

Does lighting pollution poses risk?

September 11 2012

A panel of world experts discussed "Light Pollution and its Ecophysiological Consequences" and shed light on the extent of the dangers and harm that night-time artificial lighting causes, emphasizing that it is the short wavelength illumination that we have come to know as "eco-friendly illumination" that is causing the most harm (primarily LED lighting).

"The most important thing for us is to raise awareness of the dangers of artificial light at night and we have already come a long way now that the American Medical Association (AMA) recently announced its new policy recognizing [adverse health effects](#) of exposure to light at night and encouraging further research into the matter," said Prof. Abraham Haim, a leading authority on [light pollution](#), who coordinated the 21st International Congress of Zoology (ICZ) that was held last week at the University of Haifa, Israel.

The participants were in full agreement that exposure to light at night affects [circadian rhythms](#) in nature – humans, animals and plants - which when thrown off can result in various illnesses and adverse symptoms. Prof. Haim presented one of his studies showing the adverse effects of exposure to light at night – particularly short wavelength blue LED - in the blind [mole rat](#) and in seeing rats, both of which showed varying levels of damage to their metabolic rates, hormone production, body mass, and [oxygen consumption](#) following exposure to LAN, as well as suppressed levels of melatonin production, which is responsible for tumor growth. "We expect to find similar results of damage from human exposure to LED lighting," Prof. Abraham concluded, and pointed out

that "Western youngsters are typically surrounded by this sort of lighting in the confines of their own bedroom: from the smartphone, computer screen, and television."

"Street lights in populated areas are responsible for 60 percent of LAN pollution, which is intensified under cloudy conditions when the light is reflected back down to the ground," said Dr. Franz Hölker of the Leibniz Institute of Freshwater Ecology and Inland Fisheries, Germany, who chaired the panel with Noam Leader of the Israel Nature and Parks Authority. Others pointed out the excessive levels of light pollution found in industrial areas, greatly endangering surrounding wildlife.

Provided by University of Haifa

Citation: Does lighting pollution poses risk? (2012, September 11) retrieved 26 April 2024 from <https://phys.org/news/2012-09-pollution-poses.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.