Localization map of avalanche phenomena (CLPA) and collection of eye witness accounts: field investigation method, biases, alternatives and limits, data quality

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A catastrophic avalanche occurred in 1970, killing 39 people in a tourist centre located in the Val d'Isère ski resort, Savoie, France. In response, the French government gave Cemagref, at this time called CERAFER (Grenoble, Isère), the responsibility of developing avalanche mapping throughout the French mountainous areas (Alps and Pyrenees). The localization map of avalanche phenomena (CLPA) was also created at this time.

CLPA planning is based on two distinct methods. The first consists in an expert approach combining photographic interpretation and field analysis on specific sites designed to determine signs of avalanche paths by landscape interpretation. The second is based on a collection of eye witness accounts. Historical information is gathered from these accounts by interviewing people who live and work in mountain areas (forest rangers, ski resort managers, inhabitants, etc.) and are likely to have seen avalanches and know the avalanche paths, and by studying available archives. Data collected from the eye witness accounts and the archives sometimes concern old, poorly known or contradictory phenomena. Therefore, the first question on the quality of the data obtained from collection of eye witness accounts was considered. We also attempted to define unbiased criteria to evaluate the data quality and to qualify the main components of a field investigation:

- Oral eye witness account data and their sources (qualifications of eye witnesses),
- Material data and their sources (written archives, pictures, maps, etc.),
- Investigation context and qualifications of the investigator.