

## **Abstract**

Light pollution serves as a term for negative effects of artificial light at night which has increased in the last decades. Overview of those effects is summoned in this thesis along with analysis of the current state of night environment in large protected areas of the Czech Republic obtained from satellite images. The first part of thesis describes physical characteristics of light and its physiological perception, present lighting technology and its progress toward LED sources. Characterization of light pollution, its causes and sources, monitoring techniques and of present situation worldwide follows. Impacts of light pollution does not include only decreased night sky visibility but a large scale of effects on human health, animals, plants and ecosystems, safety and security or economy; as a consequence some areas implemented laws regulating light pollution. Analysis in the final part shows that average radiance values for protected areas are lower than average radiance in the Czech Republic. Night environment in protected landscape areas and national parks is thus less affected and actions for preservation of this state should be taken in these areas and their vicinity. With regard to extensive, serious consequences of artificial light at night that are not entirely known so far, it is recommended to stick to light pollution abatement measures and use lights with appropriate parameters even beyond protected areas.

Keywords: light pollution, satellite images, VIIRS, GIS, ALAN