FRENCH RECOMMENDATIONS FOR ARTIFICIAL TRIGGERING OF AVALANCHES OVER INHABITED SITES

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ABSTRACT: In 2010, the scientific and technical council of the French snow and avalanche association (ANENA), received a mission of focus on the artificial release of avalanches over wintertime inhabited sites. Around 20 locations are impacted in France. In April 2011 a 10-item questionnaire was sent to several institutions: only few answers were received but diversified and of good quality. The Swiss experience (practical guide written since 2007 by the canton of Valais) was collected investigated with care. A MS-Excel tool, with a form of the 78 different parameters, allows a nuanced assessment of the artificial release risk adapted to each site. The results provide a score for the risk examined, which allows a better comparison of the different situations.

A preliminary list of possible recommendations was established. The artificial triggering of avalanches over housing must be: (1) well identified in its specificities: technical, legal, (2) much better planned than for a normal artificial release (= only on ski slopes): mapping, release, snow limits conditions for the intervention, intervention plan, evacuation plan, emergency plan, (3) implemented only by a highly experienced team. It must not be a normal protection measure for inhabited sites against avalanches.

KEYWORDS: snow, avalanche, artificial release, inhabited sites, method

1. THE FRENCH STATE OF AVALANCHES IN 2010

There has been no recent accident in France in the conditions of artificial releases over inhabited houses. The only avalanche event to date was the 22/12/1991 one in Val d’Isère, without victims. The final judgment on 26/11/2002 stated: even without a strong link between the upper triggering and the avalanche, the village of Val d’Isère was declared entirely responsible for damages been subjected.

Nevertheless, a reflection on the triggering of avalanches over inhabited areas was entrusted in 2010 by the Board of the French snow and avalanche association, ANENA, to its own technical committee. The main questions were:

- does this practice exist in France? If yes, in what form?
- is there any legal framework?
- what about our neighbors (Italy, Switzerland) practices?
- an evolution can (should) be considered, in what sense?

2.1 In France

In France, the avalanche artificial release over housing is currently:

- implemented on, at least 20 sites, mainly in the Northern Alps;
- implemented on some sites each winter for almost 20 years, without any specific regulations, only with the general plan for artificial release of avalanches, and without insurance blocking aspects;
- limited to sites with known historical influence of avalanches and that are certainly inhabited but the initial goal of protection is almost exclusively ski slopes, ski lifts or roads; That's why the release operator is: - the ski patrol service in case of ski area or – the road administration in case of road.

- implemented almost always without an evacuation plan for endangered inhabitants, and very rarely with an alert.

The mayor of the starting zone territory where the trigger is located is always in the official charge of the artificial release plan.

ANENA have sent a special avalanche artificial release survey with a questionnaire to many stakeholders and communes: we have got only 8 responses: interesting but not enough for statistical analysis.

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