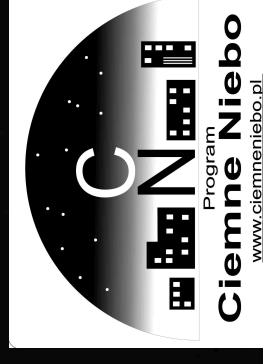
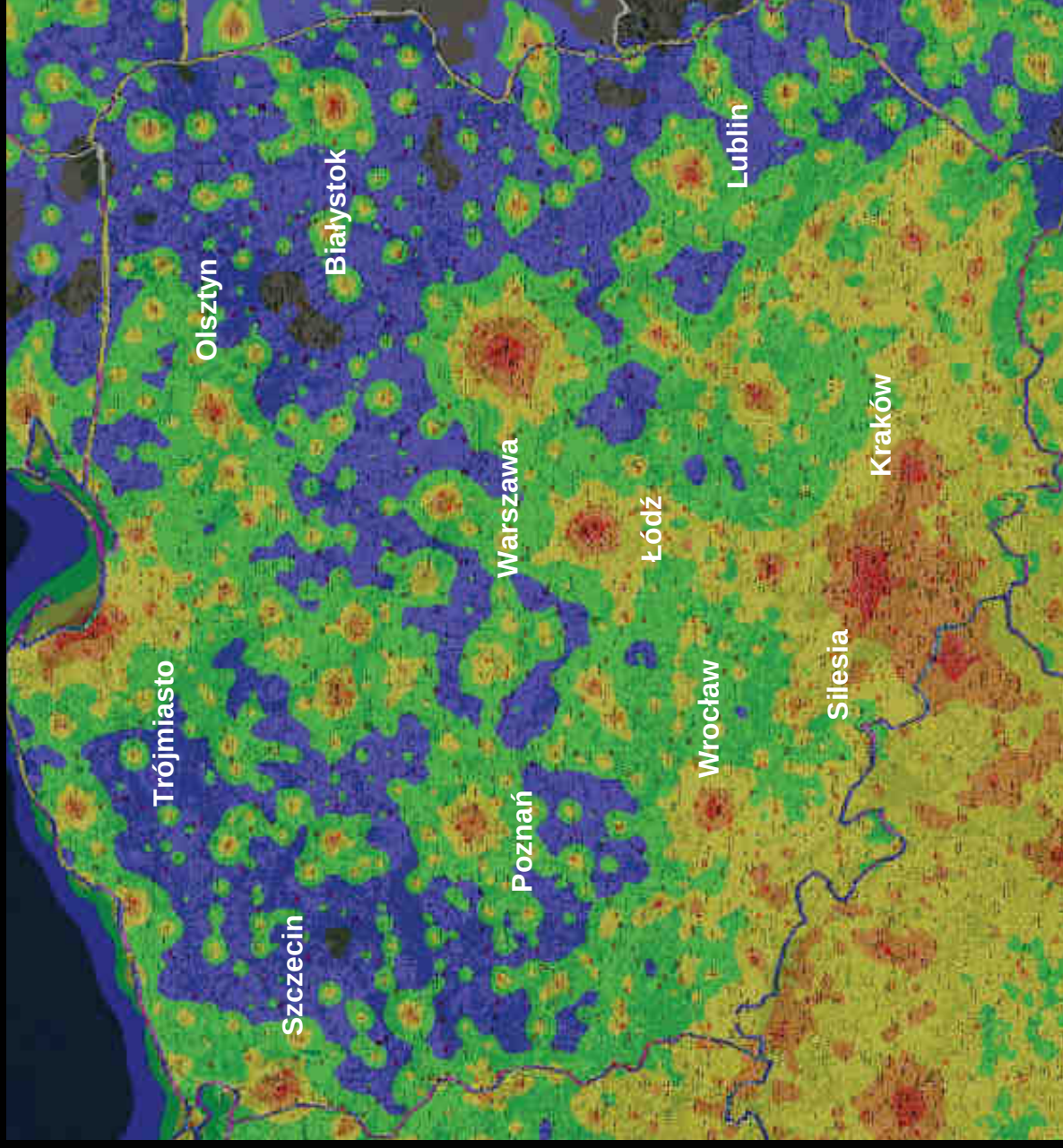


Dark Sky Programme in Poland

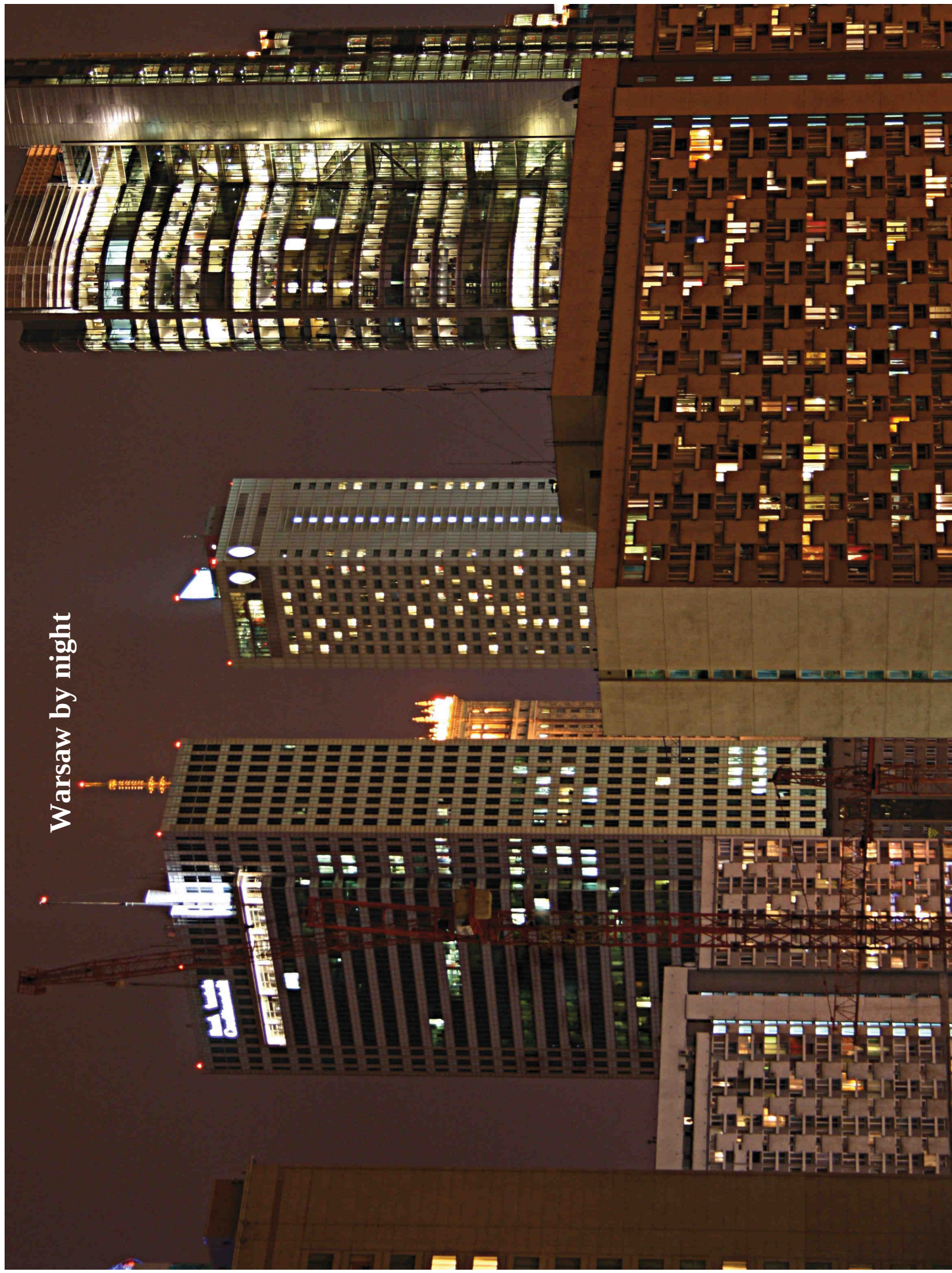


Light Pollution in Poland



- Since 90s street lamps have been changed from mercury vapor lamps to sodium vapor lamps
- Most polluted regions in Poland are: Silesia, Warsaw, Wrocław and Poznań

Warsaw by night



“Astronomer Copernicus”, or
“Conversations with God” by Jan
Matejko



Europe by night

- Dark sky as an element of Polish national heritage – Nicolaus Copernicus or Johannes Hevelius
- No regulations
- Many discussions among the astronomers

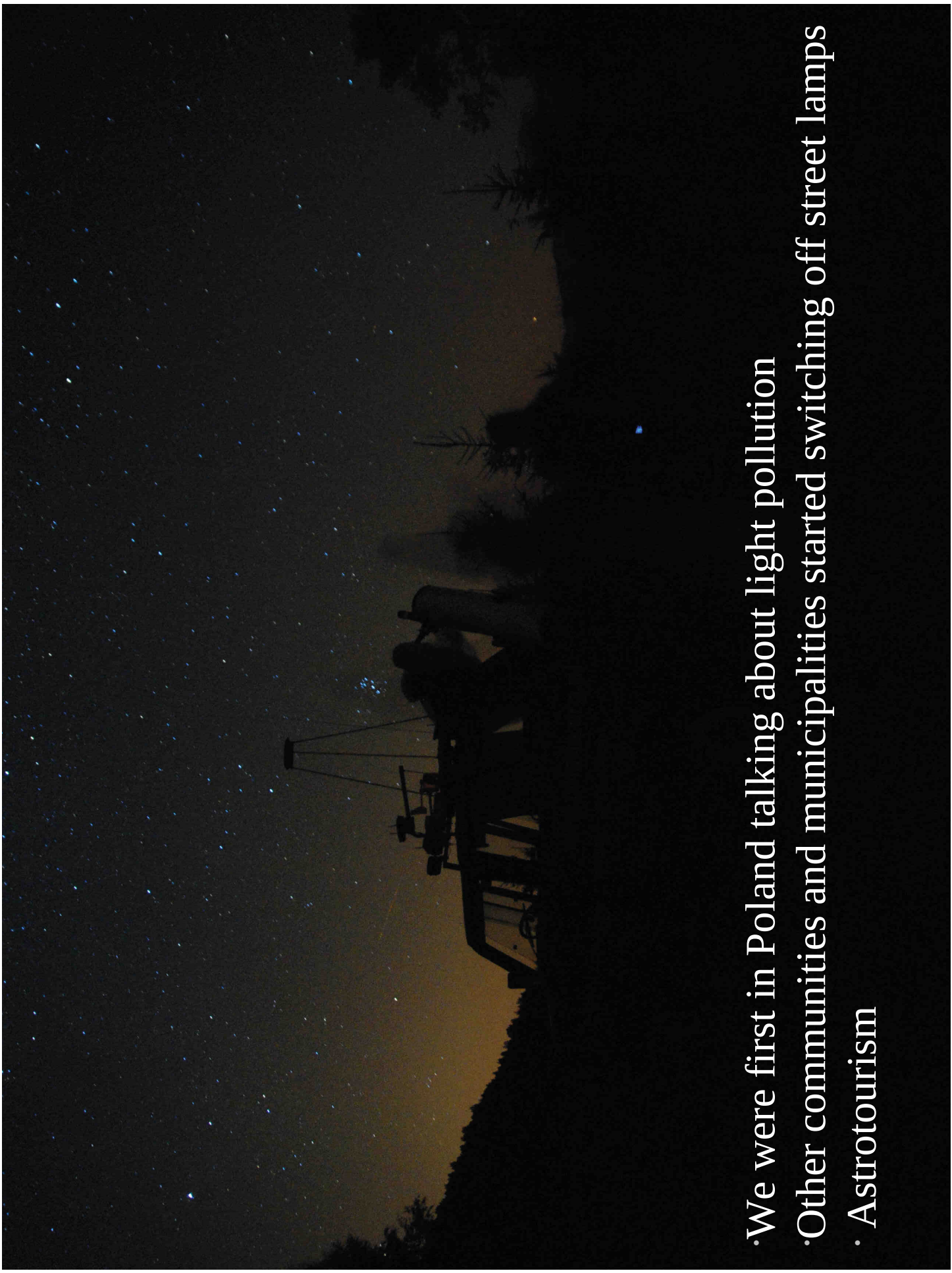
- Polaris' first attempts to save the night sky – 1996 in Sopotnia Wielka
- Switching off street lamps late at night
- Authorities accepted the idea due to energy savings
- Local people didn't

Dark Sky in Sopotnia Wielka



Sky glow above Jeleśnia and Korbielów

- 1999-2004 – changing old mercury street lamps to sodium with improper fixtures
- 2004 - Polaris established Dark Sky Programme



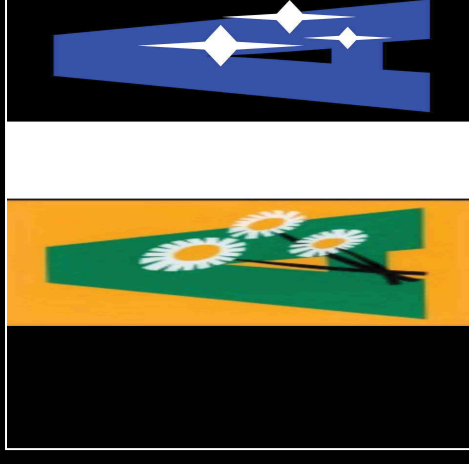
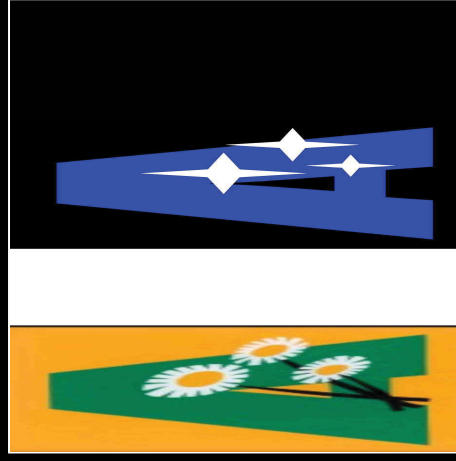
- We were first in Poland talking about light pollution
- Other communities and municipalities started switching off street lamps
- Astrotourism

Now in Sopotnia Wielka about 60% of local inhabitants know why street lighting is switched off every night

That's due to

- educational programs with youth from various cities and countries
- meteor observations
- growing number of astrotourists



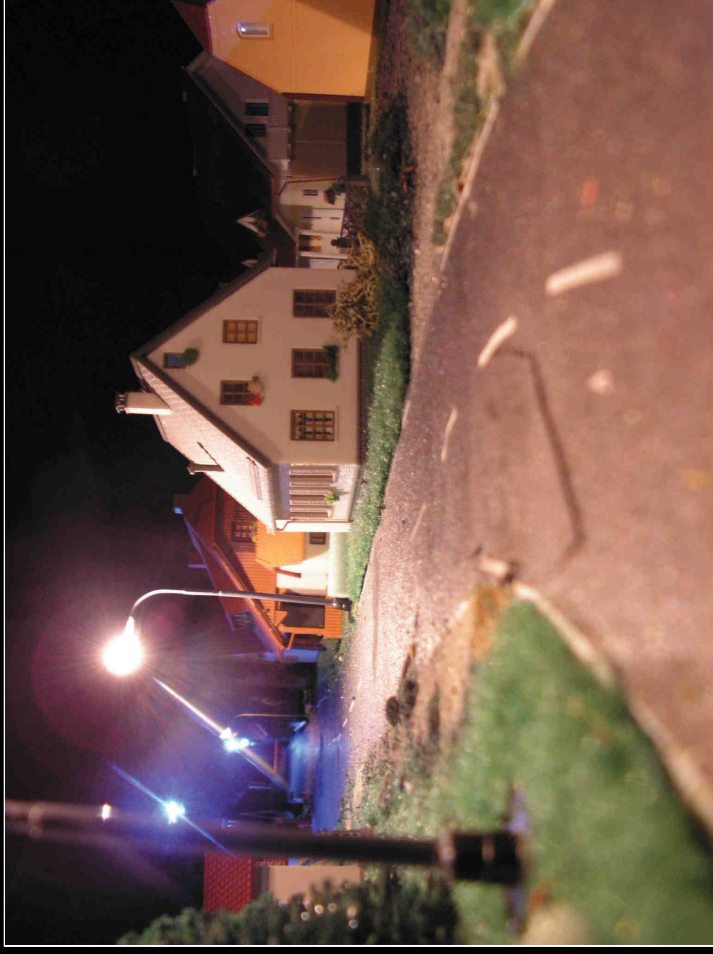


2006 - Local Activity Group (LAG) Żywiecki Raj was established. In its Local Strategy there is a subject of dark sky protection and astrotourism, which involves:

- **Informational campaign, educational projects for youth,**
- **Dark sky protection project,**
- **Transversal agreements for dark sky and astrotourism,**
- **Changing street lamps on protected dark sky area,**
- **Establishing excursion routes, viewpoints,**
- **Building a network of astrofarms,**
- **Establishing a center for dark sky education and dark sky protection area management,**
- **Organisation of conferences, excursions, etc.**

2007 - First dark sky mockup in H0 scale (1:87) in Sopotnia Wielka.

It's used for educational sessions and shows.





2009, due to International Year of Astronomy in Palowice near Rybnik Polaris exchanged multiple street lamps to the correct ones to test various kinds of street lighting in practice. Some of them were chosen and then installed in Sopotnia Wielka.



According to Dark Sky Programme strategy Sopotnia Wielka ought to be the first place in Poland where public street lighting is fully modernized regarding dark sky.



Exchanging street lamps in Sopotnia Wielka and creating a Dark Sky protection area would be a summary of all efforts of Polaris. We are able to do that thanks to financing from EU through Local Activity Group and „1 % for astronomy” funds. August/September 2011 – whole street lighting in Sopotnia Wielka was modernized.



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PROJECT „DARK SKY”

Are there any places where you can watch the Milky Way
without interference?

Are there any solutions that will allow fans of astronomy to admire
the beauty of the pure sky and residents to use the light only when
they really need it?

Does the local authority could cause that all were satisfied?

The answer is – YES!

Control and Monitoring Lighting System CPAnet

Using special function “switch on/switch off the lighting by SMS”:

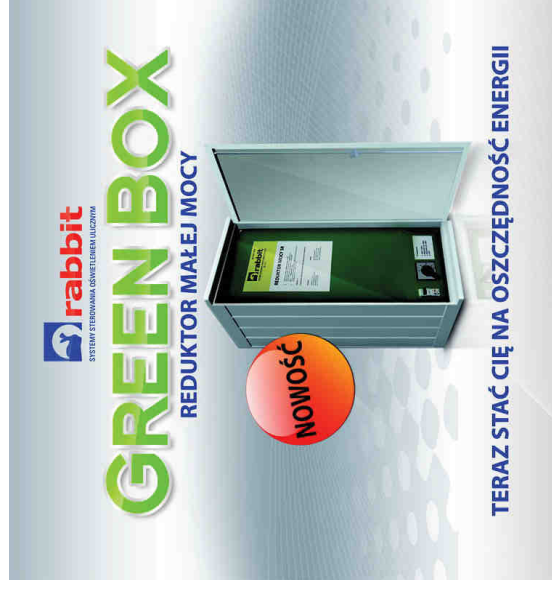
- the astronomy fans can turn off the lights in a defined area to be able to admire the sky full of stars...
- the residents can turn on the street lights when they need it
- the local authorities can monitor the lighting condition of any area and to manage it by website



**CPAnet system meet the needs of residents, astronomy fans
and city authorities**

Street Lighting Control Systems

If total exclusion of lighting at a given location is impossible due to current legislation and safety - then the light intensity can be reduced by applying the power reducer with CPAnet system.



... and the sky will brighten up with the light of the stars!