

Buiometria Partecipativa (BMP) –

Participatory Dark Sky Quality Monitoring

<http://www.buiometriapartecipativa.org> – bmp@pibinko.org



Overview



The BMP project was started in early 2008 by two environmental engineers, Francesco Giubbilini and Andrea Giacomelli with the aim of encouraging non-professionals to collect data on light pollution as a strategy for environmental awareness raising. The BMP project conjugates this component with a scientific approach, making an extensive combined use of various technologies, and allows the collection of valuable quantitative environmental data, using a low-cost device, called Sky Quality Meter (SQM).

Measurements can be produced borrowing an SQM from the BMP instrument pool, if the users do not own one.

The measurements are loaded into a database on the project web site, and are published in a variety of formats (dynamic maps, reports, charts).

What we generated following this process is the first Italian database on light pollution measurements populated by a group of citizens who are gradually increasing their insight on this environmental issue. The BMP system also includes also measures from other countries.

In 2011 we extended our system to collect data from fixed SQM stations for continuous monitoring of light pollution. We also started to experiment, in collaboration with other groups, the automated aggregation of this information with weather data. This is helping to gradually complement the participatory measures with more high-quality time series of light pollution data.

Starting from May 2011 the Participatory Dark Sky Quality Monitoring is managed by **Attivarti.org**, a non-profit organization based in Italy, operating with a European vision in the promotion and protection of minor or lesser known resources in the areas of culture, environment, and open innovation.

At the national level, the project has obtained considerable recognition, in terms of actual participation, media coverage (in the press, on the radio and on TV), and has received recognition as an original activity, winning a national award for innovation and environmental awareness raising in 2009.

Internationally, the BMP project represents one of the longest-running experiences of participatory monitoring of night sky quality, and has developed a significant network of relationships, and collaborations, with other institutions engaged globally in light pollution research, awareness raising, and policy support. Since January 2013 Attivarti.org is part of the Loss of the Night Network, funded within the COST programme.

In addition to collecting measurements we take care of:

- producing **educational material** (videos, tutorials, reports, etc.);
- giving **presentations** on the subject of light pollution;
- managing the **web site** and other web channels of the project;
- managing the **database** and the **map** where data is loaded, which can then be viewed and downloaded freely (the data are provided under the Open DataBase Licence - <http://www.opendatacommons.org/licenses/odbl/>);
- **disseminating** our project;
- promoting the use of **free/open source software**.

We are interested in:

- extending the network of contacts for the collection of measurements (the picture on the right shows the measurements recorded between 2008 and June 2012 in Italy);
- carrying out dissemination initiatives in the form of seminars, speeches, and reports to various media;
- implement a SQM network identifying locations interested in hosting this type of sensor;



- foster and facilitate the coordination among the different actors in light pollution data harvesting;
- encouraging the use of our material. Among various items, we have a model simulating the effect of various types of lighting in the background of a starry sky made with optical fibers, as well as various presentations, questionnaires, videos, etc;

- maintaining and enhancing our web sites.
- Developing citizen science projects in addition to BMP.

Last but not least, we are interested in identifying funding opportunities to consolidate the activities of the BMP project, both at a national level and in other countries.

For more information, please visit our website or contact us via e-mail (buiometria@attivarti.org).

