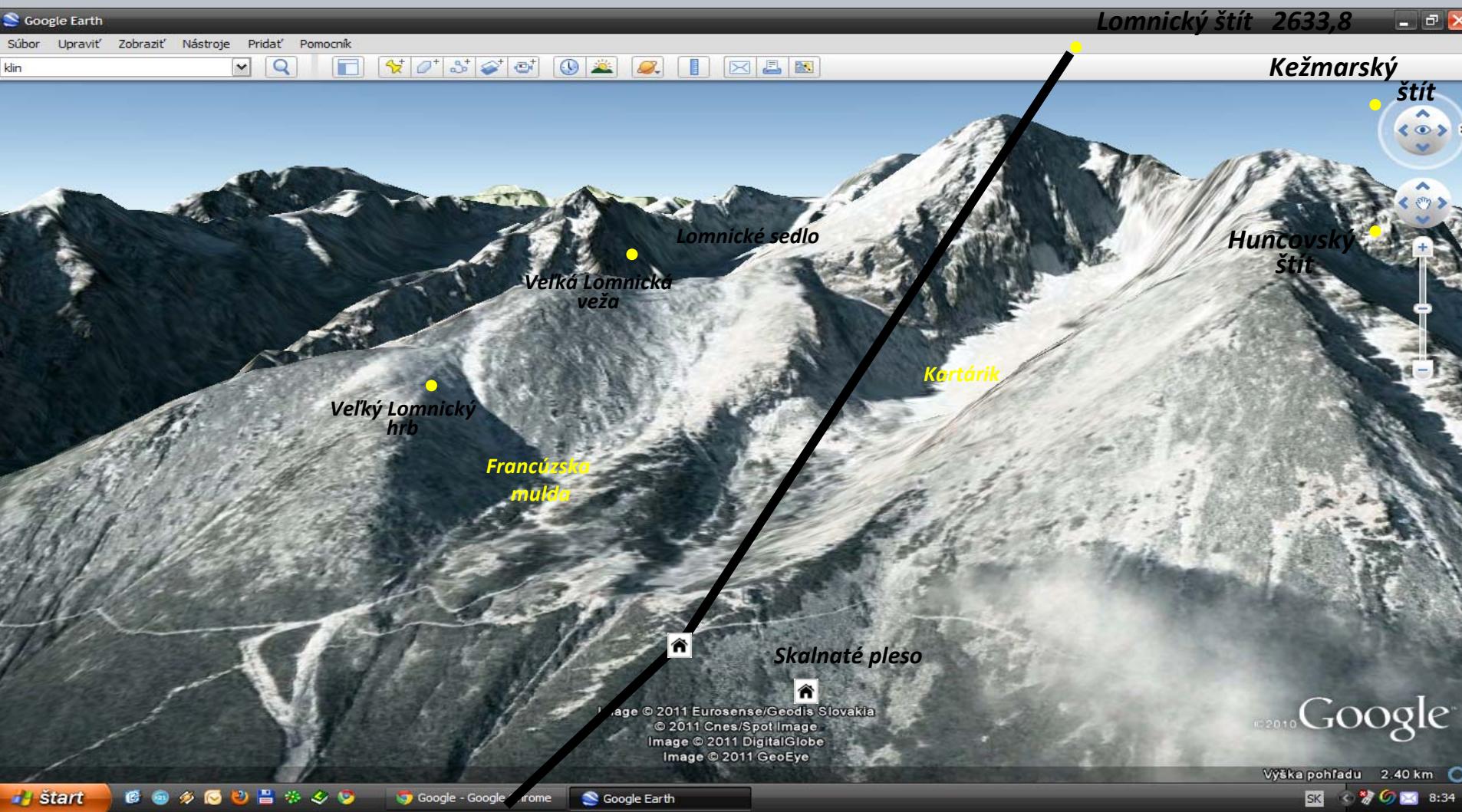
# Lomnické sedlo – High Tatras

- Frequently visited ski resort, off piste skiing
- High altitude resort, long ski season
- 1958 - avalanche accident, 4 fatalities
- Avalanche control:
  - snow defense structures

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# Lomnické sedlo – High Tatras







# Avalanche control with explosives

Plastic explosives (Danubit, Austrogel)

- Electro detonator, roving
- Velocity of detonation min.  $6000 \text{ m.s}^{-1}$
- Explosion temperature min.  $3130^\circ\text{C}$
- Impact sensitivity min. 3.5 J



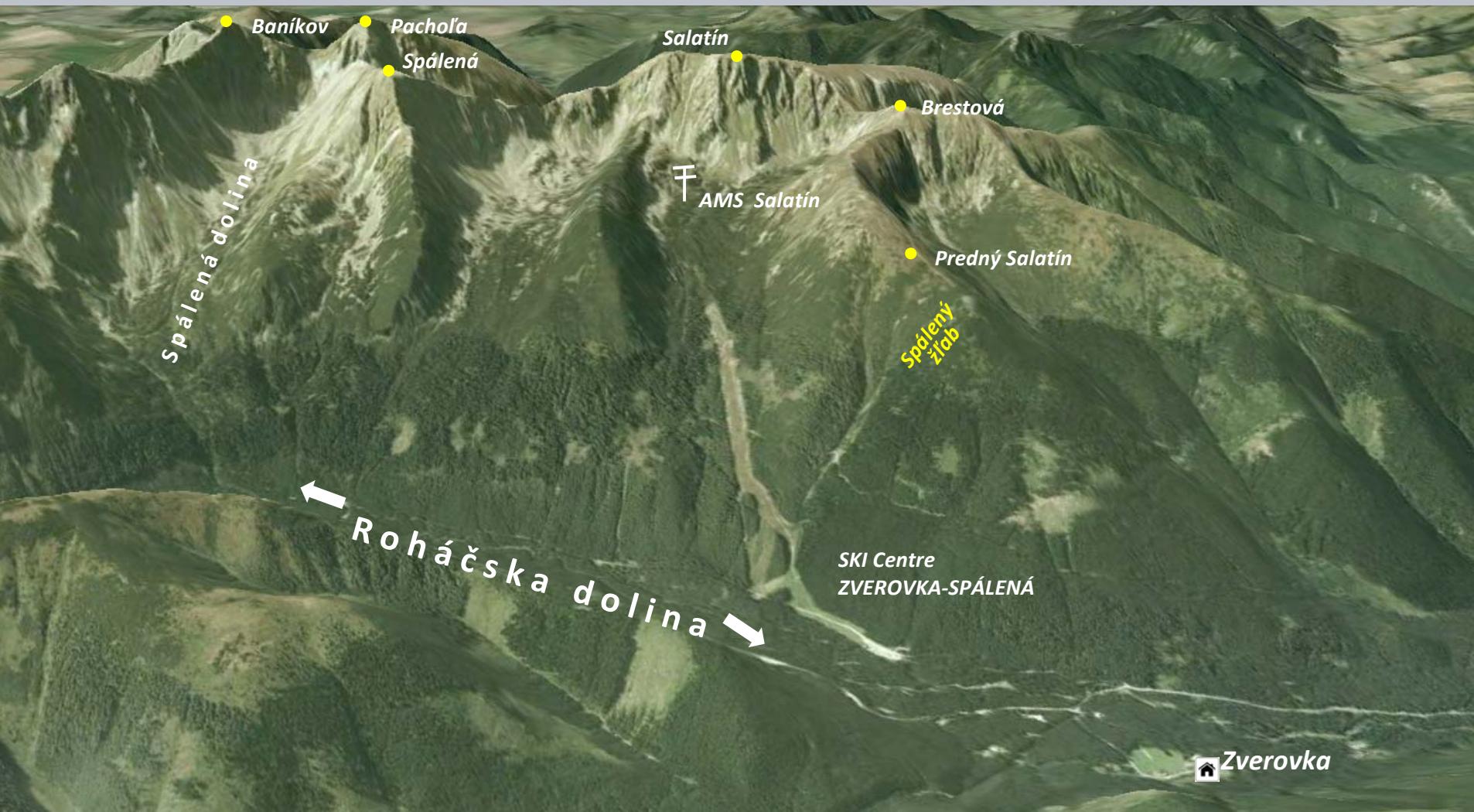




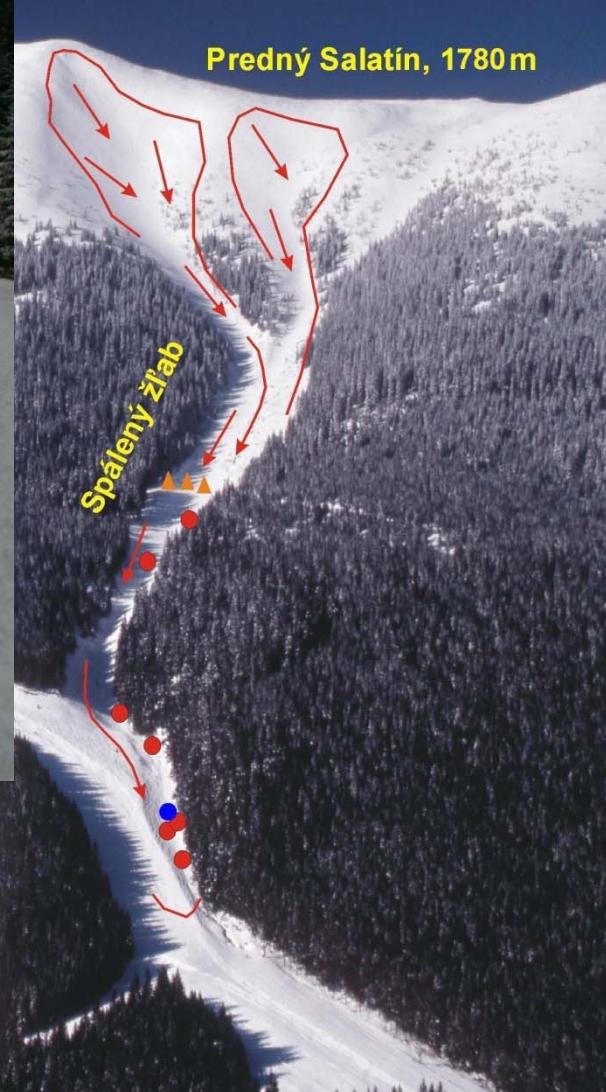
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# Zverovka – Western Tatras



# Zverovka – Western Tatras



# Jasná – Low Tatras



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# Jasná – Low Tatras



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# Jasná – Low Tatras



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# Jasná – Low Tatras



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# Žiarska valley



# North American Public Avalanche Danger Scale

Avalanche danger is determined by the likelihood, size and distribution of avalanches.

Danger Level	Travel Advice	Likelihood of Avalanches	Avalanche Size and Distribution
<b>5 Extreme</b>	 Avoid all avalanche terrain.	Natural and human-triggered avalanches certain.	Large to very large avalanches in many areas.
<b>4 High</b>	 Very dangerous avalanche conditions. Travel in avalanche terrain <u>not</u> recommended.	Natural avalanches likely; human-triggered avalanches very likely.	Large avalanches in many areas; or very large avalanches in specific areas.
<b>3 Considerable</b>	 Dangerous avalanche conditions. Careful snowpack evaluation, cautious route-finding and conservative decision-making essential.	Natural avalanches possible; human-triggered avalanches likely.	Small avalanches in many areas; or large avalanches in specific areas; or very large avalanches in isolated areas.
<b>2 Moderate</b>	 Heightened avalanche conditions on specific terrain features. Evaluate snow and terrain carefully; identify features of concern.	Natural avalanches unlikely; human-triggered avalanches possible.	Small avalanches in specific areas; or large avalanches in isolated areas.
<b>1 Low</b>	 Generally safe avalanche conditions. Watch for unstable snow on isolated terrain features.	Natural and human-triggered avalanches unlikely.	Small avalanches in isolated areas or extreme terrain.

Safe backcountry travel requires training and experience. You control your own risk by choosing where, when and how you travel.







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IS panoramix - Horská záchrana X    www.laviny.sk/index.php?menu=foto&album=202

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portál Horskej záchrannej služby  
venovaný lavinovej problematike

Vyhľadávanie:  Hľadaj    mapa stránok

Aktuálne informácie z hôr

Stupeň lavinového nebezpečenstva ku dňu 6.6.

Hora	Stupeň
Vysoké Tatry	0/0
Západné Tatry	0/0
Nízke Tatry	0/0
Veľká Fatra	0/0
Malá Fatra	0/0

kompletná informácia o lavinovej situácii  
5-dňový vývoj

Podmienky na horách  
Počasie  
Predpoved počasia  
Výstrahy HZS

Pridajte informáciu o pozorovaní lavíny

Meteostanice HZS

- Jasná
- Ladové pleso
- Solisko
- Hrubá kopa
- Salatin
- Žiarska chata

Fotogaléria

Albumy  
Filter

- Najnovšie (15)
- Všetky (208)
- Horolezectvo (3)
- Lavíny (76)
- Počasie a sneh (131)
- Projekty a konferencie (24)
- Skialpinizmus (8)
- Školenia a semináre (27)
- Záchranné akcie (20)

Snehové profily a testy stability snehovej pokrývky od 4. do 11. marca 2011

Dátum	lokality
9.3.2011	Vysoké Tatry, Skalnaté pleso
10.3.2011	Vysoké Tatry, Lomnické sedlo
8.3.2011	Vysoké Tatry, Pod Kresaným rohom

Vysoké Tatry, Skalnaté pleso, 9.3.2011    Vysoké Tatry, Lomnické sedlo, 10.3.2011    Vysoké Tatry, Pod Kresaným rohom, 8.3.2011

Predchádzajúce | 1 | Nasledujúce

späť k albumom

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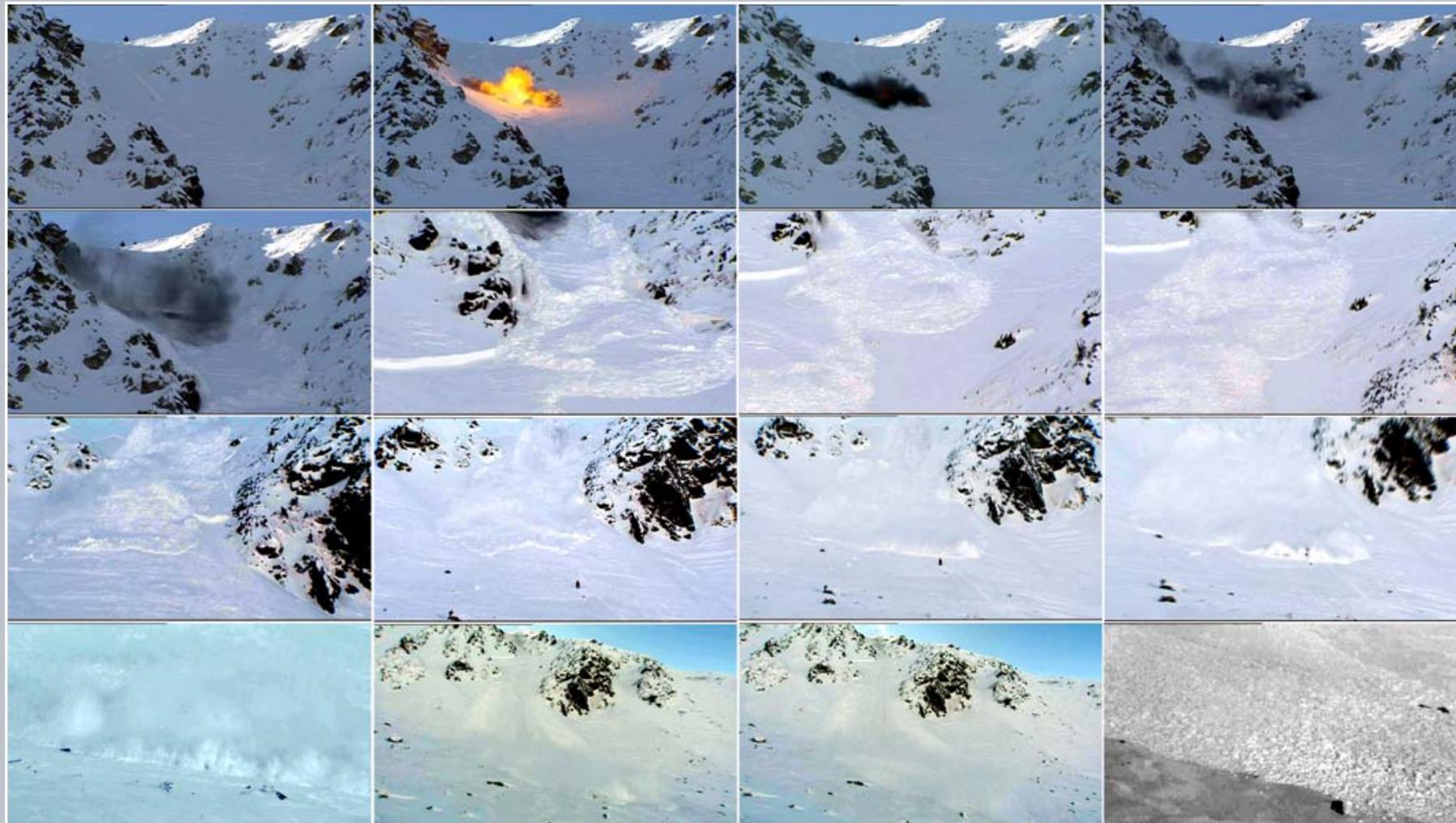


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Thank you for your attention

Vielen Dank für Ihre Aufmerksamkeit

Merci pour votre attention