The avalanche cadaster of the Valle d'Aosta Region (NW Italian Alps): the new born web portal (http://catastovalanghe.partout.it/)

A. Debernardi [1]*, V. Segor [2]

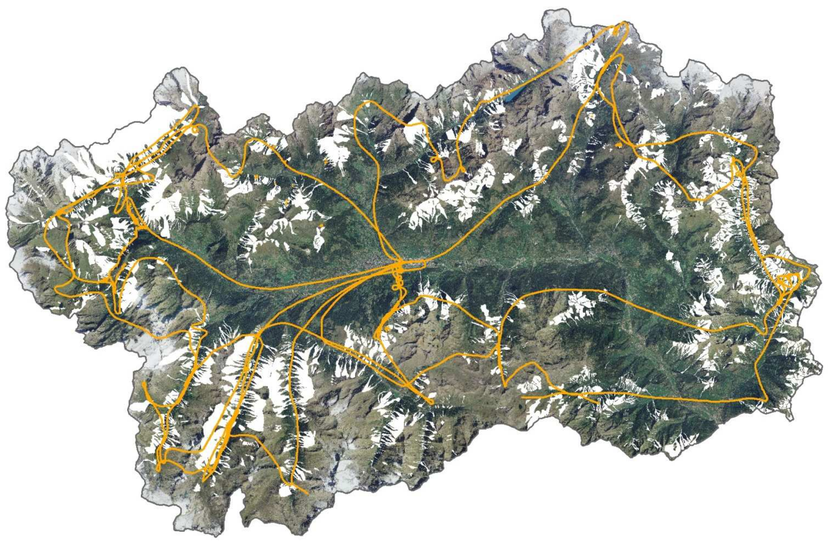
Andrea Debernardi

[1] Fondazione Montagna sicura, Villa Cameron, Località Villard de la Palud 1, 11013 Courmayeur (AO), Italy – adebernardi@fondms.org

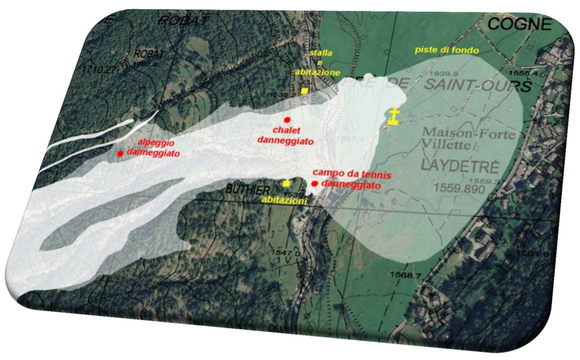
[2] Ufficio neve e valanghe, Assetto idrogeologico dei bacini montani, Regione Autonoma Valle d'Aosta, Loc. Amérique 33, 11020 Quart (AO), Italy – v.segor@regione.vda.it

In the context of a montainous region, as Aosta Valley, avalanches may have a significant influence on land use, on the ordinary course of human businesses and on the economic and touristic activities.

It's essential for the regional administration to have tools able to summarize, preserve and make the historical information related to avalanches easily accessible.



In white: limits of avalanches of the whole Aosta Valley updated to 2013. The orange hatching represents the GPS tracks made during the inspections (by helicopter or not) made for census avalanche events of 2012-2013 winter season.

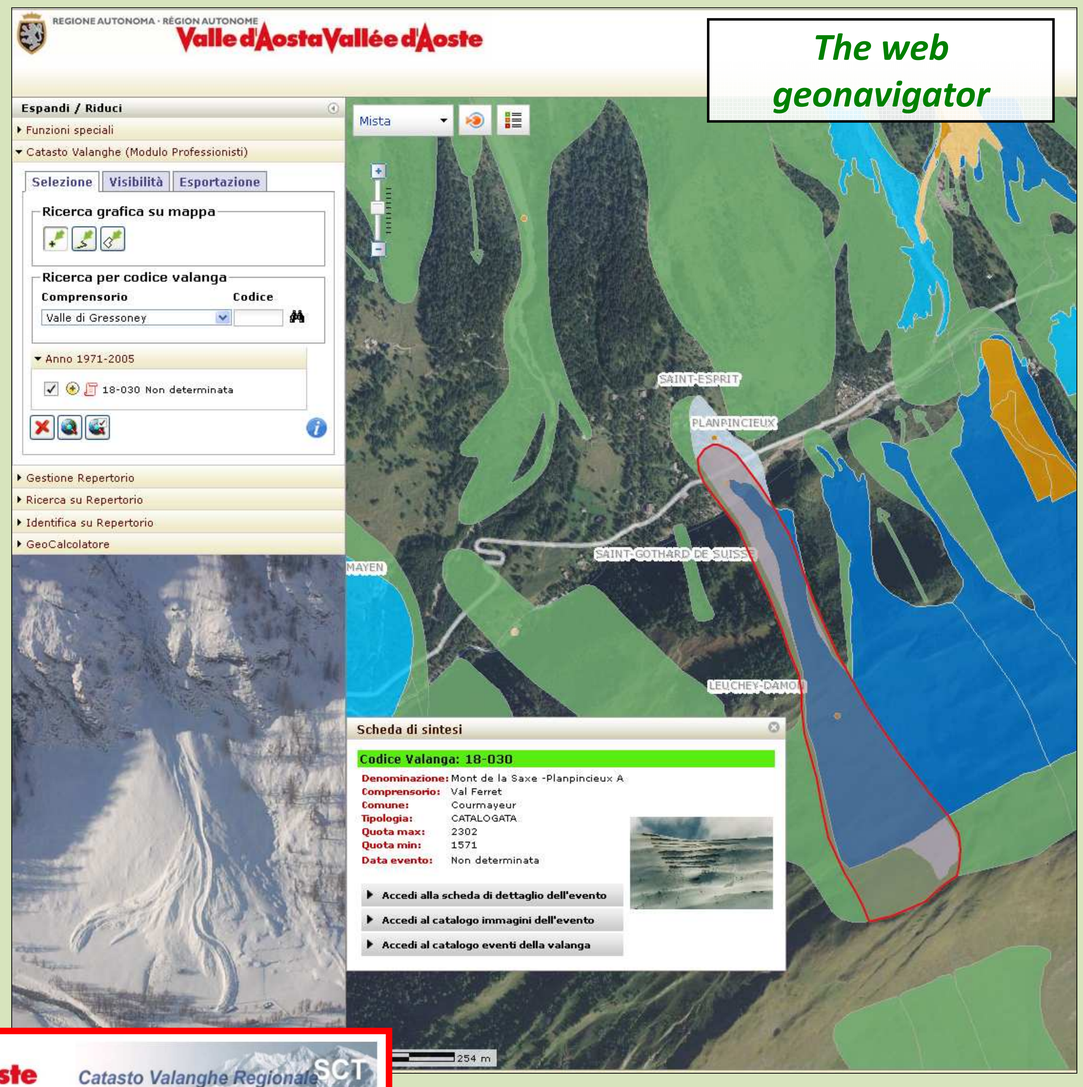


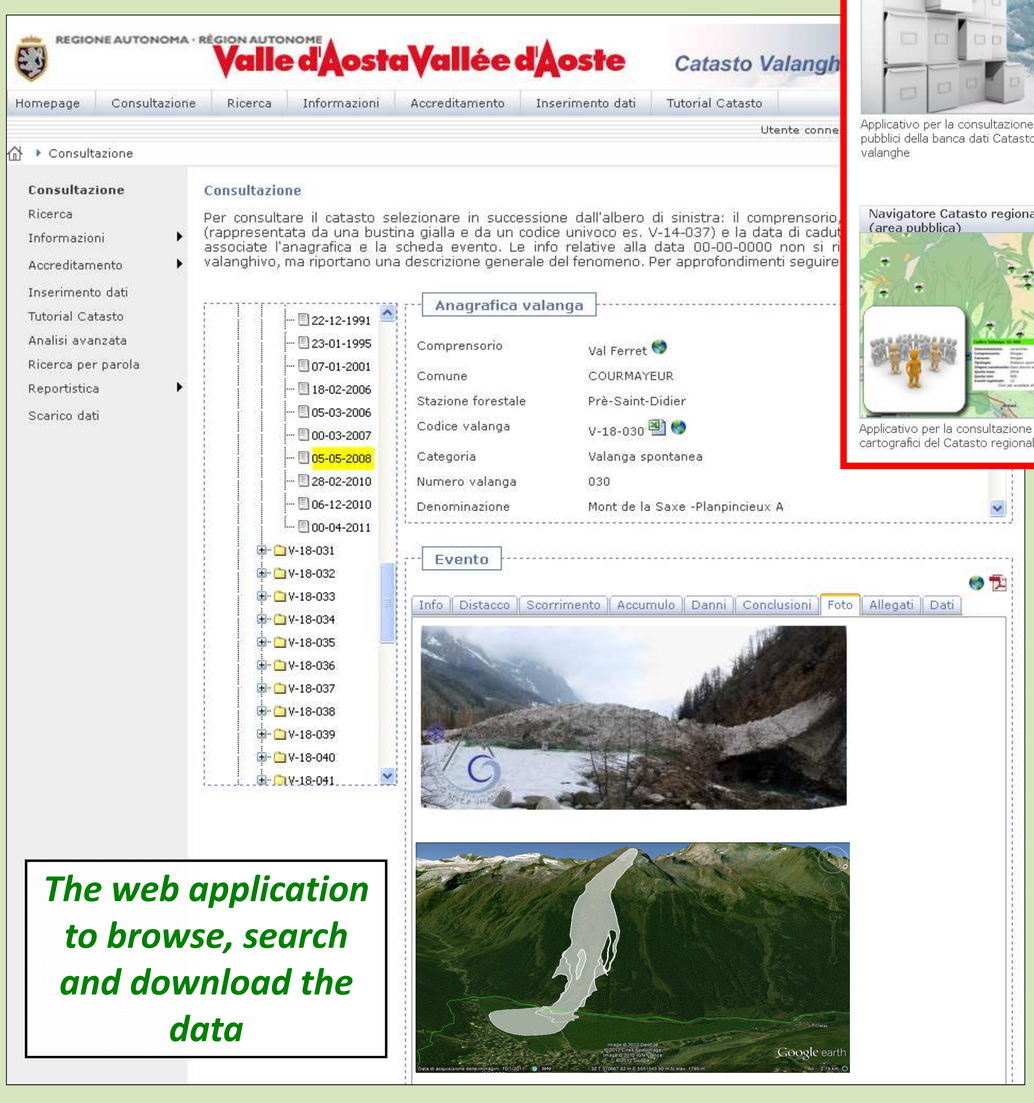
An image of the avalanches cadastre: surveyed perimeter of the big avalanche of Buthier (Cogne, 15th December 2008).

During 2011 the Snow and Avalanches Office and IN.VA. S.p.A. (the regional Information and Communication Technology company) began the design of the new web avalanche cadastre.

The web portal dedicated to the Avalanche Cadastre is divided into two main areas:

- ✓ the geonavigator, thanks to which you can view the maps of avalanches
- ✓ a web application to consult the whole avalanches database.

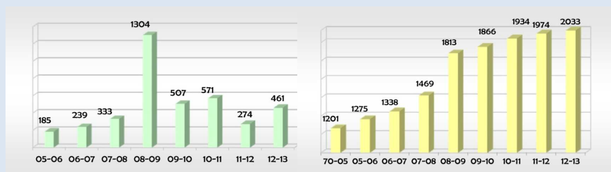




The web application to browse, search and download the data

The avalanches cadaster of Aosta Valley was created in 1970. At the end of winter 2012-2013 these are its main numbers:

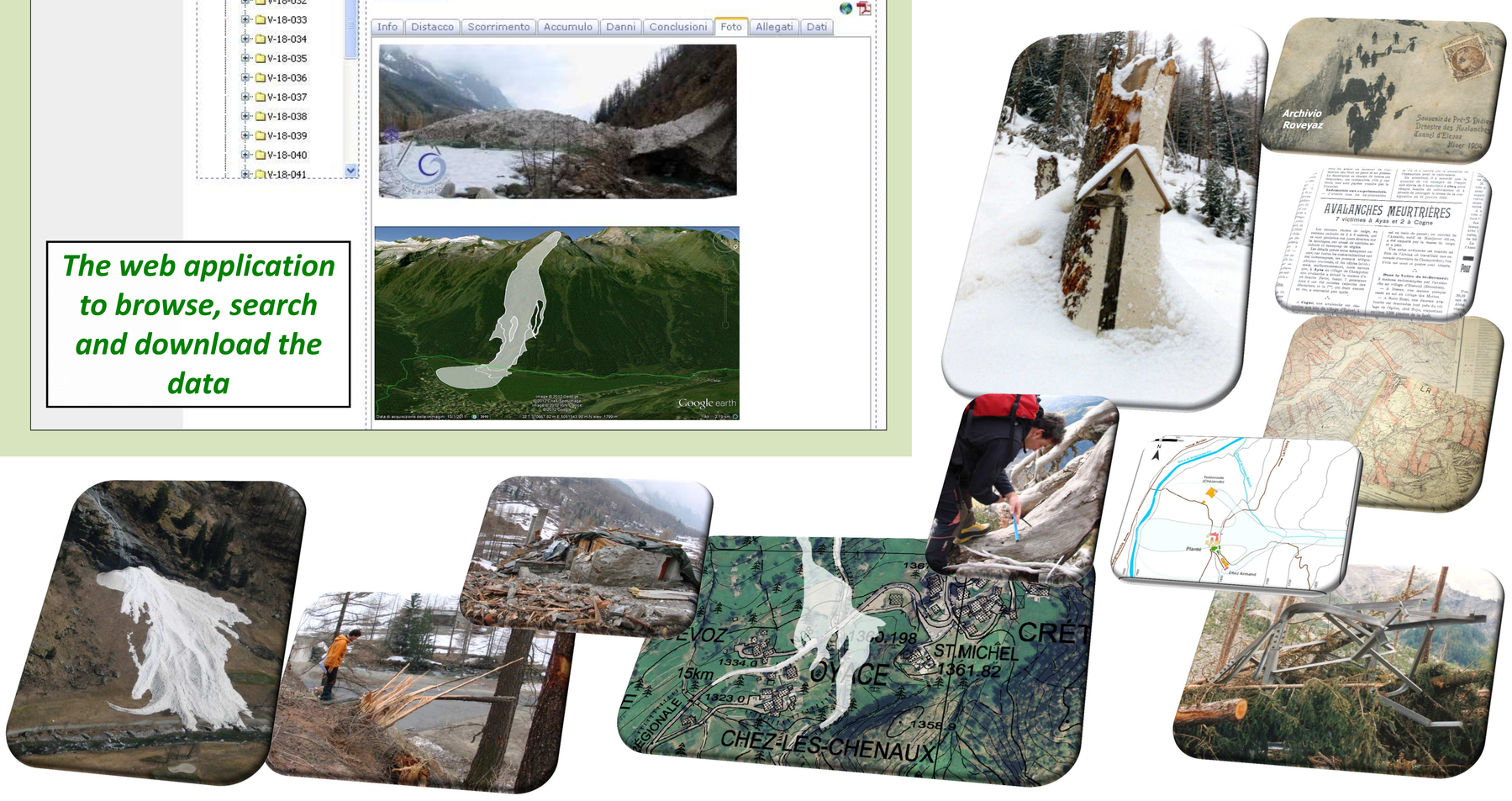
- ✓ 2.033 surveyed avalanche sites involving the 15% of the region (326.400 hectares);
- ✓ 3.000 avalanche events reported in cartography (GIS): of these, 832 were unknown before 2005;



Events seen in the last 8 years and avalanches known until 2013.

- ✓ 11.500 photos of avalanches dating from 1970 to 2005 scanned and included in the cadaster;
- ✓ 19.500 digital photos taken and catalogued;
- ✓ 4.900 Avalanche Sheets reporting digitalized.

Some photos and various documents visible into the web avalanche cadastre.



Why do we make a web avalanche cadaster?

- ✓ To get in touch with a greater number of people allows to find new data about avalanche sites.
- ✓ To confer more transparency to the information managed by Snow and Avalanches Office.
- ✓ To help the growth of avalanche activities' knowledge.
- ✓ It is a useful tool for land management, since it aims to minimize the exposure of people and assets that are vulnerable to avalanches.
- ✓ Documentary basis for future investigations and researches.