



FLASH FLOODS AND PLUVIAL FLOODING



ISPRA
Istituto Superiore per la Protezione
e la Ricerca Ambientale



REGIONE AUTONOMA
DELLA SARDEGNA



MINISTERO DELL'AMBIENTE
E DELLA TUTELA DEL TERRITORIO E DEL MARE

Working Group F Thematic Workshop

FLASH FLOOD EVENTS ON SALERNO COAST (SOUTHERN THYRRHENIAN SEA)

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26th-28th May 2010, Cagliari, Italy

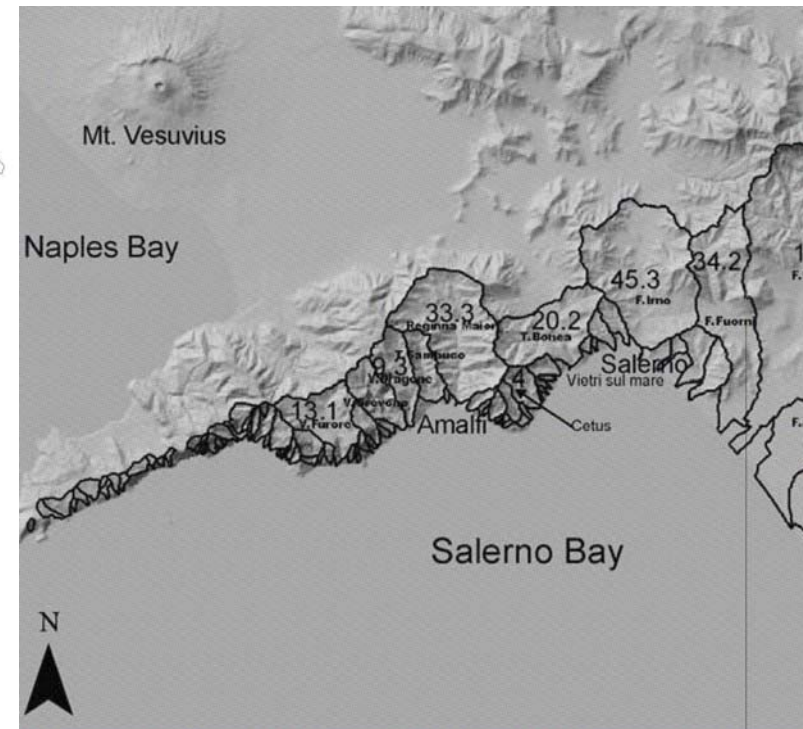


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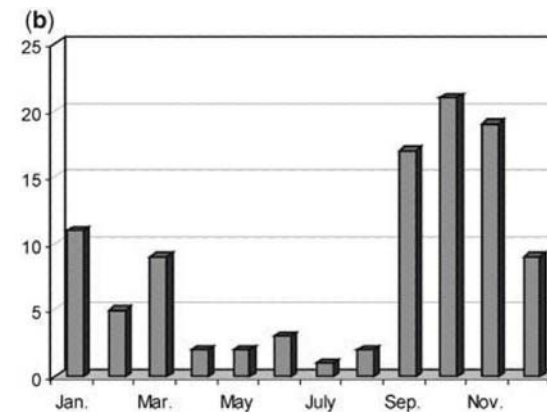
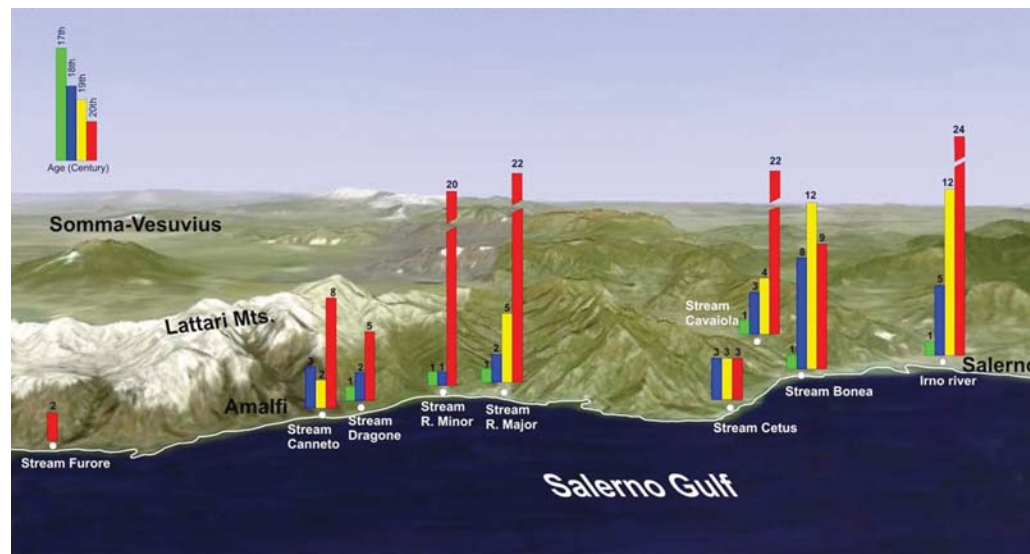
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Geomorphology of the area

- Little basins (max 30-40 km²)
- high orographic gradient from the sea level and short and steep streams
- factors that have a decisive influence on the occurrence of flash floods



Recurrence and seasonality of events



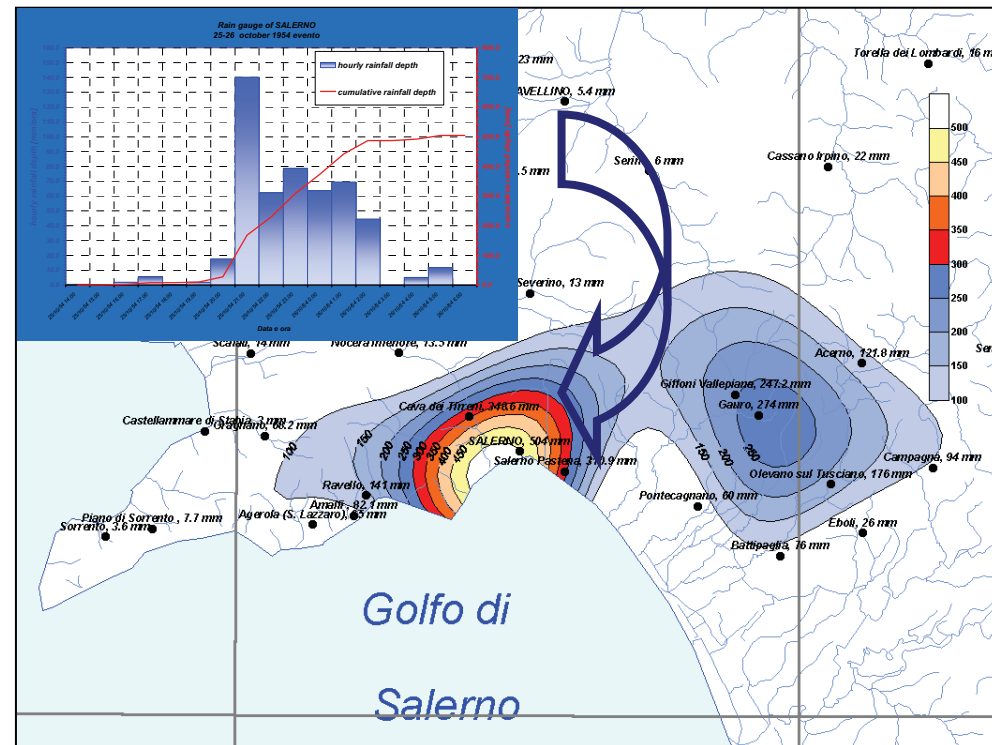
- More than 100 relevant events from 16th century, 7 of which with catastrophic effects



The most intense event

October 25-26 1954
Salerno flash flood

- Total 504 mm during about 11 hours
- Max 150 mm/h





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Risk map of Bonea torrent

NO RISK !

QUADRO DI UNIONE

- AREE (FRANCO QUADRANTE)
- AREE (FRANCO MARE)
- PUNTO CRITICO RELATIVO ALLA SEZIONE DI CALCOLO (RA)
- SEZIONE DI CALCOLO
- SEZIONE DI CALCOLO
- LINEE IDENTIFICATIVE SEZIONE DI CALCOLO
- LINEE IDENTIFICATIVE
- LINEE IDENTIFICATIVE
- LINEE DEL TERRITORIO DI COMPETENZA DELL'AUTORITA' DI BACINO DESTINATA SELE

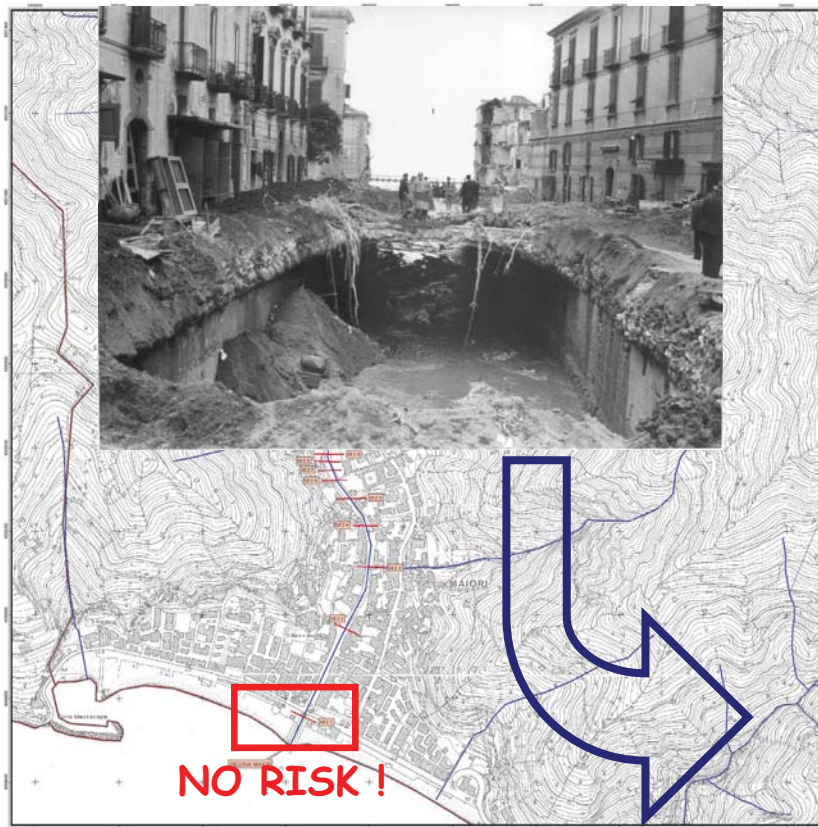
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Risk map of Ragina Major stream



REGIONE CAMPANIA
 AUTORITÀ DI BACINO REGIONALE DESTRA SELE
 PIANO STRALCIO PER L'ASSETTO IDROGEOLOGICO
 RISCHIO ALLUVIONI

CARTA DELLE AREE A RISCHIO

COMUNE DI : **MAIDRI**

DISEGNO N.3421-15-4
 TAVOLA 1/4
 SCALA 1/5000

LEGENDA

FASCE DI RISCHIO

Area a basso rischio	Area a medio rischio	Area a rischio elevato	Area a rischio molto elevato
Area a basso rischio: zone con alta probabilità di alluvione...	Area a medio rischio: zone con probabilità di alluvione...	Area a rischio elevato: zone con probabilità di alluvione...	Area a rischio molto elevato: zone con probabilità di alluvione...





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Conclusions

Flash floods present essential differences as compared with large river floods.

- large sediment and debris transport
- high flow velocities

If these different conditions are not taken into account, the risk assessment in the flash flood prone areas could be underestimated

Thanks for attention