

# ACCIDENT PREVENTION IN A SKI RESORT THE EXAMPLE OF GRANDVALIRA IN ANDORRA

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# GRANDVALIRA is the biggest ski area in the Pyrenees

It was the 2003-2004 season when the two leading Pyrenean ski resorts, Pas de la Casa-Grau Roig and Soldeu-El Tarter gave birth to a ski area of European proportions



# ACCIDENT PREVENTION IN A SKI RESORT

## THE EXAMPLE OF GRANDVALIRA IN ANDORRA

**Altitude band:** 930 m. (2.640 m - 1.710 m)

**Skiable area:** 1.926 Ha

**110 ski runs**-193 km

**2 competition stadiums I.S.F**

**3 freestyle areas**

**2 permanent boardercross**

**66 lifts**

**100.400 skiers/hour**

**1008 Snow cannons**

**Artificial Innivation:**

**(45% of the skiable domain)**





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## THE EXAMPLE OF GRANDVALIRA IN ANDORRA

Safety is a major priority in Grandvalira

Constant efforts are made:

- to improve the installations and keep them in perfect condition,
- to update the signage and delineating of the ski runs,
- to devote more human resources to medical and rescue services
- to make skiers and snowboarders aware of the importance of respecting descents and of showing a responsible attitude, not putting other sportspeople at risk through careless behaviour.

a team of 75 people is working daily and in coordination to do so

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### SNOW-REPORTING

- each morning the parameters relating to climatology and the state of the snow are reported (three weather stations)
- once a week, the snow-reporting team also carries out surveys to check the state of the layer of snow, its granulometry and the stratum characteristics, amongst other factors.
- With this information, they are able to forecast how the snow will evolve.



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### AVALANCHE EXPERTS

- after each important snowfall, or whenever the risk of avalanche exists, before the opening of the ski resort, controlled avalanches are provoked





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### AVALANCHE EXPERTS

- Clear information is given about the avalanche risk in all the entry points of the resort





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### SKI SLOPE SIGNPOSTING

- name and level of the run, so the skiers can choose slopes adapted to their level



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- Signs to reduce speed around the lifts starts and in narrow places
  - possible dangers (patches of ice, accumulations of cannon snow, temporary irregularities of slopes ...)
- All the obstacles are protected



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GROOMING AND SNOWMAKING improve the condition of the slopes





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### OPENING AND CLOSING OF SLOPES

skipatrols are the first to ski across the entire resort to check its condition.

they are also the last to go up in the lifts just before closing time and the last to come down all the slopes simultaneously, in order to check that no client is still on them and to remove any material that may interfere in the work of the night machine-operators.



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## STRETCHING & WARMING EXERCICES



## THE SNOW RESPONSABILITY CODE

### 1. RESPECT FOR OTHERS

Slope users must behave in a way which does not risk or cause harm to others, either due to their actions or by their equipment

### 2. SPEED AND HABILITY CONTROL

Keep your speed and actions appropriate for your ability, the terrain, weather conditions, for snow conditions and for the number of people on the slopes

### 3. GIVE WAY TO THE LOWER SLOPE USER

The upper slope user is in a better position to choose his or her line and be able to ensure the safety of lower slope users.

### 4. OVERTAKING

Overtaking manoeuvres can be made from above or below, from the right or the left, but always providing sufficient space to be able to anticipate the movements of the skier who is being overtaken.

### 5. AT A PISTE JUNCTION OR WHEN STARTING A RUN

After stopping or at a piste junction, slope users must check by looking above and below, whether it is safe to join the run without putting yourself or others at risk.

### 6. STOPPING

All slope users must avoid stopping on narrow stretches or with reduced visibility. In the event of a fall, you must move out the way as soon as possible.

### 7. CLIMBING OR DESCENDING ON FOOT

Any slope user who has to climb or descend a run on foot must do so at the side of the piste and check that neither themselves or their equipment is a danger to other slope users.

### 8. RESPECT INFORMATION, SIGNS AND MAKERS

Slope users must heed information concerning weather, piste and snow conditions, as well as respecting signposting and markers

### 9. HELP

Any person who is a witness to or who is involved in an accident must provide assistance by alerting the pisteurs. If necessary he or she will remain at the service of the rescue service.

### 10. IDENTIFICATION

Any person who is a witness to or who is involved in an accident must identify themselves to the rescue service.



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### SNOWPARK'S SECURITY RULES

- 1- Make jumps corresponding to your level. Check the colour
- 2- Check the jump before going
- 3- Make sure that the landing area is clear before jumping
- 4- Control your speed
- 5- Don't stand behind a jump. In the event of a fall, leave the area quickly
- 6- Don't try impossible tricks
- 7- Riding with helmet and pads is highly recommended
- 8- To take photos, please keep away from the jump area
- 9- In case of injury, close the jump immediately and avert snowpark's perchman

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## SUMMER WORKS



## **ACCIDENT PREVENTION IN A SKI RESORT THE EXAMPLE OF GRANDVALIRA IN ANDORRA**

All these actions are led in order to prevent or reduce the accidents on the resort,

But the rates of injuries as it is seen in most studies doesn't significantly change, it is important to go on collecting data on the accidents, and try to find new ways to make snow sports safer





THANK YOU