



# Spatial information fusion: application to expert assessment and management of natural risks in mountains

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# SPATIAL INFORMATION FUSION

## APPLICATION TO EXPERT ASSESSMENT AND MANAGEMENT OF NATURAL RISKS IN MOUNTAINS

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Spatial information fusion - SAGEO 2010 - JM TACNET et al.



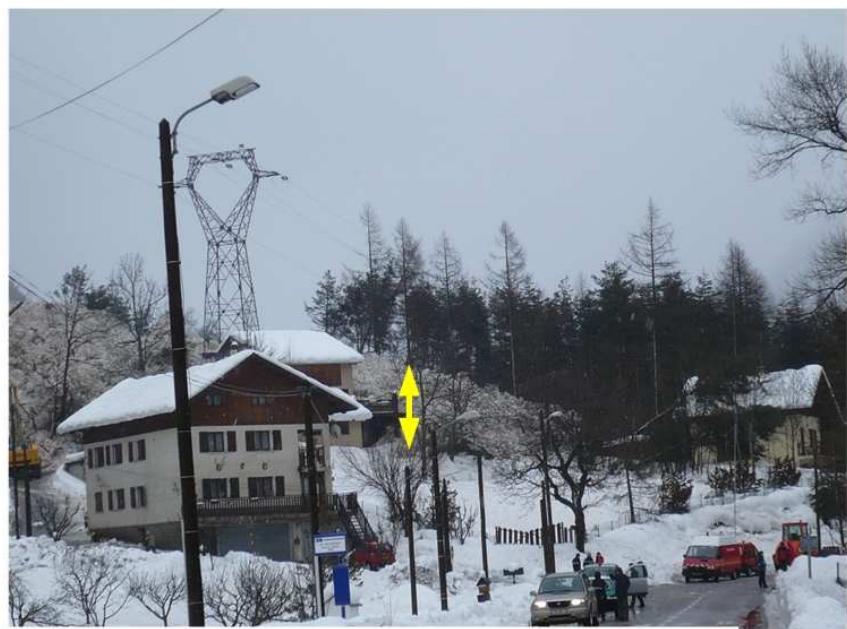
# Dangerous rapid mass movements

## Snow avalanches



Pelvoux – 2006 (S.Escande – Cemagref)

Dégâts d'avalanche damages (Cemagref)



St Etienne de Tinée – 2009 (L. Bernard/Parc National du Mercantour )

## Torrential floods

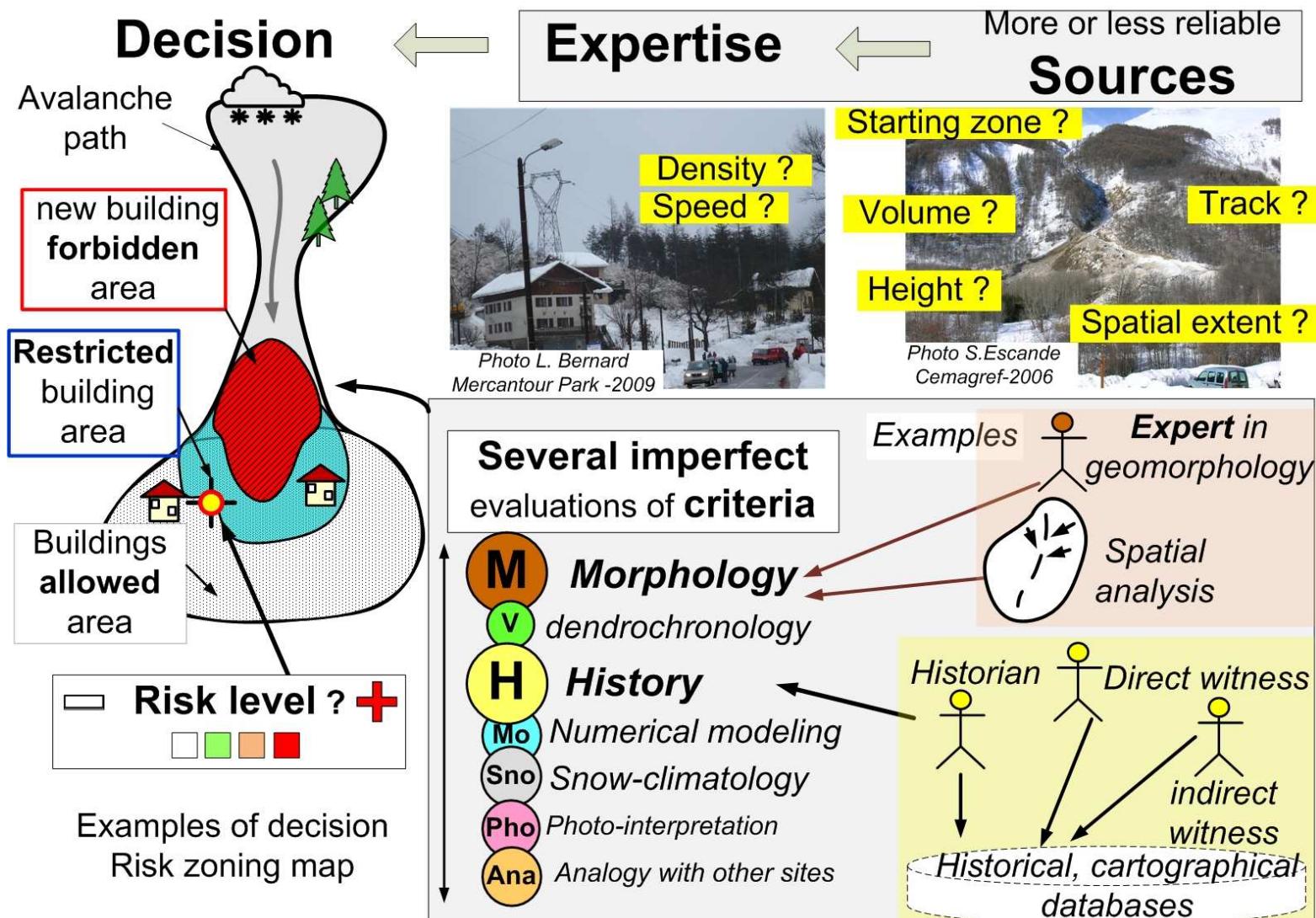
$\pm 200\,000 \text{ m}^3$



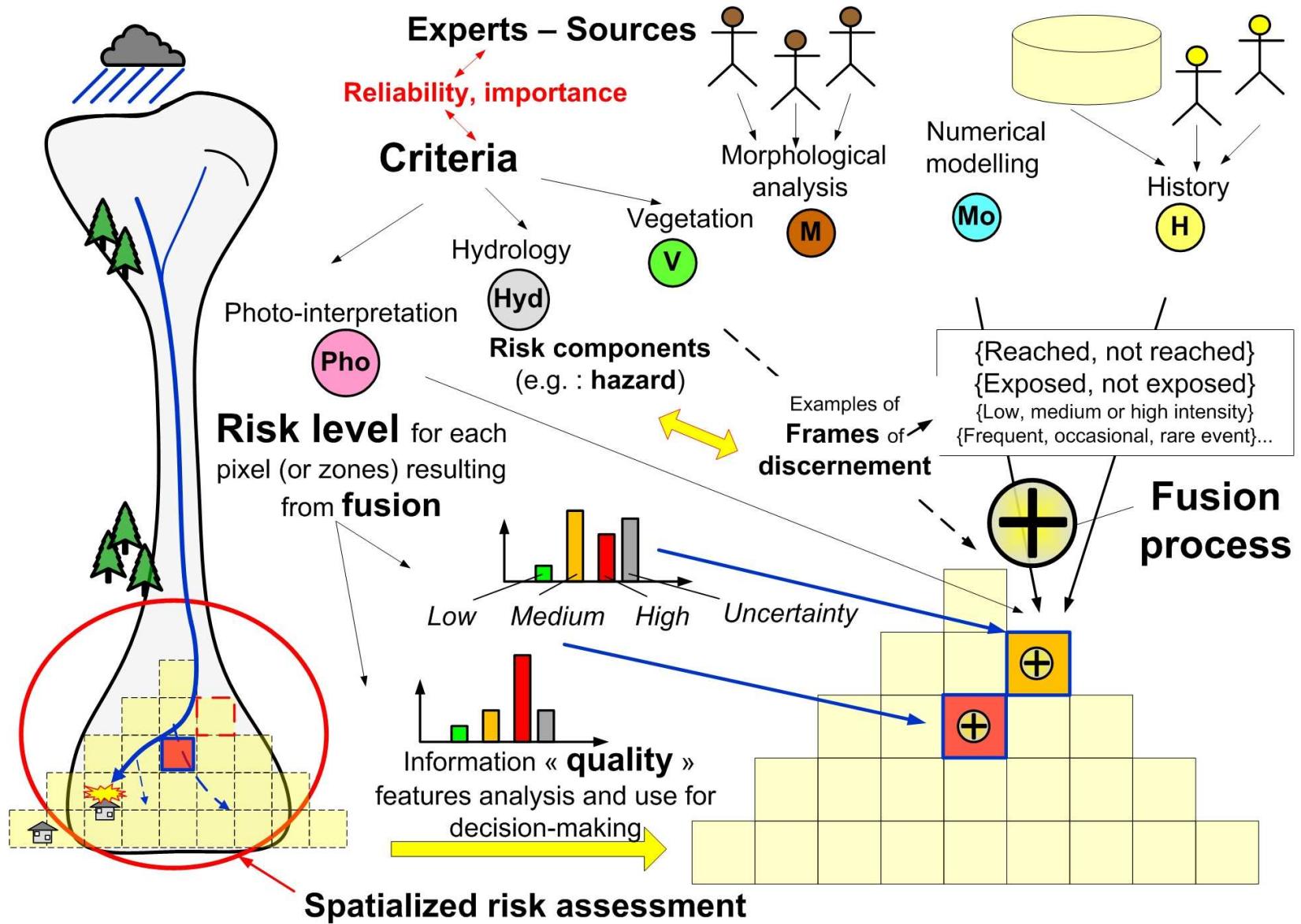
Torrent d'Armancette – Haute-Savoie – 2005  
(J.M. Tacnet – Cemagref)



Torrent St Antoine – Modane - Savoie – 1987  
(M. Meunier – Cemagref)

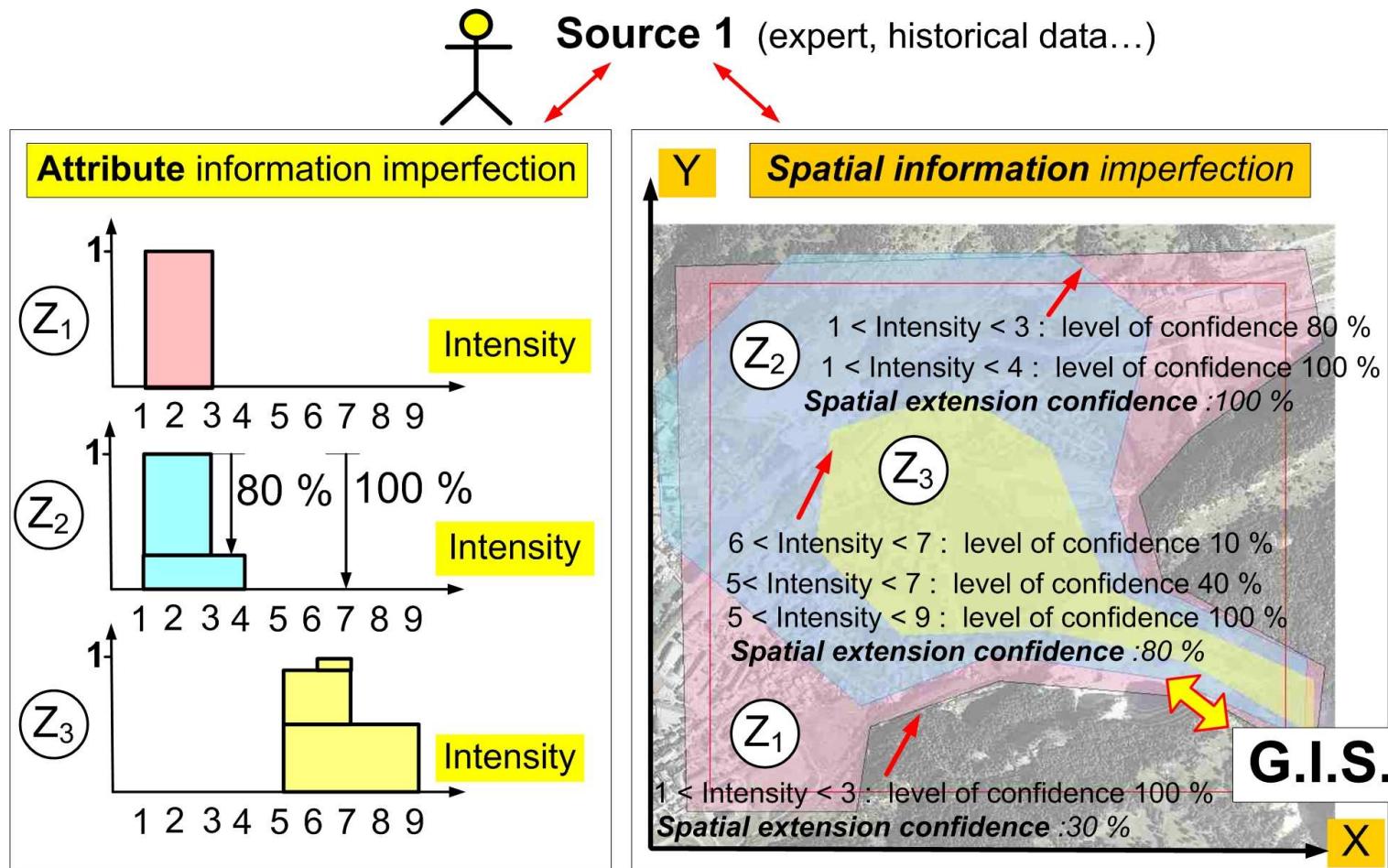


(Tacnet et al., 2010)



# Extension of the ER-MCDA<sup>1</sup> methodology

<sup>1</sup> *Evidential reasoning – Multicriteria Decision Analysis*



# Extension of the ER-MCDA1 methodology

<sup>1</sup> *Evidential reasoning – Multicriteria Decision Analysis*

