New Technical Guideline on Snow Supporting Structures in Avalanche Starting Zones
Stefan Margreth
WSL Federal Institute for Snow and Avalanche Research SLF, Davos, Switzerland

The purpose of snow supporting structures is to stabilize the snow pack so that the release of avalanches is prevented. The structures, which have been successfully used for more than 60 years, belong to the most important structural avalanche defense measures. More than 1000 km of such structures are in service in the European Alps. We present the newest edition of the guidelines that were published in 2007. The guideline regulates the planning and the design of snow supporting structures. An overview of the effects of snow pressure and instructions on the planning of defense structures in permafrost is given. Further, the procedures and criteria for type approval, together with the requirements for supporting structures and anchor grout are specified. The guideline draws heavily on past experience gained with supporting structures, and is complementary to the relevant engineering codes. It is directed towards designers and project engineers. In the newest edition the experiences of the avalanche winter 1999 are included and furthermore new insights on the maintenance and design of the structures and their foundations. The guidelines that are applied all over the world, allow the correct application of supporting structures to ensure a long service life.