

**Retreat of Mediterranean glaciers since the Little Ice Age: Case study of  
Ghiacciaio del Calderone (Central Apennines, Italy)**

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**Abstract**

Ghiacciaio del Calderone is the only glacier in the Italian Apennines and the southernmost glacier in Europe in a strong reduction phase. In this paper, the authors present a tentative synthesis of the evolution of the glacier, with a particular focus on evaluating the variations in area and thickness ranging from the end of the Little Ice Age to the present. The analysis was performed in a GIS environment, using available data for georefereration (mainly from recent topographic maps) and for the reconstruction (from historical documents and old topographic maps) of the variations of the glacier in the last two centuries. The resulting values, reconstructed and/or calculated, covering the period since the end of the Little Ice Age, of about 36 m of ice thickness and of about 59,000 m<sup>2</sup> of ice surface area represent the glacier loss by 1990.

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**Notes to readers**

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