UK Health Security Agency

UK Report of National Optical Radiation Activities in 2024-25

Report to WHO International Advisory Committee, June 2025

Recent Development

COMARE

The Committee on Medical Aspects of Radiation in the Environment (COMARE) is the UK's independent scientific expert committee that advises Government on the health effects of radiation, both ionising and non-ionising[1]. COMARE, set up a subcommittee to carry out a scoping review of the evidence for the effects of light on health, including light pollution. This possibility was set out in the 2023 Government response to the House of Lords' Science and Technology Select Committee's published report on the inquiry into the impact of noise and light pollution on human health[2]. UKHSA act as Secretariat to COMARE and have appointed an optical radiation specialist as an assessor to the subcommittee.

COMARE published a report on the health effects and risks arising from sunbeds in 2009[3]. This report included a chapter on sunbed use in the UK, and informed the 2010 Sunbeds (Regulation) Act. In November 2024, the UK Department of Health and Social Care commissioned COMARE to consider the available evidence relating to the use of sunbeds in the UK, and to determine if a new review is required. COMARE will establish a subcommittee to carry out a scoping review of the evidence. The secretariat to COMARE is provided by UKHSA, with expertise in optical radiation.

Research activities related to optical radiation and health

UKHSA published a report on indicators to reduce the impacts of heat on health[4]. The current limitations in reporting systems were reviewed, and ten indicators to monitor changes in heat exposures, vulnerabilities, heat-health outcomes and adaptation actions were proposed.

Recently, a published paper reported that UV exposure of mice fed a high-fat diet reduces markers of liver disease progression[5] and contributed to a better understanding of non-vitamin D pathways.

An observational study on daylight and electric lighting in primary and secondary school classrooms in the UK was published[6], followed by a scoping review on studies measuring the visual environment of children and young people at risk of myopia[7].

Communication activities

UKHSA published Laser guide[8] to provide advice on safety of consumer laser products and some practical tips in assessing their safety appliances and intense pulsed light sources. UKHSA website: Laser radiation: Safety advice was also updated[9].

The forecast of the UV Index, safety messages and advice on sun and health via short blog-style stories and accessible videos are communicated by the UK's national weather and climate service-the Meteorological Office (Met Office)[10]. UV Index data for nine UK locations

are provided by the UK Health Security Agency and University of Manchester and displayed in near-real time to the public with an indication when sun protection is needed[11]. The UV Index and sun safety messages are also available on SmartSun UV Global App[12] for the UK and many popular holiday destinations. Outreach activities included presentations and interactive activities about the importance of UV protection and light exposure for health.

References

[1]Committee on Medical Aspects of Radiation in the Environment

[2]Government response to the House of Lords Science and Technology Committee report: The neglected pollutants: The effects of artificial light and noise on human health

[3]COMARE 13th Report (2009): The health effects and risks arising from exposure to ultraviolet radiation from artificial tanning

[4]Murage, P., Hajat, S., Macintyre, H.L., Leonardi, G.S., Ratwatte, P., Wehling, H., Petrou, G., Higlett, M., Hands, A. and Kovats, S., 2024. Indicators to support local public health to reduce the impacts of heat on health. *Environment international*, *183*, p.108391.

[5]Hazell, G., Khazova, M., Mancey, H., Shek, R. and O'Mahoney, P., 2025. Ultraviolet exposure of mice fed a high fat diet reduces weight gain and markers of liver disease progression. *International Journal of Obesity*, pp.1-9.

[6]Price, L.L., Dahlmann-Noor, A. and Khazova, M., 2024. Daylight and Electric Lighting in Primary and Secondary School Classrooms in the UK—An Observational Study. *International Journal of Environmental Research and Public Health*, *21*(7), p.942.

[7]Dahlmann-Noor, A.H., Bokre, D., Khazova, M. and Price, L.L., 2025. Measuring the visual environment of children and young people at risk of myopia: a scoping review. *Graefe's Archive for Clinical and Experimental Ophthalmology*, pp.1-16.

[8]Laser product information sheet: practical guide

[9]Laser radiation: safety advice

[10]Met Office: UV and Sun

[11]UK Health Security Agency and University of Manchester solar monitoring UV Index

[12]SmartSun UV Global App

About the UK Health Security Agency

UK Health Security Agency (UKHSA) prevents, prepares for and responds to infectious diseases, and environmental hazards, to keep all our communities safe, save lives and protect livelihoods. We provide scientific and operational leadership, working with local, national and international partners to protect the public's health and build the nation's health security capability.

UKHSA is an executive agency, sponsored by the Department of Health and Social Care.

Contact for futher inforamtion

Katarzyna Baczynska, UK Health Security Agency, katarzyna.baczynska@ukhsa.gov.uk
Michael Higlett, UK Health Security Agency, michael.Higlett@ukhsa.gov.uk