

Report EAWS Membership Committee

The Membership Committee received one application and answered one inquiry since the last EAWS meeting in June 2017.

The application was filed by A LURTE, a local avalanche warning service in the Valle de Canfranc in the Spanish Pyrenees (Annex 1).

Following our request (ANNEX 2) to demonstrate that the applicant complies with the EAWS standards as documented in the EAWS Memorandum of Understanding (in particular article 3.2), A LURTE provided a report in April 2018. Based on the report that comprehensively shows that A LURTE complies with the standards and meets the requirements to become a member (see Annex 3), the membership committee does not require any adaptations.

The membership committee recommends to the General Assembly to accept A LURTE as candidate member.

In summer 2018 we received an inquiry from the Ukrainian Hydrometeorological Center that provides forecasts for the Ukrainian part of the Carpathians. We subsequently informed them about the procedure on membership application.

Davos, 16 May 2019

Jürg Schweizer
Chair Membership Committee

Enclosures:

- Annex 1: Application by A LURTE
- Annex 2: Requirements for membership
- Annex 3: Report by A LURTE on compliance



May 2017

The municipality of Canfranc, located in the province of Huesca in the heart of the Spanish Pyrenees, has worked for the last 4 years in Project called A LURTE, in order to create a center for risk management in the mountains with the aim of avalanche risk prevention and snow research

A LURTE aims to provide the user of the mountain, an avalanche danger bulletin for Canfranc Valley, based on the methodology and the knowhow of the European Avalanche Warning Services.

For this reason, the under signed, Mayor of Canfranc, representing the center A LURTE, gently asks the EAWS to let A LURTE become part of the association, for the contribution and dissemination of the knowledge and safety on snow and avalanches.

We expect that the participation of A LURTE in the EAWS will serve for future collaboration, as well as the exchange of information and experiences regarding the problems linked to snow and avalanches.



Fernando Sánchez Morales
Mayor of Canfranc

Rocio Hurtado
A LURTE
Pza. Forestales
E - 22880 Canfranc-Estación

Davos, 16 March 2018

EAWS Membership Committee
Dr. Jürg Schweizer
phone: +41 81 417 0164
schweizer@slf.ch

Application for EAWS Membership

Dear Rocio Hurtado

Many thanks for your Membership application¹. As you know one of the requirements to become a member of EAWS includes demonstrating that your warning service complies with the EAWS standards. The Membership Committee is in charge of evaluating your compliance. If the Membership Committee comes to the conclusion that you comply it will suggest to the GA – in 2019 at the earliest – to accept your organisation as member. The procedure is as outlined below.

You will have to prepare a report, in which you describe whether and how you comply with the following eight standards listed in Appendix A (points 2-9) of the EAWS Memorandum of Understanding (see enclosure):

1. European Avalanche Danger scale
2. Bavarian Matrix
3. Information Pyramid
4. Glossary
5. Avalanche size scale
6. Avalanche problems
7. Warning regions
8. Validity and Responsibility

¹ Can you please clarify who actually is applying. The application letter by the mayor does not include any address or name of organisation. Is the community the applicant?

In addition, you also need to demonstrate that you meet the other requirements listed in the EAWS Memorandum of Understanding (under 3.3). These include:

- have stable institutions guaranteeing, through a minimum level of funding, the operational issuing of regular avalanche forecasting products;
- promote and practice regional cooperation and neighbourly relations with other avalanche warning services;
- have the ability to take on and implement effectively the obligations of membership, including adherence to the aims of scientific, technical and operational cooperation;
- have the ability to provide a minimum level of funding to assure the participation of its representatives in EAWS meetings and the fulfilment of the tasks deriving from EAWS activities.

The report (in English) needs to be submitted to the Membership Committee by the end of May 2018. The Membership Committee will then evaluate your report.

Based on the evaluation the Membership Committee will either

- Approve your report and submit its recommendation to the GA
- Ask for further clarifications
- Ask for further improvements to be implemented during the winter 2018-2019, followed by a second report on how you comply and subsequent re-evaluation by the committee

I hope the procedure outlined above is clear. Otherwise, please do not hesitate to ask.

We look forward to your report.

Best regards,



Jürg Schweizer

Enclosure: Appendix A of the EAWS Memorandum of Understanding

APPENDIX A – MAIN STANDARDS

1. Evolution of standards

Given that standards may evolve over time upon technology, scientific and methodology improvements, the EAWS website hosts the up-to-date status of the standards introduced below, which may differ from the version when this MoU entered into force.

2. The European Avalanche Danger Scale

The avalanche danger describes the likelihood (expected probability) of occurrence and the possible size (and their damage potential) of avalanches in a specific region of at least 100 km². However, the exact moment and location of an avalanche release and the actual size of its starting zone and fracture depth cannot be precisely determined.

The European Avalanche Danger Scale shall be used by Members when communicating the level of avalanche danger in a region, as well as a basis for determining the danger level in a region.

(www.avalanches.org)

3. The Bavarian Matrix

The Bavarian Matrix is a supplementary tool to determine the avalanche danger.

(www.avalanches.org)

4. Information pyramid

EAWS members shall present the information in the avalanche bulletin according to importance (according to the EAWS's "information pyramid" schema), ranked from the heading (top) of the bulletin to the bottom.

(www.avalanches.org)

5. Glossary

The bulletin should use a standardised terminology as an aid both to a better understanding and to a practical interpretation of its contents.

(www.avalanches.org)

6. Avalanche size scale

The size of avalanches shall be classified by their destructive potential, runout length and dimension.

(www.avalanches.org)

7. **Avalanche problems**

Typical avalanche situations or problems focus the user's attention on the current avalanche problem.

(www.avalanches.org)

8. **Warning regions**

Regions (geographical areas) used for issuing the warnings shall be clearly specified so the public knows exactly what area is being covered by the Avalanche Warning Service, typically by maps of the warning regions on the website where the bulletins are published.

9. **Validity and Responsibility**

The bulletin shall also describe the geographical area of validity, the period of time it is valid, the time of publication or updating, and the name of the responsible or issuing agency.

EAWS membership Committee
Dr. Jürg Schweizer
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Canfranc. 27 April 2018
Rocío Hurtado Roa
Centro A LURTE Canfranc
rhurtado@alurte.es

Application for EAWS Membership

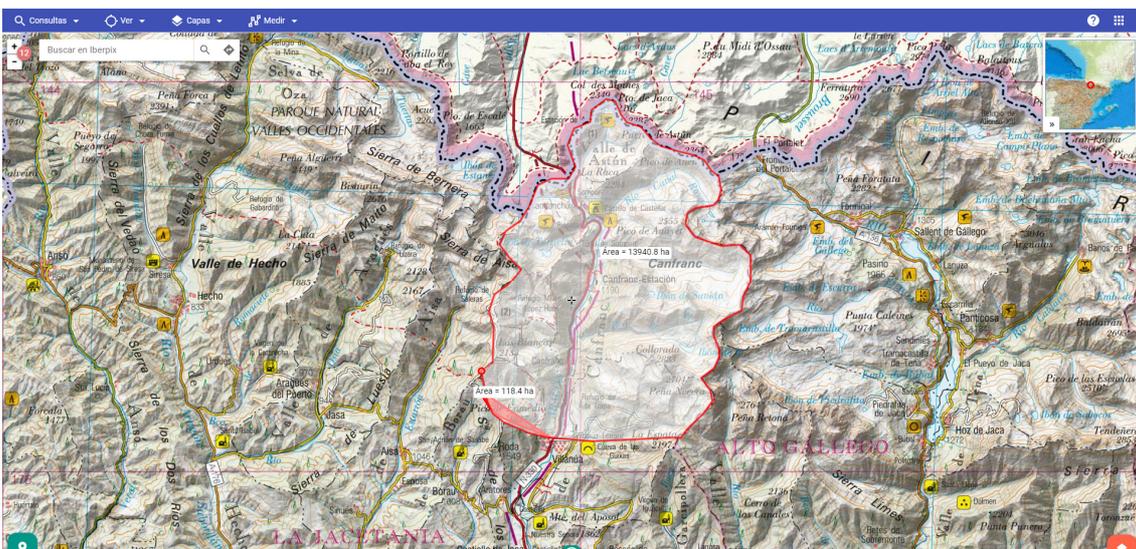
Dear Jürg and Membership Committee;

as you wrote in your letter, I'm sending a detailed report where I explain how our warning service A LURTE complies with the EAWS standards described on the EAWS MoU as well as other recommendations and requirements.

1. European Avalanche Danger scale

The avalanche danger describes the likelihood (expected probability) of occurrence and the possible size (and their damage potential) of avalanches in a specific region of at least 100 km².

The area we forecast in our avalanche bulletin is around 140km². It corresponds to part of the municipalities of Canfranc and Villanua and comprises several important valleys regarding winter sports activities like Valle de Astún, Canal Roya, Tortiellas, Rinconada, Valle de Izas. Also the highest summits of the area are located inside our forecast region (Collarada 2.883 m, Aspe 2.640 m, La Moleta 2.576 m).



The avalanche danger bulletin we issue shows on the upper part the icon of the danger level corresponding to that day as indicated on the European scale. When we talk about danger level we both say the name of the danger level (low, moderate, considerable, high, very high) and the number (1, 2, 3, 4, 5) as well as the EAWS icon.

When we rate the danger level for the day, we take into account all the parameters of the European danger scale as: probability of triggering, sensibility of the trigger, number of slopes, angle of the slopes, size of avalanches, etc. In the details we explain the avalanche prone locations (altitudes, aspect, type of terrain).



A LURTE

Boletín de
PELIGRO DE ALUDES
Valle de Canfranc

Fecha de emisión:
18 Abril 2018
Válido hasta: 21/04/2018
Próximo boletín: 20/04/2018

Previsión 24h

Descripción del peligro

Peligro MODERADO 2 para el jueves 19. Poco a poco el sol y las altas temperaturas van estabilizando la nieve y el pico de inestabilidad por aludes de nieve húmeda disminuye, quedando el peligro más limitado a laderas sin purgar, fuertes pendientes, sobre todo cuando desaparece el efecto del rehielo nocturno.



Recomendaciones

Con las laderas peligrosas fácilmente localizables, y la nieve tipo primavera, lo mejor es evitar las laderas de fuerte pendiente donde nos hundamos hasta las rodillas en nieve de pescadería. A madrugar para no pasar calor y evitar las avalanchas húmedas y los deslizamientos. Bien de crema y agua en la mochila. Que no se le ocurra a nadie ir de negro.

Situación 1: Nieve húmeda

Con las temperaturas tan altas desde hace varios días, todo el manto está mojado e isotermo. El rehielo nocturno no es muy efectivo y rápidamente se pasa su efecto, de modo que el problema de NIEVE HÚMEDA no afecta sólo a las solanas, sino también a las umbrías, en todas las cotas donde haya nieve. Atención a aludes naturales y accidentales, tanto de salida lineal como puntual que pueden llegar a enterrarnos en

Situación: Cota: Exposición: Tamaño: Probabilidad:







We also have a link to the avalanche danger scale on avalanches.org in our website

<http://www.alurte.es/escala-europea-de-peligro-de-aludes/>

The screenshot shows the A LURTE website interface. At the top, there's a navigation menu with 'INICIO', 'CONOCEROS', 'PREDICCIÓN', 'ATES', 'FORMACIÓN', 'CALENDARIO', 'CONTACTO', 'A LURTE', and 'BLOG'. The main content area features a large image of a snowy mountain range. On the left, there's a sidebar with information about 'Centro pirenaico de actividades de montaña'. The central part of the page displays the 'Escala Europea de Peligro de Aludes' (European Avalanche Danger Scale), which is circled in red. A red arrow points from the text above to this section. Below the scale, there are sections for 'Actividades: excursiones, visitas al centro A Lurte, cursos...' and 'Tweets por @alurte'.

2. Bavarian Matrix

Regarding the Bavarian matrix, we are waiting anxiously for the results of the working group in order to apply the matrix in our region, analyze the results and share it with the EAWS. As soon as we have the new Bavarian matrix available we will use it as a tool in our forecast.

3. Information Pyramid

Following the MoU, the content and structure of our public avalanche bulletin follows the information pyramid, where the most important topic is the **danger level** located on the top of the bulletin. Not only the danger level is given in this position, but also a small resume with the avalanche problems of the day and the type of avalanche or any other information that the forecaster considers important for the day.

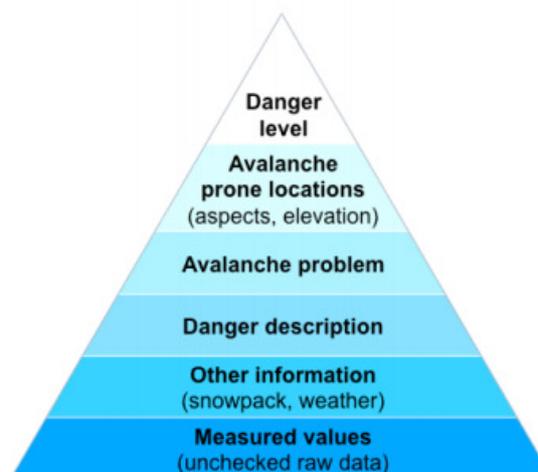
There are also recommendations to travel safe under the avalanche danger conditions of the day. These recommendations normally explain how to get out of the harm's way and can include the most dangerous moment of the day, human factor of the day or the terrain we should of should travel through according to the Avalanche terrain Exposure Scale (ATES).

The **avalanche prone locations** follows, with information about the prone locations (altitude, aspect) as well as **avalanche problems** describing the size of the avalanches and probability of triggering.

We also provide other information of the **danger**, like the most probable moment of the day, or the duration of the problem (if possible).

The last information provided regards the **weather forecast** (probability of precipitation, type and amount, cloudcover, wind, 0°C level, max and min temperature).

All this information is enforced using icons.



All this information is also given for the next 48h and 72 h, As the bulletin is issued Monday, Wednesday and Friday, the uncertainty of the 72h forecasting is corrected when the next bulletin is issued.

Other information, as snowprofiles and snow data can be consulted in our website and social nets.

Then you can see in the image of an avalanche danger bulletin from this year the information described above.



A LURTE

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Valle de Canfranc

VALIDITY

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18 Abril 2018
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Previsión 24h DANGER LEVEL

Descripción del peligro

Peligro MODERADO 2 para el jueves 19. Poco apoco el sol y las altas temperaturas van estabilizando la nieve y el pico de inestabilidad por aludes de nieve húmeda disminuye, quedando el peligro más limitado a laderas sin purgar, fuertes pendientes, sobre todo cuando desaparece el efecto del rehielo nocturno.



RECOMMENDATIONS

Recomendaciones

Con las laderas peligrosas fácilmente localizables, y la nieve ffo primavera, lo mejor es evitar las laderas de fuerte pendiente donde nos hundamos hasta las rodillas en nieve de pescadería. A madrugar para no pasar calor y evitar las avalanchas húmedas y los deslizamientos. Bien de crema y agua en la mochila. Que no se le ocurra a nadie ir de negro.



AVALANCHE PROBLEMS

Situación 1: Nieve húmeda

Con las temperaturas tan altas desde hace varios días, todo el manto está mojado e isotermo. El rehielo nocturno no es muy efectivo y rápidamente se pasa su efecto, de modo que el problema de NIEVE HÚMEDA no afecta sólo a las solanas, sino también a las umbrías, en todas las cotas donde haya nieve. Atención a aludes naturales y accidentales, tanto de salida lineal como puntual que pueden llegar a enterrarnos en terreno abierto. Evitad las fuertes pendientes no purgadas.

Situación 2: DESLIZAMIENTOS BASALES

En terreno con base lisa de nieve blanda o poca muy lisa, se pueden ver grietas que llegan hasta el suelo. Podemos esperar actividad natural de deslizamientos basales (aludes de fondo) que implican mucha nieve y pueden llegar a taparnos en terreno abierto. En algunos casos, pueden ser incluso mayores. Este problema se localiza en cualquier orientación y cota, siempre que el sustrato sea favorable (base con poca rugosidad).

AVALANCHE PRONE LOCATIONS

Situación:	Cota:	Exposición:	Tamaño:	Probabilidad:
				
				

Meteo 24h WEATHER INFORMATION

Jueves 19 Abril 2018

Día despejado, con algo de nubosidad baja en la frontera por la tarde. No se espera precipitación. Viento de SE flojo. Iso 0°C empieza a subir de 2800 m hasta 3300 m. Temps máximas y mínimas similares a las del miércoles (¡mucho calor!)

ISO 0°: 2800-3300 Incertidumbre: ???  

4. Glossary

Regarding the glossary, we use the terms listed on avalanches.org glossary that describes the type of avalanche, type of snow, type of movement, and other terminology related to snow and avalanches.



5. Avalanche size scale

During this year, and as we were told in the last Assembly in Tutzling, we are changing our bulletins in order to use the new avalanche size scale for the next winter season 2018-19. To make this change easier to the user, we have tried to use as much as possible the “description” of the size as well as the Initials (D1 to D5) as these parameters DO NOT CHANGE in the new size scale, and we tried to avoid the use of the term “sluff, small, medium, big, very big”.

When we describe the size of an avalanche we are writing down things as “we aware because today we can find natural avalanche with size enough to cover and burry a person in an open and wide area (D2)” or “for today, accidental avalanches are possible, and they are big enough to detroy a small house, a car, a small group pf trees or to affect a group of skiers (D3)”.

For the next winter, we will start using again the name of each size of avalanches

- D1 sluff o small
- D2 medium
- D3 Big
- D4 Very big
- D5 Extraordinary

Tis information will be also updated in our web site.

6.Avalanche problems

The avalanche problems are described on the bulletin. In pour experience, the avalache problems have proven to be very useful to comunicate information to the user since it relates the type of avalanche, weather parameters, the release mechanism, the position of the weak layer. Most of all is a wake-up call to the user's senses and his observation capacity so that he quickly recognizes in the field the problem described in the avalanche bulletin.

The avalanche problems used are:

- New snow
- Wind-drifted snow
- Persistent weak layers
- Wet snow (rain or heating)
- Gliding snow

When there is no avalanche problem, we use de “favourable” situation, not as a problem but as a situation where the snowpack is very stable and we do no expect any certain avalanche problems; awarning the user that danger 0 do not exist.

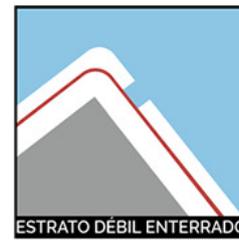
5 years ago, avalanche problem’s icon weren’t available in the EAWS so we developed our own icons. There are very similar to the EAWS ones, and we willl change the and use the EAWS icons for the next seasons.



New snow



Wind-drifted snow



Persistent weak layer



Wet snow (heat)



Wet snow (rain)



Gliding snow

7. Warning regions

As we told on the first paragraph, our region is small (140 km²) and we only issue one danger level for the whole area.

The limits of the area are written on the lower part of the bulletin

“El presente boletín informa sobre las condiciones de la nieve y los aludes y se puede aplicar a todas las actividades lúdicas/deportivas que se practiquen sobre el territorio del valle de Canfranc, entendiéndose como tal la cuenca vertiente desde Villanúa hasta la frontera con Francia”

“This bulletin informs about snow and avalanche conditions and can be applied to all recreational/sports activities that are practiced in Canfranc valley territory, meaning this area the basin from Villanúa to the French border.”

8. Validity and Responsibility

In our website, it is also explained the use and the validity of the bulletin

“The avalanche danger forecasting in the Aragon Valley is aimed at the issuance and dissemination of the Avalanche Hazard Bulletin (BPA). The BPA reports the degree of danger foreseen in the immediate 24 hours for the valley of Aragon, the distribution and the status of the snowpack, the trend for the next 48 and 72 hours. It also includes the short and medium term weather forecast provided by the State Meteorological Agency. The snow information is valid outside the ski resorts and in uncontrolled areas. The BPA is broadcast on Mondays, Wednesdays and Fridays at 4:00 pm, with the prediction for the following days, from December 1st to April 30th.

The avalanche hazard prediction is based on the analysis of the data coming from the observations performed by the forecasters as also an informal network of observers created for



this purpose located between 1100m and 2200m altitude. The network consists of ski resorts, mountain guides, forestry agents, ski enthusiasts, shelter guards, nivologists and nivology enthusiasts.

At the same time, data on the status of the snowpack and the weather in high mountain are received continuously in real time by means of different automatic meteorological stations of AEMET, SAIH Ebro, "Climate and Snow Pyrenees" and individuals. The stations are located between 1.100 and 2.500 m altitude.

Parallel to the collection of nyometeorological data, the predictions are verified, both by the observers and directly by the forecasters of A Lurte. The verification aims to control on the ground the reliability of the information contained in the BPA, carrying out stability tests, observations of the activity of avalanches, stratigraphic profiles and resistance checks of the snowpack.

The user recognizes that it is not possible to accurately predict natural events such as avalanches and for this reason he must adapt his behavior to the conditions he encounters since situations different from those described in this bulletin may occur. More information www.avalanches.org.

When an avalanche bulletin is issued, we write the date of issuance, and the validity. This information is cotained on the right upper part of the bulletin.



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VALIDITY

Fecha de emisión:
18 Abril 2018
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Previsión **24h**

Descripción del peligro

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Recomendaciones

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Regarding the responsability, the current forecasters have both the "weather and snow observer" national certification, as well as other certifications from other countries (livello 2a, 2b, 2c, 2d AINEVA and Avalanche Operations level 1 from Canadian Avalanche Association). There is also a Civil Responsibility Insurance for the bulletins issued.