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# SUMMER 2003 CLIMATE ANOMALY: INSTABILITY PROCESSES IN THE ITALIAN GLACIAL AND PERIGLACIAL ENVIRONMENT

**M. Chiarle** (1), G. Mortara (1), L. Mercalli (2), P. Deline (3)

(1) CNR-Istituto di Ricerca per la Protezione Idrogeologica, Sezione di Torino, (2) Società Meteorologica Italiana, (3) Université de Savoie, Laboratoire EDYTEM
(m.chiarle@irpi.to.cnr.it/Fax: +39-011-343574)

In the May-August 2003 period the Alps, as the whole central and southern Europe, experienced exceptionally high and prolonged air temperatures. The anomalous thermal conditions had striking effects on the glacial and periglacial environment of the Italian Alps. Besides a general, marked glacier shrinkage, numerous and widespread instability processes were recorded, involving both glaciers and high altitude rock walls. Though being usually punctual and low magnitude, these events, indication of an achieved thermal disequilibrium, posed a significant threat to outdoors activities and people safety in some mountain resorts. The paper will discuss the climatic framework and present some of the most significant examples, like the outburst flood caused by an endo-glacial water pocket release at the Ghiacciaio di Freboudze (Mont Blanc Massif, Italian side), the subglacial outburst flood from the supra-glacial Lago Effimero (Ghiacciaio del Belvedere, Monte Rosa Massif), the enlargment of the supra-glacial lake at Roche Melon Glacier (at the Italy-France border), the continuous rock fall activity on the southern Matterhorn flank and on the south-eastern Mont Blanc Massif's side.