

Långfärdsskridskoåkning - 4x4 risk analysis

Based on the Werner Munter avalanche risk analysis

Revised for skating on unprepared natural ice by Rob Mulders & Wim Willemse

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How to use - pick yes or no in each cell in the column of your moment in time. Count the number of 'yes' in that column to get the risk score at that moment in time. Take appropriate risk reducing measures counterparting the score at that moment in time.

Warning - a low risk score is no guarantee that there are no other risks involved than the risks in the column below. A low risk score is not automatically a green light to skate. You are responsible yourself at all times to make a safe skating tour. Keep thinking.

Goal - use the 4x4 risk analysis as instrument to avoid unsafe situations, by evaluating your circumstances. Judge the risks by comparing it to the reference 'normal' daytour described in this column. Use the 4x4 risk analysis to get out of a tunnel vision you might be in.

	1. Evening before	2. At breakfast	3. At first step on the ice	4. During fika and after a chance	Risk increasing examples	To be regarded as normal
1. Terrain						
Does the lake/sea have characteristics that are known to be risk increasing?	yes/no	yes/no	yes/no	yes/no	large size and/or depth; salt or brackish water; part of river; strong currents; border to sea; waves; tides; incoming (warmer) water; ship lanes; location sensible for hard wind; dangerous places indicated on SN	small and middle sized waters; fresh (sweet) water; uddar; sund; inflows; outflow; islands; normally changing deep/undep water
2. Ice						
Does the ice situation have characteristics that are known to be risk increasing?	yes/no	yes/no	yes/no	yes/no	thin ice; weak structured ice; spring ice; loose from shore; connected to open water; ice floes; (newly formed) signs of recent ice drift; signals of tension; (refrozen) släpprår; ice broken near shore due to traveling waves; råk following shoreline; stöpis/snöis without stable kärna; double ice; reduced visibility by snow/water on the ice; underfrättning; many vindbrunnar; vrakis; many torrsprickor	thick kärnis; hard stöpis/snöis with stable kärna under; ice not degenarated; snow/rimfrost on the ice < 1cm; water on the ice <1mm; normally placed upp/nedråkar; few vindbrunnar; generations of ice
3. Weather						
Does the weather situation have characteristics that are known to be risk increasing?	yes/no	yes/no	yes/no	yes/no	hard wind; increasing wind; wind direction change; temperature rise; temperature fall; air pressure change; (starting) thaw; strong sun radiation; snow; rain; fog; no or less daylight	freezing weather; temperature fluctuation < 5°; wind < 5 m/s; wind direction change < 22,5°; visibility >1km; no precipitation; daylight
4. People						
Would you judge the composition of the group to be risk increasing?	yes/no	yes/no	yes/no	yes/no	skating alone; large group size; tired or injured people; one or more newbees; stubborn/competitive people; no mixed genders; safety equipment not complete; people not having done safety exercises; multi day trip; multi group trip; multi klubb trip; new situation(s) for leader(s); exhausting night before daytour; bad internet / no information; bad preparation; preparation done in hurry; no or bad map available	standard daytour; group size >= 3 and <= 8; two leaders; complete safety equipment; skating in line; keeping distance; nothing to prove; freedom to speak; enough time to prepare; sufficient information available; suitable map available
Count the number of yes'ses						

Score count

0 - normal risk - go skating according to your plan, taking normal precautions

1 - increased risk - add risk reducing measures to mitigate the increased risk

2 - high risk - add strong risk reducing measures to mitigate the increased risks

3 - very high risk - take very strong risk reducing measures or choose another location

4 - extreme risk - don't go, retreat, choose another location or date/time