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Geodiversity and Geoheritage of the Sesia-Val Grande Unesco Geopark (NW-Italy)

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The Sesia-Valgrande Geopark has been founded in September 2013. It is located in the northern sector of Piemonte region covering an area of almost 214000 hectares. In the northern side the Geopark includes the entire territory of the Val Grande National Park, a small portion of the Ossola Valley and the Cannobina valley, while in the south covers most of the mountain range of the Sesia Valley and portions of neighbouring territories such as Valsessera, Prealpi Biellesi, Val Strona and Alte Colline Novaresi.
The present morphology of the whole area is characterized by landforms shaped by different geomorphological processes: glacial, hydrological, gravitational and in the south parts also by karstic phenomena.
From the geological point of view the Sesia-Val Grande Geopark “rides” the Canavese segment of the Insubric Line, a major tectonic boundary of the Alps. North- and Westward of the Insubric Line, the Austro-Alpine domain consists of piles of nappes, which were assembled and affected by a polymetamorphic event during the Alpine orogeny. South- and Eastward of the Insubric Line, South-Alpine Rock units were not affected by this metamorphic event: they preserve an older history, despite experiencing substantial Alpine tectonic deformation. These are the original rocks of the northern margin of the Adriatic plate, an exceptional record of metamorphic and igneous events preserved with a virtually intact section of the pre-Alpine crust.
Beyond geological heritage this territory is one of the most appealing natural environments of the Western Alps, including several different protected areas, important Walser settlement (13th century) and Palaeolithic human traces in the Monte Fenera caves, religious and artistic attraction dominated by the Ghiffa and Varallo Sacred Mount and eventually sport activities such as rafting, hiking, mountaineering and climbing.
In order to promote cultural and geological heritage of the area, several scientific institution have been developing different researches and actions both in the scientific and educational domains. The various aspects related to the valorisation and popularization of Cultural Geology have been carried out by Earth Sciences Department of Torino University in cooperation with local institution, in order to enhance the proper management of local geoheritage and the spreading of Earth Science knowledge.