

RESULTS

Meeting of the Working Group of the European Avalanche Warning Services (WG EAWS)

Innsbruck, June 11th, 2010

(Patrick Nairz – Avalanche Warning Service of Tyrol)

Participants:

- Innsbruck: Igor Chiambretti (I), Carles Garcia (CAT), Mathias Gerber (SLF), Hannes Hoertnagl (AUT), Marcel Kelterer (AUT), Filip Kyzek (SK), Milan Lizuch (SK), Gloria Marti (CAT), Patrick Nairz (AUT), Alexander Schiestl (AUT), Thomas Stucki (SLF)
- via Internet - Netviewer: Karl Birkland (USA), Kjetil Brattlien (NOR), Cecile Coleou (F), Mark Diggins (Scotland), Ethan Greene (USA), Pascal Haegeli (CAN), John Kelly (CAN), Grant Statham (USA)

CAAML – Worldwide xml-standard for Avalanche Warning Services

General agreement: Avalanche Warning Services will use the CAAML-standard (xml-standard for avalanche-related information of the Canadian Avalanche Association) for an optimized data exchange of avalanche bulletins, avalanche accidents, snow-profiles,...

CAAML for avalanche bulletins

1. The existing CAAML file from the AWS Tyrol will be adapted together with Pascal Haegeli.
2. Further input from other AWS will be included to make it a real standard.
3. We have to find nice solutions for danger-level-maps in different scales. Thomas Stucki suggested using coloured points on the European scale – e.g. green, yellow and orange in case that the levels 1, 2 and 3 are used during one day in a defined area (regional, daily and/or height-dependency). Going more into detail we can use icons and/or coloured areas. AWS Tyrol will check solutions and present them to the WG.
4. AWS Tyrol will collect the CAAML-files on a central server and create maps which will be published on www.avalanches.org.
5. The standardized CAAML-file will be made available as soon as possible for download on the web.

CAAML for (fatal) avalanche accidents

1. The proposal of a CAAML-standard from the AWS Tyrol will be adapted together with Pascal Haegeli.
2. We want to create tables and maps of all European avalanche accident fatalities and publish them on www.avalanches.org.
3. AWS Tyrol will check possible ways. Other AWS should help in finding good solutions.
4. The standardized CAAML-file will be made available as soon as possible for download on the web.

CAAML for snow-profiles

1. An international working-group will be installed to discuss the new CAAML-standard. Members of the WG are: [Roger Atkins (CAN), Doug Chabot (USA), Igor Chiambretti (I), Charles Fierz (CH), Matthias Gerber (CH), Pascal Haegeli (CAN), Johannes Hoertnagl (AUT), Mark Kahrl (USA), Samuel Morin (F), Patrick Nairz (AUT), Alexander Schiestl (AUT), Ian Tomm (CAN), Richard Yves (CAN)]. Christian Jaedicke (NOR) will be invited to take part in the WG.
2. Existing standards (IACS, SWAG, OGRES) will be included in the new CAAML-standard.
3. Avalanche Warning Services should provide info about their snow-profile-programs and their needs and send them to lawine@tirol.gv.at. (stability information, Micropen, Infrared,...). AWS Tyrol will collect the data.
4. The future trend seems to go towards (multilingual), easily accessible profile programs. Some of those programs (e.g. Snowpilot from the USA, AINEVA's Yeti, European's SPP,...) will be adapted to the standard – if possible during summer time. The minimum standard will be an interface for import and export which will be included in existing programs.
5. The standardized CAAML-file will be made available as soon as possible for download on the web.

Harmonizing Danger Levels

Spatial dimension of danger levels

A discussion during the last winter-season between a backcountry-skier, Bernd Zenke (AWS Bavaria) and Thomas Stucki (SLF) showed that there is still need of clarification:

- The **smallest spatial area for a danger level is about** the area of a mountain massif, typically a surface of at least **100 km²**.
- Danger Levels are NOT a tool for small-area descriptions of snowpacks and avalanches. If we do that, we come very close to descriptions of single slopes. Our danger level scale was not made for that purpose. Moreover, it is not suitable for such a purpose.
- For each level there are critical and less critical sectors to be differently weighted. In the interpretation these distinctions can be individually focused on, in detail. **Particularly critical zones - "core zones" - and more favourable zones are various elements of one single danger level.**
- **Differentiating between various "core zones"** (clarified by phrases such as "the snowpack is moderately/poorly consolidated on some/many/most of the steep slopes") **and the more favourable areas** (for danger level 2 e.g. defined as "... elsewhere generally good", in other danger levels it is not addressed specifically) **should be done only to discuss the snowpack itself, not varying danger levels (also in verbal explanations with backcountry ski tour users!).**
- **In principle, this leads to the selfsame result in practice.** In the more favourable sectors, skiers can (and will) conduct themselves as they would at a lower danger level. But when discussing the details, **we should be careful to adhere to the definitions of danger levels as clarified in 1993 and 1994. That is only possible if we consequently view/use them as covering a specific area of terrain.**
- Correct detailed explanations in the avalanche bulletin
 1. (Regional) danger level
 2. Avalanche prone locations (distribution, terrain, exposition and altitude)
 3. Probability of avalanche release and surcharge (additional load)

Right: "The danger level is considerable. Particular critical zones are on wind loaded slopes in NW-N-E exposition above 2000 m. In those areas you can trigger an avalanche already with small additional load. In other areas the snow-cover is better consolidated. There you need high additional load to trigger an avalanche..."

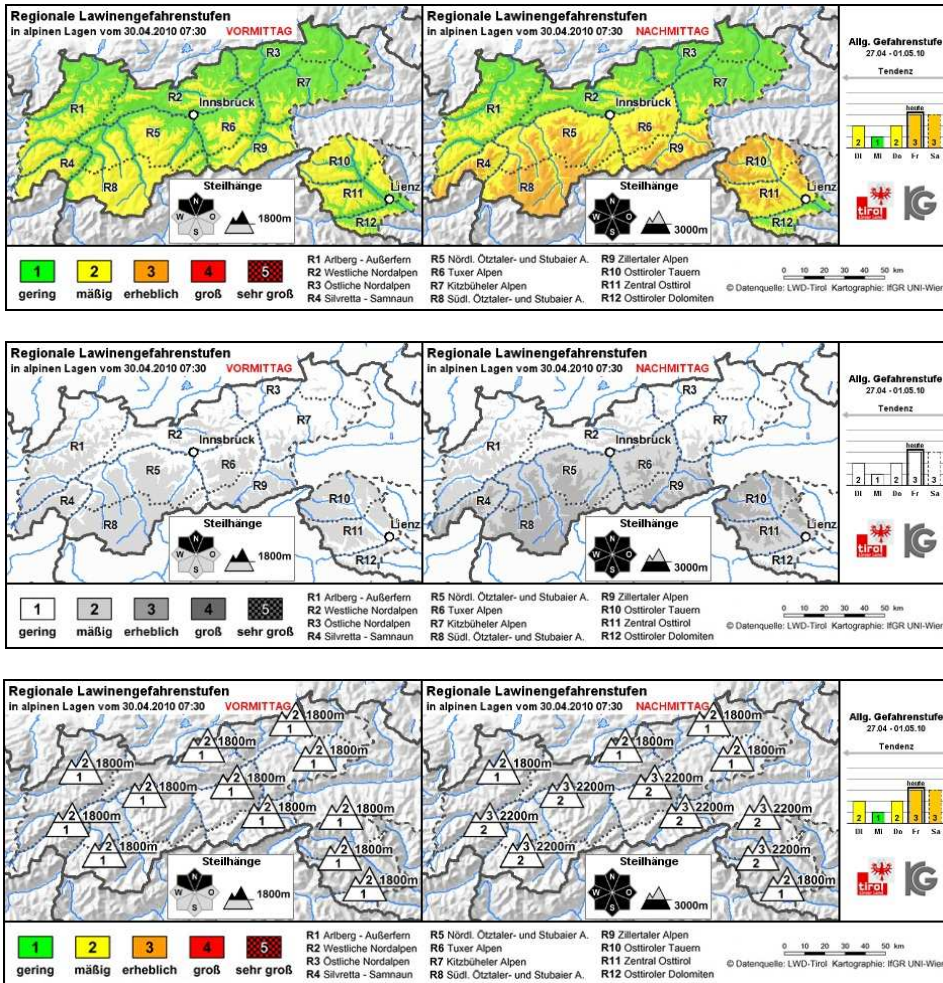
Wrong: "On steep slopes in NW-N-E expositions above approximately 2000 m considerable avalanche danger prevails."

1. Bernd Zenke, Thomas Stucki and Patrick Nairz will write an article on the spatial dimensions of danger levels and publish them in different magazines (bergundsteigen, (blatt)form lawine., ...) as well on the Internet (www.lawinen.org, ...)
2. The Swiss colleagues will adapt some details of their guidelines.

Harmonizing illustrations

General agreement: The process of harmonizing illustrations (maps, icons, symbols) should go on.

- Distinguishing time of day and altitude
 - Right now there are different solutions all over Europe. One of the solutions is shown as an example of the AWS Tyrol (coloured map, black/white map, details map):



- Pictorial depictions are always limited -> Thereafter, a text explanation will be necessary also in future!

Swiss Icons

General agreement: EAWS will use the Swiss Icons. The new icon with a question mark is generally accepted.

- There is no specific name for the new icon with the question mark. So it can be used more flexible in future (no service, no actual danger level, technical problems, ...)








- All icons (in different sizes) as well as the legends can be downloaded in different languages at the following address: <http://lwd.tirol.gv.at/downloads/Icons.zip>
- The Swiss icons will also be used by our colleagues in the U.S. and Canada from winter 2010-2011 on.

North American Danger Level Scale

As of the coming winter season 2010-2011, our colleagues in North America will use a new danger level scale:

- There is a discussion about the descending order of the danger levels at the American Scale and the ascending order of the danger levels at the European Scale. Both ways are fine for the EAWS. Due to harmonization there is the proposal to adapt their order to the American one.

Proposal: The ascending order of the danger levels of the European Avalanche Danger Scale will be adapted to a descending order.

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
5 Extreme		Avoid all avalanche terrain.	Natural and human-triggered avalanches certain.	Large to very large avalanches in many areas.
4 High		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.
3 Considerable		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.
2 Moderate		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.
1 Low		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.				

Avalanche size classification

General agreement: The EAWS decided in June 2009 that the avalanche size classification will be adapted to 5 scales. The definitions of the avalanche sizes as well as the textual part of the avalanche danger scale will be adapted and published on www.avalanches.org (Basics) during October 2010.

Renaming of level "very high"?

As discussed during the last conference in Innsbruck (June 2009), the level 5 "very high" should be renamed to "extrem". The term "extrem" describes the extraordinary situation better than "very high".

- All of us agreed that it would make sense to rename the danger level 5.
- Due to the fact that Cecile Coleou had technical problems by taking part during our Netviewer-session and she was sceptical in that issue we need the o.k. from France.
- Beginning of September 2010 the Swiss colleagues argued to keep the term "very high". The main reason is an additional process of harmonization in Switzerland where specialist departments who deal with natural hazards have decided to use the name "very high" for the most critical level.

The general proposal: The term "very high" should be renamed to "extrem" has changed to:
The general decision: "Very high" won't be changed to "extrem".

Bavarian Matrix

Like the Avalanche Danger Scale itself, the Bavarian Matrix has also to be adapted textually.

Harmonizing Avalanche Bulletins

Particularly endangered areas / Slope exposition

Feedback about the new mountain symbols, including a textual part and the altitude below or above a particularly endangered zone, has been utterly positive not only in Tyrol but also in Switzerland.



Proposal: EAWS should use not only the aspect symbol but also the new mountain symbol including the textual part.

Information Pyramid

General agreement: Our efforts to structure the avalanche bulletin in the way of the information pyramid should go on.

Internet / New Media

www.lawinen.org / www.avalanches.org

- The number of hits to our home page is astonishingly high. But the general awareness of the website must be raised still further. Therefore the members of the EAWS should put a link on their page to www.lawinen.org / www.avalanches.org. (Compare www.lawine.at/tirol where you also can download the icon of EAWS.)
- If there are suggestions for improvements don't hesitate to contact the AWS Tyrol via lawine@tirol.gv.at.
- The glossary will stay like it is now. Too much work has already been invested, too small are the hits on those pages and too rare the feedback. We wait for new resources and a new concept (e.g. data-base in the background).
- Our goal is clear: All the members of EAWS should find the latest versions of our basic agreements as well as the latest addresses and all our results and "Minutes of our meetings".
- In some countries there are no members of the WG. It would be great if at least one person per country took part in our WG. Don't hesitate to contact us in case that you are interested in joining our group.

Other (new) information channels

General agreement: EAWS tries to be up to date with newest developments like podcast, RSS, facebook, twitter, Iphone as well as with mobile Internet-pages, SMS, ...). EAWS tries to offer most of the (mobile) information on its own. www.lawinen.org / www.avalanches.org will be the optimal medium to spread some of those information uniformly.

Other

Danger Patterns

The Avalanche Warning Service of Tyrol has been trying for a number of years to introduce standardized Danger Patterns. The aim is to provide a clearer picture of avalanche danger, in addition to the Danger Levels (which are too abstract for many users) through Danger Patterns with the help of illustrations. End of November 2010 a book will be published by Patrick Nairz and Rudi Mair (AWS Tyrol) which deals with the 10 most important Danger Patterns ("lawine. Die 10 entscheidenden Gefahrenmuster erkennen" Tyrolia-Verlag). Those patterns might be used by AWS.

SLAB-test

Our Norwegian colleagues are currently very involved with a new stability test in which the rear side of the snow-cube doesn't have to be cut off, i.e. separated.