This leaflet is intended for avalanche education and is not fully self-explanatory.

Caution Avalanches!

Edited by: Core Training Team «Avalanche Accident Prevention in Snow Sports» (slf.ch/kat)
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Assessment and Decision-Making 3-by-3 Framework

	Conditions	Terrain	Human factors
Trip planning: Which trip? • Trip destination with alternatives and schedule • Rough risk assessment of cruxes → note the «key points of trip planning»	• Avalanche forecast • Weather forecast	Route planning on map incl. cruxes, decision points and alternatives	• Group composition • Equipment
Local evaluation: Which route? • Does the plan match reality? • Keep observing throughout the entire day • Adjust the plan, if necessary	• Update plans based on current weather and avalanche situation • Look for signs of instability	• Direct view of terrain • Tracks in the area	• Transceiver check • Physical and mental state (group, personal)
Individual slope: Is it acceptable to ascent/descent? If yes, how and where? Make a final assessment of the danger and consequences, evaluate the risk, and consider precautionary measures.	• Avalanche situation on the slope? • Visibility • Tracks / frequently travelled?	• Slope angle • Shape of terrain • Slope size • Terrain traps	• Intuition, pressure, perception • Communication • Behaviour, leadership

Reflection: next trip

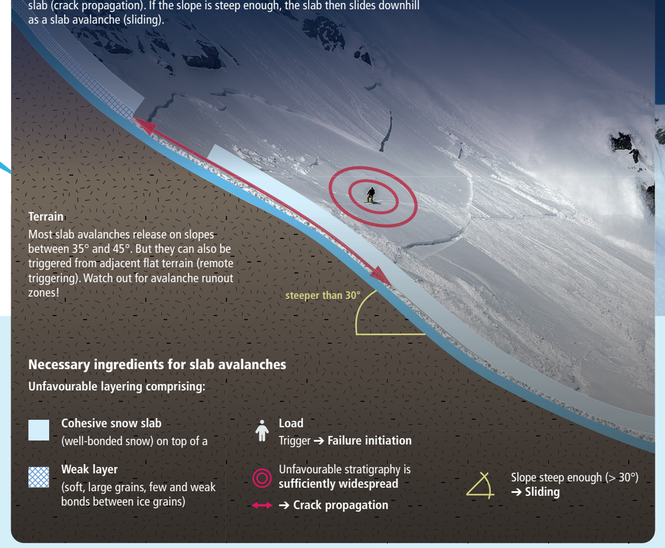
Go — No go — Reflection

Slab avalanches

Image source: © Markus Boss

The most dangerous avalanche type for backcountry recreationists

Slab avalanches can be triggered by a single person and can suddenly set a large amount of snow in motion all at once. The process begins with a failure in a weak layer (failure initiation). If the weak layer lies beneath a cohesive layer of snow, known as a slab, the failure can propagate across the slope and release the entire slab (crack propagation). If the slope is steep enough, the slab then slides downhill as a slab avalanche (sliding).



Terrain

Most slab avalanches release on slopes between 35° and 45°. But they can also be triggered from adjacent flat terrain (remote triggering). Watch out for avalanche runout zones!

Necessary ingredients for slab avalanches

Unfavourable layering comprising:

- **Cohesive snow slab** (well-bonded snow) on top of a
- **Weak layer** (soft, large grains, few and weak bonds between ice grains)
- **Load** Trigger → **Failure initiation**
- Unfavourable stratigraphy is **sufficiently widespread** → **Crack propagation**
- Slope steep enough (> 30°) → **Sliding**

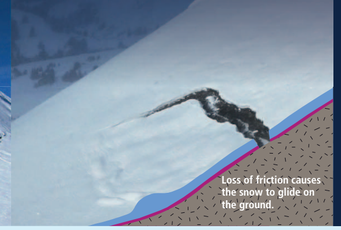
Loose snow avalanches

Loose snow avalanches start from a single point and often release in terrain steeper than 40°. Compared to slab avalanches they are slow. They form in new or wet snow with low cohesion. Wet loose snow avalanches are more dangerous than dry ones because they are often larger and the snow is heavy. Loose-snow avalanches rarely result in complete burial, but in exposed terrain they may cause a fall and carry people over a cliff.

Glide snow avalanches

Snow gliding starts with a loss of friction along the smooth, snow-ground interface due to liquid water. Once the snowpack glides, a glide crack may open through the entire depth of the snowpack. The slab continues to glide until it is no longer supported from below and is released as a glide-snow avalanche. The steeper the slope, the sooner the snow starts to glide.

Glide snow avalanches cannot be triggered by backcountry recreationists; they only release naturally.



Imprint

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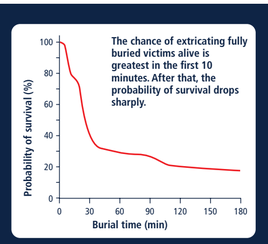
Avalanches are dangerous!

- Even small avalanches can cause serious injury or death.
- About 90 % of all avalanche victims trigger the fatal avalanche themselves.

General measures to reduce risk:
- Get training
- Check the weather and avalanche situation
- Plan the trip with alternatives
- Check that all transceivers are transmitting; carry a probe and shovel and practise using them.
- Keep reassessing the situation throughout the entire trip: weather, snow, terrain, human factors, schedule.
- Whenever possible, ride cruxes and slopes over 35° one at a time.



The chance of extricating fully buried victims alive is greatest in the first 10 minutes. After that, the probability of survival drops sharply.

Avalanche problems: typical situations in which avalanches form

New snow

New snow can form a slab and release as a slab avalanche. The more new snow, the sharper the rise in avalanche danger.

Tips:
- Wait some time before venturing in steep terrain.
- Move to lower elevations, where conditions are often less critical (warmer and less wind).

Wind slab

Wind slab forms when loose snow is transported by wind. Fresh wind slabs can often be triggered easily.

Tip:
- Avoid fresh wind slabs on steep slopes.

Wet snow

Water from rain or snowmelt infiltrates the snowpack. Wet snow avalanches usually release spontaneously.

Tips:
- Finish your trip early.
- Wait for cooling.
- Beware of very large natural avalanches!

Persistent weak layers

One of more persistent weak layers are present in the snowpack that can easily be triggered by backcountry recreationists and result in slab avalanches.

Tips:
- Act defensively, as the problem is hard to recognise.
- Be especially cautious on large, shaded steep slopes.
- Consider the danger of unexpectedly large avalanches (consequences).

Gliding snow

Typical glide snow periods occur in mid-winter after significant new snow or in spring as the snowpack becomes wet.

Tip:
- Cross terrain below glide cracks quickly.

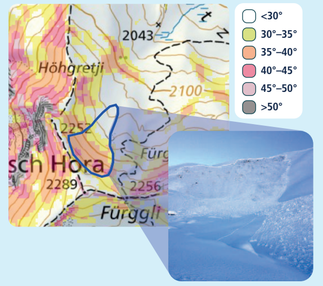
Terrain

Typical avalanche terrain
- between 35° to 40° steep
- Uniform or slightly concave-shaped

Slope angle
- For slab avalanches to form, the slope must be at least 30° steep.
- The steeper the slope, the more dangerous it is!
- Watch out for steep slopes above and below the route.
- Slope angle maps with coloured slope classes are useful for estimating slope angle.

Aspect and terrain shape
- The higher the elevation, the longer weak layers persist.
- Shaded slopes (cold) often have a weaker snowpack stratigraphy than sunny slopes.
- Sunny slopes can become critical, especially for a short time, e.g., with new snow or wind slab or strong solar radiation.
- Summits, ridges and cols are often wind-affected, so wind slab forms more often.
- Variable terrain commonly allows a favourable route choice.
- Convex terrain (ridges) is generally safer than concave terrain (hollows, gullies).
- Open forest does not protect against avalanches.

Slope angle map



Special avalanche terrain maps (e.g. CAT layer) show avalanche terrain in all its variety.

Trip planning

Trip selection:

Choose a trip suited to the conditions and participants. Websites such as whiterisk.ch, skitourenguru.com and tourenportal.ch, as well as the GRM, help with selection.

Key points of trip planning:

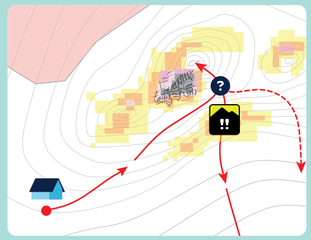
1. Gather information on conditions, terrain and human factors.
2. Plan the trip on a detailed topo map (draw the route yourself or at least check it!).
3. Identify cruxes and assess the risk there. If risk is high, proceed only with good reasons.
4. Define decision points and plan alternatives.
5. Estimate time required and set fixed times.
6. Mentally run through the route again.

Aim of planning:

identify and avoid potential problems early enough (conditions, terrain and human factors).

Useful websites
- whiterisk.ch
- skitourenguru.com
- tourenportal.ch

Mental picture of the terrain from the map



- **Crux:**
  - Primarily slopes steeper than 30°
  - If spontaneous avalanches or remote triggering are possible, also consider connected terrain and runout zones.
- **Decision point**
- **Well-planned route**
- **Possible alternatives**
- **Wildlife protection zones:** respect

Transceiver check

Local evaluation:

Keep observing and actively look for information to assess avalanche danger. Adjust the plan when new information becomes available.

A **Signs of instability (indicating poor snowpack stability):**
- Recent slab avalanches
- Whumpf sounds
- Shooting cracks when stepping onto the snowpack

B **Avalanche problem? (e.g., fresh wind slab)**

Whumpf sound:
settlement sound caused by weak layer collapse and crack propagation.

Decision:

Assess the crux. Route selection? Alternative? Uncertainties?

Thoughtful decisions always also consider human factors!
→ Cockpit

Go — No go

Individual slope:

At the crux, reassess danger and consequences and check risk-reducing measures (RiskCheck).

C **Tracks:**
On frequently travelled slopes, or where many tracks already exist, the avalanche triggering probability is often considerably lower.

D **Avalanche problem likely present on slope or are conditions more favourable?**

Detailed assessment of the crux with RiskCheck
1 2 3 4

Reflection

Build experience by looking back on the trip. Were there any surprises? What would I do differently next time?

Avalanche forecast

The avalanche forecast describes the avalanche situation for a region (gradual transitions between regions!).

The avalanche danger is described by the danger level incl. elevation and aspect where it applies (i.e., avalanche-prone locations), the prevailing typical avalanche problems and a text.

Avalanche forecast Switzerland: www.slf.ch or «White Risk» app

Avalanche forecasts Europe: www.avalanches.org/

Weather: meteoswiss.ch or app

Example: description of avalanche-prone locations

Persistent weak layers, wind slab

In this example, the danger level applies to north-facing slopes above about 2200 m a.s.l. (coloured). In the remaining terrain, the danger is approximately one danger level lower.

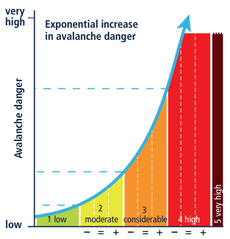
Equipment

Avalanche safety kit:
- Transceiver
- Probe
- Shovel

Also recommended:
- Airbag
- Helmet

Other important equipment:
- Ascent aids (skins, snowshoes, possibly ski crampons)
- First-aid kit
- Smartphone or satellite emergency device
- Navigation aids (smartphone/GPS with offline topo maps, possibly 1:25,000 paper map, altimeter, compass), bring a backup
- Sun and cold protection

Avalanche danger scale



The danger level depends on:
- snowpack stability
- the frequency of locations with very poor snowpack stability, where an avalanche could be triggered, and
- the (maximum) size of the expected avalanches.

Avalanche danger scale

5 – Extraordinary avalanche situation
Many very large, in places extremely large natural avalanches are expected. Avoidance is recommended. Follow official instructions.

4 – Very critical avalanche situation
Large to very large natural avalanches are expected. Avalanches can be triggered easily on many slopes. Remote triggering is typical. Whumpf sounds and shooting cracks are frequent. Pay attention to runout zones. Inexperienced persons should remain on open ski runs and marked snow shoe trails.

3 – Critical avalanche situation
Avalanches can be triggered easily on some slopes. Natural avalanches and remote triggering are possible. Whumpf sounds and shooting cracks are typical. Optimal route selection and risk-reducing measures are needed. Inexperienced persons are advised to remain on open ski runs and trails.

2 – Mostly favourable avalanche situation
Avalanches can be triggered in particular on slopes above 35°. Larger natural avalanches are not to be expected. Signs of instability may occur isolated. Choose routes carefully.

1 – Generally favourable avalanche situation:
Avalanche triggering is rare. Natural avalanches are not expected. No signs of instability are observed. Travel extremely steep slopes one at a time and watch for danger of falling.

RiskCheck for cruxes

(rough assessment)

Apply with thumb: How does it work?

Use your left thumb to assess danger and your right thumb to assess consequences. Proceed step by step and update the position of the thumbs after each assessment. Consider effective measures to reduce risk. The average of the two assessments gives a rough risk rating.

Further indicators (see reverse) can be used to refine the assessment.

1 Identify and assess danger (release probability)

Planning

Assessment according to the graphical reduction method (GRM; trip planning)?

Adjustment on site

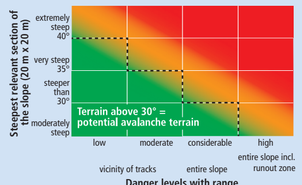
a) Signs of instability?

none detected while trail breaking for a while → upward from "considerable" → adjust 45° upward

rare / widespread → if not already down → new starting position

Many tracks and/or frequently travelled? → adjust 90° upward → if both apply, slightly more

The GRM allows a rough assessment of avalanche release probability (danger). Automated assessments may also be used (e.g., skitourenguru.com).



- Generally safe if no signs of instability are present.
- **Caution! Experience required!**
- Travel in avalanche terrain is not recommended.
- Recreationists with limited experience should stay below this line.

2 Assess consequences

Planning

How large (tall) is the slope above my route?

< 20 m / ca. 50 m / ≥ 100 m

Adjustments on site

a) Terrain traps: What is below me?

less pronounced trap / pronounced trap → if not already down → new starting position

Could several people be caught?

2 people (45°) / >2 people or whole group (90°) → adjust downward

3 Consider precautionary measures

Can measures be taken to reduce danger and/or consequences?

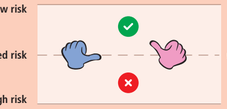
Measures are most effective when combined.

Easy to apply:
- Travel on the flattest slope sections
- Stay within already tracked areas
- As far as possible, keep only one person in the exposed area (travel one at a time, spread out)

Additional effective measures:
- Prefer ridge-like (convex) terrain
- Avoid dramatic loading of snowpack (falling, regrouping, jumping)
- Avoid fresh wind slabs
- Avoid terrain with high risk of fall or deep burial
- Regroup only in non-exposed areas («islands of safety»)

4 Evaluate risk

Does the risk suit me and the group?

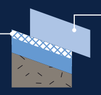


Danger	Consequences
favourable avalanche situation	not completely buried, uninjured
poor snowpack stability, natural avalanches	deep burial, fatal injury

For a detailed assessment based on additional factors, see the back.

Refined danger assessment (probability of triggering)

Key questions for assessing slab avalanche danger



Is there a weak layer? Can a failure be initiated?
Typical: A faceted snow surface, recently buried and within the upper half metre

Is there a slab? Does it support crack propagation?
Typical: At least a slightly bonded and sufficiently thick layer above the weak layer

Is the snowpack rather uniform across the entire slope?
Low variability favours wide crack propagation.

Other factors?
Additional hazard from remote triggering, other people, natural avalanches etc.

Avalanche problems and favourable avalanche situations

The classification into avalanche problems and favourable situations enables a quick and straightforward assessment of the current avalanche conditions. This broad classification helps focus attention on key factors and questions.

- What is the main problem today?
- How serious is it?
- Where is it present?

New snow problem in detail

Typical spatial distribution of new snow
- Avalanche-prone locations are usually widespread
- Often few options to avoid them
- Often more critical at higher elevations

Simple observations indicating danger
- Critical amount of new snow
- Marked rise in the snow line during precipitation
- Recent slab avalanches

Note:
The first sunny day after a snowfall is often especially accident-prone.

Critical amount of new snow (1–3 days) = at least «considerable» avalanche danger
10–20 cm in unfavourable conditions
20–30 cm in fair to mixed conditions
30–50 cm in favourable conditions

	Favourable conditions	Unfavourable conditions
Slab:	• Loose, e.g., cold with little wind influence or • Denser below than above (right side up snowpack)	• Slightly bonded new snow, e.g., due to wind influence; new snow denser above than below, e.g., when the temperature rises during snowfall (upside down snowpack)
Weak layer: (Within or below new snow?)	• Old snow surface: hard and irregular • Within the new snow: warm and relatively dense new snow	• Old snow surface: loose and uniform • Within the new snow (1–3 days): especially when cold and/or becoming denser upwards

Wind slab problem in detail

Typical spatial distribution of wind slab
- In lee slopes (change of convexity, hollows, gullies)
- Often at higher elevations and near ridges
- Highly variable over short distances
- Can occur very locally

Simple observations indicating danger
- Signs of wind actions (e.g., ripples, erosion on windward side)
- Recent slab avalanches
- Shooting cracks, successful small slope tests

Note:
Wind slabs form when loose snow is transported by the wind. Fresh wind slab deposits are often easy to trigger. With very strong winds, deceptively hard wind slabs can form.

Slab:	**Unfavourable conditions**	• Wind slabs are always suitable as a slab. • The thicker the wind slab, the further cracks can propagate.
	Favourable conditions	**Unfavourable conditions**
Weak layer: (What is the wind slab lying on?)	Failure is unlikely if: • the snow below the wind slab is hard and irregular, and • the wind slab itself is homogeneous and more than about 2 days old.	Failure is possible if: • soft, relatively loose snow lies beneath the wind slab, or • fresh wind slab (less than 1 day old) contains soft areas and conditions are cold.

Wet snow problem in detail

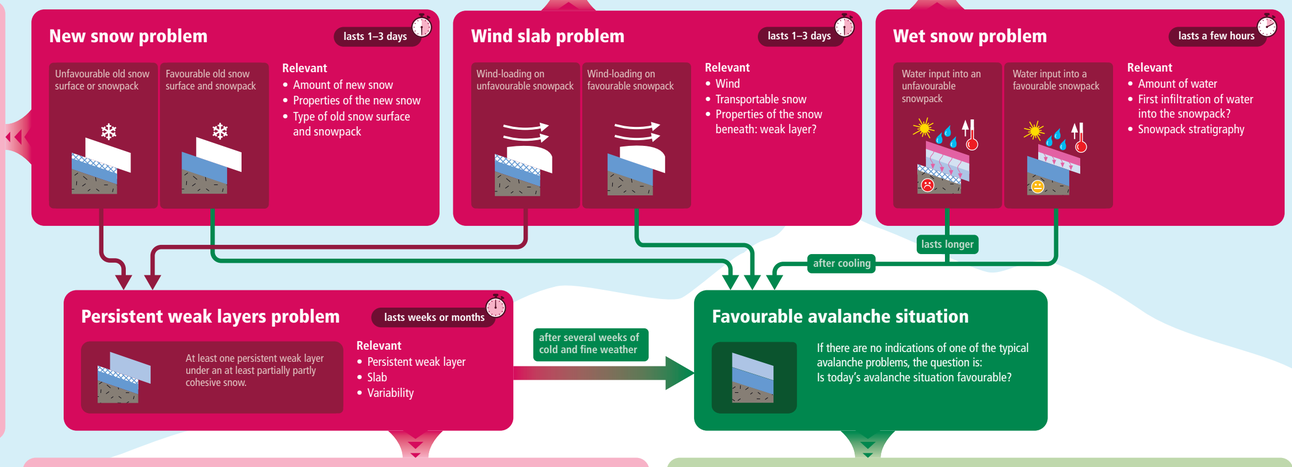
Typical spatial distribution of wet snow
- With snowmelt: during melt in specific aspects and elevations (depending on season and time of day), often near warm rocks
- With rain: on all aspects, but only below the snow line

Simple observations indicating danger
- Thickness of the wet layer at the snow surface
- Deep penetration into a wet snowpack without skis
- Development of wet-snow avalanche activity (loose snow avalanches? slab avalanches?).

Note:
The more water flows into the snowpack, and the weaker the snowpack stratigraphy is, the more critical the wet snow situation becomes.

Water weakens the snowpack and can lead to wet-snow avalanches. The first marked wetting is particularly critical. If the snowpack is already wet, further water input is less critical.

	Favourable conditions	Unfavourable conditions
Timing of water input	Snowpack is already wet and drainage channels are established.	Water penetrates into deeper layers below the surface of the snowpack for the first time.
Infiltration depth of water	Only a few centimetres at the surface (possible danger of loose snow avalanches)	Down to distinct layer boundaries
snowpack stratigraphy	No major differences in grain type and hardness within the snowpack	Large differences in grain type and hardness within the snowpack



Assessment of snowpack stratigraphy

Avalanches:
- Recent slab avalanches are clear signs of a poor snowpack layering.
- Fracture depth and extent provide clues about weak layers and crack propagation propensity.

Snow surface / snow distribution:
- The snow surface provides clues about past weather conditions, e.g., wind signs, rain, snowmelt, surface hoar, melt-freeze crust etc.
- If the snowpack varies over short distances, cracks propagate less easily.

When breaking trail:
- Penetration depth with or without skis gives clues about layering and slab properties.
- A ski pole test helps estimate layer hardness and thickness within the snowpack.
- Small slope tests provide clues about the triggering probability of new snow and wind slab.

Simple rules of thumb:
- A deep snowpack is usually better than a shallow snowpack.
- Thick and similar layers are more favourable than thinner and different layers.
- Today's snow surface may be tomorrow's weak layer.

Snowpack evaluations:
Good sites are small slopes with gentle runout where the snowpack is undisturbed and below average in thickness.

Assessing local snowpack stability:
Combine the results of stability tests (e.g., Extended Column Test, ECT) with the assessment of snowpack stratigraphy. If two of the following three points apply, snowpack stability is «poor»:
- In stability tests: clean and full propagation
- with low loading steps
- Unfavourable snowpack stratigraphy: a prominent persistent weak layer in the upper metre of the snowpack (e.g., large faceted grains) under a suitable slab (bonded and deformable)

Snowpack evaluations and interpretation

Note:
Contradictory observations indicate uncertainty → Proceed with caution!

Persistent weak layers problem in detail

Typical spatial distribution of persistent weak layers
- Shallow snowpack and cold conditions (region, terrain)
- More likely in (wind-)sheltered locations
- Often on north-facing slopes
- When present, often widespread.

Simple observations indicating danger
- Signs of a poor snowpack layering, e.g. breaking through on foot into soft faceted layers
- Whumpf sounds

Unfavourable conditions

Slab
Suitable for larger crack propagation:
- well bonded and deformable
- relatively thick (> approx. 40 cm)

Weak layer: type? How weak?
Very pronounced:
- large faceted grains or surface hoar (>1–2 mm)
- very soft and loose
- less than one month old

Depth of the weak layer:
- The closer it is to the snow surface, the easier it is to initiate failures.

Note:
- Often no signs are apparent from the «outside».
- Information from the avalanche bulletin and snowpack evaluations can be helpful.

Favourable avalanche situation in detail

Well settled large snowfall
Large amounts of new snow that have settled and bonded well lead to a favourable snowpack stratigraphy. Often in regions with a lot of snow.

Massive old wind deposits
Thick, old wind deposits (often more than 1 m deep) are often favourable. Caution at the margins, where the wind slab is thinner!

Cooling after a significant warm period
Cooling after marked warming stabilises the snowpack, e.g., a supportive crust in the morning in spring.

Favourable slab / weak layer combination
- Similar and well bonded layers
- The entire snowpack consists of faceted, low-cohesion snow
- The weak layer is on top of a stable snowpack.

Note:
Travelling on large slopes with extensive areas steeper than 35° is advisable only when there are clear indications of favourable avalanche conditions.

Favourable conditions

Slab
Hardly tends to support crack propagation:
- low strength (e.g., faceted)
- low thickness (< 20 cm)

Weak layer
Failure initiation less likely, e.g.,:
- rather small grains (< 1 mm)
- already somewhat aged and buried for a longer time

Depth of the weak layer:
- The weak layer is so deep in the snowpack (>1 m) that it is unlikely to be affected by backcountry recreationists.

Detailed assessment of cruxes with RiskCheck

The detailed assessment builds on the rough assessment. Indicators that have already been considered should not be counted again.

1 Snowpack (stratigraphy, variability) and avalanche-forming processes (failure initiation, crack propagation)

Identify and assess danger

Tendency towards «favourable»
- Favourable avalanche situation
- Weak layer deeper than 1 m

Favourable stratigraphy
- No slab or no weak layer, or
- Weak layer on top of slab
- Snowpack stability: good

High variability
- Non-uniform snow distribution
- Irregular, rough terrain
- Frequently travelled

Slope angle
- Steepest slope section < 35°
- ≤ 30° around the track

Adjust with a focus on the avalanche problem

Tendency towards «unfavourable»
- Acute avalanche problem
- Weak layer in the upper metre of snowpack

Unfavourable stratigraphy
- Large faceted grains in the weak layer, under a sufficiently bonded slab
- Snowpack stability: poor

Low variability
- Homogeneous snow distribution
- Uniform terrain
- Seldom travelled

Slope angle
- Steepest slope section around 40°
- > 35° around the track

2 Terrain characteristics

Assess consequences

Tendency towards «favourable»
- I am in the upper part of the slope
- Small slope
- Slope with gentle runout

Adjust with a focus on terrain, trail selection and potential avalanche size

Tendency towards «unfavourable»
- Large slope
- I am on the lower part of the slope with most of the slope above me.
- Terrain trap at the foot of the slope, such as a deep depression, cliffs, boulders or trees

Could several people be caught?
- Suitable regrouping spots between short descents, e.g., to the side of the slope or protected below rocks
- No suitable regrouping spots, or they are too far apart

How much snow will be released? Other factors?
- Shallow slab (< 20 cm)
- Small release area possible (e.g. tiny wind slab)
- Good escape options (smaller slopes)
- Fast and effective companion rescue possible
- Little chance of escape if caught
- Rescue difficult: no flying weather, remote area without cellular reception etc.
- Widespread release area with a deep slab

3 4 Consider precautionary measures (see front) Evaluate risk

RiskCheck

The rough risk assessment forms the basis. With sufficient information on the snowpack and a solid understanding of the avalanche formation processes, the risk assessment for an individual slope can be adjusted in a targeted way.

→ **Avalanche problems and favourable situation.**

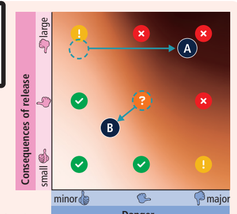
Exponential increase

High risk
Not recommended. Choose an alternative.

Elevated risk
Detailed assessment necessary; otherwise not recommended. Effective additional precautionary measures are recommended.

Caution: False evaluation quickly leads to a high risk. If uncertain → stay out

Low risk
The crux can be passed, as long as the measures are respected.



Planning

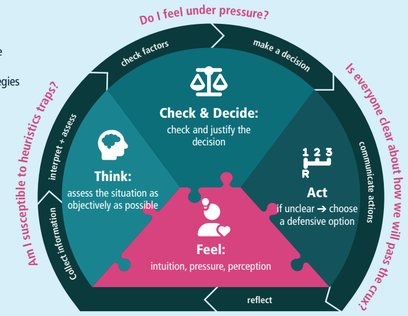
Examples

A Unexpected fresh wind slab on site. Consequently, the likelihood of triggering an avalanche is increased. Fall hazard remains.

B During planning increased release probability expected due to new snow. On site, no signs of instability observed, and the new snow is on top of a favourable old snow surface. Relevant slope area smaller than expected; effective measures applicable.

Decision-making cockpit

- Overview of the decision process under the influence of human factors
- Supports the development of personal strategies



Human factors (Feel)

Human factors influence every part of the decision-making process.

Intuition:
- What does my gut feeling say? Can I explain it?
- Intuition is based on experience from past situations. Be aware: it can be biased!
- Reflection helps train our intuition.
- Combine gut feeling with facts and knowledge.

Internal and external influences:
- What matters to me / us?
- Pressure (self-imposed or external)?
- How is my mental state? Energy level?
- Psychological influences (e.g., heuristic traps, group?)
- Where am I particularly vulnerable?

Deceptions:
- Slope angle is underestimated on sunny slopes.
- Hard snow feels safer than soft snow.
- In poor visibility we assess terrain poorly.
- In stormy weather we do not hear whumpf sounds.

Heuristic traps:
- Commitment, wishful thinking, goal fixation
- Crowds, large group
- Familiarity, habit
- Non-event feedback
- Exclusivity
- Social acceptance
- Blind trust

Communication within the group:
- Share expectations, fears and feelings within the group.
- Communicate openly and honestly at an early stage.
- Pay attention to non-verbal communication.
- Ask for feedback: has everyone understood the instructions, and are they being followed?

Groups:
- Group dynamics can influence risk behaviour.
- A group is only as good and as fast as its weakest member.

Assess (Think)

Collect information and interpret it:
- Observe actively.
- What are the relevant facts?
- Danger? Consequences?

Recognise the situation and assess it as objectively as possible:
- Rule-based (e.g., GRM, rough assessment RiskCheck), and
- knowledge-based (e.g., evaluate avalanche problems and observations from the perspective of avalanche formation processes, assess consequences).

Decide (Check & Decide)

Make risk-based decisions
- What are the benefits and risks?
- What level of risk am I / are we willing to take today?

Consider different perspectives:
- Pros and cons? Alternatives?

Check and justify the decision:
- Uncertainties? Do the objective assessment and gut feeling fit together?

Decision making strategies:
- Time-out: pause for 2 minutes to create space and time for decision-making.
- Outside view: how would I explain my decision to someone not involved?
- Six thinking hats: assess the situation from different perspectives.

Possible procedure for groups with the same level of knowledge:
- First collect facts and options within the group, without judging them.
- Use majority decisions with simultaneous voting.
- Each person has a veto right against riskier options.

Implement (Act)

- Which «gear» is used to act?
- Am I aware of the characteristic of the chosen gear?
- Which precautionary measures are effective?
- How do I communicate the decision and its implementation clearly within the group?

Characteristics of the gears
- R Stop! An alternative is needed.
- 1 Check out: approach cautiously to gather more facts. «No go» with the option of one last chance.
- 2 GO (best practice) while taking appropriate precautionary measures.
- 3 Take the chance: everything fits well together. Use the chance, but stay alert.

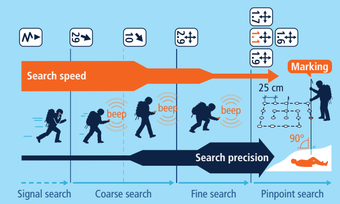
Avalanche accident

Illustration based on: MountainSafety.info (avalanche rescue).

Emergency plan

Search
- Watch the last seen point of the victim and the avalanche flow direction → define the primary search area.
- Assign a leader - get an overview. Avoid slopes with similar characteristics!
- Emergency call: If possible, call external help asap. If no connection, start companion rescue immediately and call for help later
- Transceiver search (according to airport approach) while looking and listening at the same time (switch off transceivers not needed).
- Pinpoint with the probe (leave the probe in place)
- Once the transceiver search is complete, switch all transceivers back to SEND.

Shovelling and first aid
- Dig out efficiently (snow conveyor belt).
- Free head and chest as quickly as possible.
- If the airways are full of snow, clear them immediately.
- Then, if necessary, start resuscitation straight away: 5 rescue breaths, followed by 30:2 CPR.



If caught in an avalanche
- Try to escape to the side
- Deploy the avalanche airbag (if available)
- Drop ski poles as they can act as anchors
- Try to stay on the surface
- Keep mouth closed
- Protect face / airways with arms

Emergency numbers
- Switzerland (Rega): 1414 / Rega app
- International emergency number: 112
- Canton of Valais: 144

Leaflet Avalanche accident