



## **On the space monitoring of the Sassi and Murgia Park (Matera UNESCO site) using LANDSAT time series**

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This paper is focused on the preliminary results obtained in the framework of the Great relevance project “ Smart management of cultural heritage sites in Italy and Argentina: Earth Observation and pilot projects funded by the Ministero degli Affari Esteri e della Cooperazione Internazionale –MAE, 17/04/2014, Prot. nr. 0090692, 2014-2016.

A temporal series (1999–2011) of the LANDSAT TM data was used to carried out investigation in the Murgia Park enclosed in the Matera UNESCO site . The PCA was adopted to enhance regions of localized change in multi-temporal data sets (Lasaponara 2006). Both naturally vegetated areas (forest, shrub-land, herbaceous cover) and agricultural lands have been investigated in order to extract the most prominent natural and/or man induced alterations affecting soil and vegetation cover.

Results from PCA were compared with independent data sets and field survey to evaluate the reliability of the obtained maps of the ongoing land degradation phenomenon. Such analyses can provide valuable information for an operational monitoring of the status of vegetation which is an indicator of the degree of stress namely any disturbance that adversely influences plants in response to natural hazards and/or anthropogenic activities.

Our findings suggest that the Landsat TM time series can provide valuable information for environmental management policies involving biodiversity preservation and rational exploitation of natural and agricultural resources.

### **Acknowledgement**

This research was performed within the framework of the Great relevance project “ Smart management of cultural heritage sites in Italy and Argentina: Earth Observation and pilot projects funded by the Ministero degli Affari Esteri e della Cooperazione Internazionale –MAE, 17/04/2014, Prot. nr. 0090692, 2014-2016