



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

Vulnerability assessment of Sardinia (Italy) to extreme rainfall events

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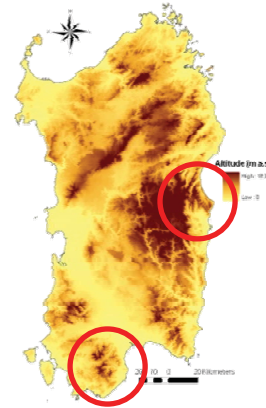
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Recent Flash Flood in Sardinia

- December 2004, Central-East
- January 2006, Central-East
- December 2006, Central-East
- October 2008, South-West
- November 2008, Central-East



December 2004: flash flood effects in Villagrande



December 2004: flash flood effects in Villagrande



October 2008: flash flood effects in Capoterra

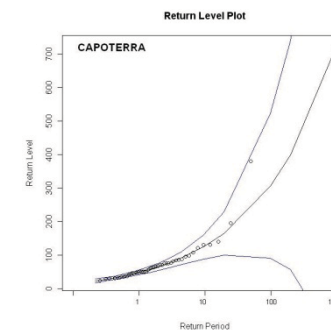
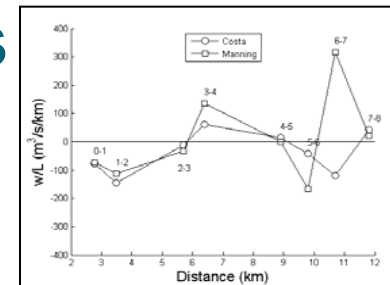


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About more recent flash floods

- hydrological characterization
- study of the induced geomorphic changes
- statistical analysis of the triggering extreme rainfall events
- statistical modeling of daily rainfall data in Central-East Sardinia allowing for the characterization of extreme events pattern



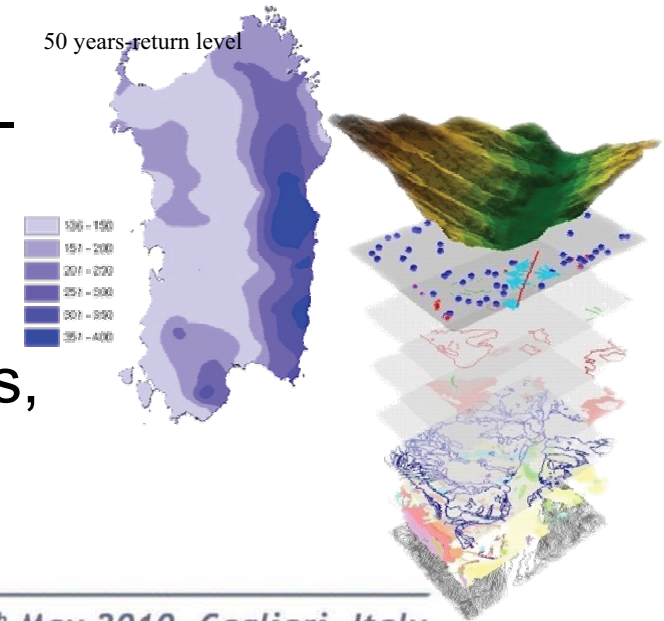
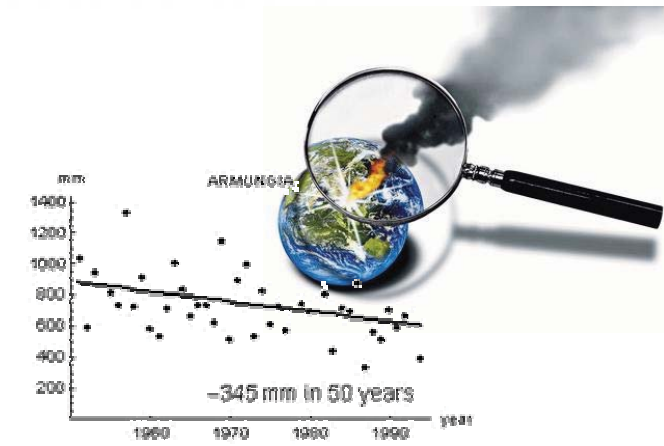
Station	20ys	30ys	40ys	50ys
Baunei	(236.4, 379.5)	(251.1, 429.0)	(261.2, 467.1)	(268.8, 498.6)
Genna	(270.0, 500.8)	(288.7, 574.5)	(301.9, 632.4)	(312.1, 680.8)
Silana	(280.3, 558.7)	(307.9, 674.6)	(327.9, 770.7)	(343.7, 854.4)
Villanova S	(251.3, 455.1)	(271.6, 532.2)	(285.9, 594.1)	(296.9, 646.6)

(2)



Vulnerability of Sardinia

- Climatic analysis, focusing on extreme rainfall events and trends
- Characterization of past damaging hydro-geological events
- Comparison with land use, forested areas, land abandonment, burned areas, roads and urban developments





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Thank you for your attention



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