

Late Baroque Towns of the *Val di Noto*

Engineering geological conditions and problems:

The towns of the *Val di Noto* inserted in the UNESCO World Heritage List are: Caltagirone, Catania, Militello, Modica, Noto, Palazzolo Acreide, Ragusa, Scicli.

These towns all are in a part of the Sicilia region considered seismic. The major earthquakes affected the zone in 1169 (Catania), on December 10, 1542 and on January 11, 1693 (Val di Noto). The last one is considered the biggest earthquake that hit the valley. The dome of Saint Nicolò church in Noto fell down on March 13, 1996, as a consequence of the structural breakdown caused by the 1990 earthquake and by the great quantity of winter rain.

The other geological problem concerns landslides: recently the investigations located 130 - 140 slides in all the valley.

Since geology, morphology and climate are not suitable to account for the observed phenomena, it has been deduced that these mass movements were caused by the strong earthquakes periodically shaking that territory.



The Cathedral of Catania (www.sicily-photos.com)



The church of S. Francesco all'Immacolata - Caltagirone (www.sicily-photos.com)



The Church of S. Domenico – Noto (<http://www.sicilainfoto.it/noto.htm>)

Investigations and protection measures already realized:

The eight towns in south-eastern Sicily: Caltagirone, Militello, Catania, Modica, Noto, Palazzolo, Ragusa and Scicli, were all rebuilt after 1693 on or beside towns existing at the time of the earthquake which took place in that year.

Until the year 1800, the ground level of Monastero SS Salvatore (Noto) was lowered for about 1.50 m with a significative reduction of the foundation of the masonry structure. The remedial works (Castelli et al., 1997) consisted in the retrofitting of the Monastero. The work was made in two stages:

- some provisional works by steel structures placed along the side of buildings;
- final stabilisation by the reinforcement of the foundations.

Supplementary information:

The Committee decided to inscribe this property on the World Heritage List in 2002 because it represents a considerable collective undertaking, successfully carried out at a high level of architectural and artistic achievement. Keeping within the late Baroque style of the day, they also depict distinctive innovations in town planning and urban building.

References on studies already done:

ADORNI G., NICOLETTI P.G., PARISE M. e SCALZO A. (1996) "Frane sismo-indotte e sbarramenti fluviali in Sicilia sud-orientale: primi dati" Atti del Convegno internazionale "La prevenzione delle catastrofi idrogeologiche: il contributo della ricerca scientifica", Alba 5-7 Novembre 1996, 163-172.

CASTELLI F., MAUGERI M., GAETA G. e PAVONE A. (1996) "Retrofitting of the Monastero SS. Salvatore in Noto, Sicily". Proc. Intern. Symp. "Geotech. Eng. For the preservation of Monuments and historic sites" Naples 3-4 October 1996, pag. 581-590.

NICOLETTI P.G., IOVINE G. e CATALANO E. (2000) "Beni culturali e riattivazione di antiche frane sismo-indotte in Sicilia sud-orientale: i casi di Castelluccio, Noto Antica e Modica". Convegno GEOBEN 2000, Torino 7-9 giugno 2000. 697-703.