



Swedish Skiers Knowledge, Experience and Attitudes Towards Off-Piste Skiing and Avalanches

A study aiming to understand the profile of a Swedish Avalanche Victim.

ISSW 2013, S. Mårtensson, P-O Wikberg, P. Palmgren 2013



Organizations within the Swedish Mountain Safety Council



Fjälledareföreningen SFU





Swedish Skiers Knowledge, Experience and Attitudes Towards Off-Piste Skiing and Avalanches

Background

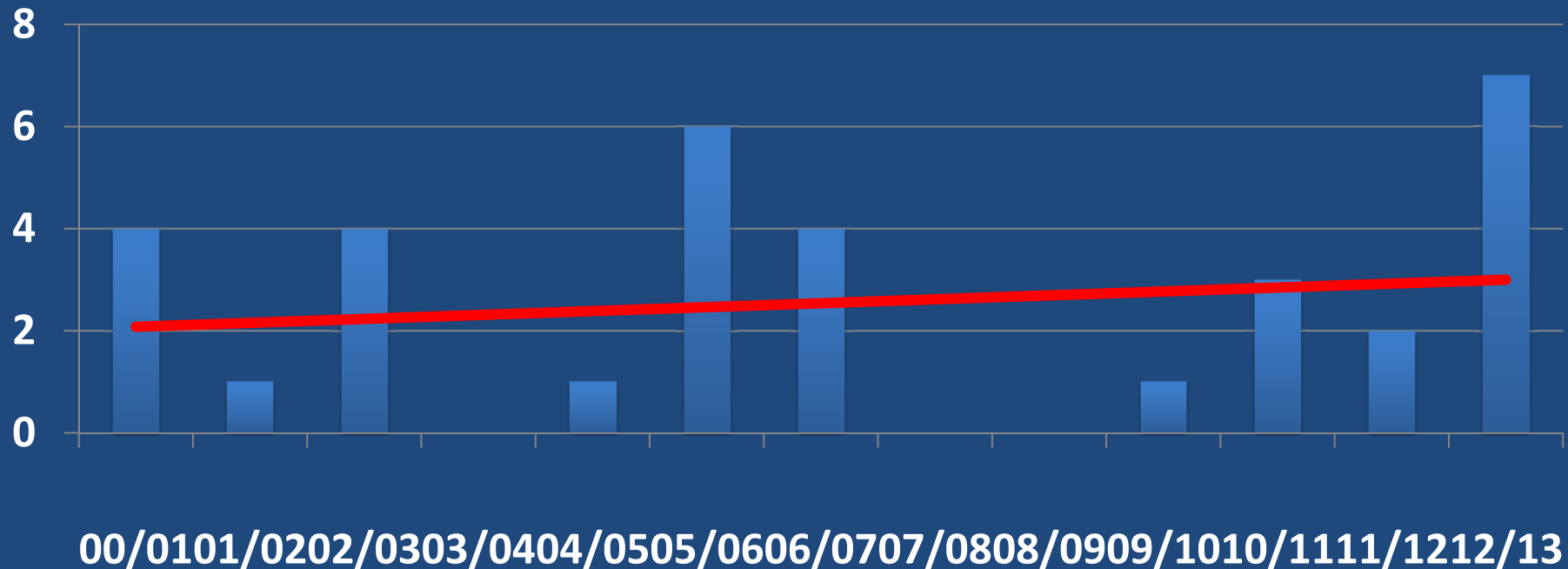
- The winter 2012/2013 was one of the most accident-prone seasons in the Swedish avalanche history
- A total of seven dead Swedes - five in the Alps, one in Norway and one in Sweden
- The winter of 2012/2013 is following a trend, with an increasing number of Swedes who are killed in avalanches
- Another trend is that the majority of Swedes are killed abroad; in a sense Sweden is *exporting* avalanche victims



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Background

Number of Dead Swedes in Avalanches 2000-2013

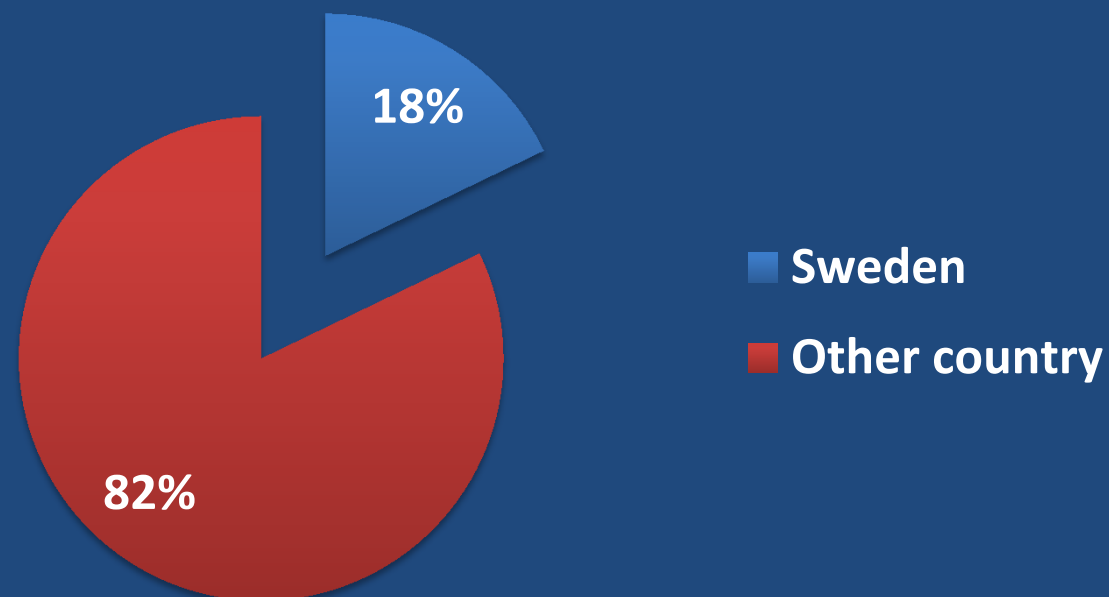




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Background

Location for Swedish Avalanche Fatalities 2000-2013





Swedish Skiers Knowledge, Experience and Attitudes Towards Off-Piste Skiing and Avalanches

Questions

- Are Swedes worse educated, less experienced, or do they not use enough safety equipment?
- Do the Swedes take greater risks than other nationalities?
- In short, who are the people behind the statistics?



Swedish Skiers Knowledge, Experience and Attitudes Towards Off-Piste Skiing and Avalanches

Aim of the Survey

- Describe the Swedish skiers knowledge, experience and attitudes towards off-piste skiing and avalanches



Swedish Skiers Knowledge, Experience and Attitudes Towards Off-Piste Skiing and Avalanches

Web Survey

- In April 2013 we conducted a web-based survey at the largest Swedish website and forum for skiers (www.freeride.se)
- Freeride was founded in 1998 and is today, with its 300 000 unique visitors each month of the season, and it's 100,000 members it is Scandinavia's largest ski/freeride social media forum



Swedish Skiers Knowledge, Experience and Attitudes Towards Off-Piste Skiing and Avalanches



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Web Survey

- Respondents were asked to answer a total of 28 questions
- 1,127 respondents participated
- The respondents chose one of four main groups:
 - a) piste
 - b) park
 - c) lift assisted off-piste
 - d) ski touring



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Web Survey

- Of the total 1,127 respondents, 1,047 (93 %) answered that they are essentially;
 - a) lift assisted off-piste skiers
 - b) ski touring skiers
- These 1047 we consolidated into one group, Swedish off-piste skiers, and we then analysed them in more detail



Swedish Skiers Knowledge, Experience and Attitudes Towards Off-Piste Skiing and Avalanches

Validity

- Does the survey describe the Swedish people who have been or will be killed in avalanches?
- We compared the statistical information for all dead Swedish avalanche victims between 2001 and 2013 with the corresponding data from the survey

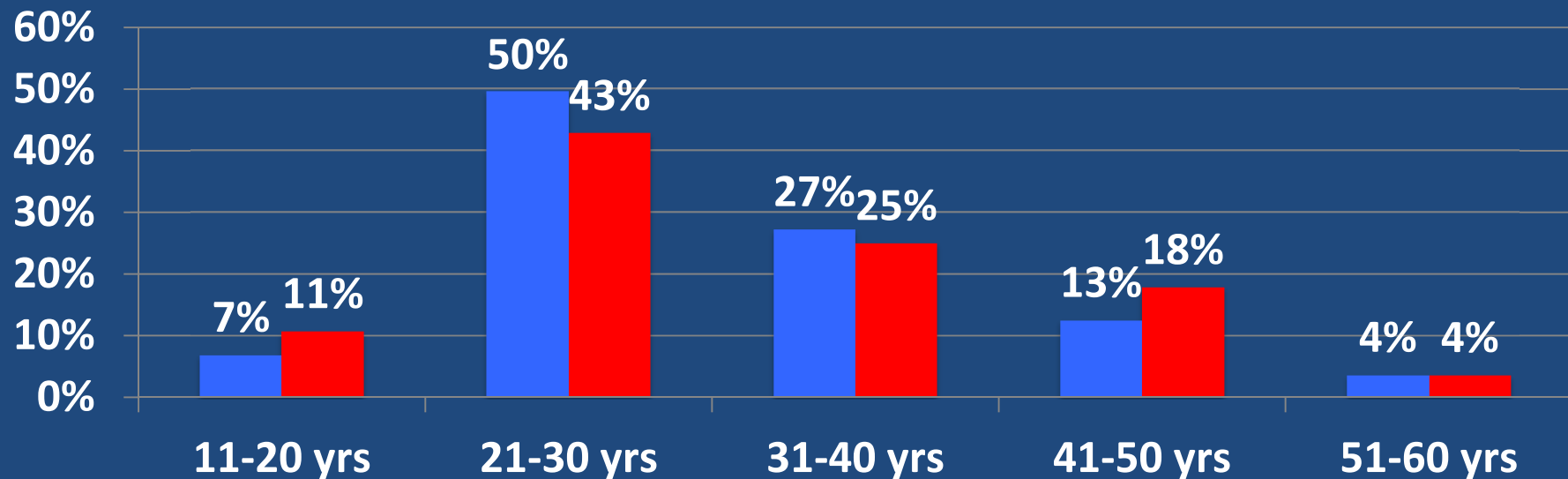


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Validity

Age Distribution

■ Survey responses (n=1047) ■ Fatalities 2001-2013 (n=28)

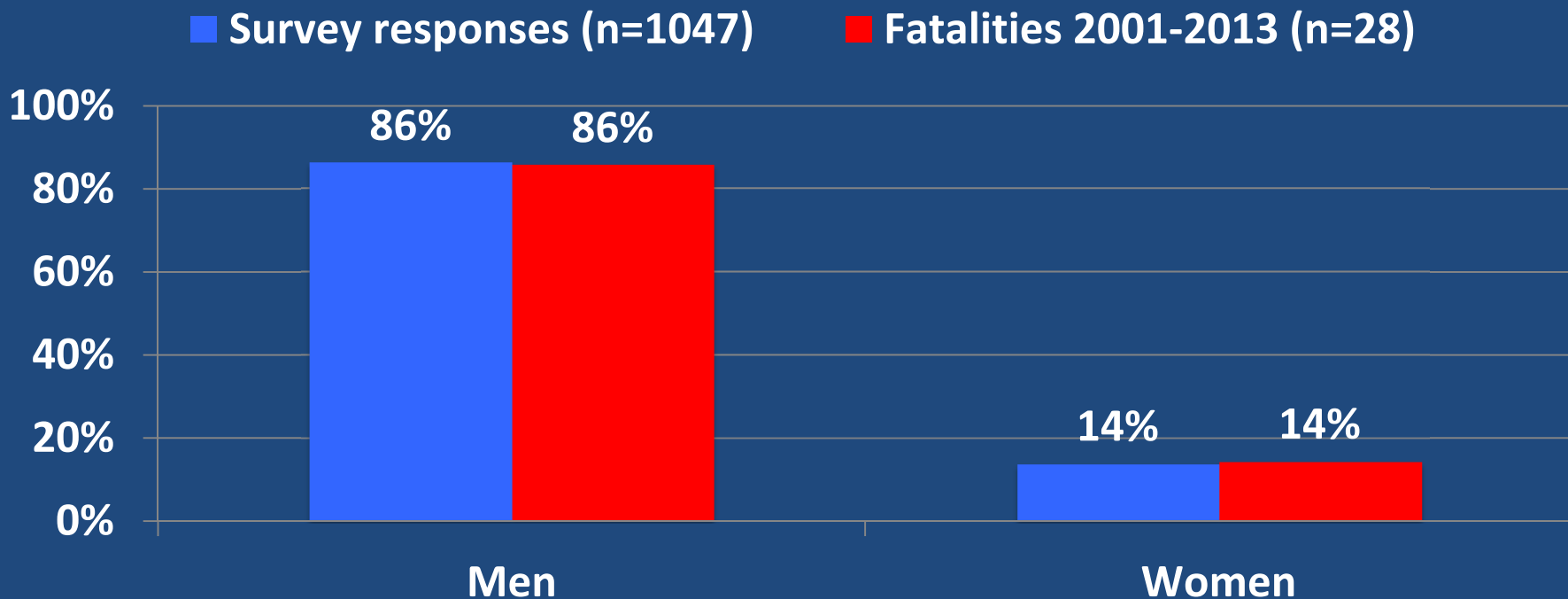




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Validity

Gender Distribution

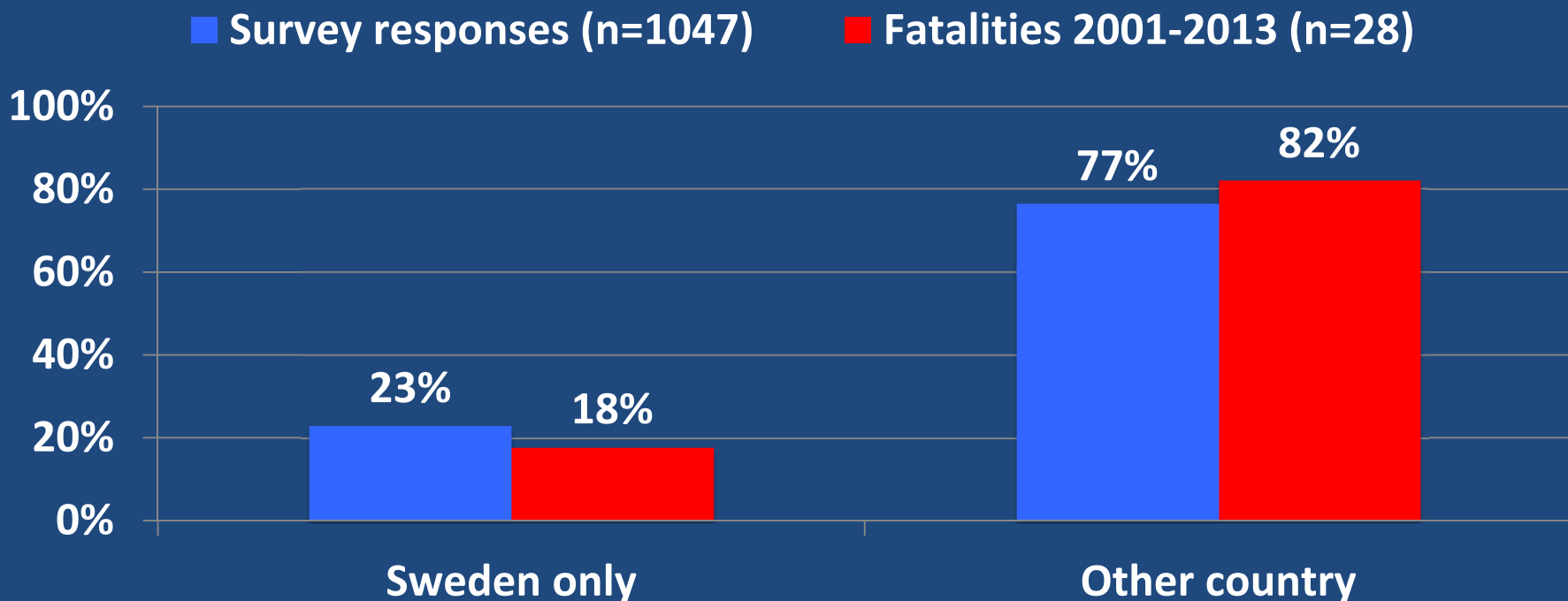




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Validity

Location of Skiing

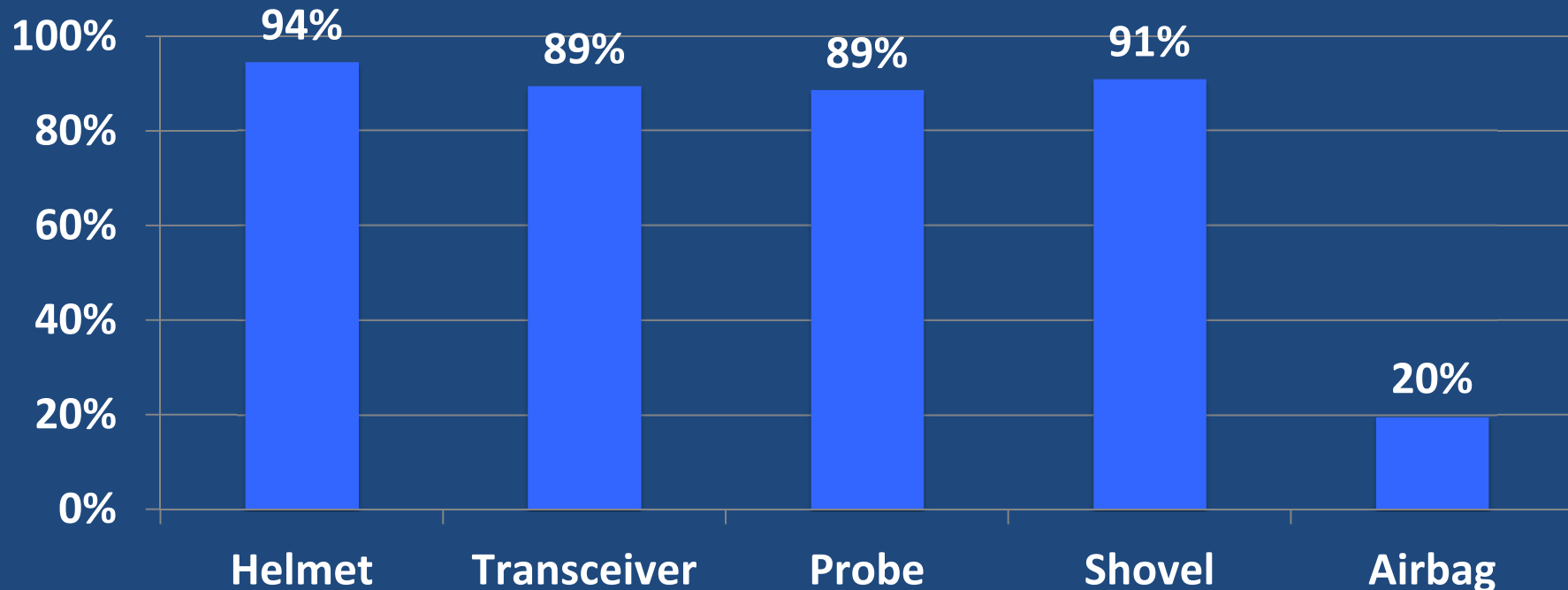




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Use of Avalanche Safety Equipment

Possession of avalanche equipment





Swedish Skiers Knowledge, Experience and Attitudes Towards Off-Piste Skiing and Avalanches

Use of Avalanche Safety Equipment

- 62 % have it always on
- 25 % use it when it is snowing or when there is a higher avalanche danger
- i.e. 87 % use their equipment regularly
- 62 % practises every year or more
- But more than 30 % does not train regularly



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Avalanche Knowledge and Awareness

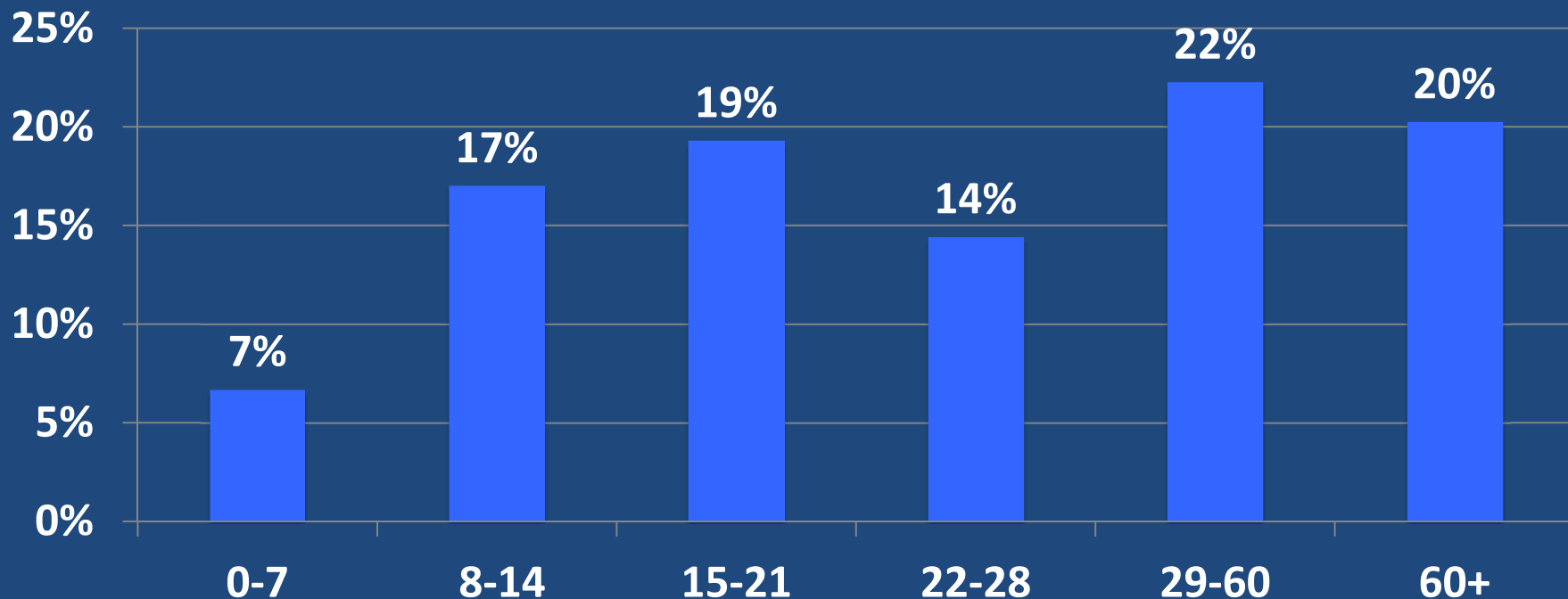
- 81 % believe their *own* knowledge to be good
- 78 % believe their *friends* knowledge to be good
- 54 %, have passed a formal avalanche course
- 77 % could give an accurate description of the meaning of the level "Considerable" in the International Avalanche Danger Scale.



Swedish Skiers Knowledge, Experience and Attitudes Towards Off-Piste Skiing and Avalanches

General Skiing and Mountain Experience

Number of skiing days per year





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General Skiing and Mountain Experience

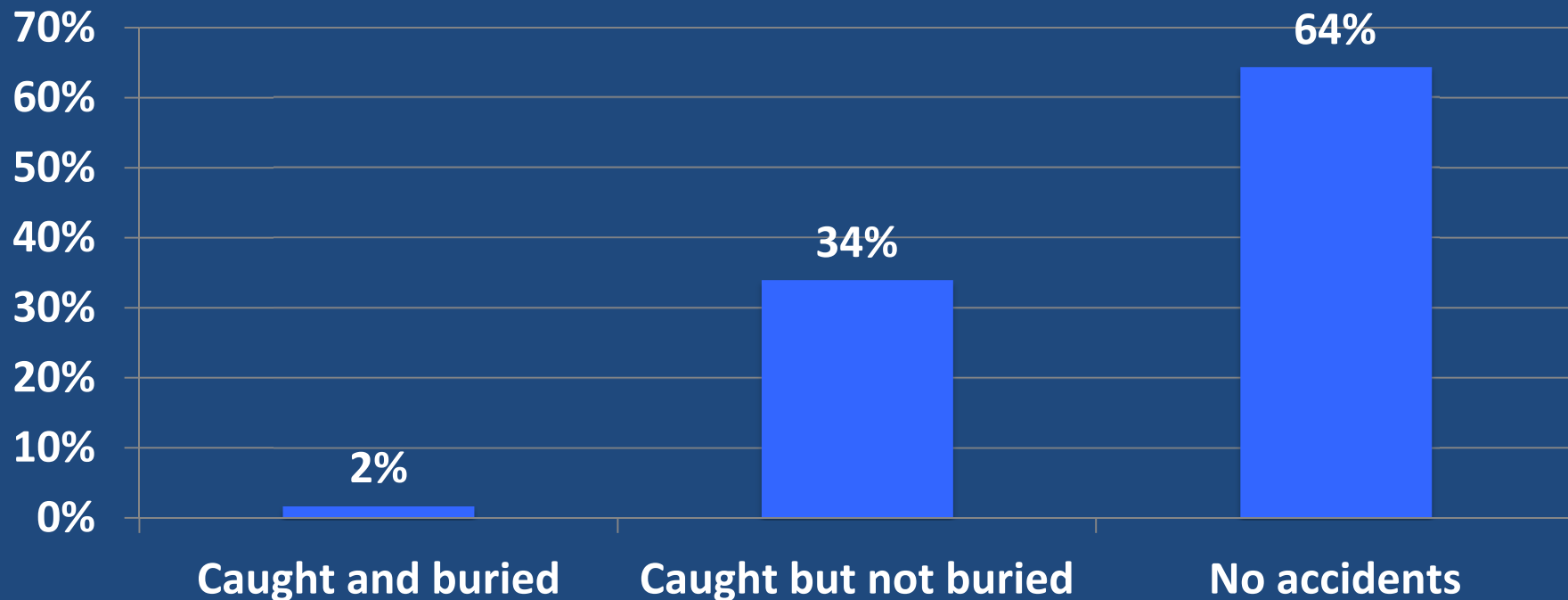
- 76 % are skiing more than two weeks per year
- 92 % have been skiing for more than 10 years



Swedish Skiers Knowledge, Experience and Attitudes Towards Off-Piste Skiing and Avalanches

Accidents and Incidents

Experience of avalanche accidents





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Accidents and Incidents

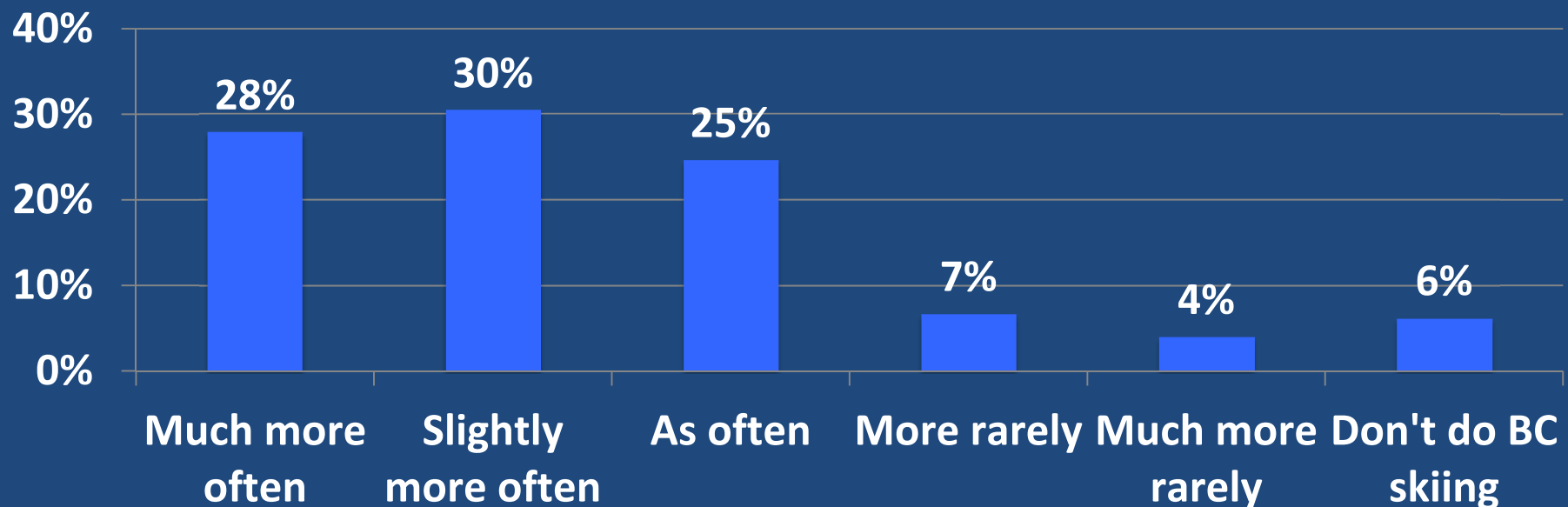
- 36 % have been caught in an avalanche
- 62 % have friends who have been caught



Swedish Skiers Knowledge, Experience and Attitudes Towards Off-Piste Skiing and Avalanches

Risk-taking and Behaviour

Do you ski more or less off-piste compared to three years ago?





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Risk-taking and Behaviour

- 83 % ski, as much, or even more outside the ski areas
- 46 % answered that recent avalanche accidents don't affect them and they are thinking and doing in the same way as before
- 74 % were prepared to take risks for good off-piste skiing



Swedish Skiers Knowledge, Experience and Attitudes Towards Off-Piste Skiing and Avalanches

Conclusions

Aim of the Survey

- Describe the Swedish skiers knowledge, experience and attitudes towards off-piste skiing and avalanches



Swedish Skiers Knowledge, Experience and Attitudes Towards Off-Piste Skiing and Avalanches

- The results shows that Swedish offpist skiers are..
- Well Equipped
- Rather often trains with avalanche rescue tools equipment
- Good Avalanche Education
- Seasoned Skier
- Aims for the Off-Piste
- Been Caught by an Avalanche
- No Change of Behaviour Despite Experiences
- But Still Willing to Take Risks



Swedish Skiers Knowledge, Experience and Attitudes Towards Off-Piste Skiing and Avalanches





Swedish Skiers Knowledge, Experience and Attitudes Towards Off-Piste Skiing and Avalanches

DISCUSSION

- Have we just shown that skiers actually are aware of the danger of avalanches, but they still want to ski off-piste anyway?
- Have we just shown that human factors affect behaviour?

Or are there more dimensions?

- Can it be that there are explanations to be found in the Swedish avalanche context. Education and communication is maybe missing important pieces
- New and important questions to be answered..



Swedish Skiers Knowledge, Experience and Attitudes Towards Off-Piste Skiing and Avalanches

- Do we see really the forest for the trees?
- They know it's dangerous
- They will still continue to ski off-piste
- What can we do to prevent and see the ongoing trend to decrease?
- How can we give them better tools?
- ...and how does this trend and behaviour affect mountain rescue in our and other countries?



Swedish Skiers Knowledge, Experience and Attitudes Towards Off-Piste Skiing and Avalanches

THANKS FOR YOUR ATTENTION!

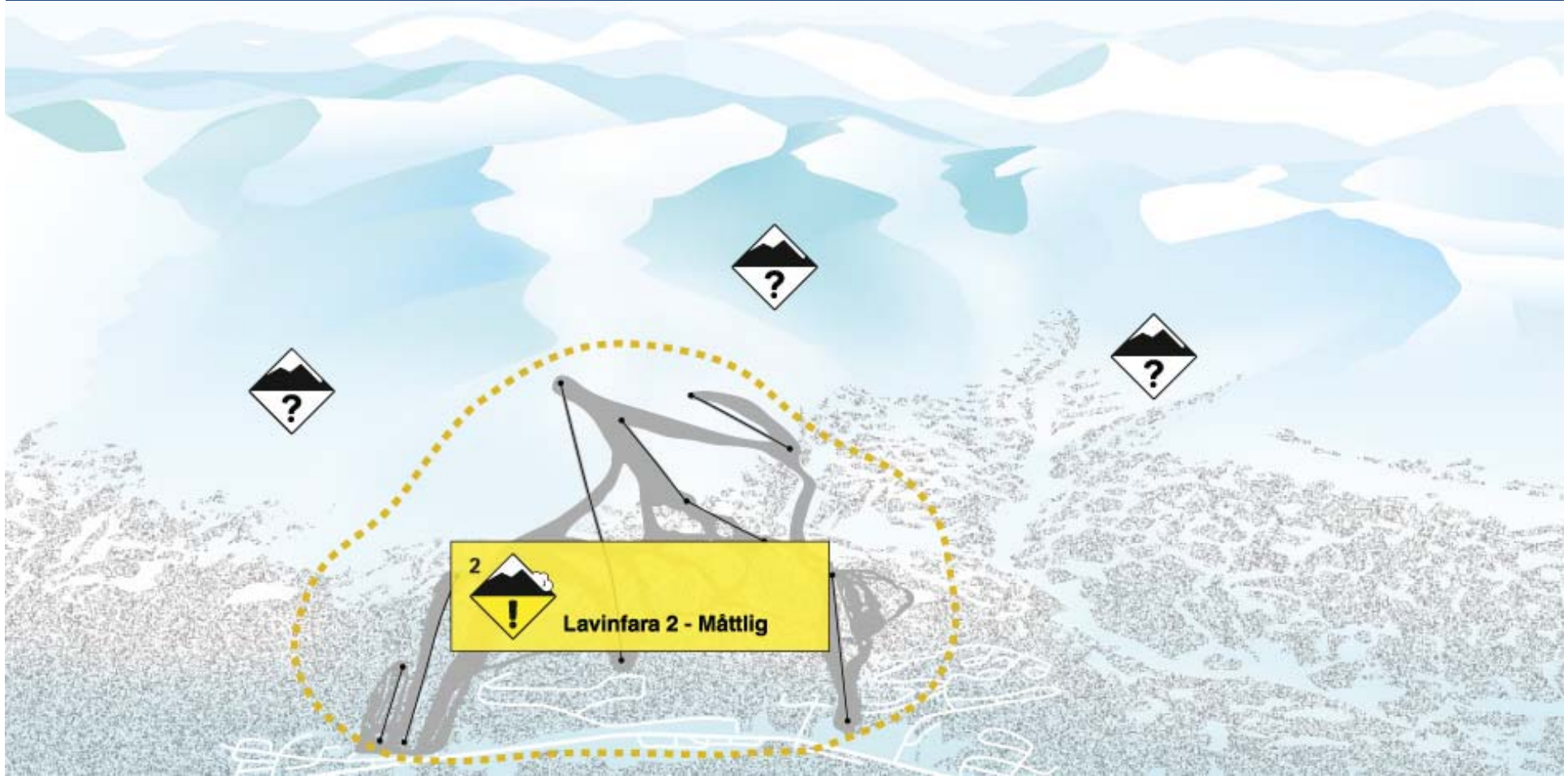
Per-Olov Wikberg

Swedish Environmental Protection Agency, Sweden
Swedish Mountain Safety Council



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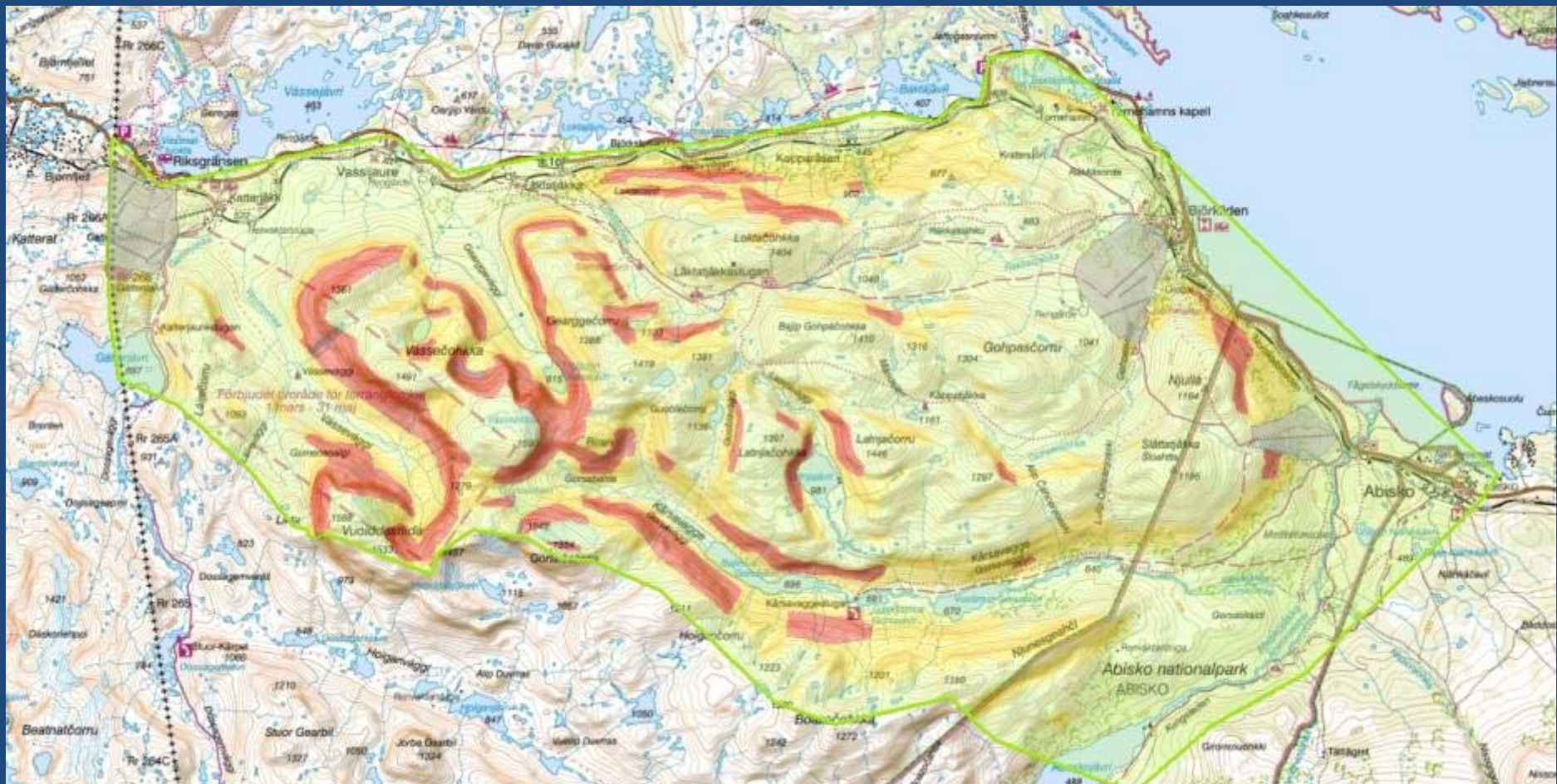
Avalanche nowcast/forecast information in Sweden





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ATES – Avalanche Terrain Exposure Scale (2013-)





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Avalanche education in Sweden

Swedish Avalanche Courses Winter 2012/2013:

- Avalanche 0 (4 hours)
- Avalanche 1 (3 days)
- Avalanche 2 (6 days)
- (Avalanche 3 = CAA ITP Level 2)
- Avalanche Rescue 1 (1 day)
- Avalanche Rescue 2 (3 days)
- Avalanche Blasting (3 days)
- Avalanche Instructor (3 days)



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Swedish Avalanche Courses 1994-2010, numbers of students

