

3rd International SWAT Conference

**RUNOFF-EROSION MODELLING
BY SWAT
OF AN EXPERIMENTAL MEDITERRANEAN
WATERSHED**

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Objectives

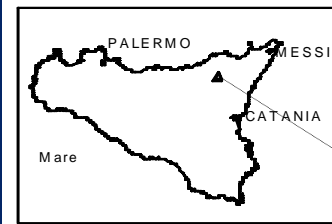
To set-up indications on applicability and efficiency of the erosion prediction model SWAT in environmental situations that can differ from those where the models were developed

In order to set-up a database for the assessment of the performance of erosion models in Mediterranean areas, a monitoring program on a small mountainous watershed started in Sicily seven years ago

Work steps:

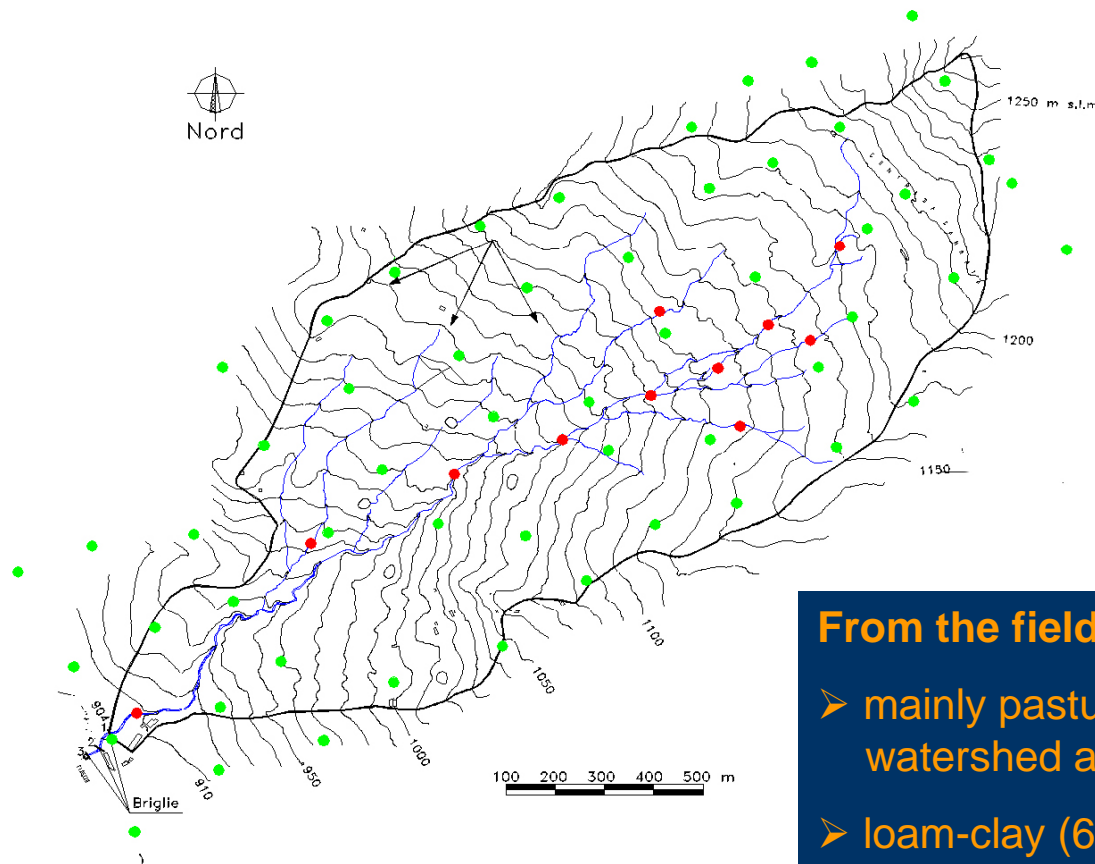
- ✓ to analyse the collected hydrometeorological data
- ✓ to quantify the hydrological response of the experimental watershed
- ✓ to evaluate the performance of SWAT model after a calibration/validation carried out using the available database

Flascio basin and Cannata sub-basin



Area	130 ha	
Elevation	minimum	900 m
	mean	1089 m
	maximum	1270 m
Longest pathway	length	2400 m
	average slope	12 %
Average land slope	21 %	

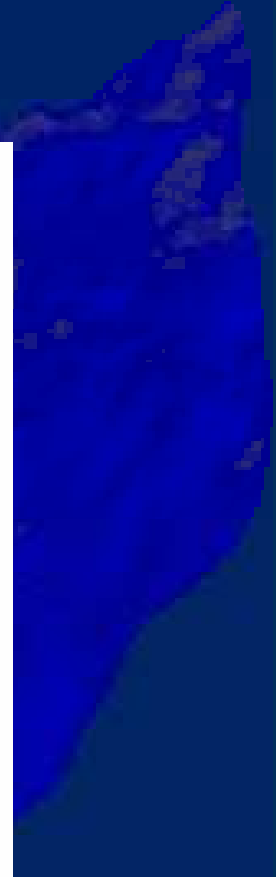
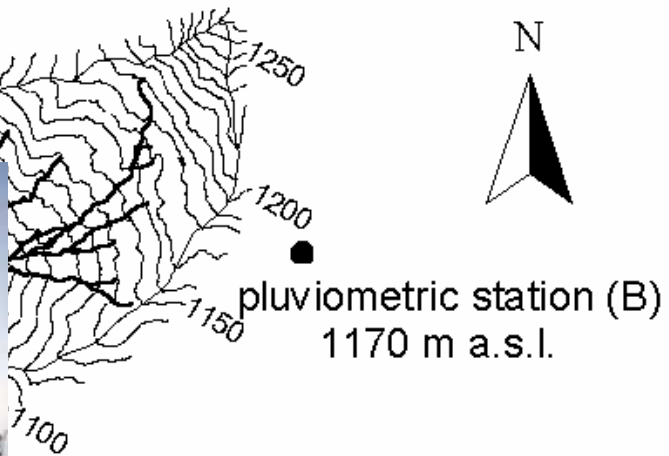
Location of the 57 soil samples within the Cannata watershed



From the field survey:

- mainly pasture (87%÷92% of the watershed area)
- loam-clay (63% of the samples)
- saturated hydraulic conductivity: 0.2÷0.7 mm/h (81% of the samples)

pluviometric station (C)
1049 m a.s.l.



Periods of the monitoring stations

Stations	1995	1996	1997	1998	1999	2000	2001	2002	2003
A		■	■	■	■	■	■	■	■
B			■	■	■	■		■	■
C						■	■	■	■
D		■	■	■	■	■	■	■	■
E			■	■	■	■	■	■	■

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