

ABSTRACT

THE AGREEMENT BETWEEN THE ITALIAN CIVIL DEFENCE DEPARTMENT AND AINEVA

Study, research and technical training activity in the snow science area

Paolo Pagliara

This issue of "Neve e Valanghe" summarises the contents of the study carried out in 2006 by AINEVA on behalf of the Dipartimento Nazionale della Protezione Civile (the civil defence service).

The research was carried out in the framework of a 3-year agreement signed in 2005 between the two organisations with the aim of drawing up scientific methods and organisational procedures to deal with the civil defence problems linked to snow, in the framework of the system of Functional Centres.

The activities provided for by the agreement are in fact aimed at improving knowledge, methods and useful technologies for the development of national monitoring and forecasting systems to be implemented by Functional Centres, as well as granting technical and scientific support within the civil defence service, as established by the directive of the Prime Minister of 27/02/2004 "Operational strategies for the organisational and functional operation of the national and regional warning system for hydrogeological and hydraulic risk for civil defence", published in the supplement n. 39 to the Official Gazette n. 59 of 11 March 2004.

NATIONAL SURVEY ON SNOW AND AVALANCHES: THE STATE OF MONITORING NETWORKS AND SNOW AND WEATHER DATABANKS IN ITALY

Giorgio Tecilla

This article illustrates the results of the national survey on snow and avalanches, carried out in 2006 by Aineva for the national civil defence service, addressing the state of monitoring networks and special snow databanks operated by the national system of functional centre of the civil defence service.

Referring to the snow monitoring activities carried out in real time or in partially deferred time, the article reports the main description elements of the system currently operating in the country, emphasizing the

most interesting technical and organisational aspects and the main critical points, and indicating some possible development guidelines aimed at enhancing their degree of efficiency. The study also aims at defining the nature and importance of snow databanks linked with the mountain territory, therefore considering monitoring stations installed above 800 m a.s.l., the threshold conventionally assumed as the level beyond which avalanche problems become a significant problem.

GENERAL CHARACTERISATION OF THE SNOW CONDITIONS IN ITALY

Massimiliano Fazzini

This article reports the results of a study of snowcover, the aim being that of generally offering an outline of snow conditions and diffusion in Italy. In particular, by retrieving and analysing in detail the still scarce and fragmentary sources of data currently available, other than focusing on the results of some studies published in national and international magazines, researchers have tried to give a general characterisation of the event that can provide useful elements of study for the planning of future interventions by the civil defence service.

Particular care was devoted to defining the snow cover situation at altitudes above 800 a.s.l., and therefore to those territories potentially affected by the "Snow Risk", as established by the workteam of the snow and avalanche sector.

METHODOLOGY FOR ASSESSING THE REPRESENTATIVENESS OF SNOW MONITORING NETWORKS

Mirko Sebastiani

The "National survey on snow and avalanches" has allowed researchers to carry out a first analysis of the state of the snow monitoring networks currently installed in Italy.

In order to support the future choices aimed at consolidating and rationalising the system, it was deemed appropriate carry out a general evaluation about the importance and representativeness of these networks, taking into account the mountain areas by convention corresponding to altitudes exceeding 800 m a.s.l.

To this aim, researchers calculated several general spatial density indexes that are

assumed to be suitable to the functions of snow monitoring networks, and an assessment methodology originally developed by Latenser and Schneebeli for the Swiss territory was revised and made fit for the Italian reality.

AVALANCHE RISK IN ITALY: THE IMPORTANCE OF AVALANCHE PROBLEMS AND THE INSTRUMENTS TO CONTRAST THEM

Giorgio Tecilla

This article summarises the contents of the document named "Analysis of the national technical and organisational framework of the civil defence system for dealing with avalanche problems", drawn up in 2006 in the framework of the ongoing collaboration between the national civil defence service and AINEVA.

The article includes three sections, the first of which (Section A) aims at providing a general description of the importance of avalanche problems for the national territory.

This description is based on two distinct data sources:

- figures on avalanche accidents annually gathered by AINEVA in the framework of the activities carried out by CISA-IKAR, the international commission for avalanche rescue;
- those provided by the national survey on snow and avalanches carried out by AINEVA in the course of 2006 for the national civil defence service.

The elements provided by the survey, though being necessarily synthetic, outline in a sufficiently reliable way the real incidence of avalanche problems in Italy.

Based on these elements it was thus possible to carry out an evaluation of the degree of problem avalanches represented in the different regions and autonomous provinces.

The second section (Section B) contains the results of the survey concerning the nature and validity of the cartographic databanks on avalanches currently available in Italy. These elements in fact play a fundamental role for any programmed action and technical planning of interventions aimed at mitigating the effects of avalanches, besides representing an essential assumption for the activity of planning the use of territory in maximum safety conditions.

The last section of the article (Section C) describes the composite nature of active competences in the area of avalanche risk prevention at the level of state, regions or autonomous provinces and at local scale, represented by Avalanche Commissions.

OPERATIONAL STRATEGIES FOR PREVENTION

Stefano Bovo

From the analyses reported in this issue of Neve e Valanghe it is possible to draw precious indications for setting up future intervention strategies, with the aim of enhancing the effectiveness of the technical infrastructures set up for the prevention of risks linked to snow in the framework of the system of the civil defence functional centres.

These indications can be translated into a series of actions to be carried out with priority within the several operating areas of functional centres.

