WHO NIR IAC Committee - Optical radiation (including UV)

Germany - National Report 2020

1. Radiation protection in cosmetic and other non-medical applications - NiSV

On 31 December 2020, the Ordinance on Protection against the Harmful Effects of Non-Ionizing Radiation in Human Applications (NiSV) comes into force. In particular, this ordinance defines in legally binding manner requirements for the operation and technical qualification of professional users of non-ionizing radiation for cosmetic and other non-medical purposes. In the field of optical radiation, the focus is on applications such as tattoo removal with laser devices - an application, which will in future be subject to medical supervision - and permanent hair removal (epilation) with lasers or IPL devices. Other applications with lasers or IPL, e.g. for permanent hair removal, may still be carried out by non-physicians. From 31.12.2021, these persons has to be qualified for application of non-ionizing radiation. For this, requirements for the acquisition of technical qualification (guideline on technical qualification) were developed regarding the requirements for training courses and the relevant learning contents and objectives. The guideline serves to support the executive authorities, and for the design of training courses.

2. Sunbed legislation

In Germany, the rules on sunbeds, including a ban on minors, are still not fully implemented despite all the efforts and support for the control authorities. In 2019 and 2020, the BMU, together with two national institutions, the German Cancer Aid (DKH) and the Working Group for Dermatological Prevention (ADP), carry out a solarium intervention program including an extraordinary exhibition of an award-winning artwork that attract great public attention. As a repeatedly conducted survey reveals, sunbed use in Germany seems slowly to decrease – unfortunately not among minors despite the existing bam for under 18th. Based on the scientific findings regarding the health and economic consequences of using a sunbed, Germany is prepared to work together with other EU member states on an EU-wide solution of the sunbed issue.

3. UV Protection Alliance

The focus of the UV Protection Alliance is to force the nationwide implementation of structural skin cancer prevention measures https://www.bfs.de/EN/topics/opt/uv/alliance/alliance.html . For this, skin cancer prevention shall be integrated into the German Preventive Healthcare Act. So far, it could be achieved that the cooperation association "gesundheitsziele.de", which is responsible for the elaboration of Health Targets mentioned in the Prevention Act, has classified skin cancer prevention as very important and will publish the criteria analysis together with the UV Protection Alliance. As soon as the work program of the alliance allows a further revision of health objectives, skin cancer prevention shall be included in the prevention law.

4. UV Monitoring

The Federal Office for Radiation Protection (BfS) operates a nationwide network in Germany for solar UV radiation monitoring in cooperation with Federal Environment Agency, and other associated institutions http://www.bfs.de/EN/topics/opt/uv/index/monitoring-network/monitoring-network_node.html . Measured values are published as UV index (www.bfs.de/uv-index). BfS continuously improves the web based communication strategies for the UV index based e.g. on citizen's enquiries. UV index seems to be best understood and applied when it is communicated in the following three ways (1) as daily maximum value with the opportunity to receive past readings and to compare data time series of different

stations, (2) as three-day forecast (can be ordered via a newsletter) of the daily maximum UVI considering cloudiness and clear sky conditions for 10 regions in Germany, and (3) as UV irradiance values collected over the day with continuously updated graphic charts for each station displayed as UV Index, and supplemented with daily forecasted data (by the German Weather Service (DWD)) over the day at clear sky conditions. Measurement data as well as the forecast of the UV index can be viewed continuously at www.bfs.de/uv-index and https://www.imis.bfs.de/geoportal.

5. Occupational Safety and Health

At the Federal Institute for Occupational Safety and Health (BAuA) the following research projects with respect to optical radiation have been completed or are currently ongoing:

Completed Projects
F2355: Determination of the actual light exposure from natural and artificial sources with regard to circadian effects in shift-working employees - Joint project between BAuA and Public Health England (PHE)
(https://www.baua.de/EN/Tasks/Research/Research-projects/f2355.html)

F2442: Ageing resistance of laser protection filters
(https://www.baua.de/EN/Tasks/Research/Research-projects/f2442.html)

Ongoing Projects
F 2448: Effect of light on the alertness during the day: Dependence on the spectral composition of light and the exposure time
(https://www.baua.de/EN/Tasks/Research/Research-projects/f2448.html)

F2449: Occupational circadian effective light exposure Subproject 1: Job-Exposure-Matrix (JEM) for the assessment of circadian effective light exposure for selected occupations based on objective measurements Subproject 2: Determination of circadian effective daylight exposure based on long-term measurements and simulations
(https://www.baua.de/EN/Tasks/Research/Research-projects/f2449.html)

F 2483: Simplified risk assessment of incoherent high-power spotlights Subproject I: Evaluation criteria for the risk assessment of high-power spotlights Subproject II: High-Power Spotlights Risk Assessment (HiPoSisAs) - Photochemical and Thermal Retinal Hazards at Workplaces (PEROSH project)
(https://www.baua.de/EN/Tasks/Research/Research-projects/f2483.html)

F 2496: Non-visual effectiveness of light at night as a function of the light direction