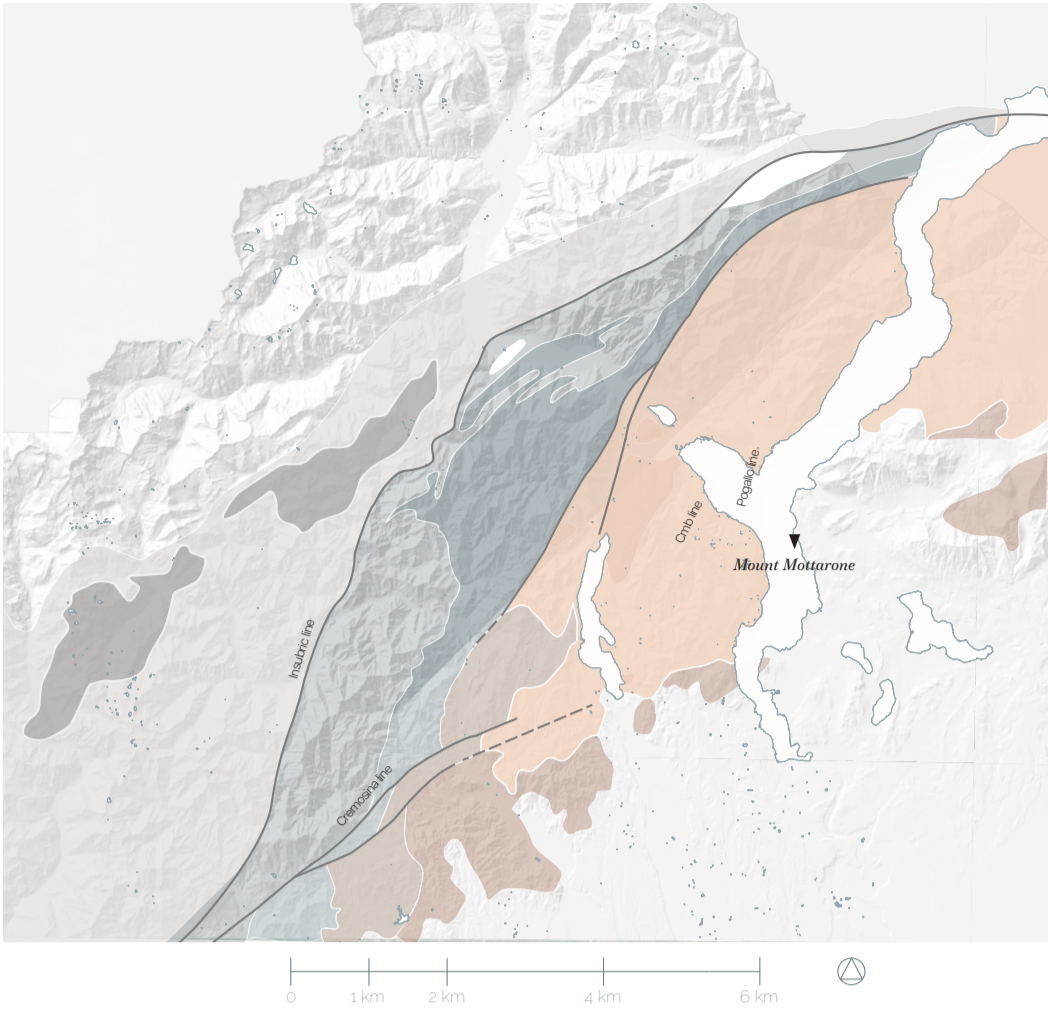


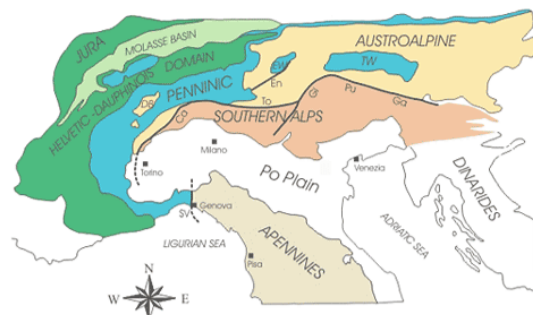
# MONTE MOTTARONE

## Geological identification



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### Tectonic and paleogeographic domains of the Alps



DB - Dent-Blanche; EW - Engadine Window; TW - Tauren Window

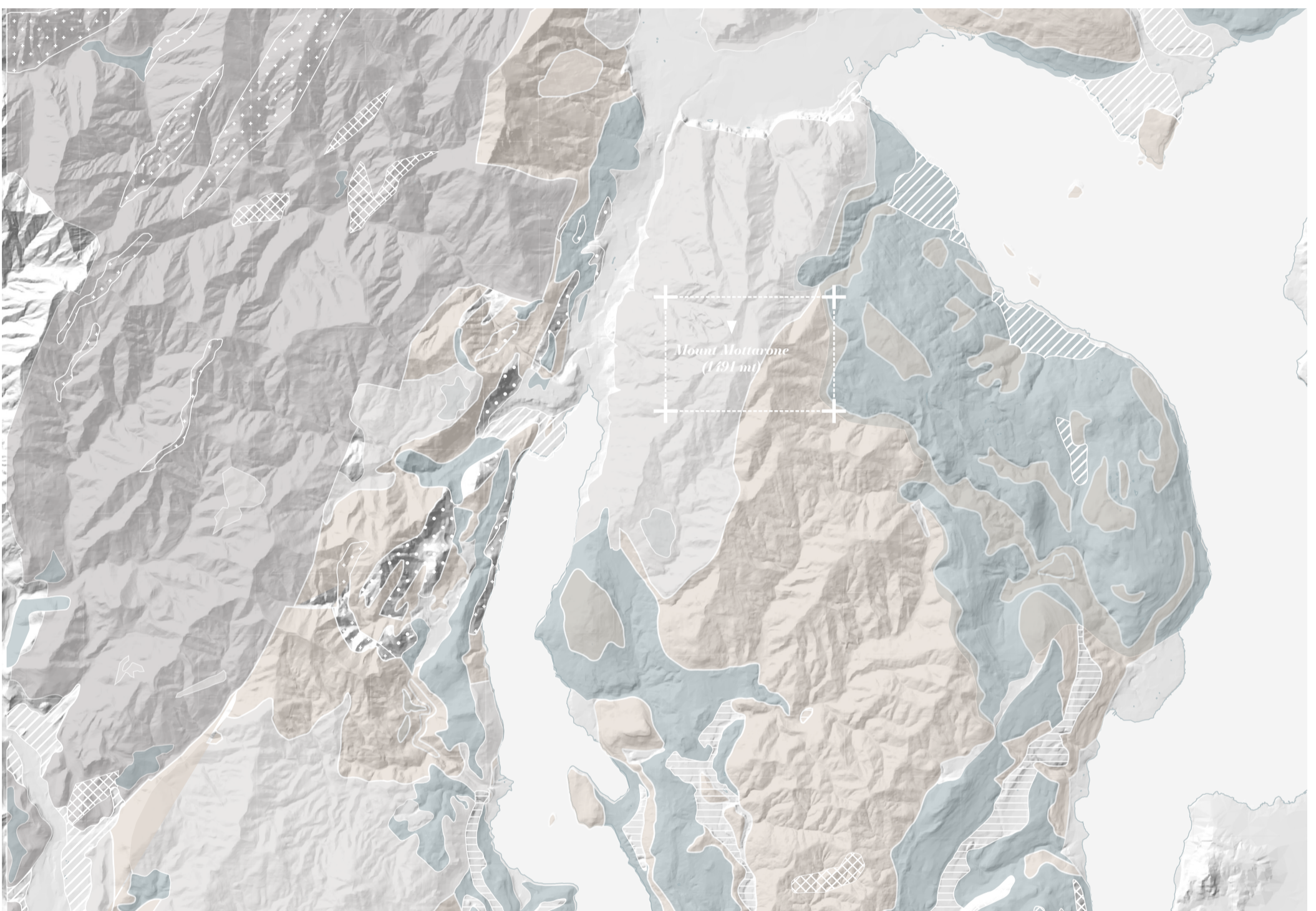
Periadriatic Lineament: Ca - Canavese Line; To - Tonate Line;  
GI - Giudicarie Line; PU - Pusteria Line; Ga - Gail Line.  
En - Engadine Line  
SV - Sestri-Voltaggio Line

Within the Pennine Alps, divided between the province of Novara and that of Verbania-Cusio-Ossola, Mount Mottarone, at 1492 meters, dominates the area of Lake Maggiore, Lake Orta, and Lake Mergozzo, reaching as far as Lake Varese. Mount Mottarone lies within the Ivrea-Verbania Zone, a terrane consisting of a portion of the Adriatic microplate undergoing subduction. Geologically, it is considered part of the Southalpine structural unit, of which it forms the western area. In more detail, Mount Mottarone lies within the Strona-Ceneri zone, south of the Pogallo line. The Ivrea-

Verbania Zone consists of pre-alpine metamorphic rocks in high-temperature amphibolitic and granulitic facies. It has pelitic-psammitic composition, with lenses of mafic and ultramafic rocks and marbles. The geological composition of Mount Mottarone is characterized by the presence of granites and granodiorites, hence the presence of one of the most important quarries in the Verbania area, that of the pink granite of Baveno, and cycasists, quartz paragneiss, plagioclase and white mica. In addition to granite mines, Mt. used to have lead, silver, and nickel mines, which are now abandoned. A little further north, moving toward the Ossola Valley, mining activity resumed with the Montorfano and Candoglia quarries of white granite and white/pink marble, respectively.

- Sesia Zone
- Mafic Complex
- Permian granitic rocks
- Strona-ceneri zone
- Insubric line
- Kinzigite Formation
- Paragneiss and diorite
- Permian-Mesozoic volcanic and sedimentary rocks
- Mantle peridotite

## Geological composition



- Fluvial and fluvio-glacial deposits
- Migmatitic amphibolites
- Marbles
- Granites and granodiorites
- Gneiss and garnet and sillimanite micasists
- Biotite and plagioclase orthogneisses
- Terraced alluvial and debris flow deposits
- Micasists, quartz paragneiss, plagioclase and white mica
- Glacial bedrock and ablation deposits

### Northwestern slope



The rocks that make up the northwestern slope are predominantly granitic in nature; in fact, this slope is characterized by walls and formations suitable for climbing activities.

Granites and granodiorites



### Northeastern slope

- Granites and granodiorites
- Glacial bedrock
- Terraced alluvial and debris flow deposits
- Micasists, quartz paragneiss, plagioclase and white mica



The northeastern slope faces Lake Maggiore and has a more complex geological structure; in fact, it is characterized by granitic rocks, Micasists, quartz paragneiss, plagioclase and white mica.

