



1173 | 120 | Culverted rivers in the historic center of Genoa (Italy) as an emblematic case of human pressure and fluvial landscape changes | F. Faccini¹, P. Piana¹, S. Saj², M. Terrone³

The city of Genoa is internationally known for its recurrent floods, mainly related to the Bisagno River.

The high risk is linked to meteorological hazard and to the urbanisation in hazardous areas and consequently to the high exposure of risk elements.

The present research concerns the hydrographic network that characterises the historical center of Genoa, i.e. the natural amphitheatre bordering the Polcevera valley to the W and the Bisagno valley to the E.

In this area of just 8.5 km² there are eight catchments ranging from 0.49 km² to 2.36 km² in size: from W to E we recognise the basins of the San Bartolomeo, San Lazzaro, San Teodoro, Lagaccio, Sant'Ugo, Carbonara, Sant'Anna and Torbido streams.

These watercourses have been subject to anthropic modifications since the Middle Ages, sometimes with



which is otherwise not perceptible. Only the upper basin of the Lagaccio and San Lazzaro streams still have a watercourse with a natural riverbed, although the area is still significantly urbanised.

The construction of these culverts over time and the modifications they have undergone over the following centuries up to very recent times due to progressive urbanisation have led to a reduction in the hydraulic cross-section, which can lead to a possible flow of water under pressure and the consequent flooding hazard.

Therefore a better geographic knowledge of these culverted streams in Genoa historical city is crucial for hazard and risk assessments and for the planning of related hydraulic risk reduction activities.

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