



FLASH FLOOD EVENTS ON SALERNO COAST (SOUTHERN TYRRENIAN SEA)

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Abstract

The coast off the city of Salerno in south Italy on the Tyrrhenian sea is subject to frequent extreme rainfall events, confined in space and in time, that can trigger landslide, debris flows and flash flood phenomena. These latter events are affected by the peculiar geomorphology of the area characterized by high orographic gradient from the sea level and short and steep streams.

One of the major events occurred on October 25 and 26, 1954 and resulted in more than 300 casualties. Rainfall lasted about 12 hours with a total value of 504 millimetres and maximum intensity of 150 mm per hour. The area most affected included the Regina Major stream in the town of Maiori, Bonea torrent in Vietri sul Mare and the town of Salerno with several very small streams. This rainfall event, though of limited extension, was well recorded because the rain gauge network resolution at that time was quite adequate. But no stream gauge in the hit area was installed (not is one installed today). Peak discharge is estimated from post-event survey or by hydrological model.

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Despite the well known seasonal recurrence of this kind of event in that area, that (mostly in autumn) are typical of the Mediterranean climate, and the very limited extension in space and time of the event (not allowing for recording), high resolution monitoring systems (like weather radar) are still not available and it is difficult to improve knowledge on this type of event and for flash flood hazard and risk assessment.