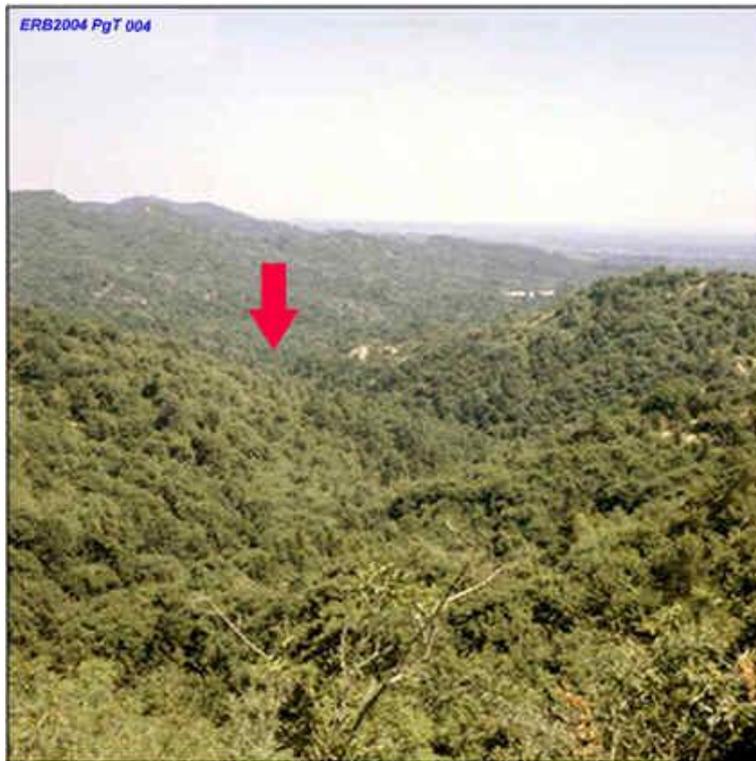


Valle della Gallina experimental basin (1,08 km²)



Landscape of the *Valle della Gallina* downstream view.
The arrow indicates the closing of the basin

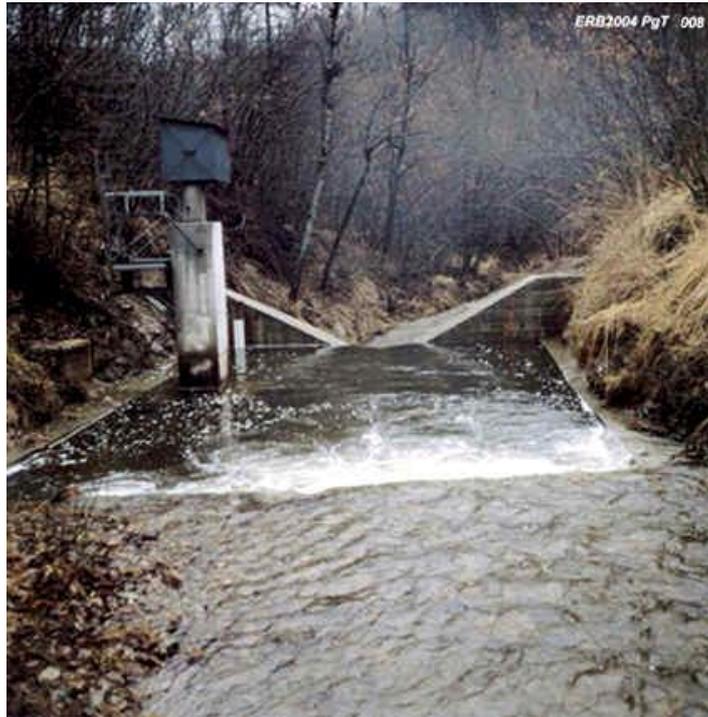
The small basin of *Valle della Gallina* is a tributary of the Marchiazza basin, and was equipped in 1975 by the Research Institute for hydrogeological protection of the National Research Council. Its aim was the recording of data concerning the rainfall and runoff in a frontier environment between the watershed of the Alps and the upper Po plain for evaluation of the water balance. Starting from 1982, hydrological monitoring and related data-processing have been prosecuted on the measuring-stations of the sub-basin *Valle della Gallina* recognized as representative of the entire Marchiazza basin.

Pluviometric, vegetational and lithological homogeneity of the small basin *Valle della Gallina*, as well as its conditions of non-human activities, led to equip a sedimentary station in the hydrometric station located just before the confluence with Marchiazza river at the closing of the small basin. Phisyographic characteristics are: geographic position lat. 45°38'05" North, long. 16°48'38" Est Greenwich; area 1,08km²; mean altitude 417 m a.s.l.; mean inclination 49%; soil (azonal) cover 99%; vegetational cover 77%; bedrock cover (rhyolites) 23%. Observed data are: mean temperature 11°C; mean precipitation 1283 mm/year; mean runoff 735 mm/year; mean discharge 0,02m³/s.

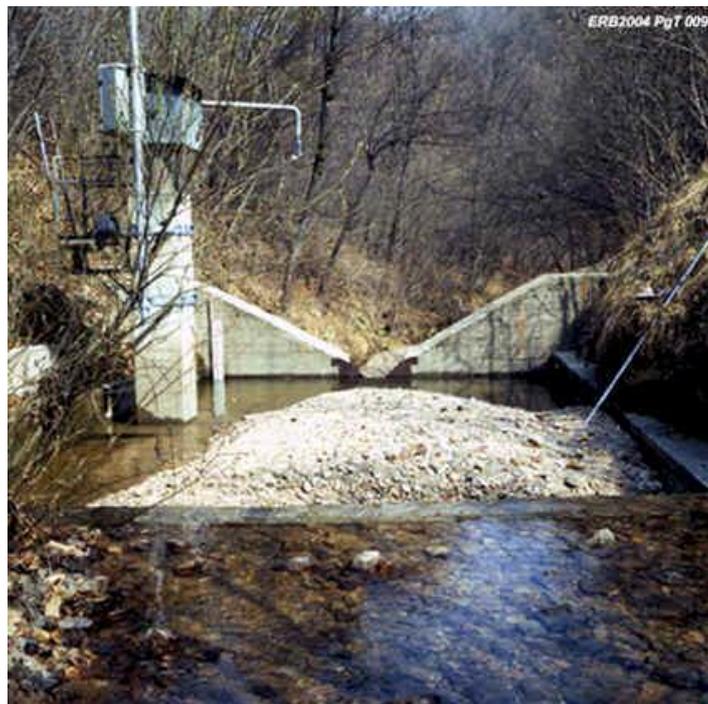
The studies performed at present are:

- water balance (day-month and year rainfall and runoff relationship)
- sediment yield (sediment volumes as the event and the year sediment budget related to runoff)
- sediment travelled distances (autoctone sediment tracers transfer related to the peak flow)

Sediment transport experience: volumes (starting from 1982)



Sedimentary station, downstream view: water level recording on the left



Sediment trapped volume of 20 m³ in the sedimentary station
(downstream view)



The sedimentary station at the time of material removal (upstream view)



Sediment grain sizing at the sedimentary station

4 sensor load



Data Acquisition Unit

Ultrasounds water gauge



Automatic pressure transducer

Steel plate

AUTOMATIC BALANCE FOR THE MEASUREMENT OF BED LOAD (since 2001)

The system allows automatic and in real-time weighing of the solid/liquid flow using a swinging plate attached to 4 sensor load and 1 pressure transducer.