



Corpo Nazionale  
SOCCORSO ALPINO e SPELEOLOGICO

Structure and organization of  
mountain and speleological  
rescue in Italy



CLUB ALPINO  
ITALIANO (ITALIAN  
MOUNTAINEERING CLUB)

*Founded in Turin in 1863*

*312,000 Members*

**12 December 1954**



*National operative  
structure of C.A.I.*



*Speleological rescue  
1966*

**Mountain rescue**



*Association of volunteers*

*From 7th April 1998 enrolled in  
the list of Volunteer  
organizations of the Protezione  
Civile (Civil Defence);*

**2007 STAFF**

**7155 volunteers including:**

- 235 doctors
- 29 National instructors for mountain rescue
- 28 National instructors for speleological rescue
- 23 National avalanche rescue dog instructors –  
U.C.V- Unità Cinofila Valanga
- 10 National surface rescue dog instructors  
U.C.R.S.- Unità Cinofila Ricerca Superficie
- 10 National instructors for canyon rescue

**NATIONAL LAWS**

Law No. 91 of 26th January 1963

**"Reorganization of Club Alpino Italiano"**

Art. 2

*The CAI (I.M.C.) shall assume adequate technical initiatives to prevent accidents while mountaineering and to rescue mountaineers and walkers who are injured or in danger, as well as recovering of bodies.*

Law No. 225 of 24th February 1992

**"The setting of the National Civil defence service : Protezione civile"**

Art. 11

**Operative structure of the national defence service:**

**Corpo Nazionale Soccorso Alpino - C.N.S.A.S**  
(National Mountain and Speleological rescue corps)

Law No. 162 of 18th February 1992.

**"Measures for CNSAS volunteers to facilitate the relative rescue operations"**

**absence from work for rescue operations without losing a day's pay**

**absence from work for national and regional training exercises without losing a day's pay.**

**NATIONAL LAWS**

Law No. 74 of 21st March 2001

**"Dispositions to help the activities of the C.N.S.A.S."**

Art. 1

**The Italian Republic recognizes the social value of the C.N.S.A.S. as a public service;**

Conventions:

**Ente Nazionale Aviazione Civile (E.N.A.C.) - National civil aviation agency;**

**Servizio Sanitario Nazionale "118" - National health service "118";**

## NATIONAL SCHOOLS:

*National Technical Mountain Rescue School;*

*National Technical Speleological Rescue School;*

*National Medical School for High Risk Emergencies in Mountain Environments;*

*National Medical School for High Risk Emergencies in Underground Environments*

*National School for Avalanche Dogs and Handlers;*

*National School for Dogs and Handlers for surface searches;*

*National Technical School for canyon rescue;*

*National School for Coordinators of Rescue Operations.*

## NATIONAL LAWS

Law No. 289 of 27th December 2002

**"Financial law"**

Art. 80 sub paragraph 39

*Rescue operations in mountains, in caves, in hostile and dangerous environments are usually assigned to the C.N.S.A.S. of the C.A.I. and to the Bergrettungs-Dienst (B.R.D.) of the Sudirol-Alpenverein (A.V.S.).*

*C.N.S.A.S. and B.R.D. are responsible for the coordination of rescues in the presence of other bodies or organizations excluding great emergencies or calamities.*

## NATIONAL NORMATIVE

President decree of 27th March 1992

**"Recommendations to all the Regions to coordinate and to determine the levels of medical assistance necessary in each emergency"**

**The National Emergency Services (Centrale Operativa) national phone number "118" is the means of raising the alarm**

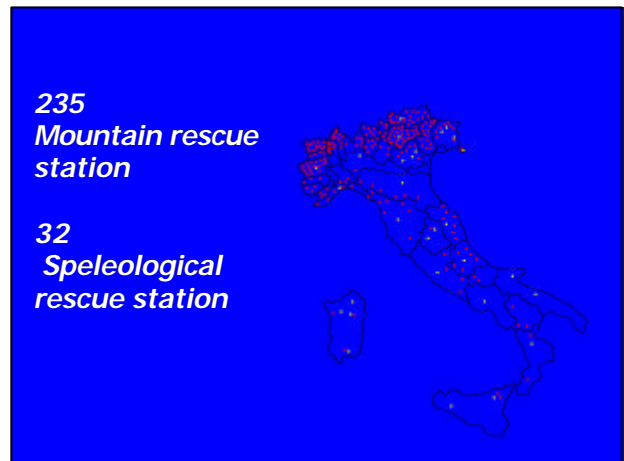
**The Emergency Services receive all the requests for health or medical emergencies.**

**21  
Regional  
and  
Provincial  
Services**



**32  
Mountain  
"committees"  
"Delegazioni  
Alpine"**





**INJURY SITUATION**

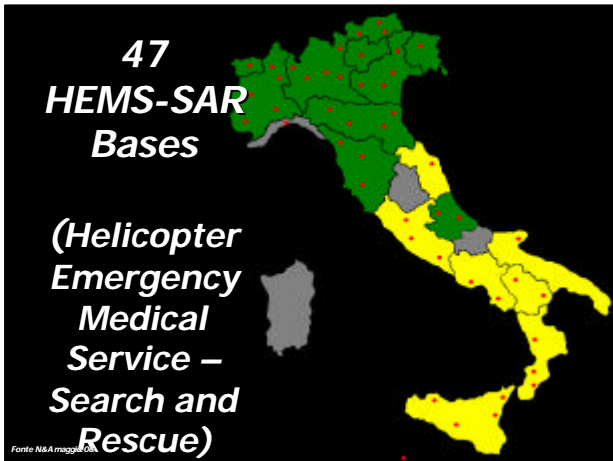
INJURED	6020
UNINJURED	1495
SLIGHTLY INJURED	2063
BADLY INJURED	1579



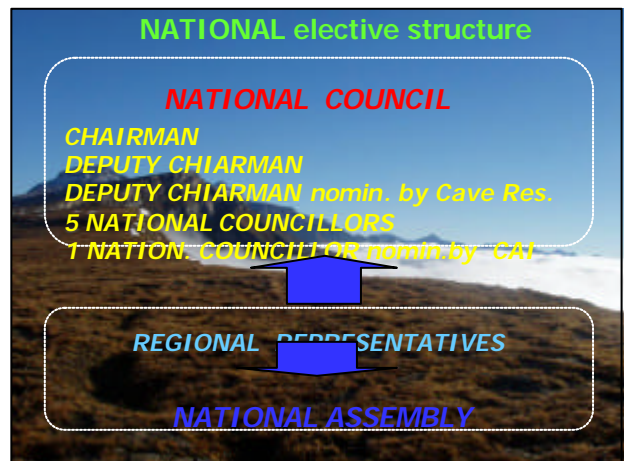
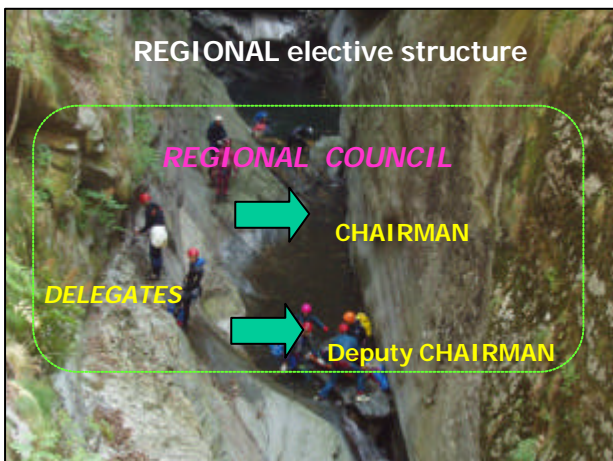
**RESCUE CALL**

- Emergency medical phone number
- 24 hour service
- no charge for the call or the rescue

**118**



- FLIGHT CREW**
- Pilot
  - Flight specialist
  - Doctor, anaesthetist specialised in reanimation
  - Professional nurse
  - Mountain rescue technician
  - Avalanche rescue dog and handler

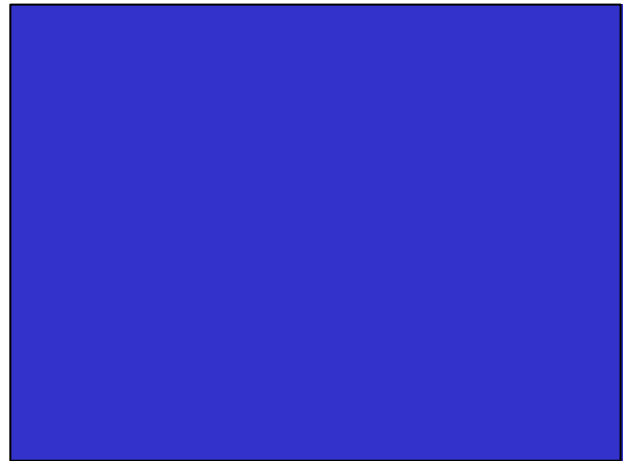
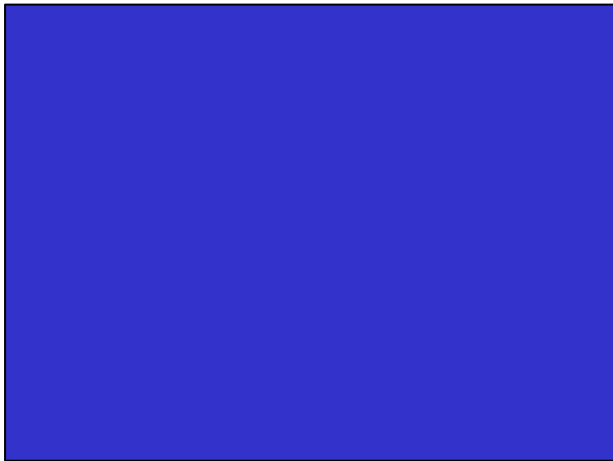


## RADIO FREQUENCIES

MHz	notes
71,000 71,550	Frequency for air and ground operations
68,750 169,8125	Frequency for Italy except the Aosta Valley
71,575 72,975 161,300	Frequency in use for the Aosta Valley alone

## RADIO FREQUENCIES

MHz	notes
169,4125	National territory
169,475	National territory
169,500	National territory
169,800	National territory



- **Corpo Nazionale**

**SOCCORSO ALPINO**

**e SPELEOLOGICO**

### OUTLINE OF THE COURSE SNOW AND AVALANCHE

- ORGANISED ACCORDING TO THE RULES OF THE *REGIONAL SPELEOLOGICAL RESCUE* OF FRIULI VENEZIA GIULIA
- SPECIALISED TEAM IN „SNOW AND AVALANCHES”

» *SAMPLE PROGRAMME*

- **THEORETICAL LESSONS**

- **1 - Snow formation in the atmosphere**

- a. typical formations
- b. other kinds of solid precipitations

- **2 - Evolution of the snow on the ground**

- a. metamorphisms of dry snow
- b. metamorphisms of wet snow

- **3 - Equilibrium of snow blanket**

- **4 - Stabilising and destabilising factors**

- a. influence of ground morphology
- b. influence of local vegetation
- c. wind influence

- **5 - Meteorology**

- a. chemical composition of dry
- b. atmospheric heat exchanges
- c. temperature and atmospheric pressure
- d. humidity
- e. wind: description, origin and variations
- f. cloud classification
- g. vertical stability of the atmosphere
- h. visibility
- i. air masses and weather fronts
- j. general atmospheric circulation

- **6 - Synoptic meteorology**

- a. fundamental properties of air temperature, humidity, air pressure and solar radiation
- b. general atmospheric circulation and cold/warm frontal systems
- c. anticyclones and fronts over Europe ( typical configurations)
- d. Role of the Alps, deformation of the fronts, stau-fohn, Bora etc.)
- e. circulation and local phenomena (breezes, snow limit, etc.)
- f. typical synoptic configurations in the south-east Alpine region and its evolution

- **7 - Weather maps reading**

- a. surface weather charts
- b. upper air weather charts
- c. surface forecast weather charts
- d. upper air forecast weather charts

- **8 - Weather Bulletin**

- a. Regional Meteorological Observatory of Friuli Venezia Giulia, OSMER-ARPA
- b. other meteorological offices
- **9 - Reliability of weather forecasts**
- a. Domains and orography of the models
- b. long term behaviour of forecasts
- c. an example for the estimate of the reliability
- d. possible causes of forecast mistakes

- **10 - The nivometeorological bulletin**

- a. short history of the product, from the avalanche bulletin to the nivometeorological bulletin in Italy; survey network and kind of relieves
- b. standardised scale of avalanche alerts methodology of processing the nivometeorological bulletin
- c. organisation and contents of the snow bulletin, users and field of employment
- **11 - Theoretical lesson on rescue method using A.R.Va and sounding on the avalanche**

- **Training lessons**

- 1 - Stratigraphy of the snow blanket
  - a. structural analysis of the snow blanket
- 2 - Stratigraphy and penetrometry of the snow blanket with analysis of the hardness and snow flow, survey of crystallographic composition, of the density and general consolidation
- 3 - Review on the formation and evolution of the snow blanket due to metamorphic processes and relative crystalline shapes
- 4 - Completion of the sliding block
- 5 - The useful ranges of the A.R.Va, carrying out searches using A.R.Va with shuttle and precision pinpointing via intersection, use of probe and shovel, sounding with loose mesh (60x60cm), research with A.R.Va by concentric fields.

- Alpine ski excursion to point out the chosen routes and the characteristics of the snow blanket. At the end there will be carried out a test with A.R.Va, with accurate comparative pinpointing (research by concentric and intersecting fields)