

The brightening of nightscapes is increasing globally by 2-6 % per annum with unforeseen consequences for ecosystems and human well-being. The EU directives and norms, like the eco-design directive and the EN 13201 recommend to using most energy efficient light devices and providing a minimum brightness for certain classes of infrastructure. The sole focus on the factors energy efficiency and visual effectiveness will result in an increasing emission of blue light at night and even increase the rate of brightening of nightscapes. The lack of regulations for outdoor light installations can cause additional rebound effects, when efficient lighting becomes available at low cost. Today EU regulations on outdoor lighting lack scientific evidence for minimum and maximum light levels. Furthermore, thresholds for non-intended light emission into habitat of flora and fauna and into living areas are often complicated to be enforced. Manifold studies indicate that the ongoing waste and misuse of light, the so called light pollution, • affects human well-being and health • threatens light sensitive species and their habitat, causing disruptions in ecosystems and loss of biodiversity • destroys nighttime landscapes and the cultural heritage of the starry night scape • is making the observation of the universe impossible. Therefore, the EU standards on outdoor lighting stand in contradiction to the European legislation for the protection of the environment, the EU Environmental Liability Directive ([Directive 2004/35/EC](#)) and in particular the Habitats Directive ([Council Directive 92/43/EEC](#)).

We advocate:

- To regulate the maximal intensity for outdoor lighting and to support research in defining scientifically justification for minimal illumination levels in public lighting standards (e.g. EN13201)
- To limit the light emission directed in the horizontal and above and in shallow downward angles
- To limit the exposure of bright light and particularly light with short wavelength, such as blue and UV-light.

Examples of comparable national / regional legislations within the EU:

- Law for the Protection of the Astronomical Quality of the IAC Observatories (Law 31/1988).
- Slovenian national law against light pollution (<http://www.darks skiesawareness.org/slovene-law.php>)
- French Order of 25 January 2013 relating to the night lighting of non-residential buildings in order to limit the light pollution and energy consumption (<https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000027003910&categorieLien=id>)
- Regional Lombardy law against light pollution (http://www.cittametropolitana.mi.it/export/export_14032014/n_i_luminoso_2001_dgr_20ottobre_n7-6162.pdf.)

Why do we need a European regulation of outdoor lighting?

- To protect citizens from lighting trespasses into their homes, which might have an impact on the circadian rhythm and consequently can increase the risk for health issues like insomnia, obesity and cancer.
- To reduce glare and thus improving safety in European infrastructures.
- To protect Europe's natural capital and rich biodiversity.

- To support efforts to reach climate protection goals in reducing energy consumption and associated pollution, carbon dioxide emissions and land-use changes associated with the production of electricity.
- To protect astronomical viewing sites, for both professional and amateur astronomers.
- To promote the Universal Declaration on the Rights of Future Generations (UNESCO): "Future generations have the right to inherit an unharmed and unpolluted earth, and this includes the right to a pure sky." (1994, Cousteau-UNESCO group).

More information: <http://stars4all.eu/>