

Participatory monitoring in Tuscany (Italy): raising awareness on night sky quality to empower citizens

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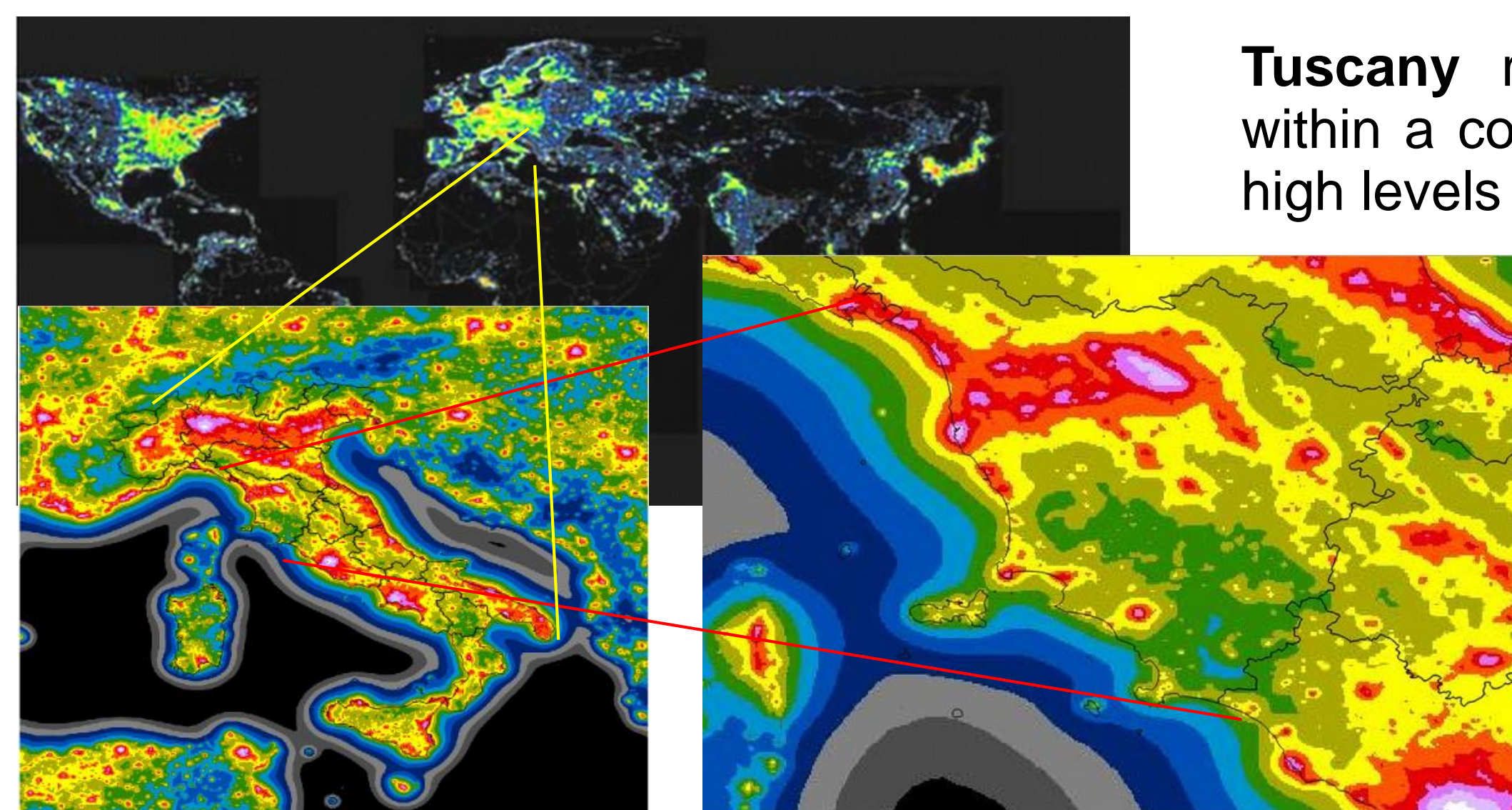
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The issue of **artificial light at night (ALAN)** and the negative impacts associated to its excess are being increasingly acknowledged by different sectors of society. Negative impacts deriving from night light pollution are being assessed in relation to energy consumption, ecology, human health, astronomy, and nightscape preservation.

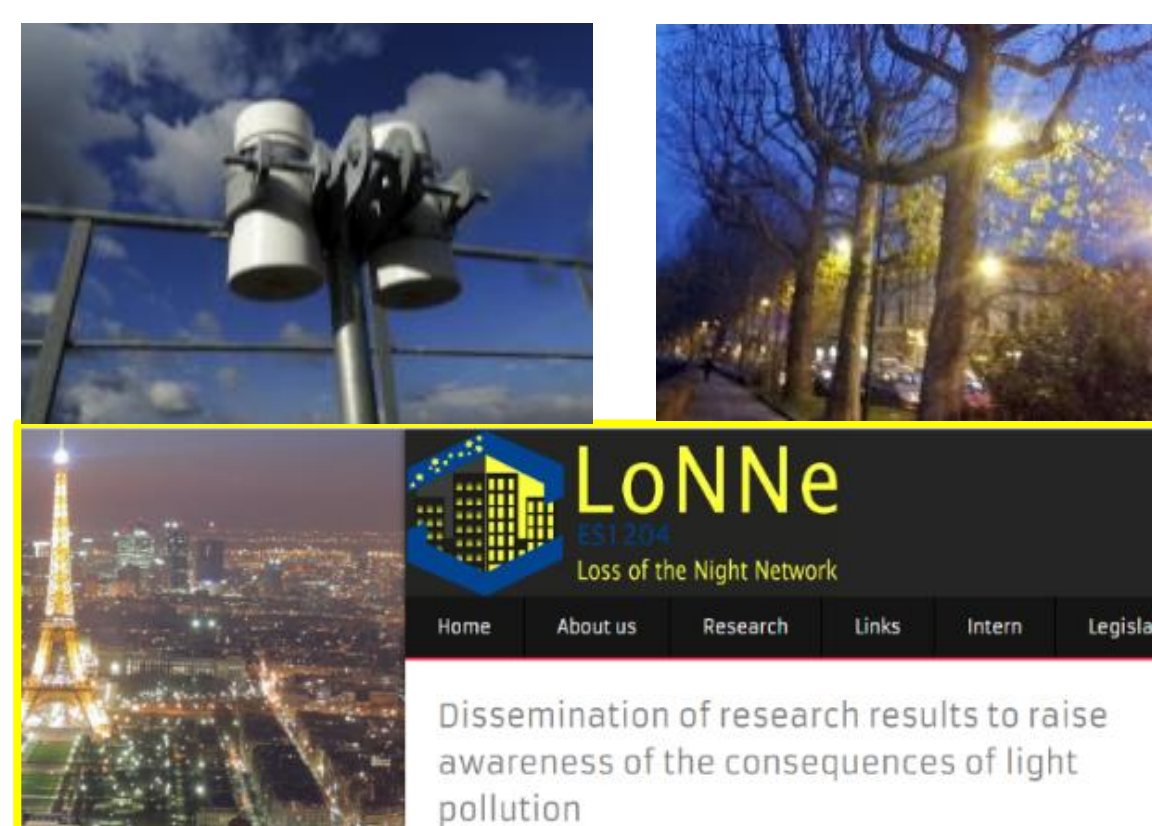
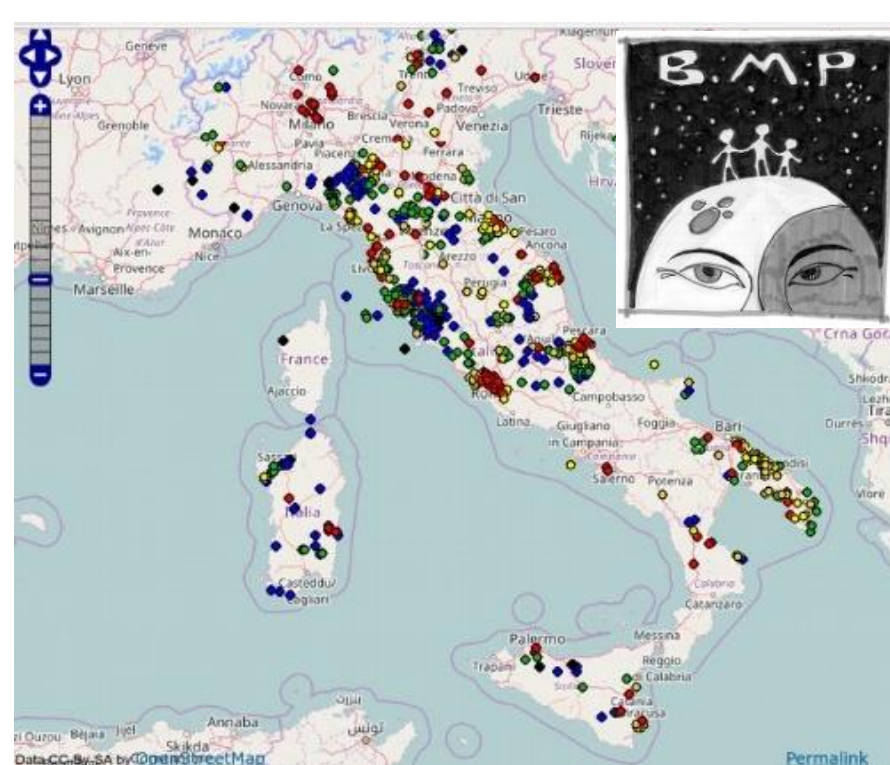


Tuscany represents a unique region within a country (Italy) characterized by high levels of light pollution. In fact, this region encompasses one of the largest zones in Italy with a very good night sky quality. The region thus has the potential for protection initiatives and promotion of night sky-related activities.

In 2008, the organization **Attivarti.org** (located in southern Tuscany) launched the **BuoMetria Partecipativa (BMP)** project, with the aim of raising awareness about light pollution. BMP organized numerous outreach events and adopted a citizen science approach to collect quantitative data on night sky quality across Italy.

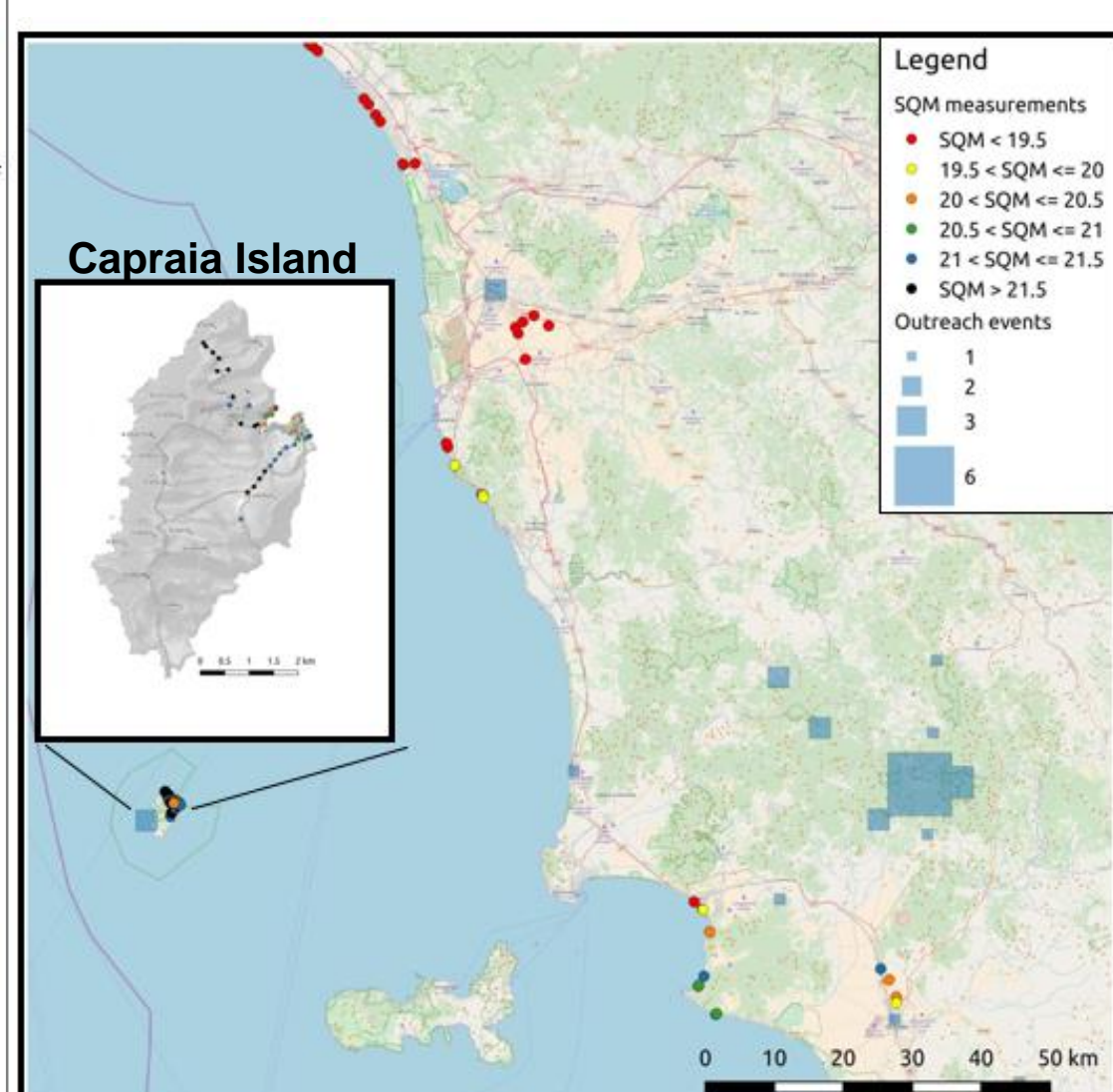
The BMP outreach work eventually attracted the interest of **CNR IBIMET**, which proceeded to install night sky brightness sensor in Florence and in the Montecristo Island, as well as to conduct surveys on urban vegetation in Florence. Both organization became partners within the **European Cost action Loss of the Night**.

In 2015 **University of Pisa** started a collaboration with Attivarti.org and to study marine light pollution issues, initially focusing on rocky shore food webs including microphytobenthos, and eventually extending to a broader range of biodiversity and functioning issues.

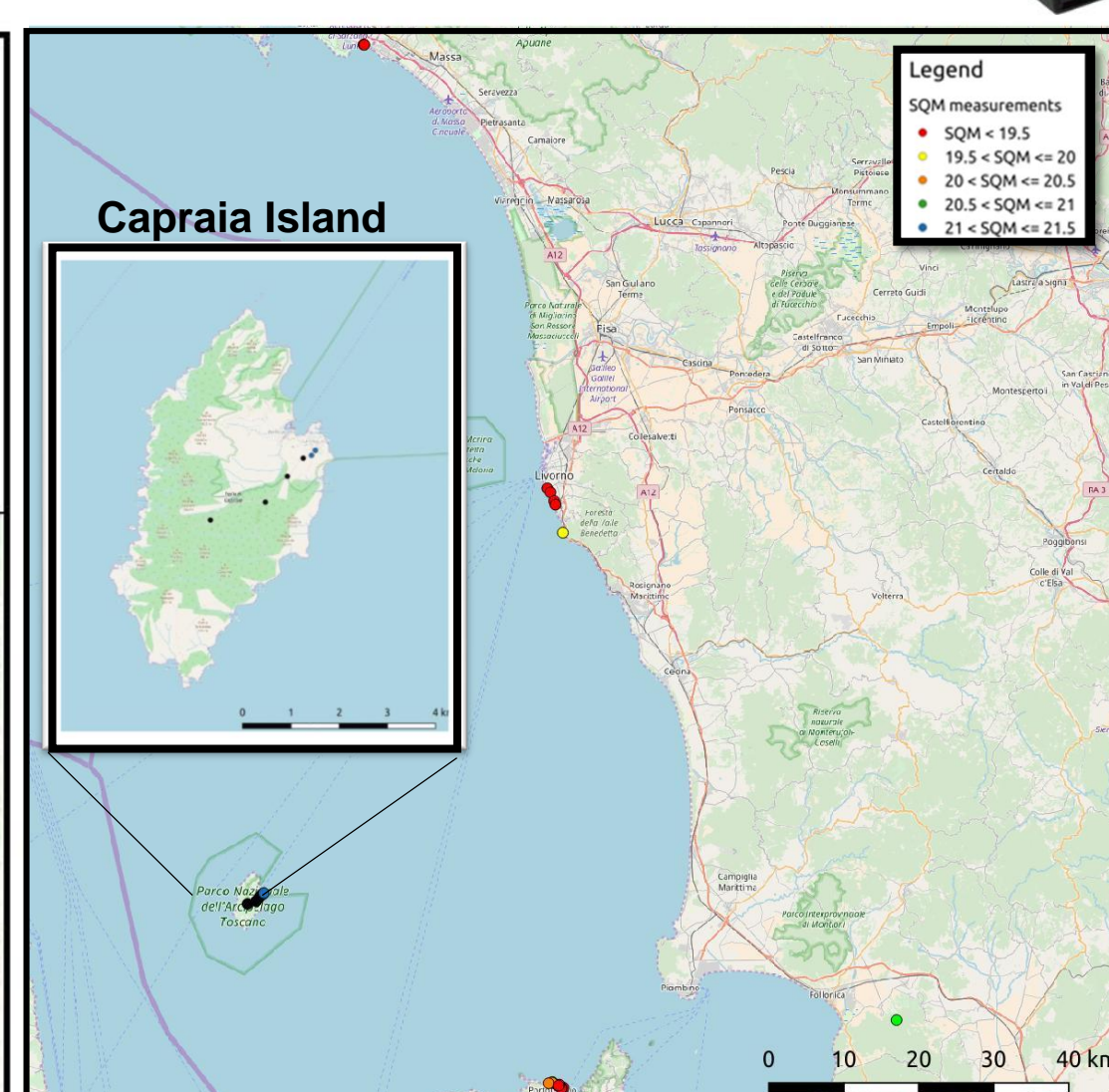


The three above mentioned subjects undertook a *Summer Campaign* in 2017, to **monitor levels of light pollution along the Tuscan coasts, following an approach based on voluntary observations**. The campaign was repeated from autumn 2017 to spring 2018 (2017/18 Autumn-Spring Campaign). Monitoring was combined with outreach activities and scientific and public events.

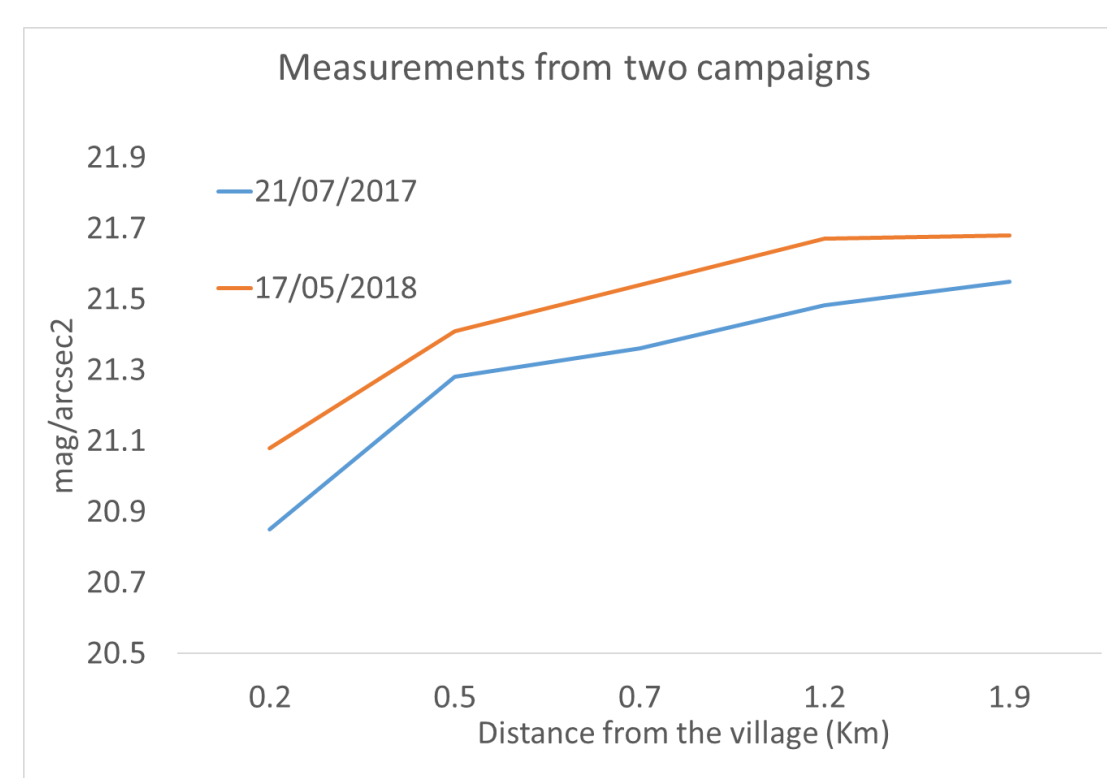
1) Measurements of night sky quality by a group of researchers and students, via Sky Quality Meters



2017 Summer Campaign: data and related outreach events



2017/18 Autumn-Spring Campaign: data and related outreach events

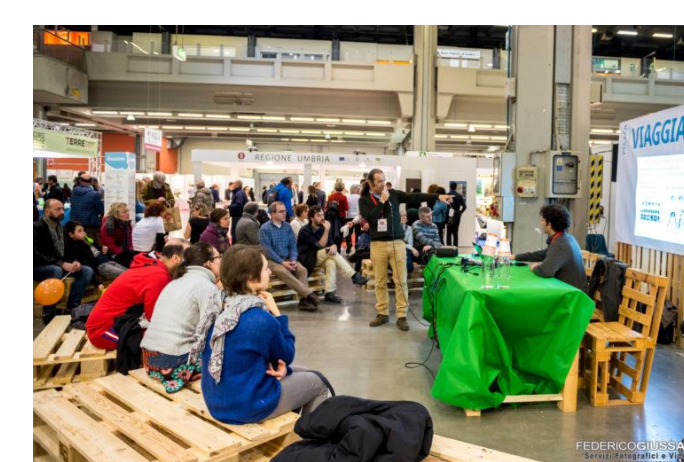


Capraia island: night sky brightness measurements collected during the two campaigns along the same path at increasing distance from the centre of Capraia village.

2) Engagement of tourists via outreach activities

3) Participation/organization of scientific events for sharing ideas and results and public events for raising public interests

- **Festival della Meteorologia** – Rovereto (IT) – November 2017
- **First Italian Citizen Science Conference** – Rome (IT) - November 2017
- **STARS4ALL meeting** – Milano (IT) – November 2017
- **ICELPE** –Amsterdam (NL) – January, 2018
- **Fa' la cosa giusta** – Milano (IT) - March, 2018
- **Dark noctis project** – San Vigilio di Marebbe (IT) – April 2018
- **DESTIMED project presentation** – San Vincenzo (IT) – May 2018
- **Capraia smart island** – Capraia Island (IT) – May, 2018
- **Event at Primary school and installation of a dark sky meter** – Livorno (IT) – May 2018

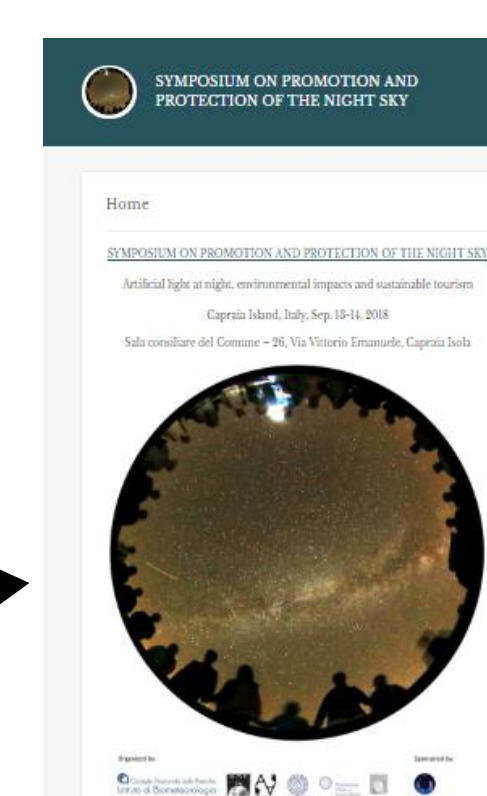


Upcoming events

- Setup of sky quality meters in the Natural Park San Rossore – Pisa (IT) – June 2018
- **Night trekking and measurement campaign** – Mugello (IT) – June 2018
- **Night trekking and measurement campaign** – Cornate di Gerfalco (IT) – July 2018
- **Festival del Pensare** - Cecina (IT) – July 2018
- Organization of the **Symposium on promotion and protection of the night sky** – Capraia Island (IT) – September 2018



Night trekking



<http://capraianightsky2018.com>

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