Is going from snow avalanche analysis to decision making different for snow scientists or practitioners?

Sebastien Escande¹, ² Dominique Letang³
¹. Cemagref, Saint Martin d’Hères, France; ². S.N.G.M. (French Mountain Guide Association), Chambéry, France; ³. ANENA (French Association for Snow and Avalanche Study), Grenoble, France

Snow avalanche analysis is needed either for experts to reduce the risk for people and assets at risk or for skiers and alpinists to choose the best way, to abandon the trip and go back... Depending on the situations related to risk management processes or recreational practices, expert assessment involves different technical, scientific and personal backgrounds and profiles.

In all these situations, qualitative and expert judgments remain essential. On one hand, experts search for methods and techniques to reduce risks though structural or non-structural measures (such as zoning control). On the other hand, experimented snow practitioners (including Mountain Guides) use their own methods, such as check-lists, to help their reflexion and decision. These methods do reduce avalanche accidents while some human factors still have negative influences on decision making. In both cases, real-time decisions and easy-use, efficient decision making support systems are often required. The main goal is always to make the right decision using the available information with all its imperfections and uncertainty. Indeed, nobody wants deliberately to make wrong decisions and any decision is paradoxically always good for his author.

Classically, the two previous contexts are considered as different problems and knowledge from each community is not clearly compared and shared. Our approach proposes a state of the art of the existing analyse and decision methods in order to identify their respective advantages and lacks. The main perspective is the cross analysing of these different approaches.