

# **Geodiversity and Geoheritage at the Sacro Monte of Varallo (Varallo Sesia, NW Italy): interconnection between geology and Cultural Heritage in a geosite of Sesia Val Grande Global Unesco Geopark**

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The Sacro Monte of Varallo (Varallo Sesia, NW Italy) witnesses the great geodiversity and geoheritage of the area, and for this reason it was chosen as the 59th geosite within the Sesia Val Grande UNESCO Global Geopark and the protect area of the Sacri Monti of Piemonte and Lombardia region. The geodiversity and geoheritage of the Sacro Monte of Varallo play a crucial role in understanding the relationship between geology and cultural heritage, and therefore it represents a remarkable case study that exemplifies this relationship. The Sacro Monte is a sacred complex that includes a series of chapels and religious buildings, constructed between the 15th and 17th centuries. These structures are strategically placed along a pilgrimage path leading to the summit of Sacro Monte, offering a blend of religious devotion and artistic expression.

From a geological perspective, the Sacro Monte of Varallo is situated within the Ivrea-Verbano Zone, a tectonically complex area of the Southalpine Domain displaying different lithologies and processes of geological units of deep crust. The geodiversity of the area is characterized by the presence of various rock types, including gneisses and garnet-sillimanite bearing micaschists of the Kinzigitic Formation and, diorites and gabbros of the Mafic Complex. These units offer insights into the geological history of this area, including its formation during the Alpine orogeny.

Moreover, the geological features of the Sacro Monte serve as a backdrop to the rich cultural heritage preserved within its walls. The chapels, built directly on the rock outcrops and with ornamental stones of local origin, are adorned with valuable frescoes, sculptures, and religious artifacts, showcasing the artistic prowess of renowned Italian artists such as Gaudenzio Ferrari and Tanzio da Varallo. These artworks provide a glimpse into the historical and cultural context of the region, enabling visitors to delve into the art and the religion.

The interrelationship between geodiversity, geoheritage and cultural heritage within the Sacro Monte of Varallo highlights the importance of preserving and promoting such sites. This emphasizes the need for interdisciplinary collaboration to promote the preservation, understanding, and sustainable management of geosites within UNESCO Geoparks. By recognizing the geological groundwork of cultural heritage, a holistic understanding of the site value emerges. This underscores the importance of geosites within UNESCO Global Geoparks as they serve as repositories of both natural and cultural heritage, fostering sustainable development, education, and tourism.