



# 光與癌 被遺忘的危險因子





# 光害

## Light Pollution

夜間人造光 (**Artificial Light at Night**) ,  
經由氣膠反射到大氣層 , 產生雜亂散射的  
現象 , 進而影響生物、植物生活或是人類  
的身體健康。



池上

臺北



# 影響

昆蟲



植物



海洋生物



人類健康



## FRONTIERS IN ECOLOGY and the ENVIRONMENT

Review | [Free Access](#)

### Ecological light pollution

Travis Longcore, Catherine Rich

First published: 01 May 2004 | [https://doi.org/10.1890/1540-9295\(2004\)002\[0191:ELP\]2.0.CO;2](https://doi.org/10.1890/1540-9295(2004)002[0191:ELP]2.0.CO;2) | Citations: 575

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### Abstract

Ecologists have long studied the critical role of natural light in regulating species interactions, but, with limited exceptions, have not investigated the consequences of artificial night lighting. In the past century, the extent and intensity of artificial night lighting has increased such that it has substantial effects on the biology and ecology of species in the wild. We distinguish “astronomical light pollution”, which obscures the view of the night sky, from “ecological light pollution”, which alters natural light regimes in terrestrial and aquatic ecosystems. Some of the catastrophic consequences of light for certain taxonomic groups are well known, such as the deaths of migratory birds around tall lighted structures and those of hatchling sea turtles disoriented by lights on their natal beach. This review synthesizes the current state of knowledge on the effects of artificial light on the ecology and evolution of species, and discusses the potential for mitigation of light pollution. This review is part of a special issue on “Ecological Light Pollution” in the journal *Frontiers in Ecology and the Environment*.

## Light pollution, reproductive function and cancer risk.

Anisimov VN<sup>1</sup>

### Author information ▶

Neuro Endocrinology Letters, 01 Feb 2006, 27(1-2):35-52  
PMID: 16648818

Review

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Volume 2, Issue 4  
May 2004  
Pages 191-198

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Gábor Horváth, György Kriska, Péter Malik, Bruce Robertson

[Frontiers in Ecology and the Environment](#)

[The nature, extent, and ecological implications of marine light pollution](#)

Thomas W Davies, James P Duffy, Jon Bennie, Kevin J Gaston

[Frontiers in Ecology and the Environment](#)

[Ecological riparian](#)



# 報告目標

1. 利用Global at Night 資料繪出2006-2021年個國家測點之光污染數值時空序列資料
2. 建立光污染與特定癌症罹癌率間的視覺化圖
3. 利用非線性模型或是時間序列模型討論 光污染與特定癌症罹癌率之間的係數估計

## 更進一步

1. 疫情底下光污染的改變與人類健康的影響與改變

### Study shows lower light pollution during COVID-19 lockdown in Granada

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By [Dr. Liji Thomas, MD](#)

Nov 26 2020

Among the positive fallouts of the many nationwide lockdowns implemented following the outbreak of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) worldwide are the observed reductions in environmental pollution. Namely, reductions in nitrogen dioxide in the air, the release of pollutant aerosols, noise pollution and light pollution.

A novel study published on the [preprints.org](https://preprints.org) server in late November (2020) reports a favorable change in light pollution during the lockdown in Granada, Spain, from March 14 to May 31, 2020, and has traced it back to several different causes related to coronavirus disease 2019 (COVID-19) lockdown measures.

# 資料來源

 **Globe at Night**

AboutLearnObserveReport**Maps & Data**Resources

DataInteractive InfographicInteractive Data MapRegional Map Generator

## Maps and Data

### 2021 Globe at Night Campaigns

Globe at Night has been collecting data about the night sky since 2006. All of that data is available to download in a variety of formats, and also can be explored in our interactive map. Links to previous years' data is available below. We are just getting started with this year's campaign, but you can [explore the data from 2021](#) as it comes in.

### Globe at Night - Sky Brightness Monitoring Network (GaN-MN)

The [GaN-MN project](#), an extension of the original Globe at Night project, is a global night sky brightness monitoring network using a commercially available meter (SQM-LE by Unihedron) for long-term monitoring of the light pollution conditions in different places around the world.


### Previous Globe at Night Campaigns

**2020 Results:** 29,508 total observations

Download the 2020 GLOBE at Night data:  
**NOTE:** The 2020 data has not yet been vetted, and is presented here as raw data.  
[Full Dataset \(.txt\)](#)  
[Full Dataset \(.xls\)](#)  
[Full Dataset \(.csv\)](#)  
[Full Dataset \(Google Maps, .kmz\)](#)  
[SQM Dataset \(Google Maps, .kmz\)](#)

2020 Results  
[Interactive Infographic for 2020](#)

**2020 Observations.** To explore the 2020 data in more detail, click the map below to launch the Map Viewer.



 Dataset

 747

## World Health Statistics 2020 | Complete | Geo-Analysis

Complete dataset with brief explanation.

 Zeus • updated 6 months ago



THANK YOU