



MULTILATERAL COMENIUS PROJECT

“Green Building”

ISTITUTO TECNICO STATALE

“L. Vanvitelli”

Cava de' Tirreni

Italy

School year: 2012-2013



Landscape analysis

Cava de' Tirreni

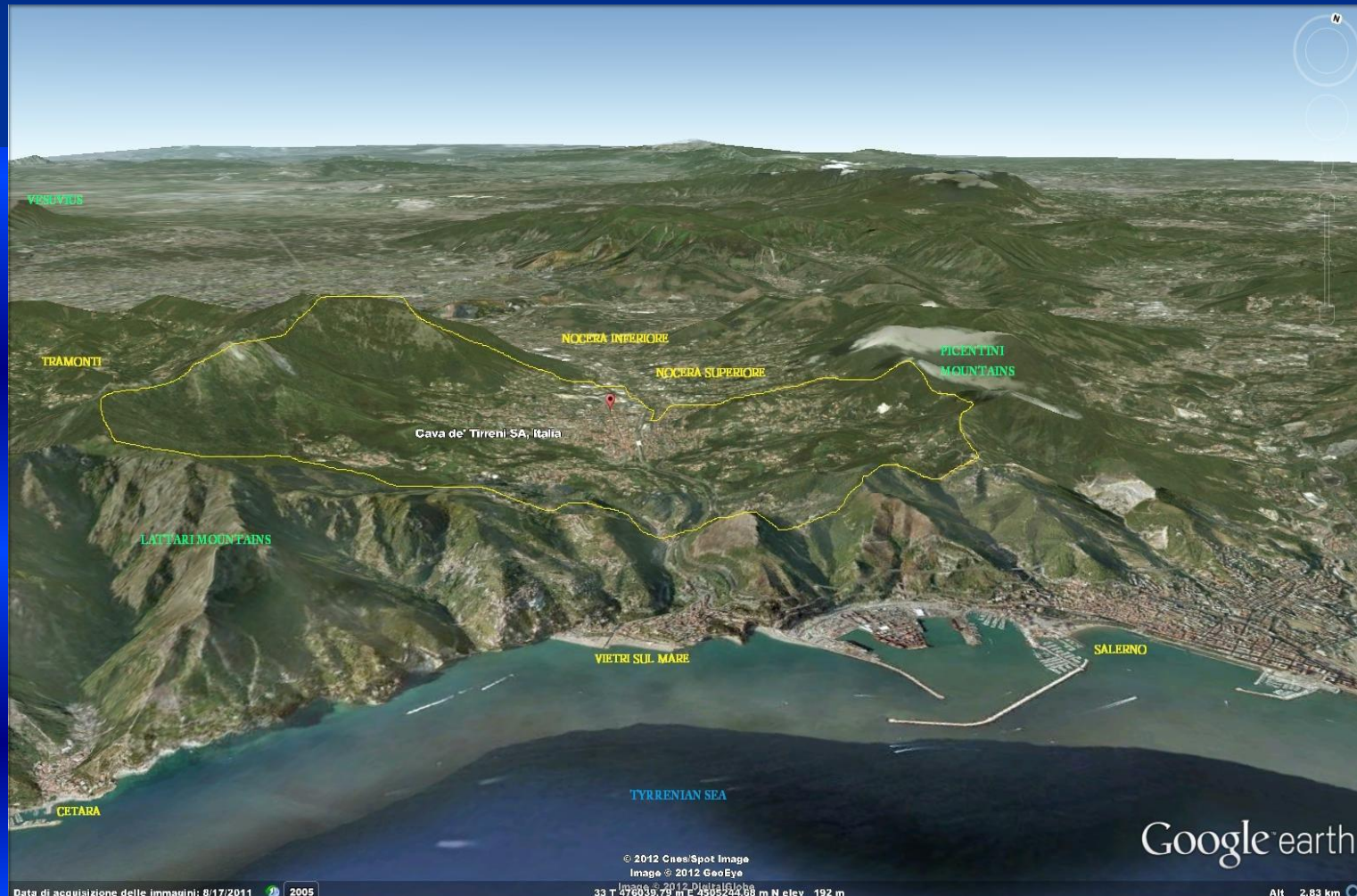


# LOCATION

Cava de' Tirreni is located 5 km inland from the Tyrrhenian sea.

It represents the north door of the Amalfitan Coast.

The city has 53,307 inhabitants spread over an area of approximately 36 square kilometers.







The center of the city developed in a valley surrounded by the Lattari Mountains to the west (which separates it from coast) mainly carbonatic (Mt Finestra, Mt Sant'Angelo, Mt San Martino and Mt Crocella) and the Picentini to the east mainly dolomitic, (Mt. Caruso, Mt. Sant'Adiutore, Mt. Castello, M. Stella, Mount San Liberatore and Colle Croce);

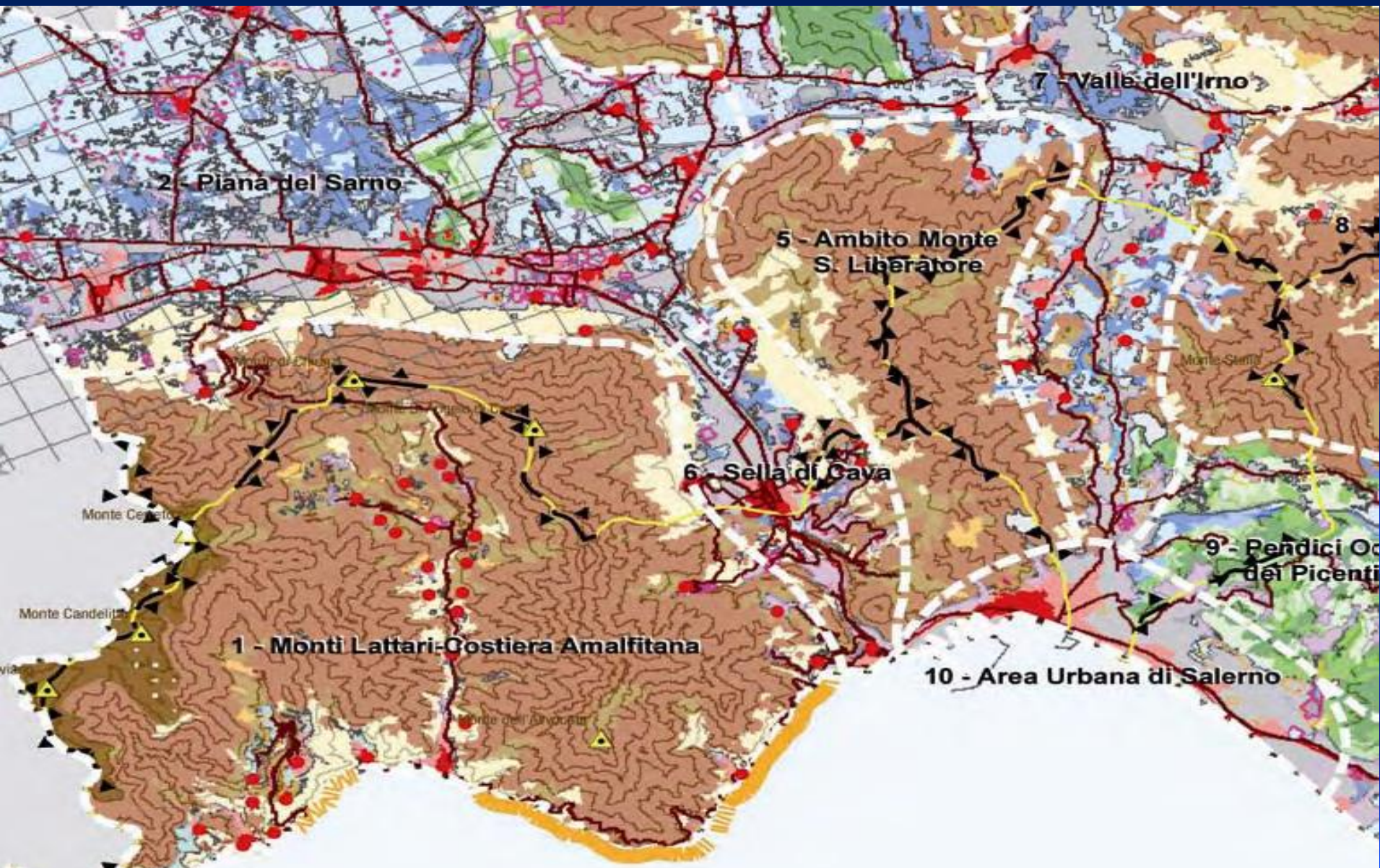
The name Monti Lattari derives from the flocks of goats grazing in the area, which provide a good quality of milk. The range is bounded to the north-west by the Gulf of Naples, to the north by the Sarno river plain, to the east by the Metelliana plain of Cava de' Tirreni and to the south by the Gulf of Salerno.

Cava is bordered to the north by the municipalities of Nocera Superiore, Roccapiemonte and Mercato San Severino, to the east by Baronissi, Pellezzano and Salerno, to the south by Maiori and Vietri sul Mare, to the west by Tramonti.





The city represents a link between the geographical area of Nocera-Sarno (flat morphology with an intensive agricultural and industrial use) and the Amalfitan Coast (mountainous morphology with a tourist economy).





# THE CLIMATE

The climate is Mediterranean, with hot summers and mild winters. Meteorological data suggests that the rainfall of Cava is much higher than that of the nearest cities, like Nocera in the North and Vietri sul Mare and Salerno in the South,

The temperature is very hot in the summer, between  $31.6^{\circ}$  and  $31.2^{\circ}$  in the months of July and August, while in winter it drops to  $7.9^{\circ}\text{C}$  and  $8.6^{\circ}\text{C}$ , respectively in January and February.



# THE SOILS



Soils are strongly influenced by the presence of the Somma-Vesuvius vulcan, with the formation of Andosols .

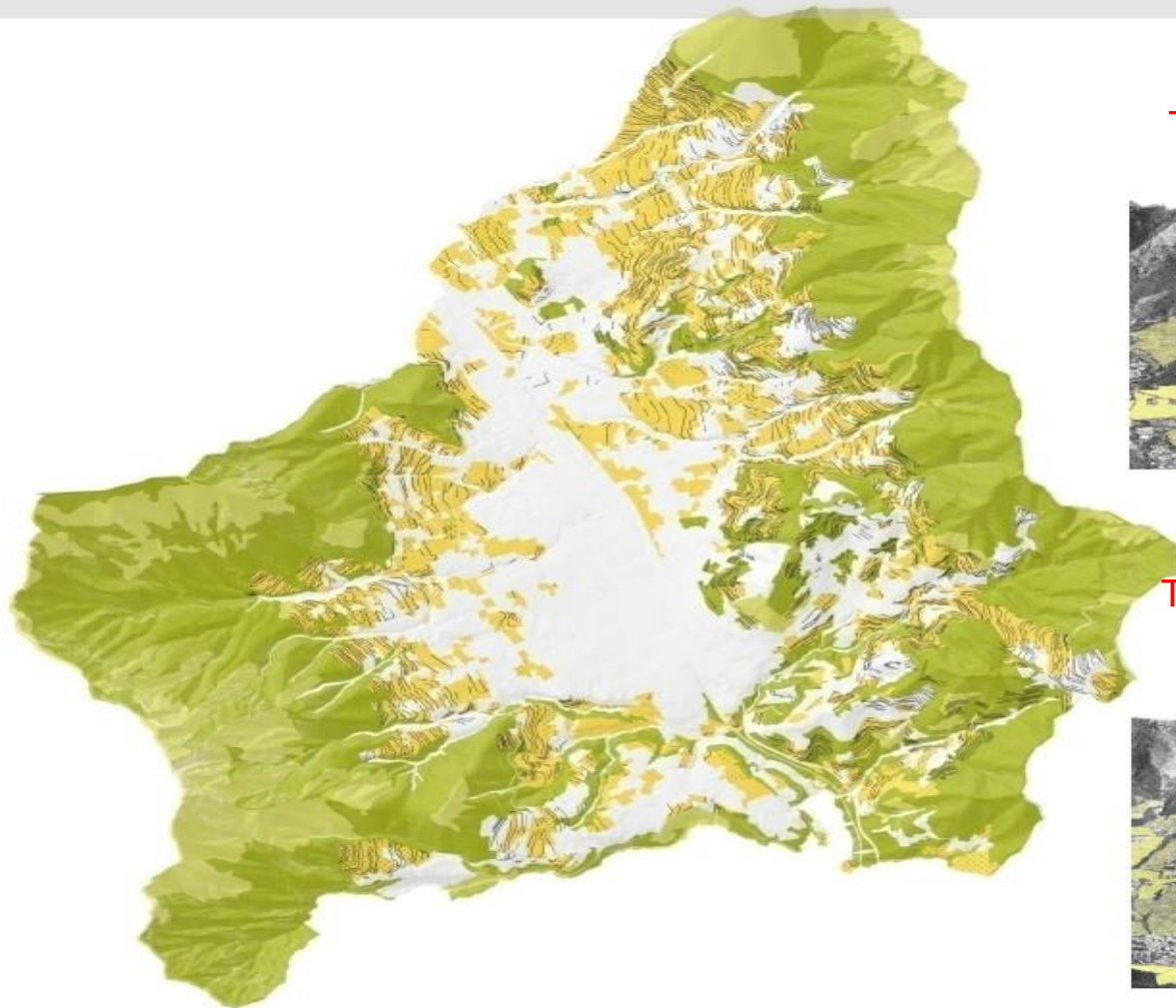
These soils originate from materials rich in volcanic glass (ash, tuff, pumice, lava) and present dark surface horizons, with low density and very high water retention capacity.

The high fertility of Andosols makes them suitable for various uses: in Italy they are among the most fertile soils: the famous gardens of Naples (Phlegraean fields of the ancient Romans) are precisely of this type of soil.

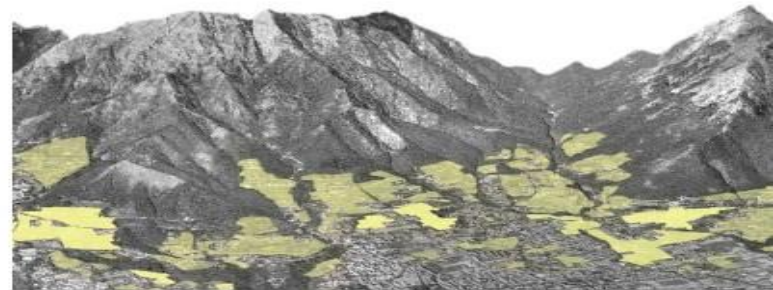
## Agricultural areas

Agricultural areas are terraced hills. In the Amalfi coast they are bordered by stone walls, while in Cava from grassed embankments

The terraces are consolidated elements for the protection of agricultural land. Most widely practiced crops are tobacco and vegetables, these last often subsidiaries in small orchards with olives and grapes.



Terraced hills of the Lattari mountains.

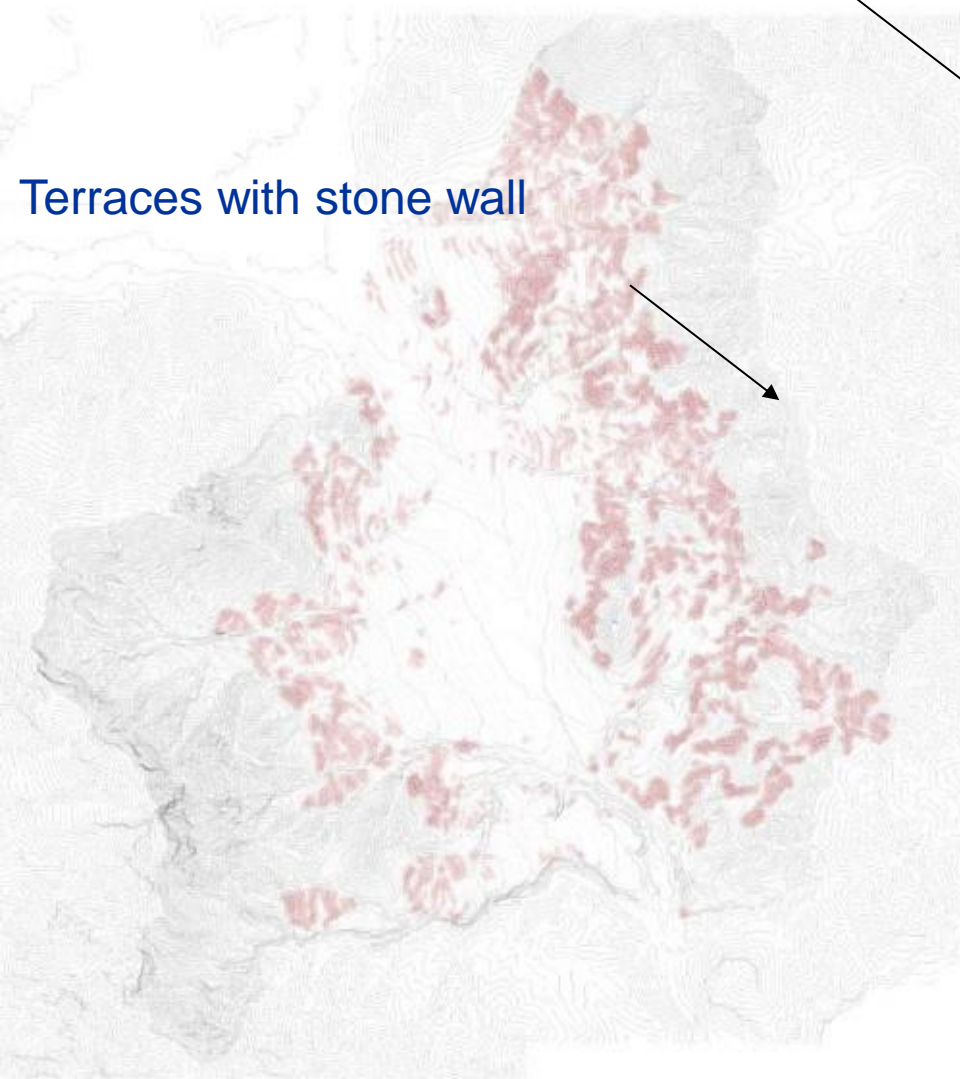


Terraced hills of the Picentini mountains.





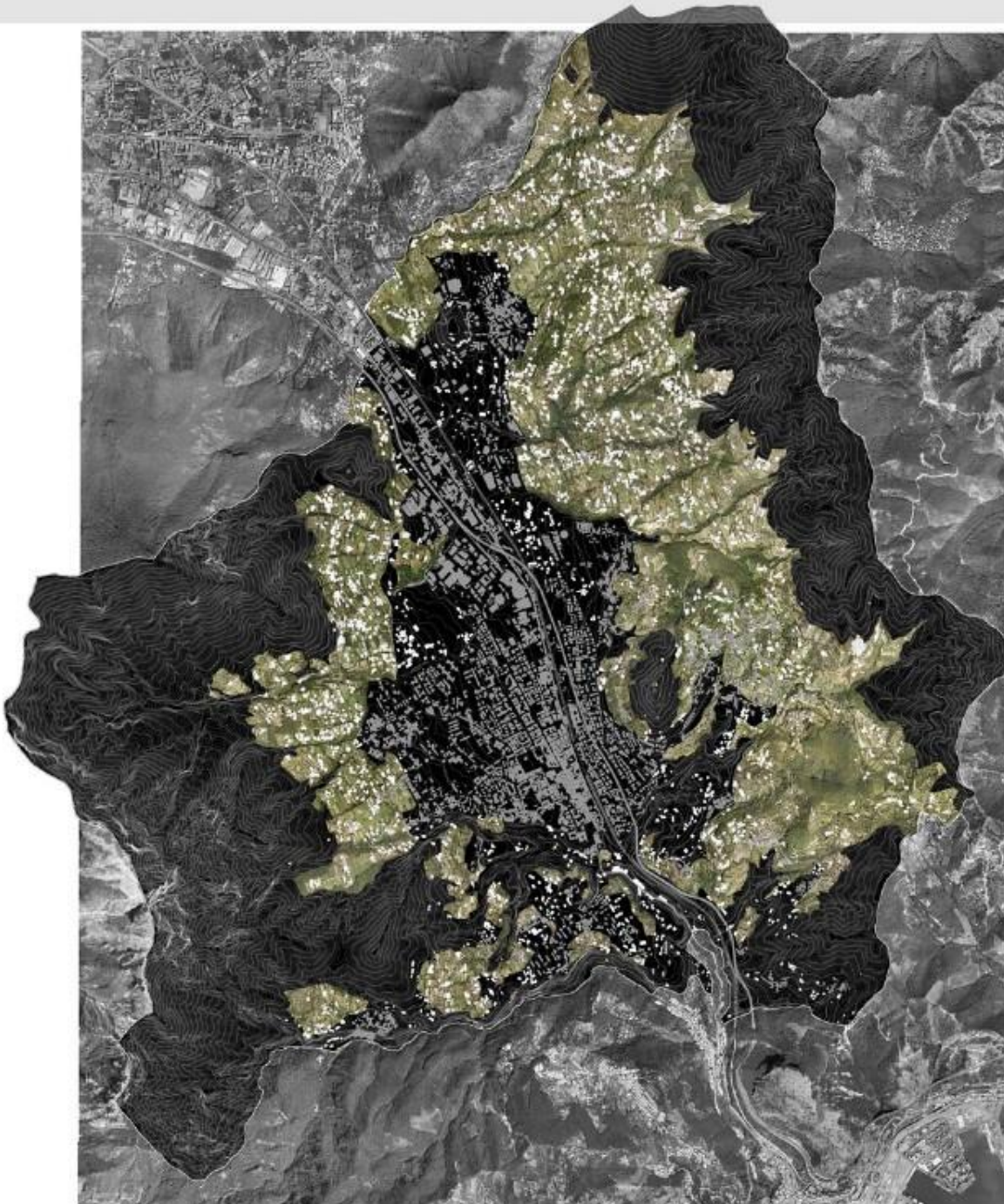
Terraces with grassed  
embankments



Terraces with stone wall







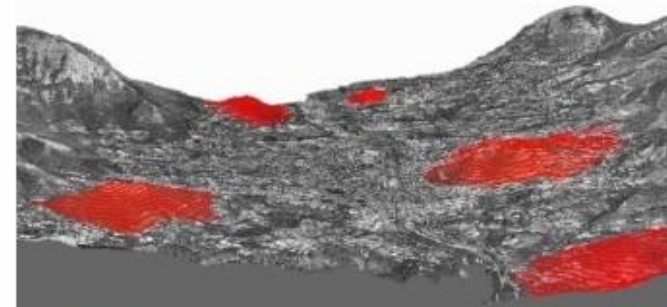
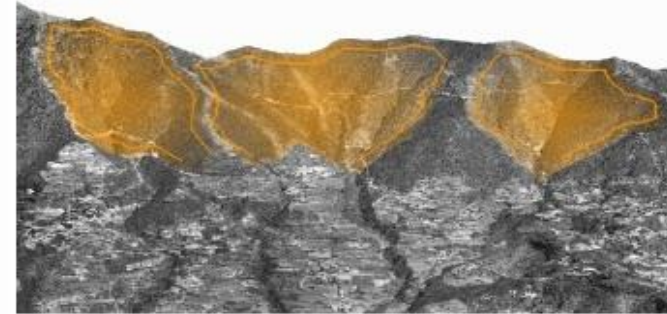
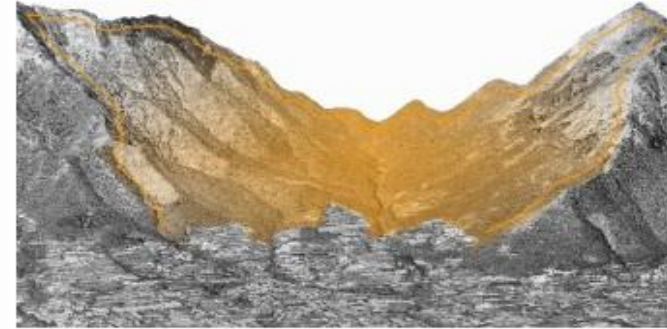
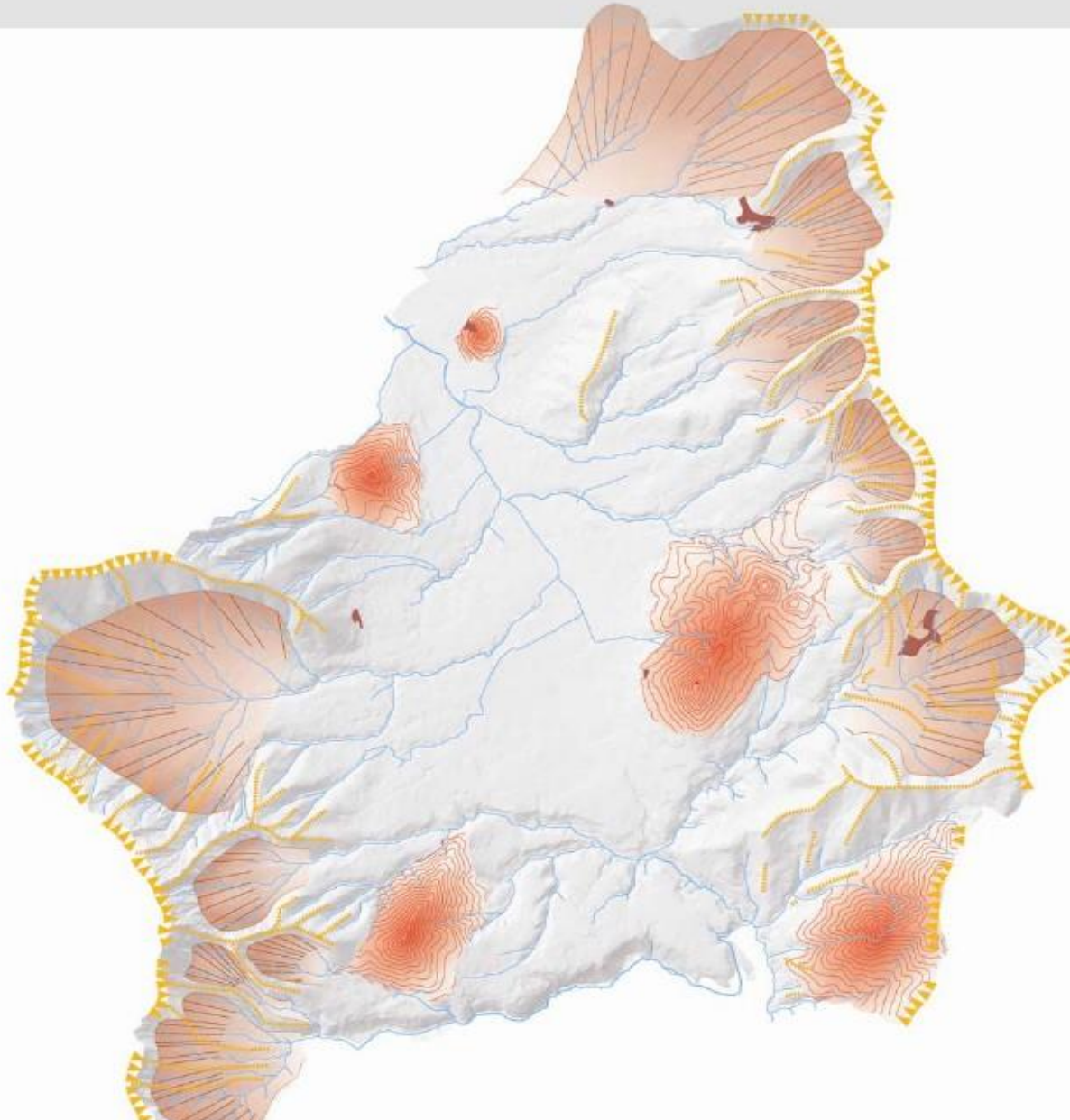
# CULTIVATION

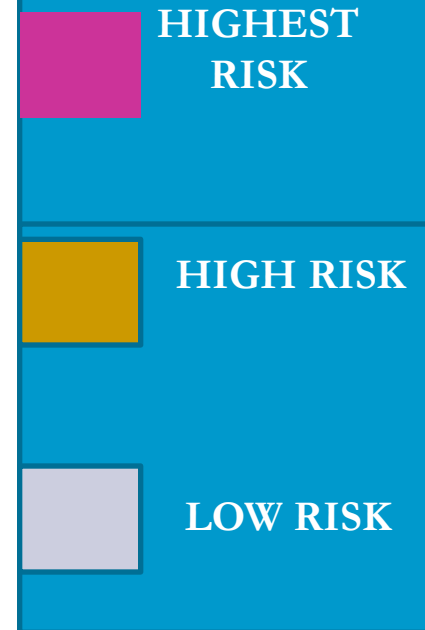
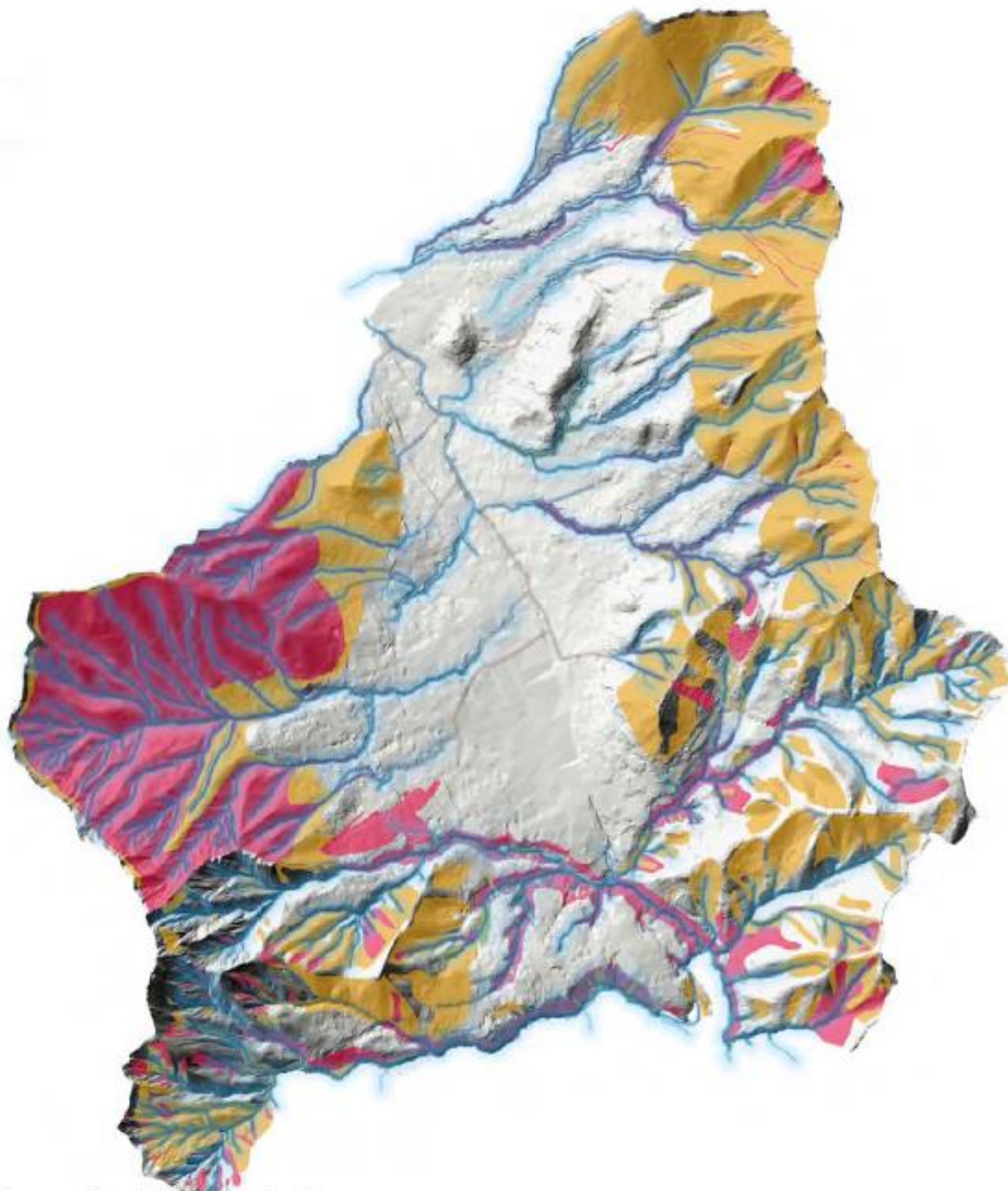
Cultivation of tobacco has been the most widely practiced form of agriculture, in the past. Today it is a culture in danger of extinction, with serious problems for farmers and for the abandonment of agricultural land.



# Geomorphological and hydrogeological risk

The area is characterized by hills, valleys and engravings.



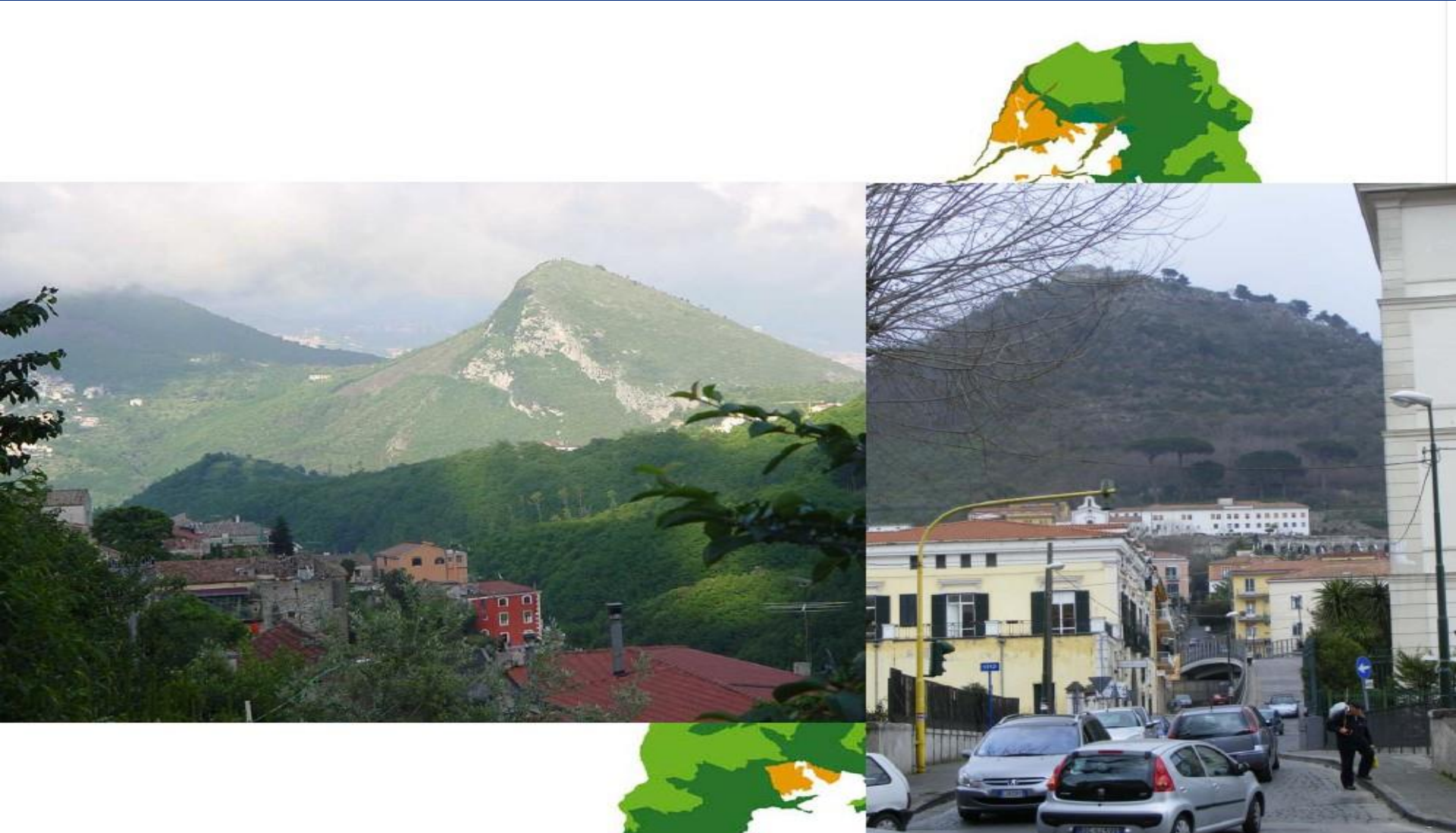


These aspects, together with the ecological fragility of the soil, makes high hydrogeological risk. The red areas represent the areas with the highest risk of landslide and flood, while the danger becomes high in the yellow areas and poor in the gray areas.



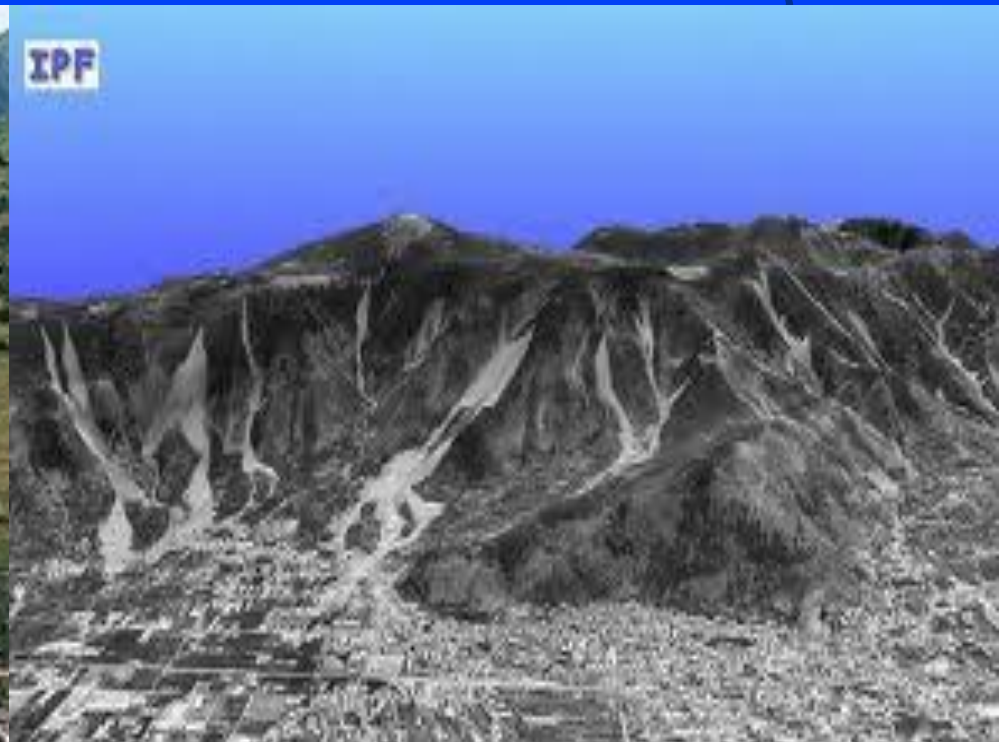
# Vegetation components

The forests are characterized by mesophilic and thermophilic vegetation, with species of chestnut, oak, alder, hornbeam.



# Ecological data

The mantle of highly fertile volcanic soil covering the limestone substrate is very fragile, and if the management is not appropriate, the processes of accelerated and widespread water erosion, cause irreversible degradation of agro-forest ecosystems, together with relevant hydrological risks, such as demonstrated recently by landslides of Quindici and Sarno in 1998.

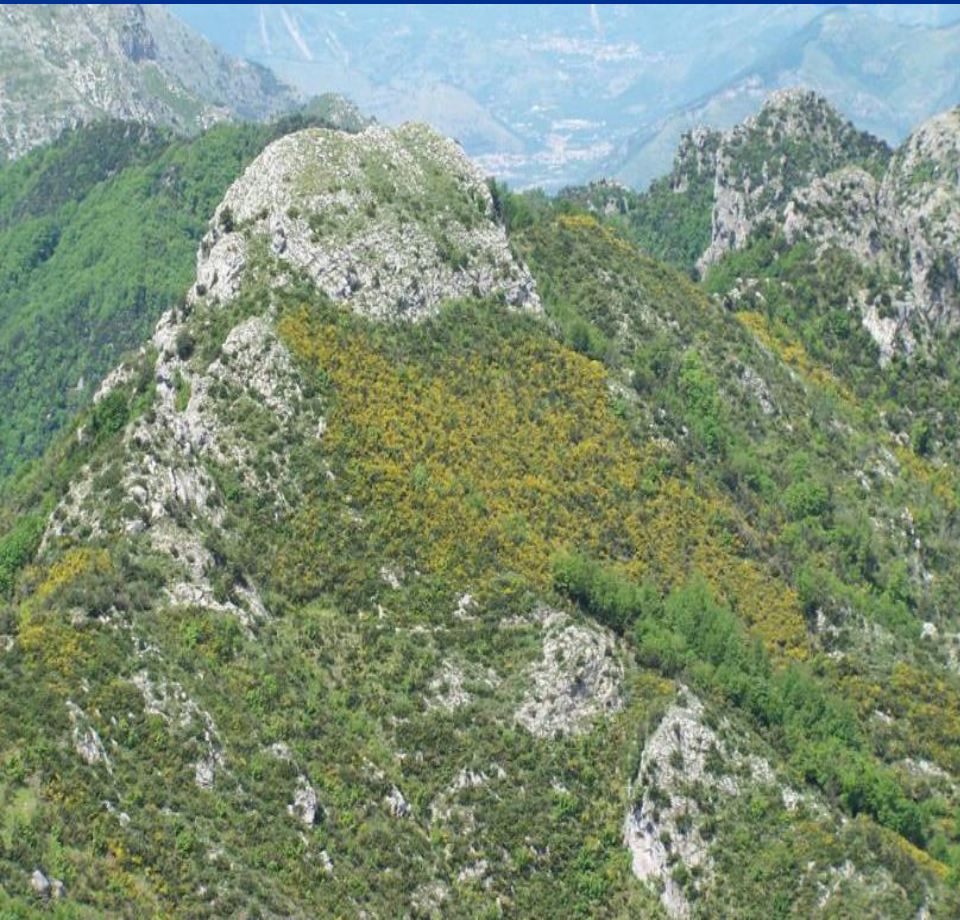




The top of Lattari and Picentini mountains, with high slope, are covered by thin blankets soil in which the volcanic material is rich in carbonate rock fragments.

This is the environment of the Mediterranean scrub.

As the inclination increases, the thickness of soil decreases and the rugged areas are totally naked, for the erosive effect of denudation.





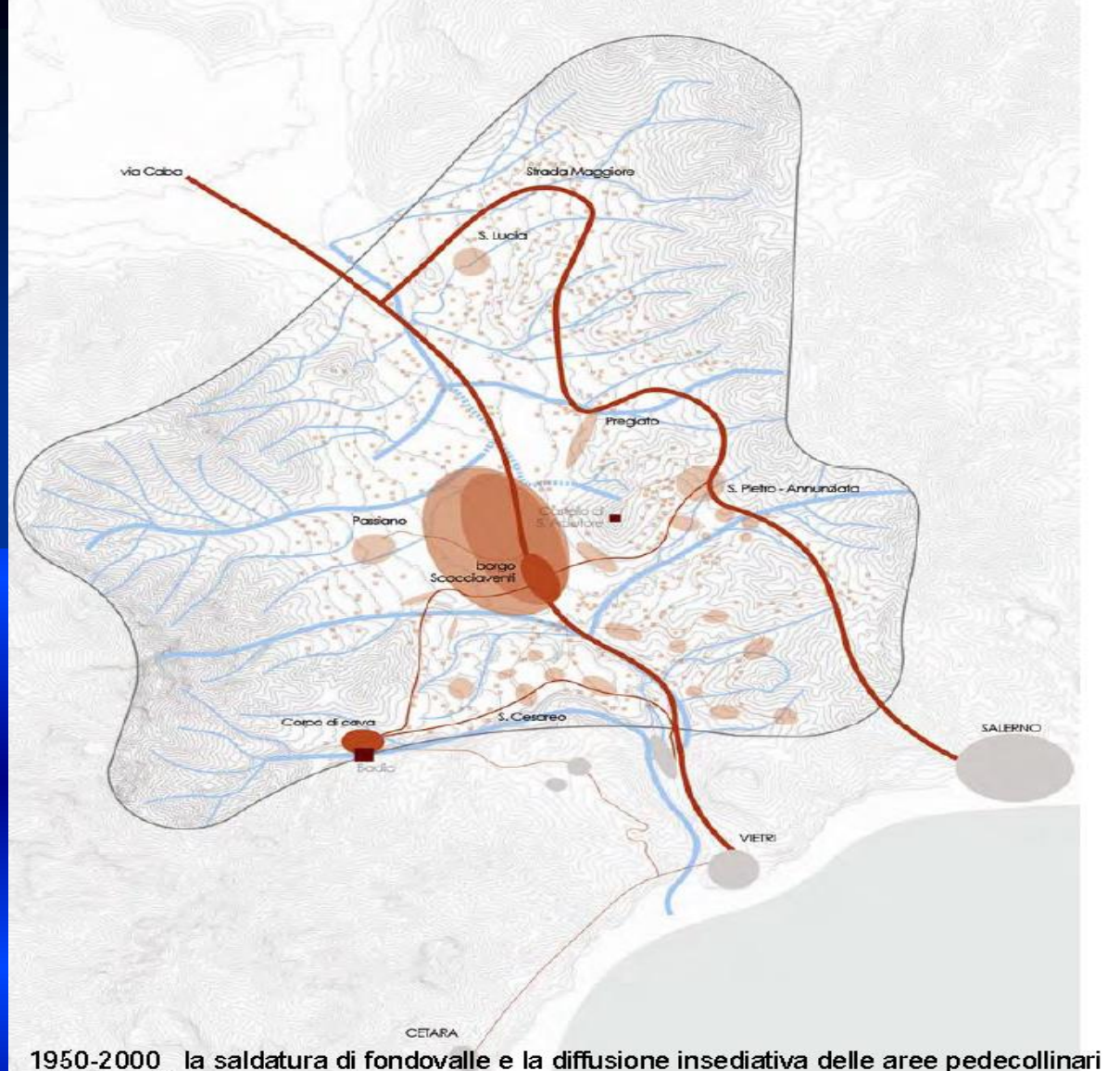
## BIODIVERSITY

In Cava de' Tirreni there are three protected natural areas:

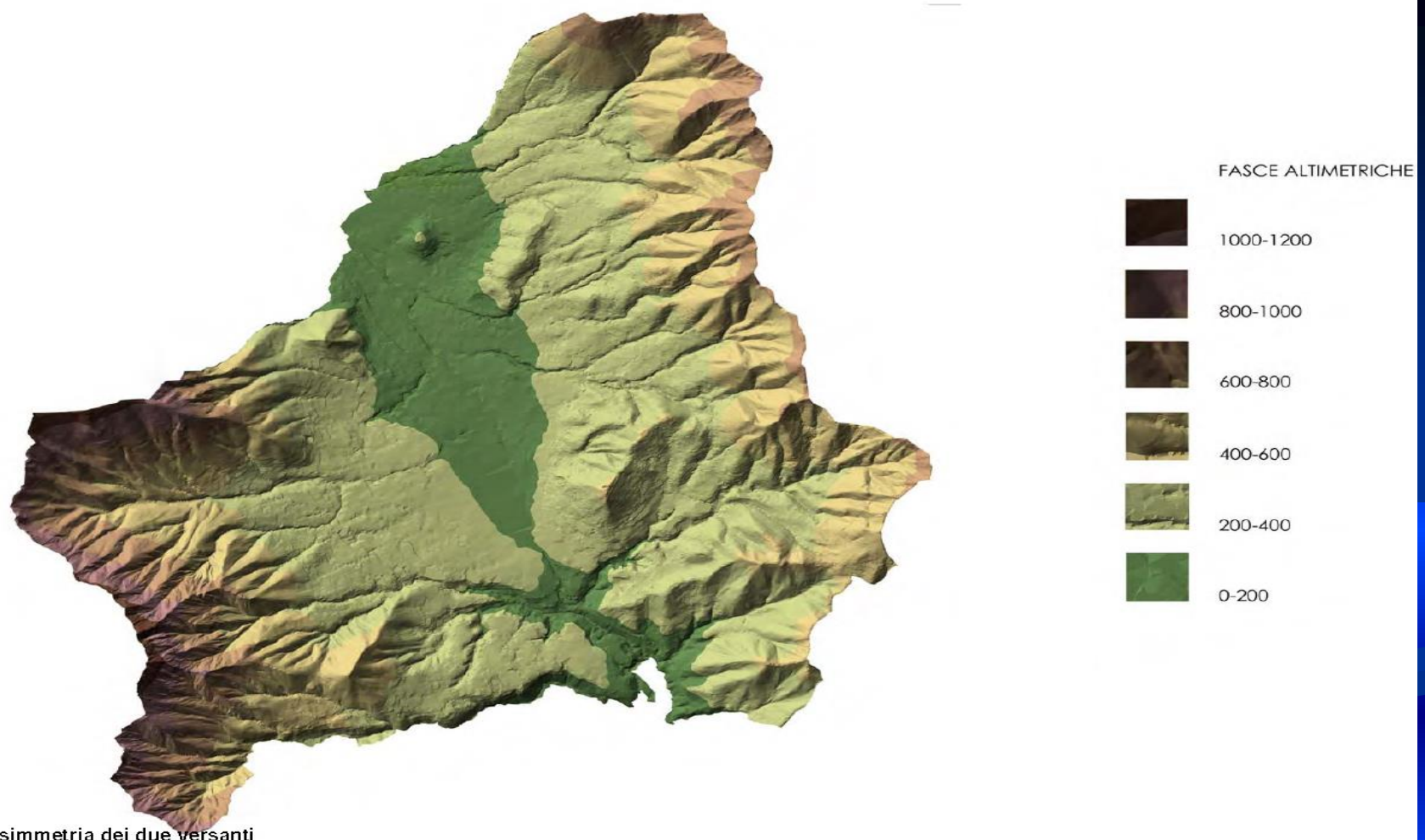
- The Parco of Monti Lattari
- The SIC area "Dorsale dei Monti Lattari"
- The regional park "Oasi di Diecimari"







The valley in which the city developed was, for centuries, the only major channel of communication between North and South on the Tyrrhenian coast.



## The main components of the landscape of Cava de' Tirreni

From the perspective of the elevation, territory includes 3 large landscape units:

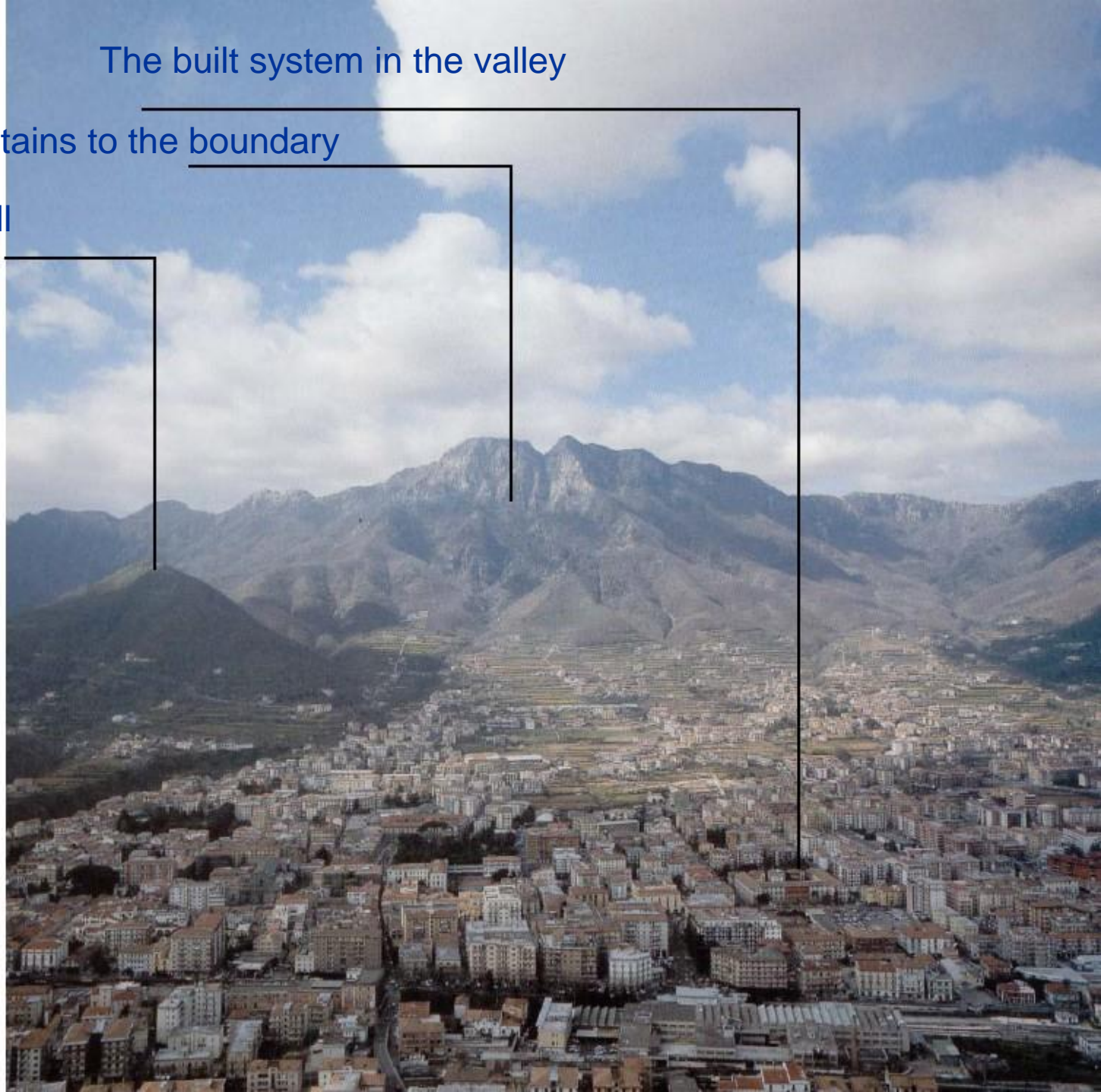
- A strip of flat and sub-level land, from 0 to 200 m. above sea level
- A hilly area, from 200 to 600 m. above sea level
- A mountainous area, up to 1200 m. above sea level



The built system in the valley

The belt of the mountains to the boundary

The emergent hill



# The emergent hills





# The twentieth century expansion

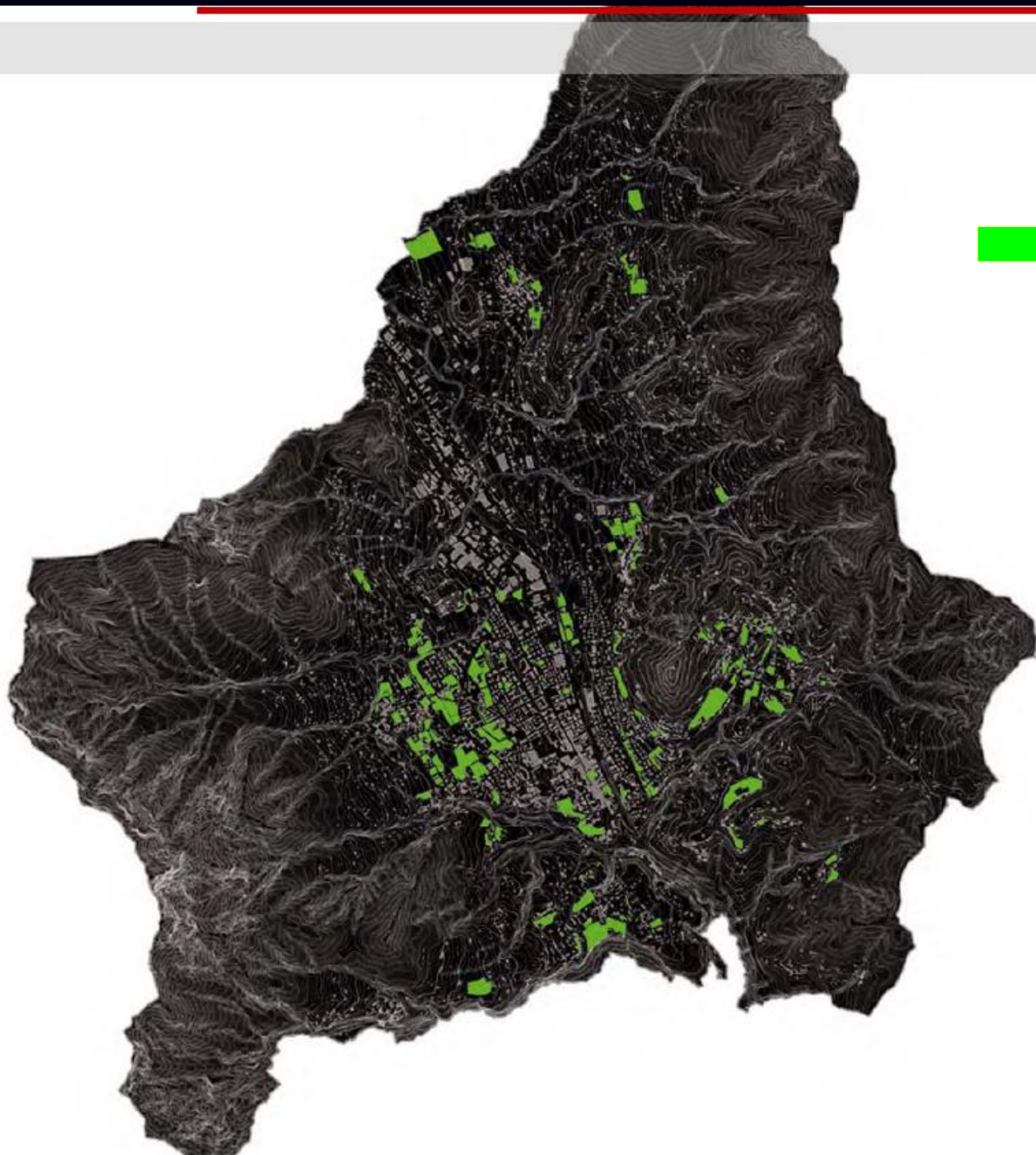


# The Industrial areas





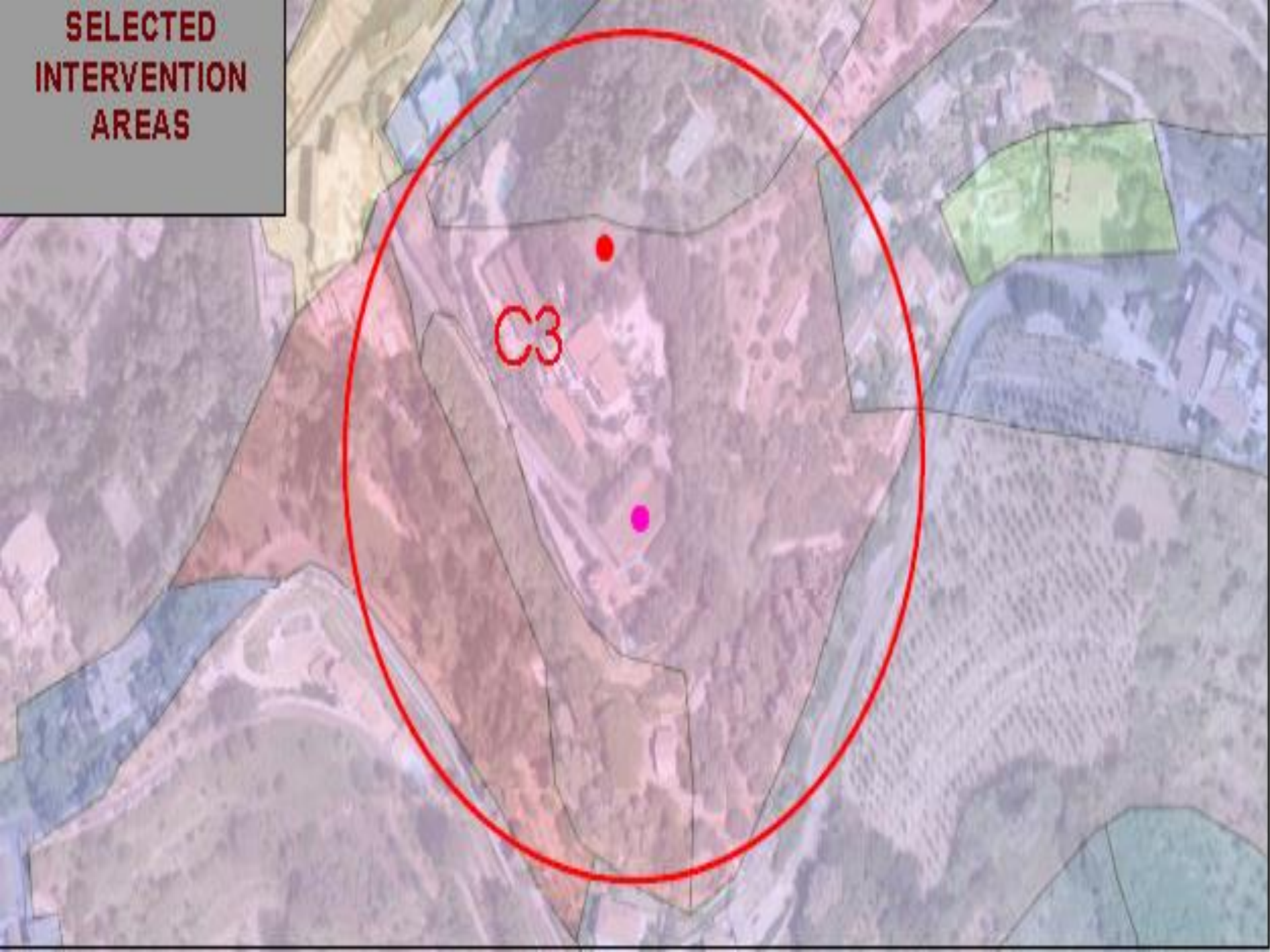




 Residual of PRG  
(municipal zoning)



**SELECTED  
INTERVENTION  
AREAS**





The Area 1 allows coverage of approximately 400 square meters and a building volume equal to 1320 cubic meters per floor



The Area 2 allows coverage of approximately 340 square meters and a building volume equal to 1100 cubic meters per floor

The proposed project area falls in the C3 zone of the PRG.  
In such zone the urbanistic prescriptions are:

Spatial density = 0.5-0.75 mq / mq  
Height of each floor = 3.30 m  
Maximum building height = 13.50 m  
Maximum number of levels = 4



# THANK YOU FOR YOUR ATTENTION

## COMENIUS TEAM

### Students

Alfonso Attanasio

Maria Federica Calce

Angela Franza

Carmine Russo

### Teachers

Mrs. Gianna Barrella

Mr. Maurizio Murolo

Mr. Ciro Sorrentino

Mrs. Agnese Salerno

### Coordinator:

Mrs. Gianna Barrella

### Headmistress

Mrs Elisabetta Barone