

# DARKERSKY4CE

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CENTRAL EUROPE



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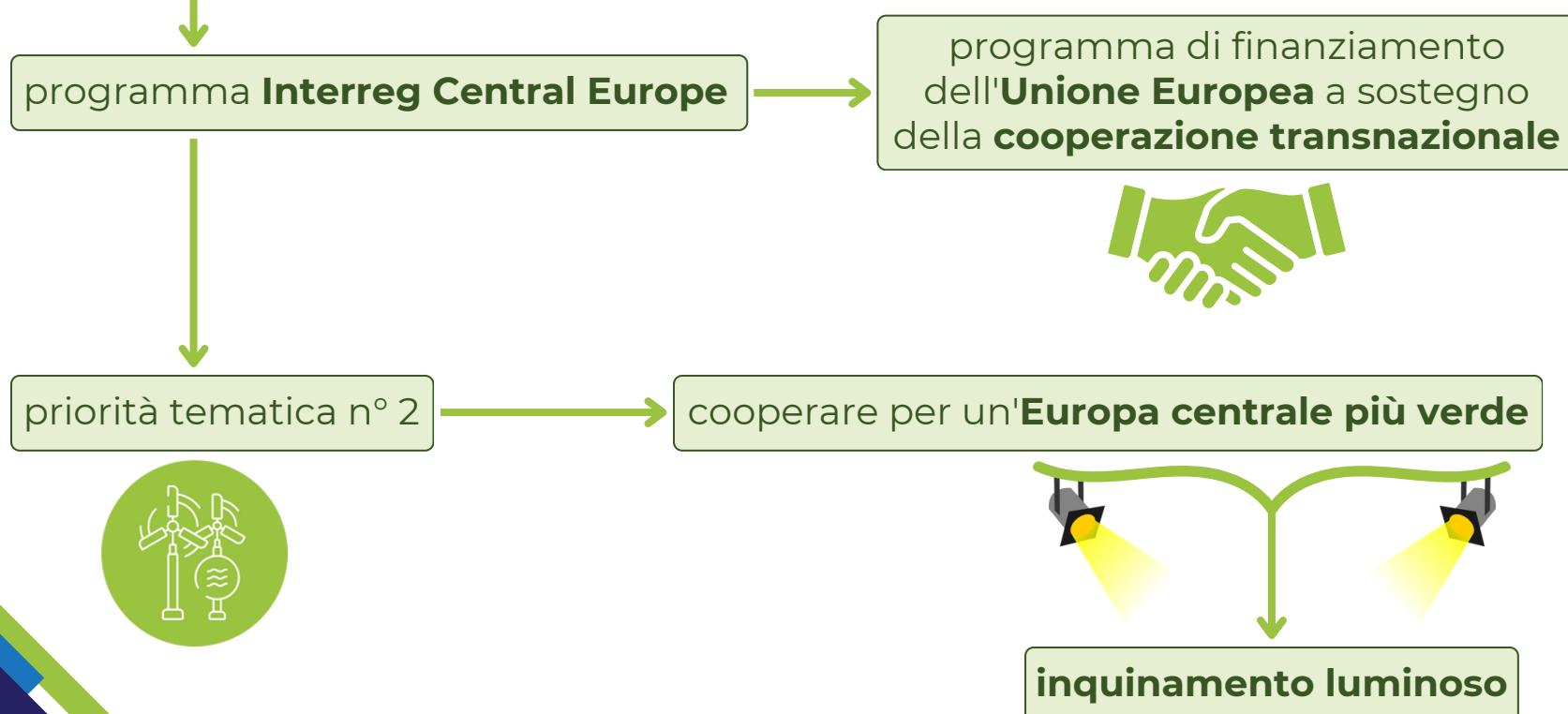
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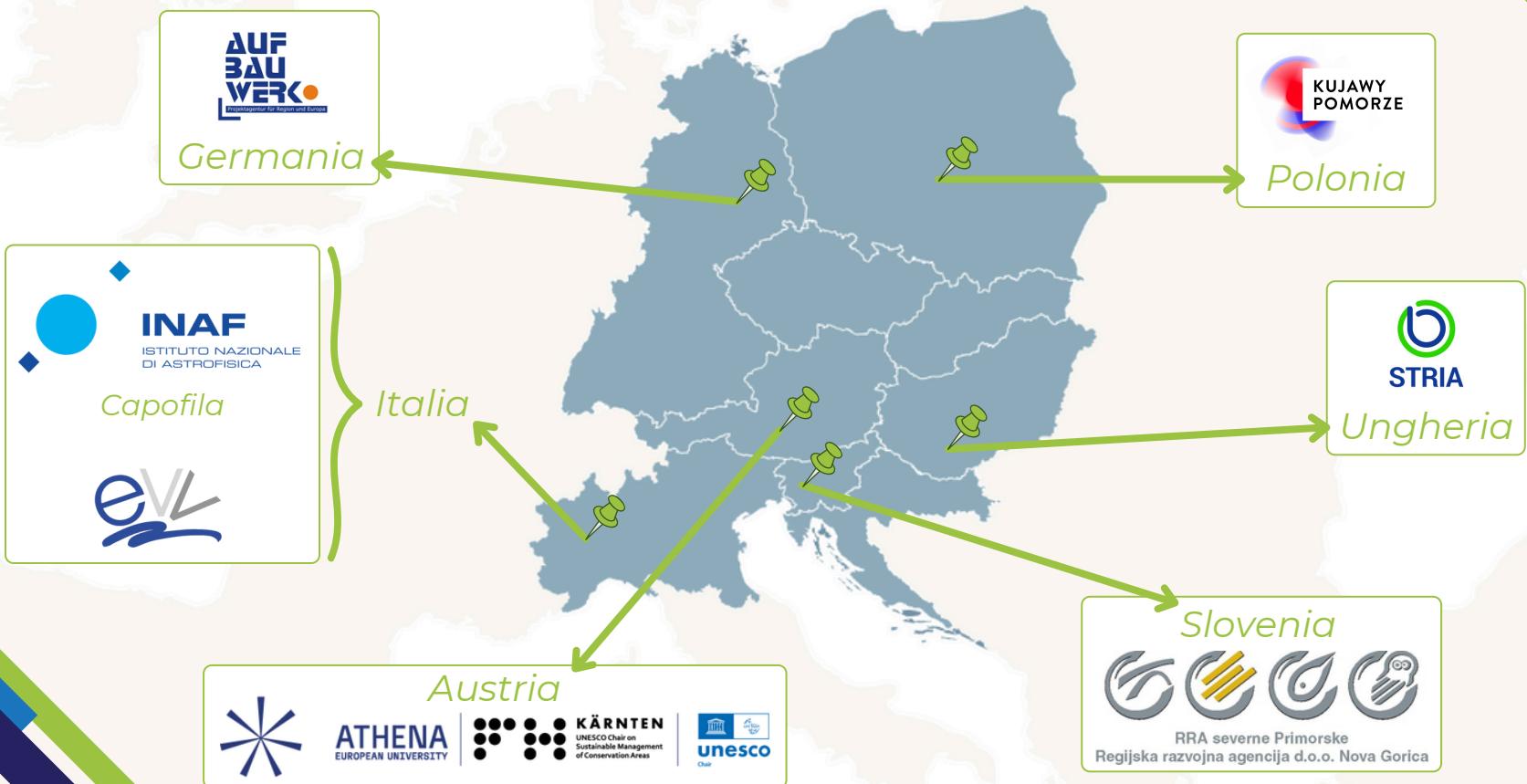
Strategic Transnational Approach to  
Reduce Light Pollution in Central Europe

Chiara Lamberti

# DARKERSKY4CE



# UN PARTENARIATO INTERNAZIONALE



# OBIETTIVI DEL PROGETTO



# IL PROGETTO

**WG1** - Una minaccia che chiama all'azione

**WG2** - Strategia transnazionale per la valorizzazione dei cieli bui

**WG3** - Soluzioni pilota per cieli più bui in Europa centrale

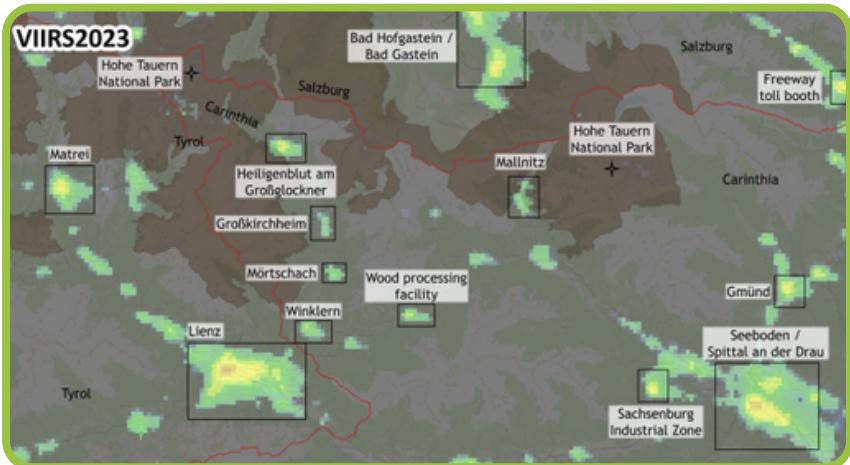
**Work Package**

**Activity**

**Deliverable**

## Country-Based Report

- **ricerca documentale e sul campo**
- **6 report** con analisi:  
caratteristiche area,  
fonti inquinamento luminoso,  
monitoraggio,  
impatto sugli ecosistemi
- **base comune di conoscenze** per  
l'implementazione del progetto

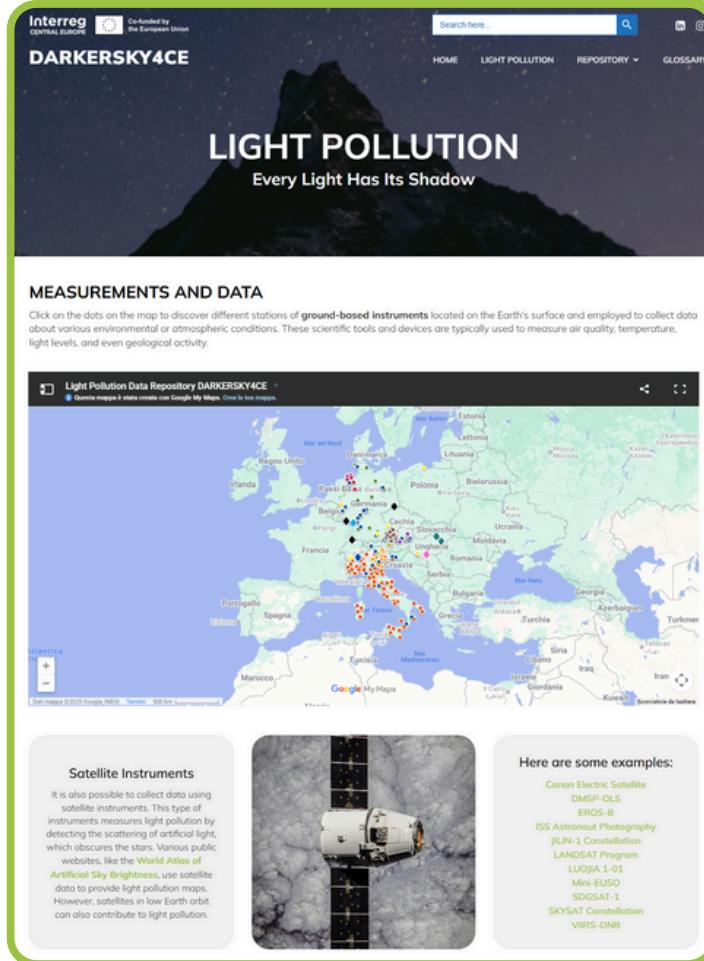


# WG1 - A.1.1 - D.1.1.2

## Repository

- **database open source di strumenti e misurazioni da terra e satellitari dell'inquinamento luminoso in Europa centrale**
- ospitato su **server INAF**
- rivolto a **stakeholder, decisori politici, esperti e ricercatori**

 [darkersky4ce.inaf.it](http://darkersky4ce.inaf.it)



The screenshot shows the homepage of the DARKERSKY4CE website. At the top, there's a banner with the text "LIGHT POLLUTION" and "Every Light Has Its Shadow". Below the banner, a section titled "MEASUREMENTS AND DATA" contains a map of Europe with numerous colored dots representing measurement stations. A callout box on the left provides information about ground-based instruments used to collect data on various environmental conditions. Another callout box on the right lists examples of satellite instruments used for light pollution monitoring, including the Canon Electric Satellite, DMSP-OLS, EROS-B, ISS Astronaut Photography, JILIN-1 Constellation, LANDSAT Program, LUOJA 1-01, Mini-EUSO, SDGSAT-1, SKYSAT Constellation, and VIRIS-DNB.

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HOME LIGHT POLLUTION REPOSITORY GLOSSARY

## LIGHT POLLUTION

Every Light Has Its Shadow

### MEASUREMENTS AND DATA

Click on the dots on the map to discover different stations of **ground-based instruments** located on the Earth's surface and employed to collect data about various environmental or atmospheric conditions. These scientific tools and devices are typically used to measure air quality, temperature, light levels, and even geological activity.

Light Pollution Data Repository DARKERSKY4CE

Satellite Instruments

It is also possible to collect data using satellite instruments. This type of instruments measures light pollution by detecting the scattering of artificial light, which obscures the stars. Various public websites, like the [World Atlas of Artificial Sky Brightness](#), use satellite data to provide light pollution maps. However, satellites in low Earth orbit can also contribute to light pollution.

Here are some examples:

- Canon Electric Satellite
- DMSP-OLS
- EROS-B
- ISS Astronaut Photography
- JILIN-1 Constellation
- LANDSAT Program
- LUOJA 1-01
- Mini-EUSO
- SDGSAT-1
- SKYSAT Constellation
- VIRIS-DNB

## *Dark Skies as Ecosystem Services*

- **report sui cieli bui come servizi ecosistemici**
- **webinar**
- **gruppi di lavoro** guidati da **esperti**
- **coinvolgimento** degli **stakeholder**

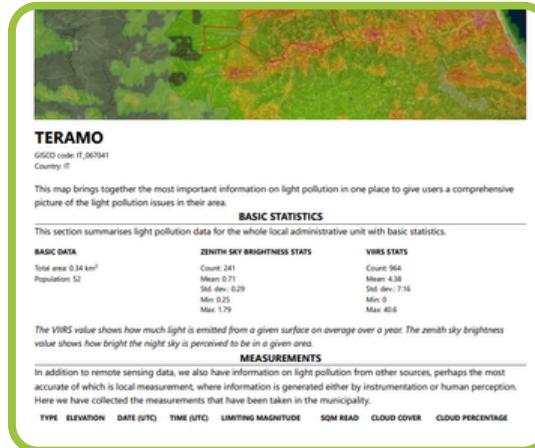
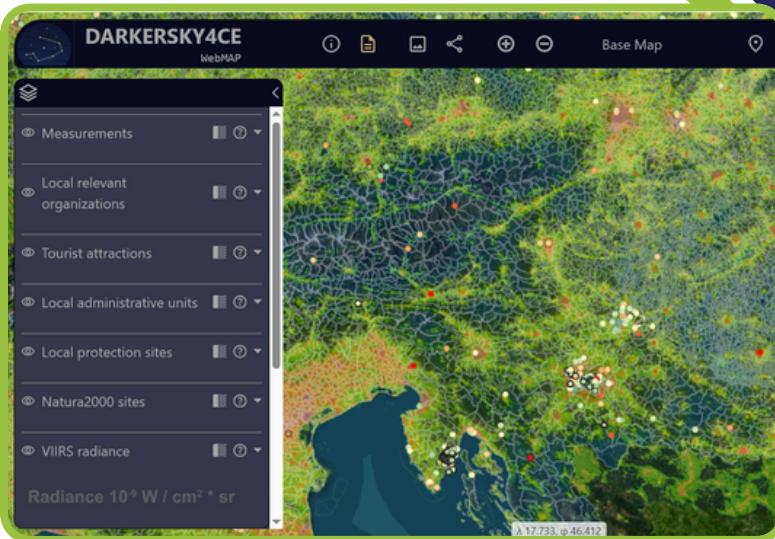


# WG1 - A.1.2 - D.1.2.3

## Ecosystem Services GIS Map

- **scopo:** analisi livelli inquinamento luminoso in Europa centrale
- **dati:** misure locali (SQM), siti Natura 2000, unità amministrative, attrazioni turistiche, ecc.
- **funzioni:** raccolta dati, scambio dati tra ricercatori, creazione di report per decisori politici

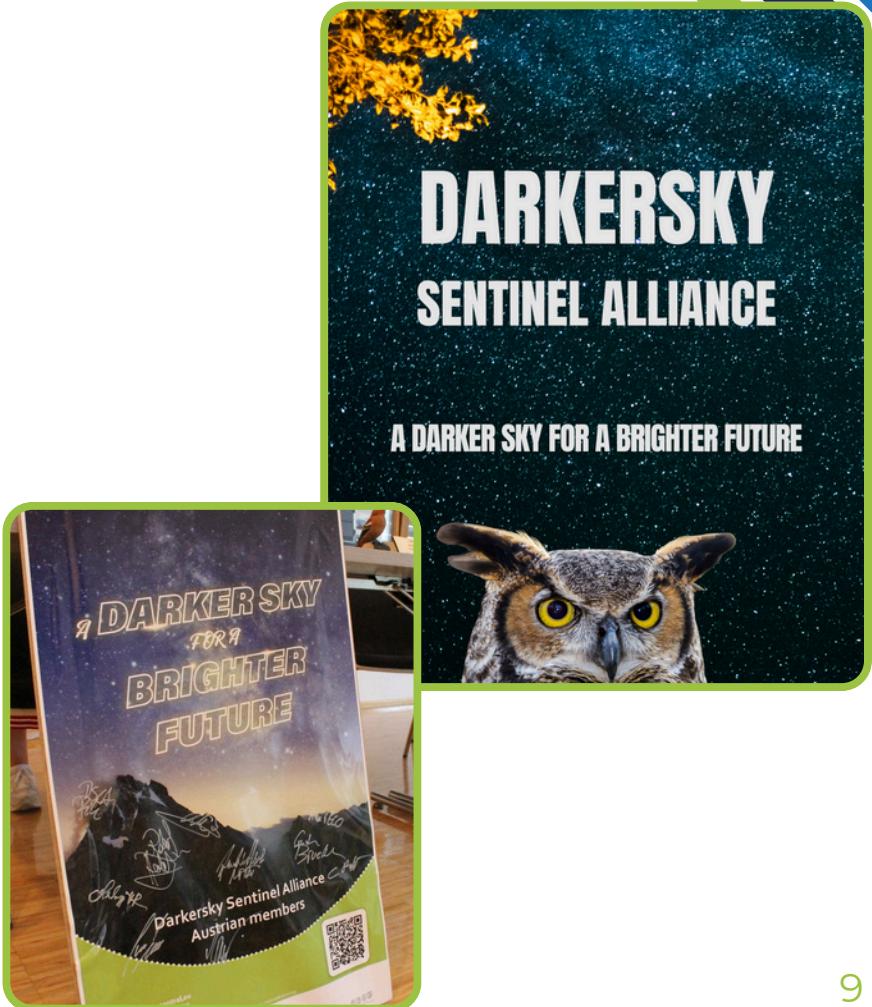
[https://darkersky4ce.inaf.it/  
impacts-on-ecosystem-services/](https://darkersky4ce.inaf.it/impacts-on-ecosystem-services/)



## WG1 - A.1.3 - D.1.3.1

### Sentinel Alliance

- **obiettivi:** cooperazione, sensibilizzazione, promozione di buone pratiche, supporto allo sviluppo sostenibile delle aree rurali
- **forum** con già **27 membri**
- almeno 2 **assemblee generali** all'anno indette dal **Board**



# WG1 - A.1.3 - D.1.3.2

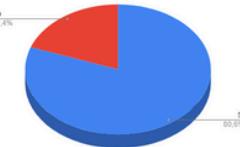
## Dynamic Monitoring Tool

- **questionari, Call to Action, ricerca documentale**
- **obiettivo: misurare il cambiamento** generato dal progetto nella percezione dell'inquinamento luminoso
- **gruppi target:** cittadini, studenti, amministratori locali

### A CLOSER LOOK AT THE COLLECTED DATA

The following charts offer some examples of clear and concise snapshots of what the data reveal, bringing the participants' voices to life through numbers and visuals.

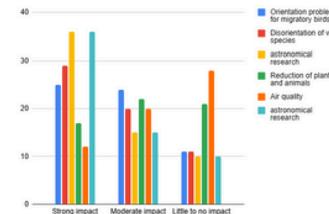
#### HAVE YOU EVER HEARD OF "LIGHT POLLUTION"?



#### Have people ever heard of "light pollution"?

The primary objective of the DARKERSKY4CE project is to raise awareness among people on the issue of light pollution.

#### HOW MUCH CAN ARTIFICIAL NIGHT LIGHT AFFECT THE FOLLOWING AREAS?

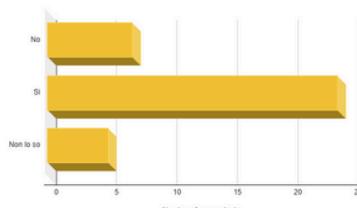


#### Can kids and teens identify the impacts of light pollution?

Despite the ever-growing literature on the topic, the effects of artificial lighting on the natural environment and its species are still poorly accepted by the population. Kids and teens suffer the lack of information from adults and institutions.

The graph shows the evaluation of the impact level of different light pollution effects according to some 12 and 13-year-old students.

#### DO YOU THINK THAT DARK AREAS CAN INCREASE THE RISK OF CRIME AND THEREFORE BE DANGEROUS FOR HUMAN SAFETY?



#### Is artificial lighting beneficial to humans?

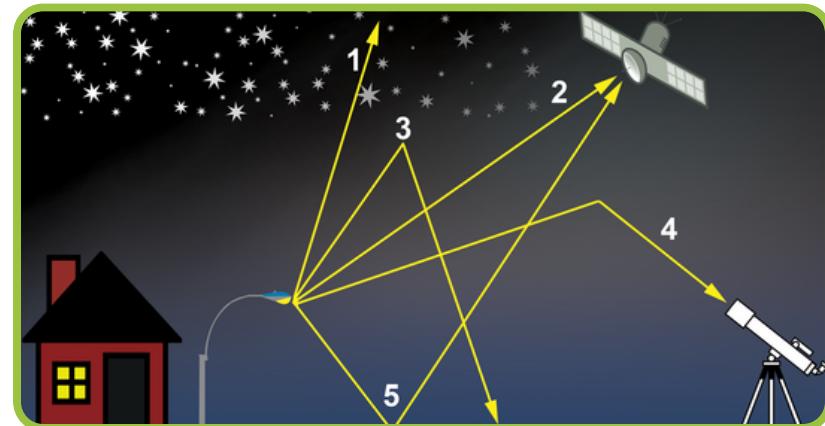
Generally speaking, artificial light is often considered to be a form of progress and is closely linked to the concept of safety during the night.

Indeed, the dark is often associated with crime, even though this correlation has not been clearly proven and there is also counter-evidence.

## *Dark Skies in Peripheral Areas - Solution*

- **dati quantitativi e qualitativi**
- **metodologia di misurazione, monitoraggio e divulgazione dei dati del Repository**
- **capitoli:** 1) The Repository - Data Format, 2) Methodology, 3) How to Use the Data

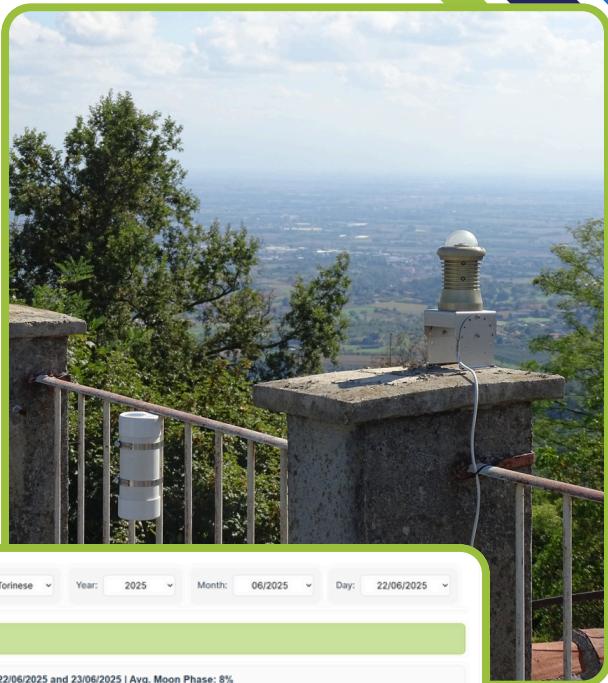
The cover features the Interreg CENTRAL EUROPE logo and the text "Co-funded by the European Union". Below that is the project logo "DARKERSKY4CE". The title "Dark Skies in Peripheral Areas: Solutions to Convey Their Value" is centered. In the bottom right corner is a small green circular icon with a network-like symbol. At the bottom right, it says "Version 2 06.2025".



# WG1 - A.1.3 - D.1.3.4

## Photometer Network

- **network di SQM** nuovi e già esistenti
- **Data Visualisation Tool**
- **acquisizione automatica dei dati**
- **software sviluppato da INAF-OATo**
- **focus:** aree rurali e **siti dimostrativi** delle **azioni pilota**



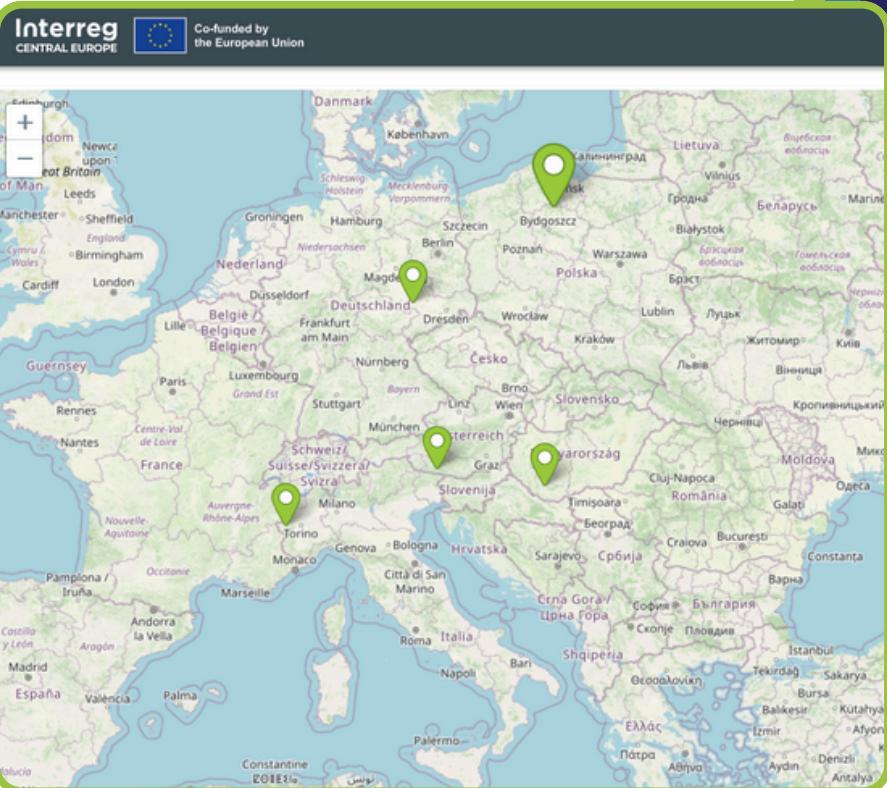
## *A Transnational Strategy for the Valorisation of Dark Skies*

- **gruppi di lavoro tematici**
- **focus:** protezione degli ecosistemi notturni, cieli bui e astroturismo come risorse di crescita sostenibile, partecipazione locale e cooperazione transnazionale
- **report e strategia transnazionale**



## **4 azioni pilota in 5 siti dimostrativi**

- **mostra itinerante**
  - **focus:** illuminazione pubblica sostenibile, offerte turistiche ed educative di astroturismo, dialogo con gli stakeholder locali, monitoraggio scientifico degli effetti inquinamento luminoso sugli ecosistemi



## WG3 - A.3.2 - D.3.2.3

### *Forte di Fenestrelle*

- *dialogo con stakeholder e amministratori locali*
- *installazione buiometro*
- *attività di disseminazione*



# Grazie dell'attenzione

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