

Light Pollution

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Light pollution and air pollution are linked, showing that they affect one and other. Light pollution is rarely talked about yet very harmful to the environment, economics, and even health! Did you know that animals and humans need darkness to survive? It's true. Animals need the darkness to hunt, mate, or even avoid predators. Humans need it as it's unhealthy to sleep with lights on. Artificial lights in cities can disrupt this darkness. Artificial lights don't just affect animals' lives, it also causes health problems for humans, as well!

Light pollution is caused by misdirected lights. Some examples of light pollution include lights in buildings, (especially hospitals, police stations, firefighter stations, planes, sports fields, etc) One example of light pollution is in sea turtles and birds. They are guided by moonlight throughout migration, get confused, lose their way, and usually die. Another way light pollution affects animals, plants, and humans is it adds excess heat into the atmosphere. Relating to roads and fences, artificial light creates barriers that separate animal habitat.

Air pollution is the presence of substances in the air that can be due to overuse of fossil fuels, cars, forest fires and many more causes. Artificial light adds carbon dioxide (CO₂) in the atmosphere. This matters since carbon dioxide is an odorless, colorless chemical compound which traps heat in the atmosphere, meaning it causes forest fires showing light pollution contributes to climate change.

Together, light pollution and air pollution create a powerful team causing environmental issues and disrupting animals and humans.



“At the start of the 19th century oil was now king. William Murdoch’s gas lighting system was demonstrated in Paris in 1800 and in England in 1802.” - National Geographic

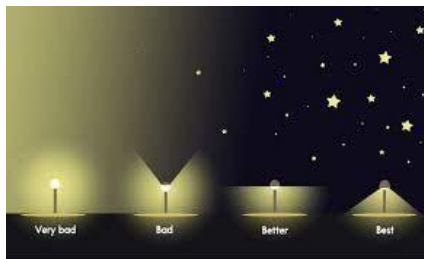
Glassblower Heinrich Geissler invented a gas discharge lamp during 1857 which became known as the Geissler Tube. He built on that, expanding to the famous fluorescent lamp. (Fluorescent lights) Originally the Geissler Tube was used for unneeded and only entertainment purposes, but would evolve into more modern neon tubes (fluorescent lights) and the much

more groundbreaking vacuum tube in order that outdoor lighting today can thrive. (Thrive not environmentally)

In 1857, no one knew about pollution. Approximately 113 years later, in the 1970s, astronomers discovered light pollution. Even with the most powerful, expensive instruments, the astronomers could no longer view stars and other celestial objects with the same clarity. While at least 2,500 stars shall be visible under typical nighttime conditions, only a few hundred can be seen in an average American suburb. In the majority of large cities, residents would be fortunate to catch a sight of a few stars, as this happens rarely!

People like to use lights as they bring security and warmth. Our ancestors, known as prehistoric early humans, loved the sun because humans evolved under the sun. Modern humans still crave sunlight! It guided us, and today we acknowledge that it provides a nutrient, known as vitamin D!

All this information connects to light pollution because TODAY we put light in unnecessary places, because it feels good, but it really messes with our brain chemistry. When you think about it, sunlight during the night makes us happy, but when you glimpse unnatural lights during the night, it can mess with your sleep schedule.



Most people don't recognize how bad light pollution is for the earth, and if they do, they feel like they don't have enough time or don't know how to deal with it. Simple things like turning off lights at night, and adjusting misdirected lights can make a big difference, though!

To wrap this up, light pollution is just one way that humans disrupt animals. While the city lights are pretty, the true sky with true colors are more beautiful and provides for the earth!



8/9
City/Inner
City Sky

7
City/
Suburbia
Transition

6
Bright
Suburban
Sky

5
Suburban
Sky

4
Suburban/
Rural
Transition

3
Rural Sky

2
Dark Sky
Site

1
Excellent
Dark Sky
Site