

Avalanche accidents in Italy

Season 2015-2016



winter 2015-2016 italian Alps summary:

- first snowfall in **October** then
- warm and no snow in **November** and **December**
zero level many days: November > 4000 m; December >3500 m
- snowfalls only in **January**
- a lot of snowfalls in **February**
- so **March** and **April** with average snow cover

85% accidents: from **February** to **May**

33% accidents: **April**

few accidents thanks to particular conditions of stability: **short periods of instability**

(few days or few hours)



Pila, 5 January 2016
cracks triggered by single skier
uphill, slope 20°-25°

examples:



Gran Paradiso
spontaneous slabs from
moraines May 2016

Example:

slab remote triggered by a skier

Gran Paradiso



Few accidents thanks to particular **conditions of stability** for long periods

examples:

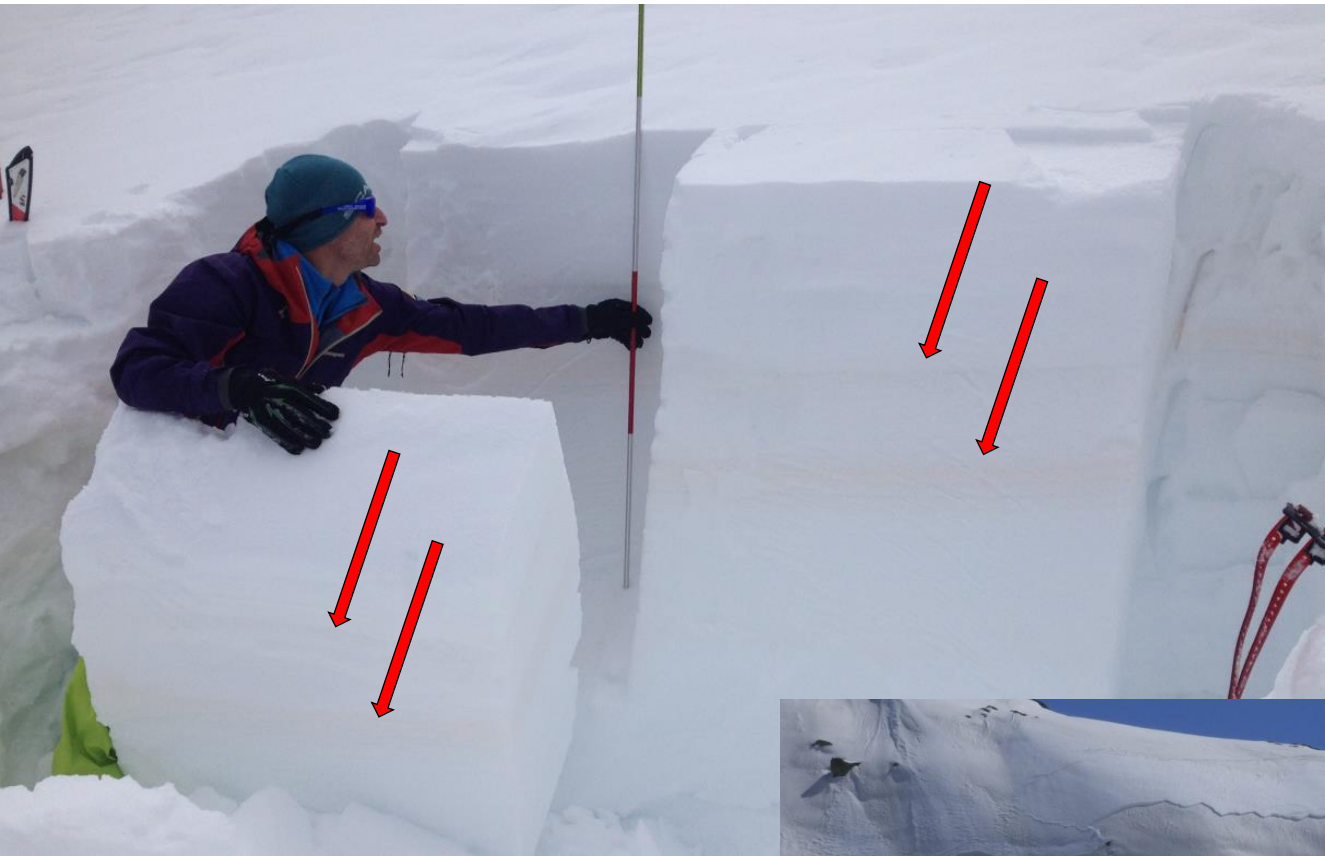


Gran San Bernardo

18 January 2016

Slopes 45°-50°

after snowfall and
especially strong wind
and intense cold : no
spontaneous⁵
avalanches



between end of
March and beginning
of April, two
snowfalls with
Saharan sand

a preferred base layer
for avalanches



avalanche danger:

- winter not so critical for spontaneous avalanches
- average critical for skiers/mountaineers

avalanche problems (in order of importance):

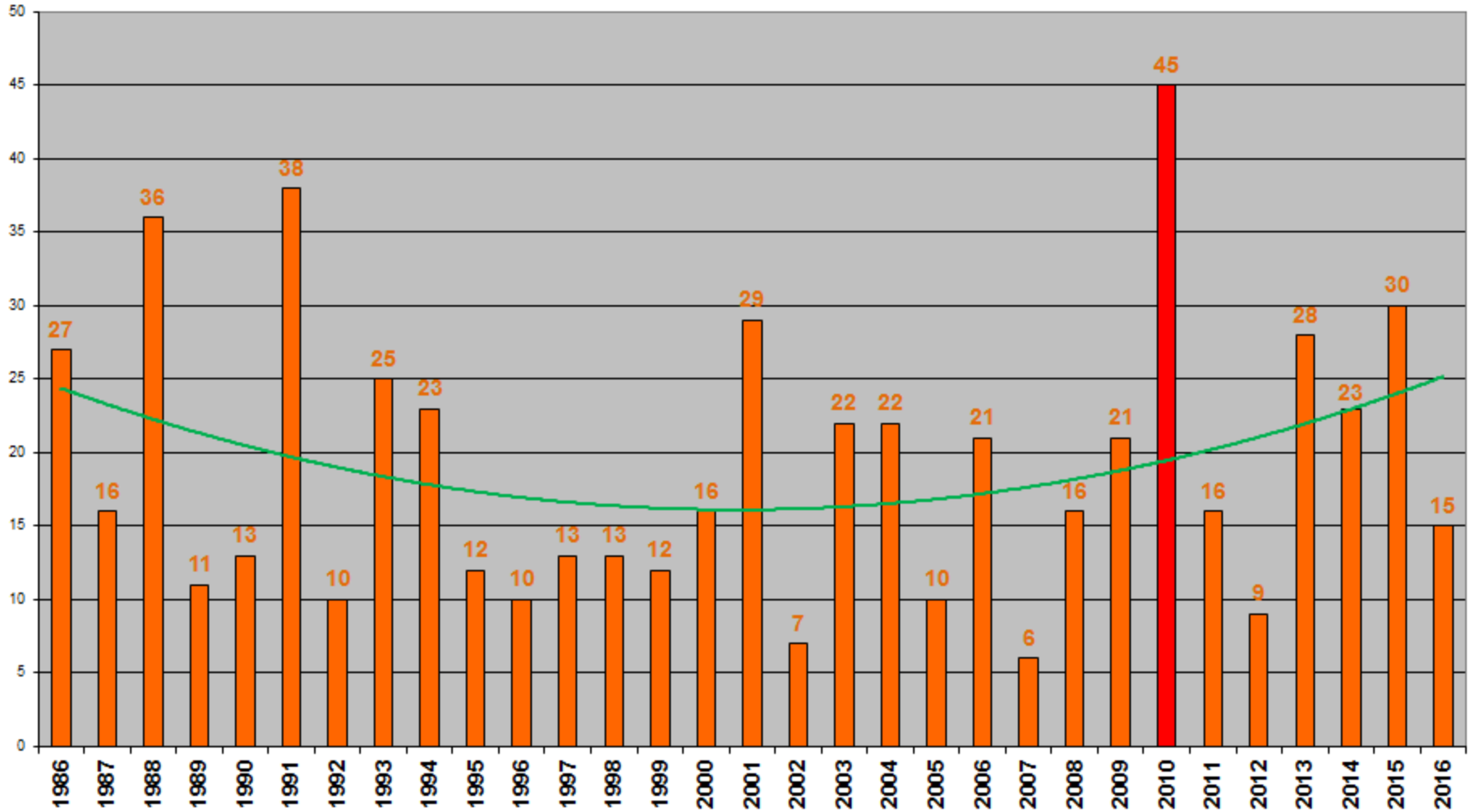
1 – wind slab, often close to the ridges

2 – wet slab

3 – deep slab (old snow with a weak layer)

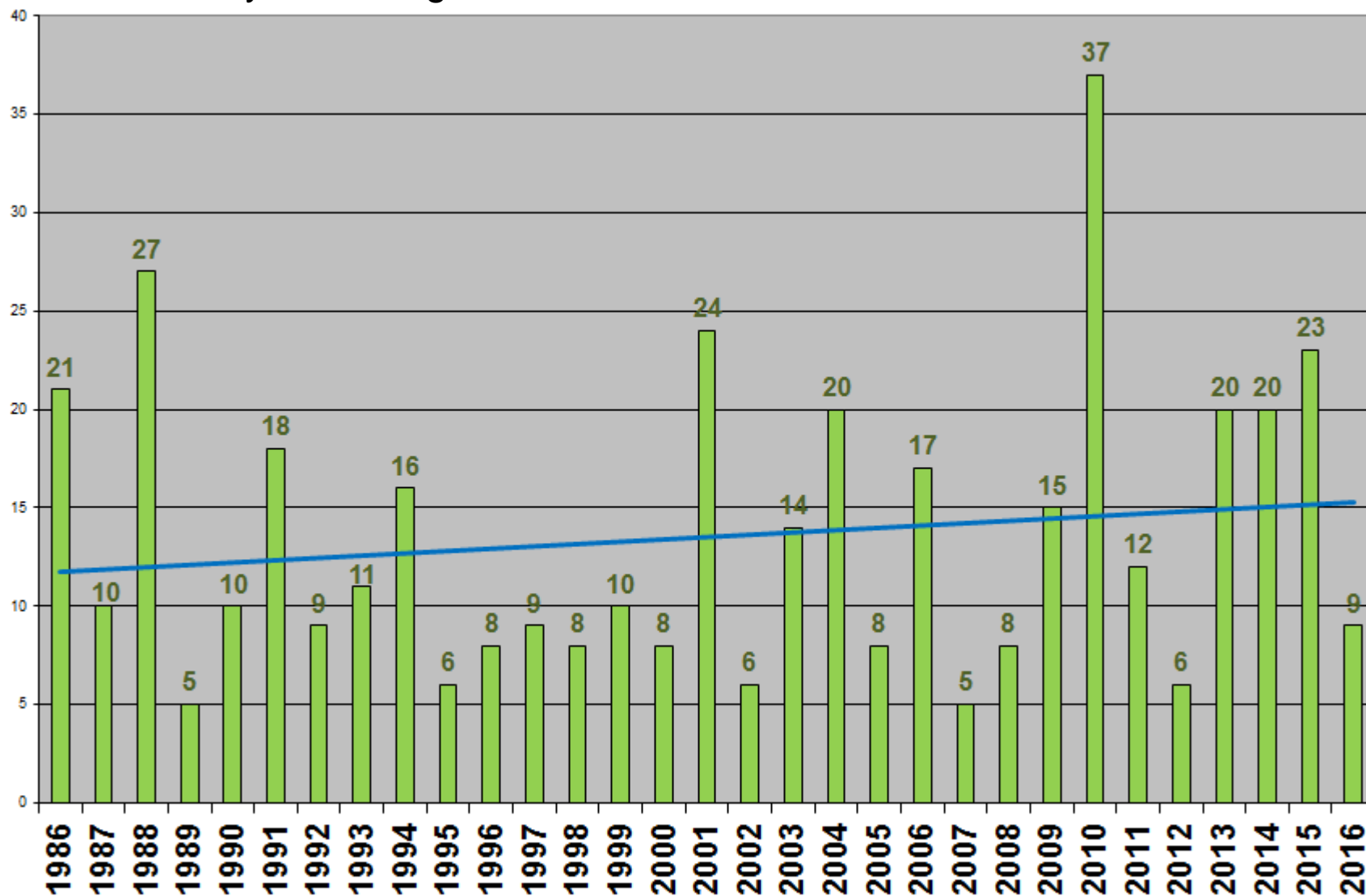
Avalanche victims in Italy 1986-2016

In Italy on average (linear media) 19 persons die every year in avalanche fatalities



Avalanche fatalities in Italy 1986-2016

In Italy on average there are 14 avalanche fatalities each season

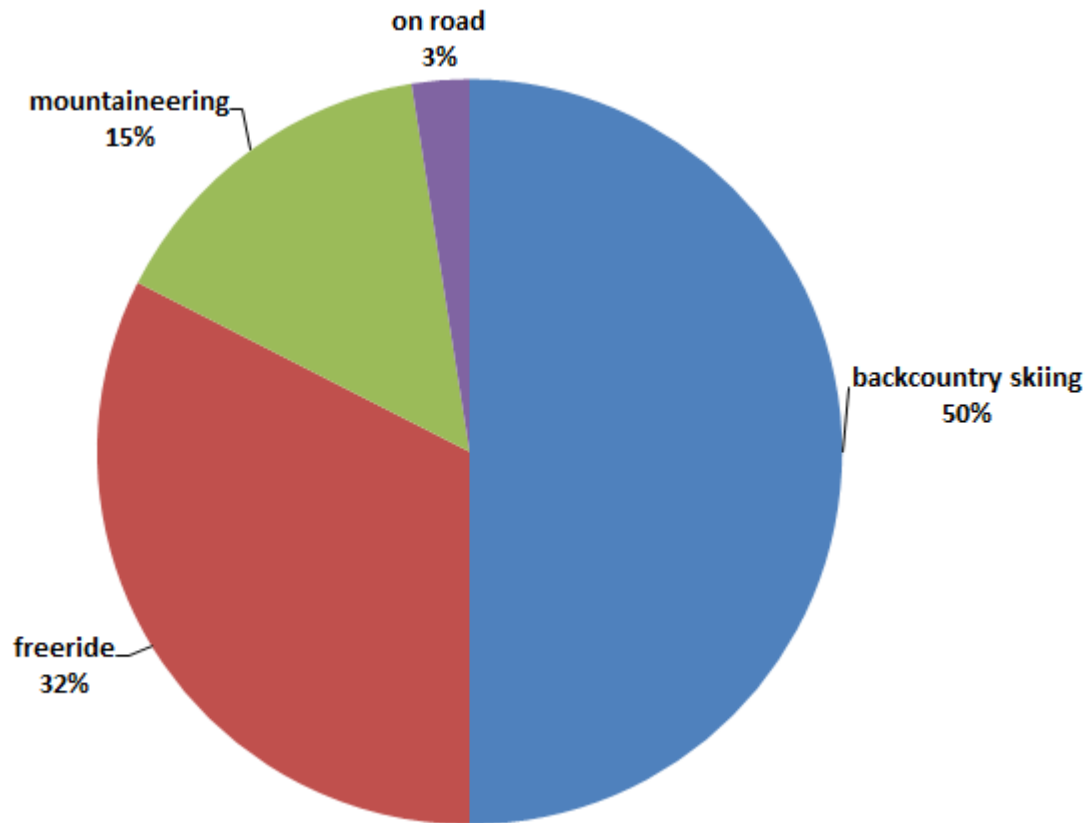




Victims in Italy by Regions season 2015/2016



Avalanche accidents rate by category in Italy 2015-2016



Accidents: When?

66% accidents: 1st day of good weather after a snowfall

87% accidents: within 3 days after a snowfall

Every days of the week (a little more on Saturday, a little less on Friday): confirms increase in frequentation of the backcountry.

Avalanche victims by category 2015-2016

15 victims:

13 backcountry skiing

1 off piste skiing

1 mountaineering

not easy to distinguish clearly between mountaineering and ski touring because many times at the moment of the burial, the ski mountaineers involved were climbing with ice axe and crampons

Problems highlighted in this season:

2 accidents in which several people were caught at the same time :

- 12 March 2016 Monte Nevoso: 9 people caught (6 dead)
- 10 April 2016 Cima Salimmo – Faustinelli Couloir: 9 mountaineers caught (7 uninjured, 2 injured)
- and other accidents where just by chance, there were not many people caught



Problems: self rescue inefficient or impossible; hard work for rescue team

Problem highlighted also in this season:

the number of backcountry skiers has increased substantially in recent years

The consequences can be dramatic because multiple burials are more likely, that complicate self-rescue, even more so if there are more groups that do not know each others.



Gran San Bernardo – Col Serena

January 2016: at least 105 people in the picture...and many other more back

Skimo race – Tour du Rutor 2016

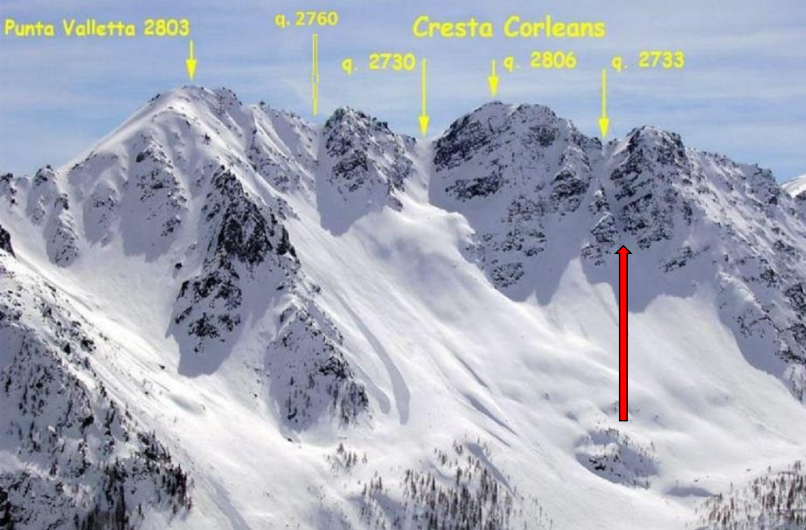




Mont Gelé – Valpelline – April 2016



Noeud de la Rayette – Valpelline – April 2016



Gran San Bernardo

Cresta di Corléans – February 2016





Gran San Bernardo – Mont Flassin - January 2016

Features of the accidents:

50% of accidents → slopes > **3000 m** of altitude

62% of accidents → **cold** aspects (from NW to N until E)

38% of accidents → **warm** aspects (from SE to S until W)

because of: lighter and better equipment + better fitness and technique

= increases the search for steep slopes

70% of accidents → slopes > **40°**

small avalanches that unbalance skiers

Mont Blanc – Petit Mont Blanc – Couloir Bonatti



Mont Blanc – Petit Mont Blanc – Couloir Bonatti

3 french skiers (without helmet):

small loose wet avalanche at 11.00

1 caught, airbag deployed, severe trauma
(500 m of fall)

2nd avalanche during rescue operation



At 15.00 2 skiers still in
the bottom of couloir,
searching lost
equipment.

Monviso – Coolidge couloir – classic steep couloir, skied few days before and posted in the social media

warm day - small natural loose avalanche

10 people in the couloir - 3 people caught: 2 injured, 1 died



Monte Nevoso - Riva di Tures – Valle Aurina – 12 March 2016

9 different groups (local groups + 2 austrian), a total of 26 persons





9 people caught (skiing up, skiing down and on foot):

2 injured

1 injured

6 dead

1 person dead with airbag not deployed

1 person injured with airbag deployed, critical buried but visible

no more data because there is still an investigation by the Prosecutor



old snow with a weak layer



Mencair – Gran Paradiso



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