ATHENA project: training activities for the detection of looted archaeological sites

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A core element of the ATHENA Horizon 2020 funded project is knowledge transfer, achieved primarily through intense training activities (including virtual training courses, workshops and summer schools) with an ultimate scope to enhance the scientific profile of the research staff and to accelerate the development of research capabilities of the Eratosthenes Research Centre (ERC), placed in Cyprus. In addition, the project aims to promote Earth Observation knowledge and best practices intended for Cultural Heritage (CH).

The preservation of CH and landscape is today a strategic priority not only to guarantee cultural treasure and evidences of the human past to future generations, but also to exploit them as a strategic and valuable economic asset (Masini & Soldovieri 2016). This is an extremely important key factor for the countries which are owners of an extraordinary cultural legacy, that is particularly fragile due to its specific characteristics and specific risks at which CH is continuously exposed (Brodie et al. 2001). Taking advantage of large-spatial coverage, high-spectral and sensitivity satellite remote sensing can be usefully adopted for contrasting looting. Satellite technologies offer a suitable chance to quantify and analyze this phenomenon, especially in several countries, from Southern America to Middle East (Casana 2015), where the onsite surveillance is not much effective or non-practicable due to military or political restrictions.

Target training activities organized by the National Research Council (CNR, through IMAA and IBAM) are focused on the characterization of the looting phenomenon from a multi-faced prospective. These workshops are focused on the use of high spatial resolution satellite and aerial optical images as well as Lidar and geo-physical data to quantitatively assess looting (Lasaponara et al 2014). An overview of methodologies and data processing for the identification and quantification of looting features (using both single date and multi temporal satellite images and object oriented classifications as in Lasaponara et al 2016) are discussed for several study areas.

Reference

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