

OFF PISTE SKIING IN FRANCE

Recent evolution .
Avalanches accidents -Forest preservation¹

Francois VALLA²

Abstract : off piste ski, in France, is a type of ski practiced in "wild snow" out of the ski runs of the ski areas. We examin the avalanche accidents for the period 1971-1986, and it evolution. Another sharp problem, in the Alps, is the negative competition between skiers and forest. We present the french program of public information.

INTRODUCTION .

Among the winter leisure activities, practiced in France, snow sports are the most popular. There are different types of ski, according to the terrain and the equipment.

We have four major ski activities :

1) *alpine ski*, using with ski lifts in the ski areas. In France, there is about 450 ski areas, with 100 major places like Val d'Isere, Tignes, or Chamonix. Ski lifts equipement is very important, with 3 000 lifts. The number of skiers is over five millions, and the number of skiing days about 50 millions. Security and rescue are assumed by the ski area.

2) *nordic ski or cross-contry ski*, practiced on well prepared runs. This sport is very popular since 1968, the date of the Grenoble Olympic games. About 3 millions of skiers are consuming 25 millions of days. Security and rescue is assumed by the ski areas.

3) *mountain ski*, praticed in the montain ranges and on the glaciers, with a special equipement (skins, bindings for climbing...). There is less than half a million skiers, with about 5 millions of days. People is skiing at their own risks, and rescues are assumed by the French National Rescue Organisation.

4) *off piste ski*, practiced with ski lifts, in the neighbourhood of the ski area, in the "wild snow", with alpine equipement. Presently, it is known that off piste ski is, in number of skiers

and days, about 5% of alpine ski. We may accept a number of half a million skiers, with 3 millions of days. People is skiing at their own risks, and the rescues are generally assumed, with expenses, by the ski area.

This paper presents some datas, concerning off piste skiing in France: first regarding the avalanche accidents during the last 15 years, second in connection with the forest.

I - OFF PIST SKI IN FRANCE.

This practice of skiing is each year more and more popular in Europe, especially in France, and this for about 20 years. At this fact, we may found three main raisons :

- the ski areas are often overcrowded,
- the skiers want more freedom, and alpine ski is too much regulated and organised,
- in the same time, the technical level of the skiers is each day better and the equipement is constantly being improved.

Regarding this ski, France is in a leader position. A great number of the major ski areas have just the good slopes and exposures for this sport. In Switzerland and Italy off piste skiing is also an not negligible componant of the "ski industry". We have, in France, a great number of foreigner skiers.

For this type of ski, the responsability of the ski area is engaged only for the transportation on the ski lifts. The slopes where the ski is practiced are out of the securized areas, and nobody is looking for the security. It is especially true when snow conditions are hazardous, and avalanche control hardly used for the ski runs protection. Thus, after an avalanche condition period, the ski runs are open. The access on the unskied slopes is possible, but the snow stability is very poor; after such periods, we note often several accidents.

¹
Paper presented at the International Snow Science Workshop, Lake Tahoe, California, October, 22-25, 1986.

²
Francois VALLA, Dr. es Sciences Physiques, Snow, Avalanches, Glaciers Division, C.E.M.A.G.R.E.F., BP 76, 38 402, Saint Martin d'Herès, F R A N C E .

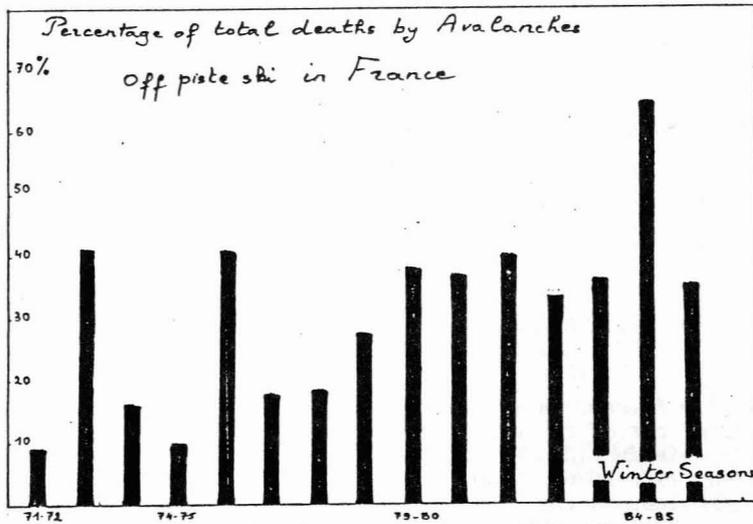


Figure 3. Evolution 1971-1986, in France, of the percentage of deaths in off piste ski related at the total number of dead victims by avalanches.



Figure 4. Sticker "We want to grow", and warning panel in four colors.

III - OFF PISTE SKIING AND FOREST PRESERVATION.

For about ten years, we have in France a new phenomenon : skiing in the forest produces real damages on the young trees. And now, we can observe in the most skied places, a really poor regeneration : injured by the ski edges, small trees, especially the conifers, are no more able to grow normally, and they produce a "bonzai".

In France, we pay attention at this fact and we have engaged, for about ten years, some actions.

On the terrain.

Some experimental places are controlled by foresters, and the damages are counted. The most significant damages are : cutting of the terminal bud, scrapping of the bark, breaking of the branches... We have to distinguish the french northern Alps, humide and deeply covered by firs and spruces, and the dry, suny and clear covered mountain of the southern Alps, with larches and many types of pines.

Information campaign.

In the same time, we have planed a large information program, for scholars (our skiers of the future...), and adults. The most important realisations are :

1) a 16 pages color pamphlet mailed and distributed at 170 000 copies. It is out of print for the moment.



Figure 5. Humoristic sticker, the point of view of a young fire...

2) 4 color warning panels (50 by 50 cms), put in the most sensitives places. About 1 100 pieces are on the spot, and we are printing 1 000 more panels.

3) stickers for tean agers. One is the warning panel (figure 4), and the second is an humoristic point of view of the young tree (figure 5). About 20 000 copies.

II - AVALANCHE ACCIDENTS IN OFF PISTE SKIING.

Today, avalanche accidents are important in the Alps. Each year, more than hundred people are killed in those accidents (an average of 121 for the decade 1975-1985, with a maximum of 180 in 84-85). Figure 1 shows the number of deaths during the last 10 years (1975-1986), for the 5 countries making the Alps (France, Switzerland, Italy, Austria and Germany) and for each type of activity (mountain ski, off piste ski, alpine ski, alpinism, roads and access, houses and miscellaneous).

We note that France is in the first position (351 victims, 29% of the total number of deaths), and off piste ski is the second activity regarding the amount of dead victims (25%), after the mountain ski (48%).

	F	CH	I	A	D
5	7	7	7	7	2
ALPINISME ④	5	6	6	6	6
3	④	⑤	⑤	⑤	⑤
SKI HORS PISTE ②	②	④	④	④	④
2	②	②	②	②	②
SKI MONTAGNE ①	①	①	①	①	①
1	①	①	①	①	①

F = FRANCE 351 deaths, 48% of the total (Alps)
 S = SUISSE 324 deaths, 27% of the total (Alps)
 I = ITALY 248 deaths, 20% of the total (Alps)
 A = AUSTRIA 256 deaths, 21% of the total (Alps)
 D = GERMANY 31 deaths, 3% of the total (Alps)

1 = MOUNTAIN SKI 583 deaths, 48% of the total
 2 = OFF PISTE SKI 301 deaths, 25% of the total
 3 = ALPINE SKI 36 deaths, 3% of the total
 4 = ALPINISM 120 deaths, 10% of the total
 6 = HOUSES 38 deaths, 3% of the total
 7 = MISCELLANEOUS 45 deaths, 4% of the total

DECADE 1975-1985, TOTAL NUMBER OF DEATHS : 1210 .

Figure 1. Number of victims killed by avalanche, during the decade 1975-1985, in the Alps.

Figure 2 shows, for the last 15 years (1971-1986) in France, the number of people dead by avalanche in the practice of off piste skiing. We have a total of 161 deaths, with an average of 11 victims. The major fact we note is the presence of "hot winter", with a large number of deaths (1972-73, 75-76, 81-82, and 84-85 with 29 victims). This points are more or less on a right line, and curiously, the winters with few accidents are on a line roughly parallel. Without contest, we have an important increase of the rate of mortal accidents, during the last decade, connected with the mountain ski traffic.

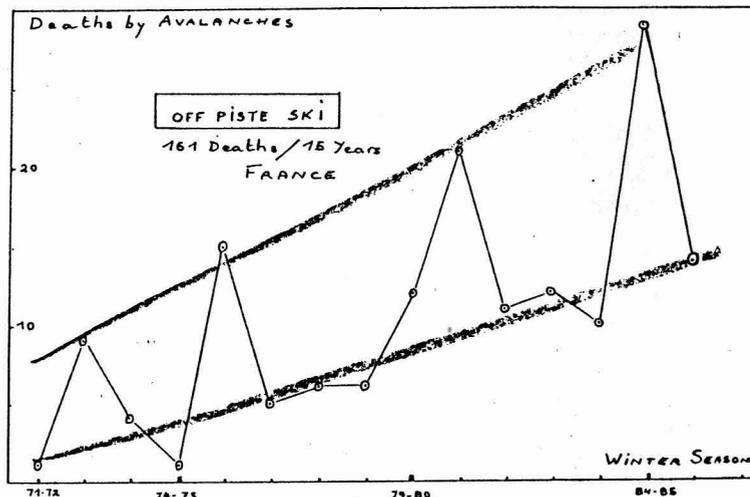


Figure 2. Evolution, in France, of the deaths by avalanches, in off piste skiing. 1971-1986.

For the avalanche accidents, the winter seasons are very contrasted; if we want to have an idea of the evolution of the security regarding the avalanches, in off piste ski, we have to look figure 3. This figure shows the evolution of the ratio : number of deaths by avalanches in off piste skiing / number total of deaths. We note that the average percentage of killed in off piste skiing is about 40% (of the total deaths) for the last 8 years. We cannot reveal a clear tendency for the futur. This is because the number of avalanche accidents is strongly in relation with the ski traffic; with a "poor winter", bad weather does not allow busy skiing days, and we have few avalanche accidents. With sun and a lot of fresh snow, skiers are innumerable, avalanche conditions are optimum, and we have more accidents.

Anyhow, as we have an increase of the popularity of the snow sport, we have an increase of the number of avalanche accidents.

4) an exhibition of 9 panels (0.80 by 1.20 cms) with color drawings, giving the main explanations for this problem. At the moment in 6 exemplars, and 5 more are in preparation in a smaller size (0.50 by 0.70 cms).

This exhibition was presented at the Lake Tahoe Workshop. (see the poster session paper by the same author).

5) a slide set of 40 color pictures, for the scholars. In this document, we present the mountain forest, the snow action, the ski damages and what we can do if we want to have a nice forest in a century... This set is under creation, and will be printed at 1 500 exemplars.

6) a color fold-out page, with the drawings of the exhibition, in 50 000 copies. A poster version will be available.

The encouraging results of this campaign, show that France should continue in this way. If everyone take care of our forester patrimony, our children or grandchildren... will have the opportunity to enjoy the beauty of the forest.

