

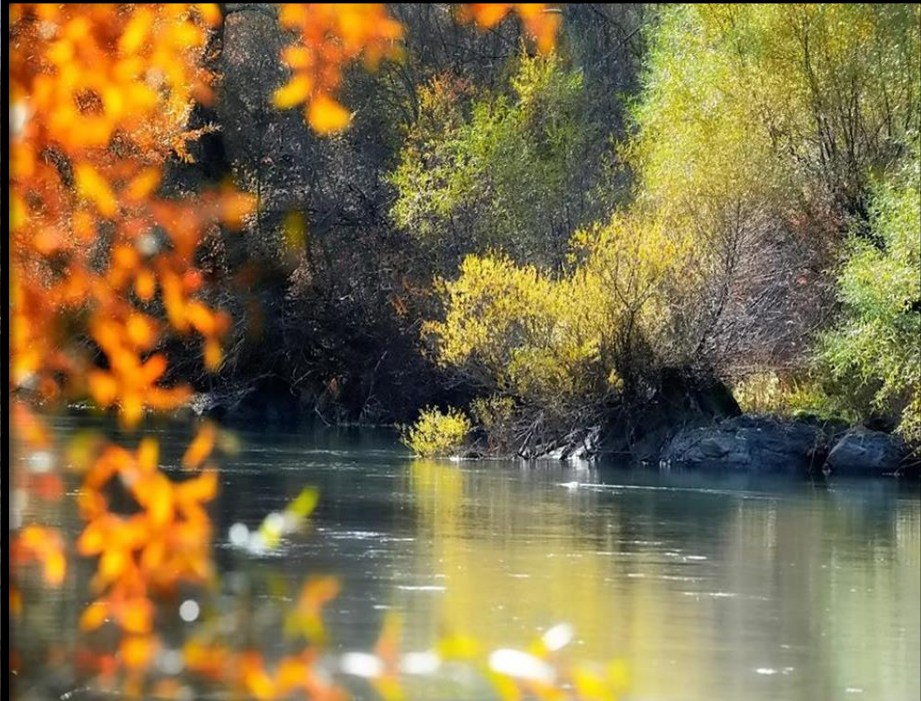
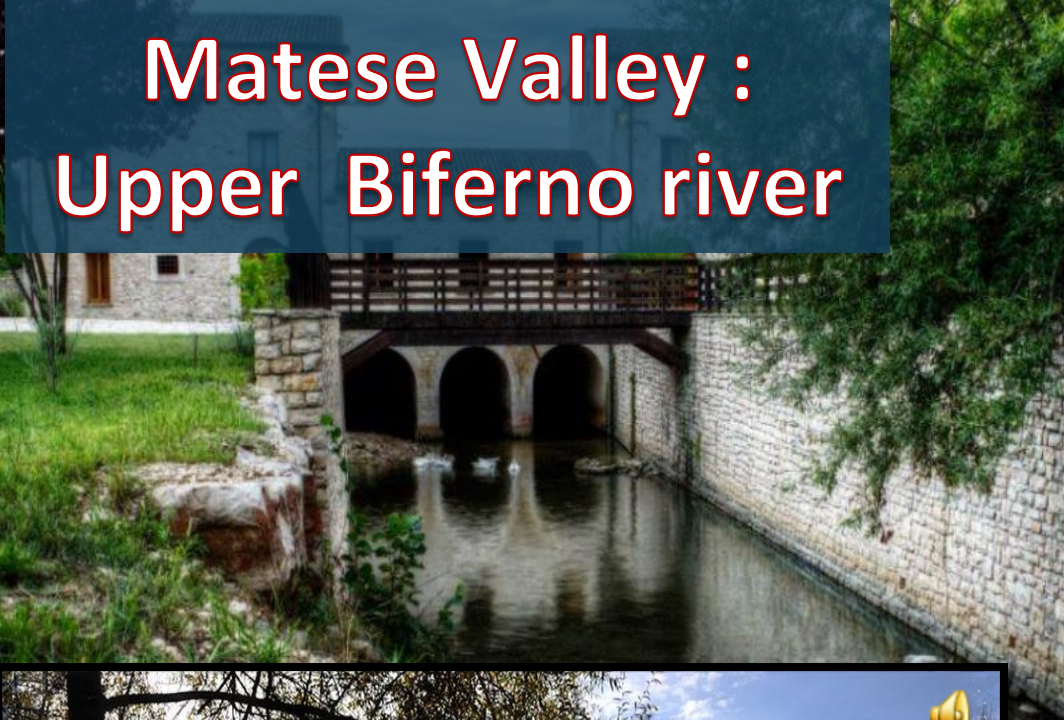
I.I.S.S. BOJANO

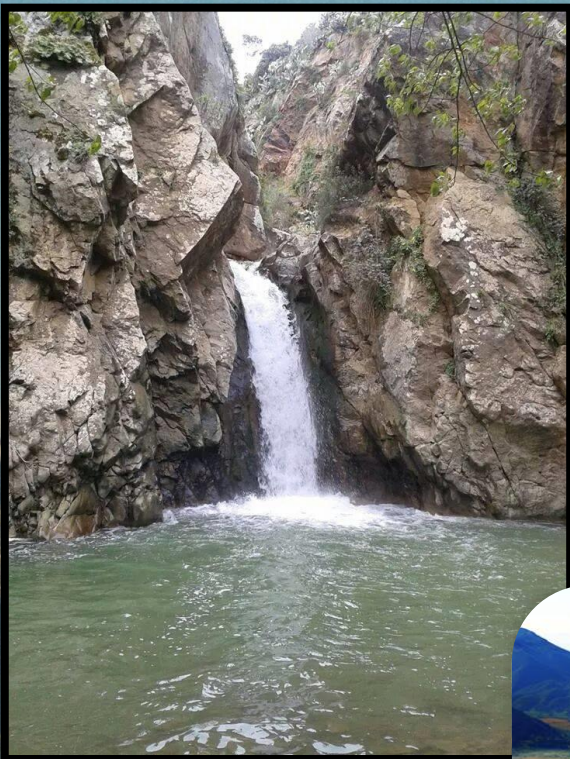


Erasmus Plus K2
Water is life. Let's preserve it
2015-2017



Matese Valley : Upper Biferno river





The water catchment area of the upper Biferno identifies with the morphological, stratigraphic-structure and with the hydrological complex of the rivers, whose waters are conveyed to the Valley of Bojano.

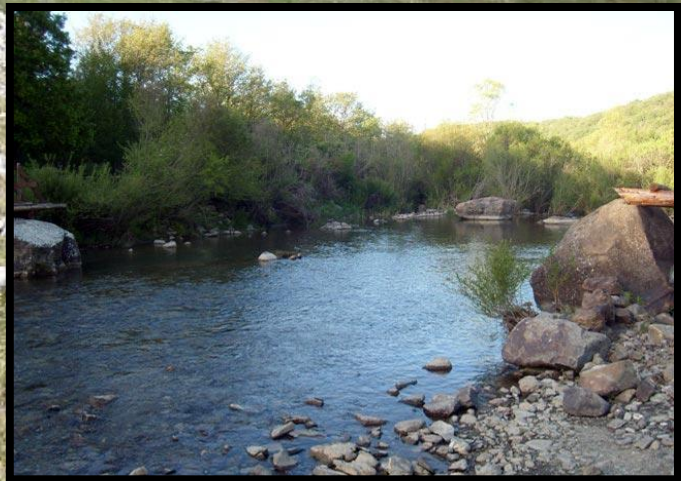
The area, covering about 260 square kilometers, is bounded by the watershed surface of the following slopes:
central and northern of the Matese Massif ,
South west Mount of Castelpetroso, S.Angelo in Grotte and Macchiagodena ,
South Hills of S.Elena Sannita, Spinete, Colle d'Anchise e Vinchiatiuro.



FRANCESCO RAFFAELI

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The Matese Massif is the most important geo- morpho-hydrological unit of the catchment area.



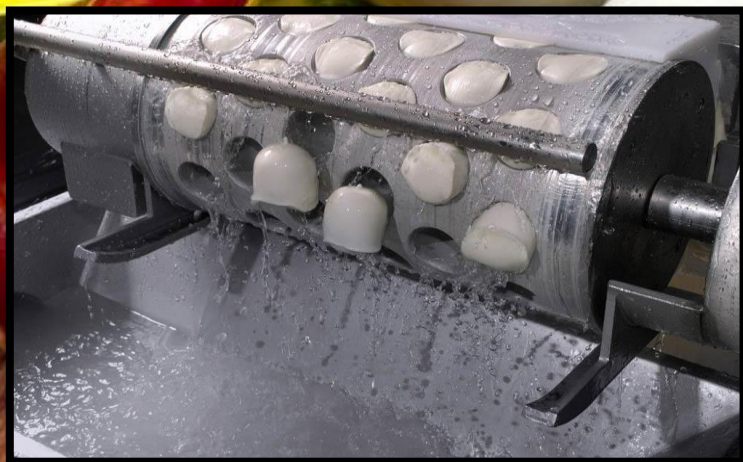
It is bordered by the river Biferno with the tributaries Callora, Rio and Quirino, and by the river Volturno with the tributaries Cavaliere, Titerno and Calore.

The Valley of Bojano collects the rainwater and the snowmelt, which, flowing on the surface of the soil and in the subsurface, represents the hydrographic network of the upper Biferno.



Water is used by the inhabitants of the valley for many purposes, one of which is the production of local cheese.

The Lovers of good food cannot help but taste the famous **cheese** of 'Matese', known and appreciated not only in Molise...



Bojano is famous for the production of high quality **dairy products**, and in particular for the **mozzarella cheese**.

According to the food traditions of Molise, the **mozzarella** should be eaten as an appetizer and eaten alone.



Among the other cheese, **Pecorino** is a classic mountain cheese made by sheep or goat milk. It is a hard cheese, compact and characterized by the presence of a thick outer crust of brown color.

BIFERNO RIVER

The river Biferno, 85 kilometers long, springs in the municipality of Bojano, at **Pietrecadute**, 500 m above the sea level.

The hydronym corresponds to the ancient "**Tifernus flumen**", "Tifernus" could derive from the greek "tifos" that means: pond, stagnant water.



Characterized by a rather large flow, the river suffers in summer of strong lean and of impetuous floods in autumn.



The river, after going through several territories, flows into the Adriatic Sea, between **Termoli** and Campomarino.

The Biferno river, between February and May, forms falls, offering the opportunity to enjoy boating activities...



...while from March to October it is the destination of many fishermen.



TORRENTE CALLORA



Callora is a seasonal river with a variable regime. Its waters are supplied by winter rains and snowmelt and in summer almost dries up for many traits, forming puddles.

The Natural Area of the **Callora river** shows an environment of intact beauty, with wild places dominated by the famous, inaccessible medieval castle which helps to give charm and historical interest to the area.



Our sight is caught by an intact and touching environment: a canyon with steep walls where the river runs with jumps, of considerable height.

Many types of flowers characterize the area such as snowdrops and crocuses in the winter months. The red lily, the bluebells and the scabiose.

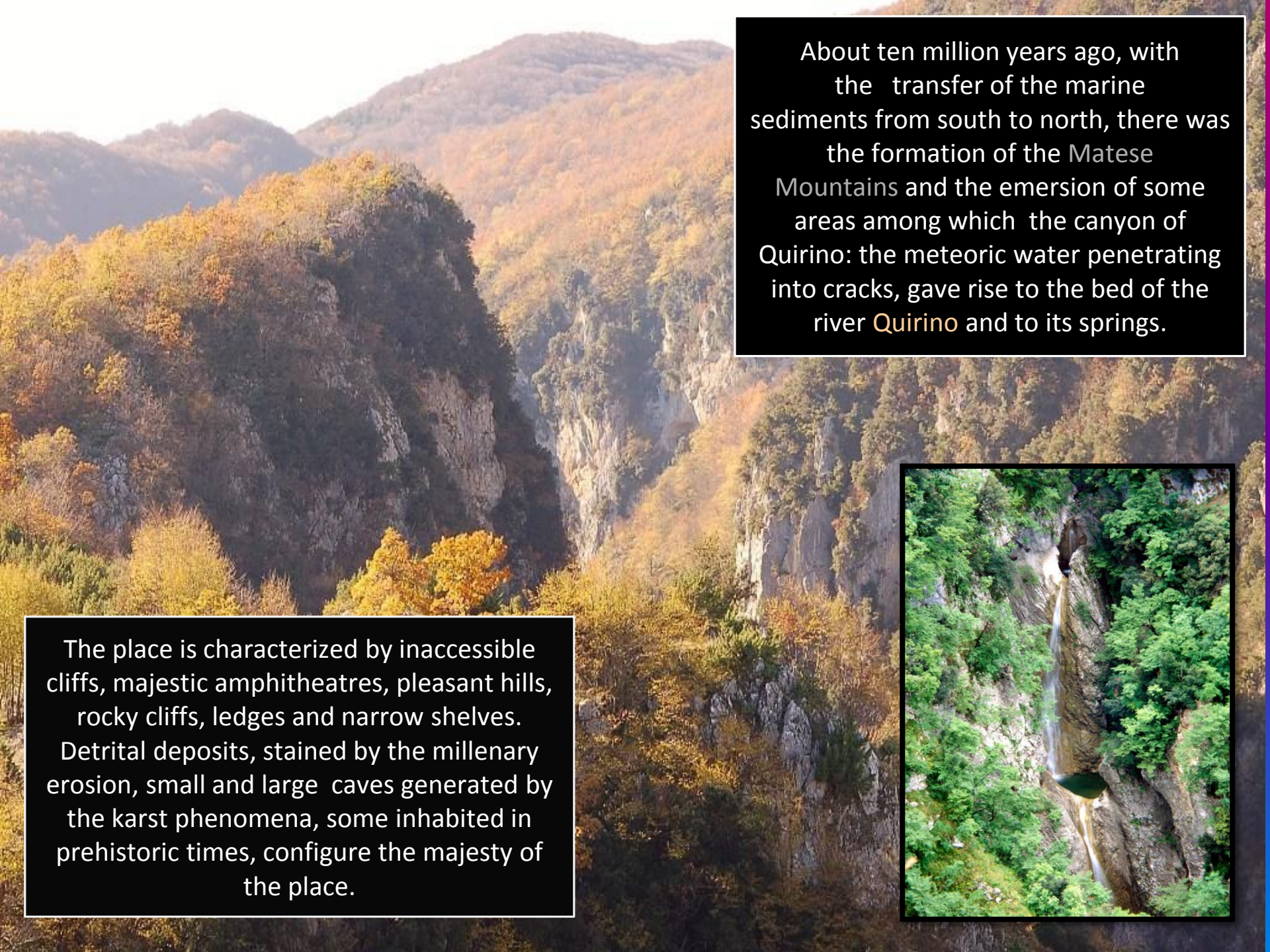


THE CANYON OF QUIRINO

The Canyon is among the most impressive landscape of the South Appenine not only for the complex of the structures that form its morphology, but also for the singularity of the associations of flora and fauna which characterize it.

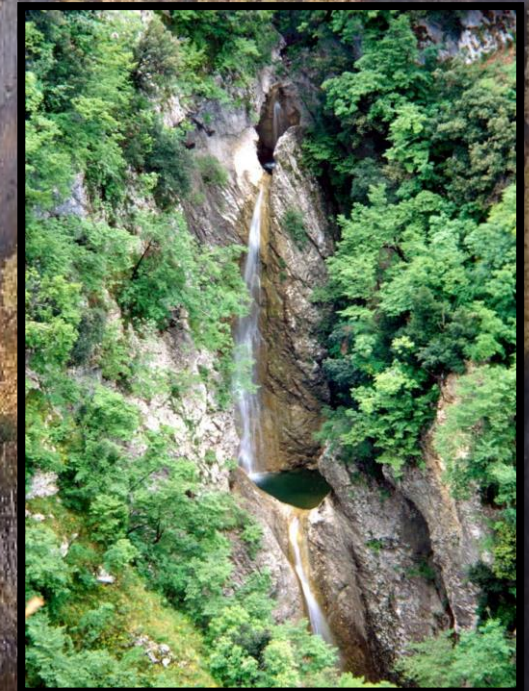


The animals which populate the area are Solarini wolves, foxes, hares, wild cats, wild boars, squirrels, vipers and colubrids, species of insects and other arthropods. Birds of prey like buzzards and sparrows.



About ten million years ago, with the transfer of the marine sediments from south to north, there was the formation of the Matese Mountains and the emersion of some areas among which the canyon of Quirino: the meteoric water penetrating into cracks, gave rise to the bed of the river **Quirino** and to its springs.

The place is characterized by inaccessible cliffs, majestic amphitheatres, pleasant hills, rocky cliffs, ledges and narrow shelves. Detrital deposits, stained by the millenary erosion, small and large caves generated by the karst phenomena, some inhabited in prehistoric times, configure the majesty of the place.



SANTA MARIA DEL MOLISE

Santa Maria del Molise is a small village at the feet of the Matese mountain.

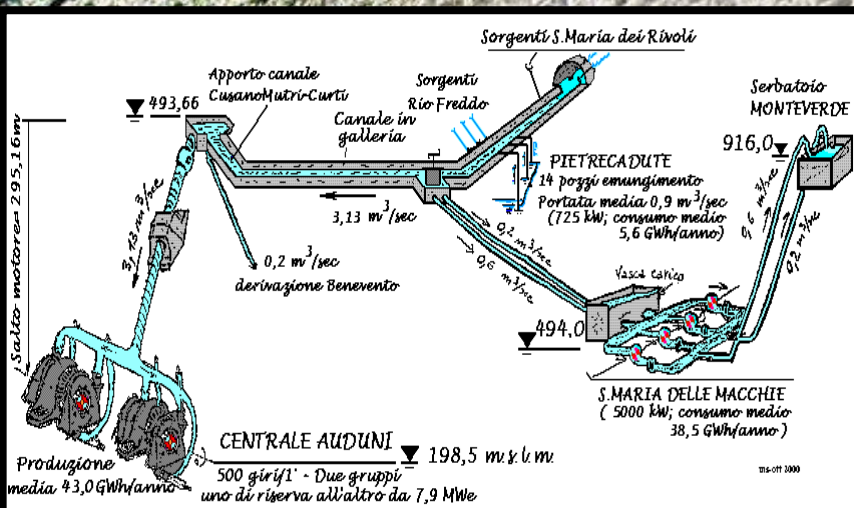


A series of small canals of water gives birth to the river **Rio**, one of the main tributary of the **Biferno** river .

In the past the water was essential for the functioning of a power station and of several mills, one of which has recently been renovated.

AUDUNI HYDROELECTRIC POWER

The hydroelectric power plant Auduni was built by the 'Cassa per il Mezzogiorno' in the Campania region and uses the water collected in the Matese tunnel for the production of electrical energy, which satisfies the needs of the Campania Region.



The power plant property was assigned to the **Molise Region** and a framework for the distribution of the water resources, available from the sources of the **Biferno** river, was set out.



A wide river flows through a lush green landscape under a clear blue sky. The water is dark and reflects the surrounding trees and sky. The banks are covered in dense, vibrant green foliage.

The Biferno river from Baranello to Stagnone

(medium-low course)

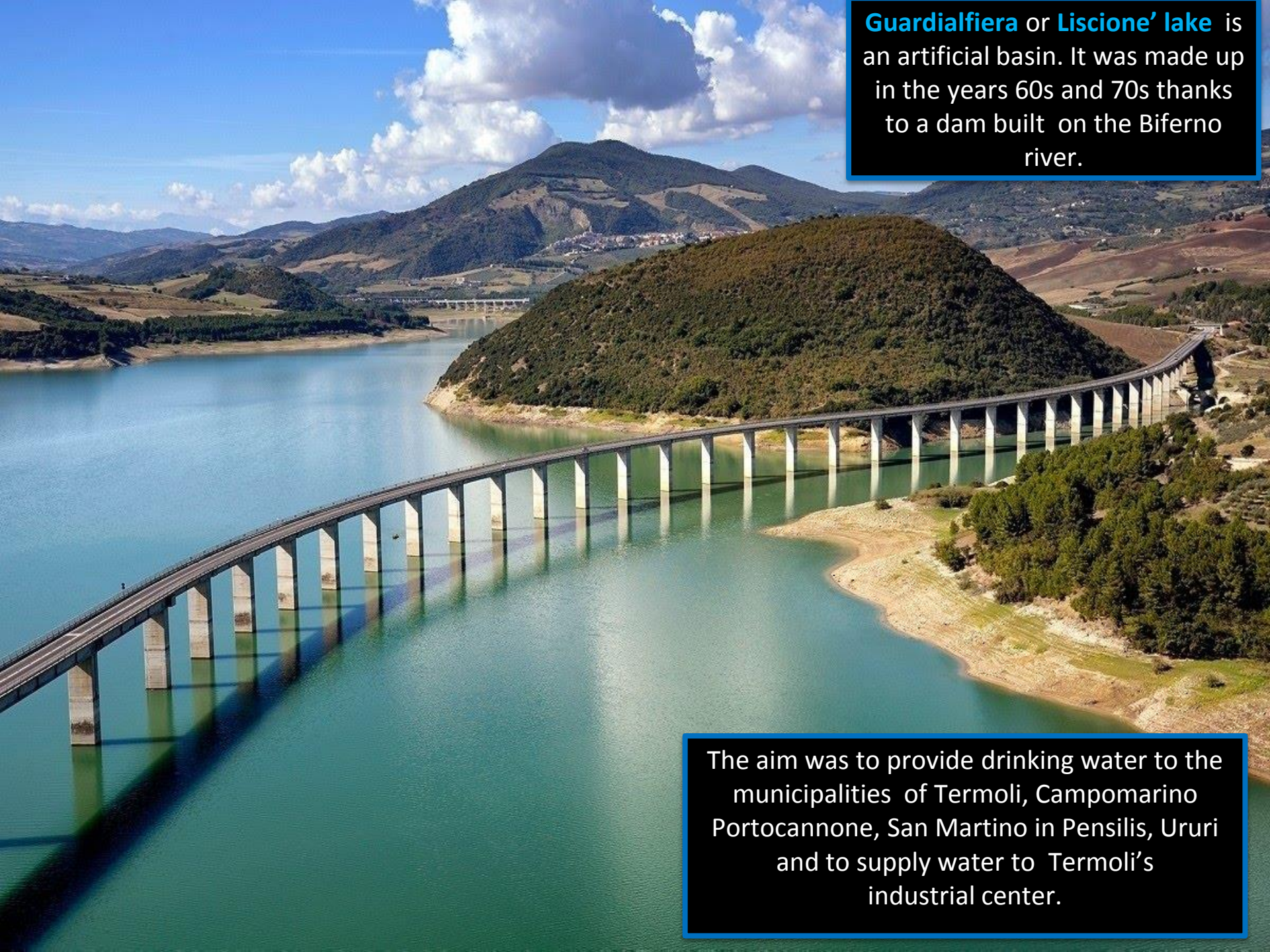




The **Biferno river** is 95 km long and flows in the Adriatic sea, south of Termoli. It has a torrential regime, the floods are in fact related to the rainfalls.

About the climate, the middle and the low valleys of the Biferno river are interested by warm and cold winds, predominantly cold winds.



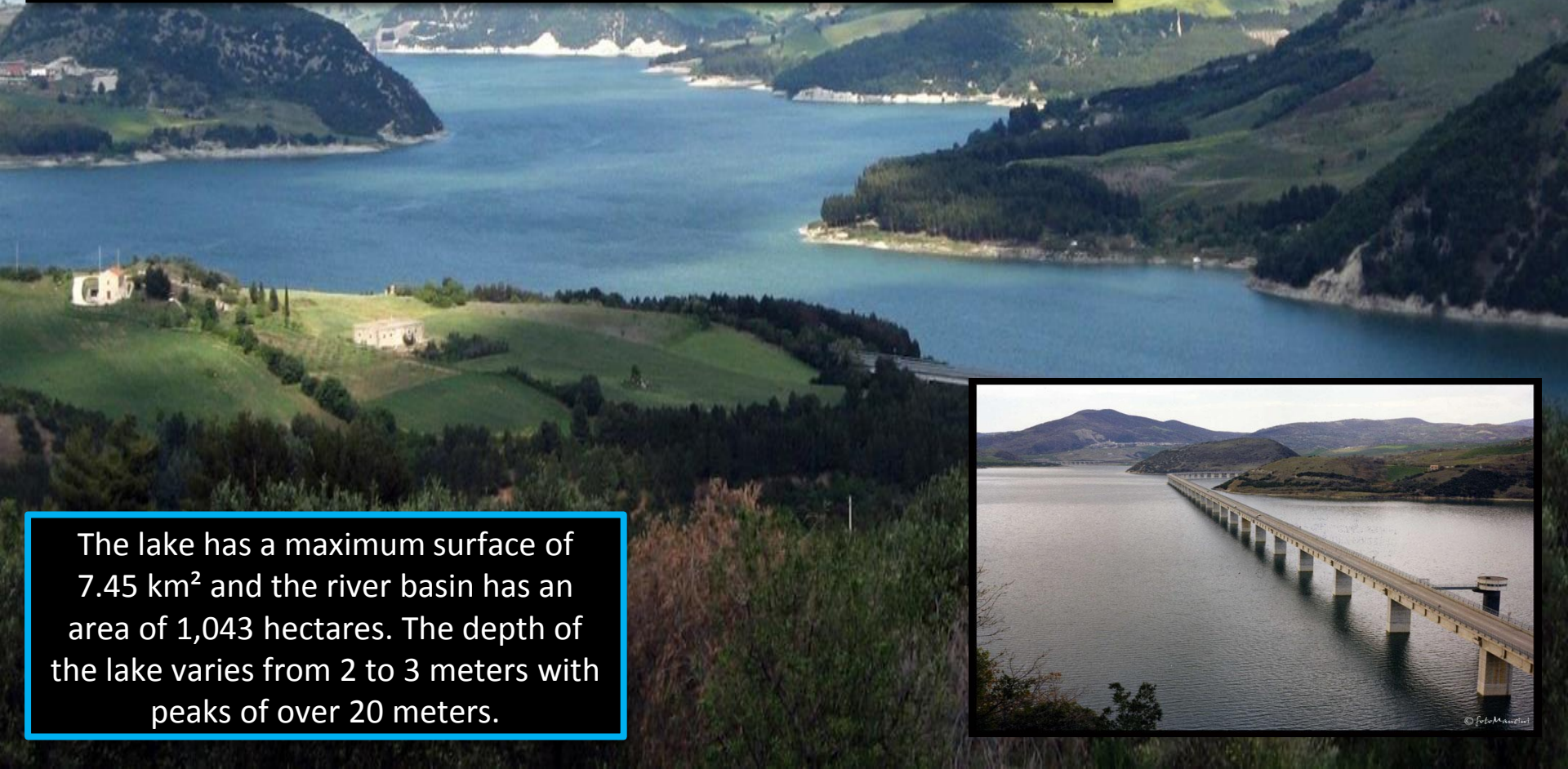


Guardiafiera or **Liscione' lake** is an artificial basin. It was made up in the years 60s and 70s thanks to a dam built on the Biferno river.

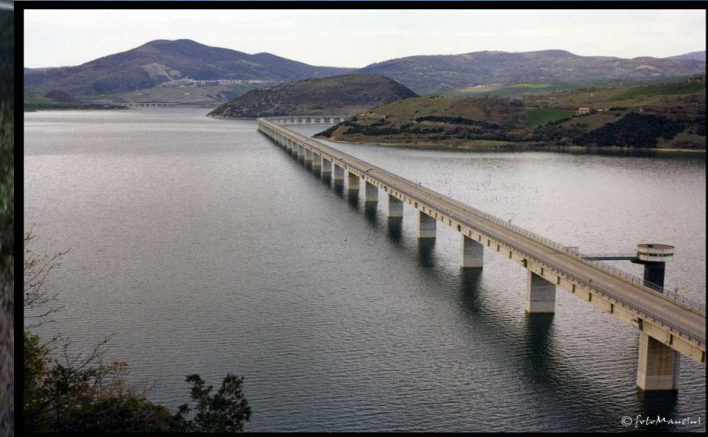
The aim was to provide drinking water to the municipalities of Termoli, Campomarino, Portocannone, San Martino in Pensilis, Ururi and to supply water to Termoli's industrial center.



The environment is characterized by wild hills of medium altitude, with forests of **Cerro** and **Roverella**, typical of the Mediterranean region, and by some other important species.



The lake has a maximum surface of 7.45 km² and the river basin has an area of 1,043 hectares. The depth of the lake varies from 2 to 3 meters with peaks of over 20 meters.



To create the lake and the dam, an ancient Roman bridge was covered by water; it is visible in summer, near the Peloso Mountain.



A popular legend tells that Annibale, during the second Punic War, crossed the bridge with his army. For this reason it is called “**Ponte di Annibale**”.



The Molisan landscape preserves ancient remains related to the industrial archeology; tracks, paper mills, wool mills, but mainly power plants and hydropower plants. They represent the **industrial history** of the Molise Region.

During the flood of the river Biferno in 1812, it was formed ,on the left bank, a pond with a wide stretch deep estuary. The pond became a safe harbor for large merchant vessels. Today, however, it is filled .



Today the water flowing towards the estuary is very low and the sedimentary one almost nil. The estuary, as well as the coast, are in great erosion.





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*Piano cover- "Let her go"
Passenger*

"This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein."