frequent occupational disease e.g. in agriculture and construction, as well as the most frequent occupational cancer of all branches. The magnitude of affected workers and recent dosimetric UVR measurements showing high annual exposures (>600 SED) are currently stimulating regulatory efforts for improved workplace prevention. The recognition of UVR induced skin cancer as an occupational disease, has proven to be pivotal to this approach.

Results UV radiation exposure is the major cause of melanoma and non-melanoma skin cancer (NMSC). Australia has the highest incidence of melanoma in the world and skin cancer accounts for over 80% of all new cases of cancer diagnosed each year. Although sun protection is used by 95% of those exposed at work, only 9% are fully protected.

A 2015 study estimated that 7220 melanomas occurring in Australia in 2010 could be attributed to UV radiation exposure. The incidence of melanoma in those under the age of 25 is expected to be due to improved sun protection behaviour from education programs, although it may partly relate to the change in the population racial mix.

Evidence shows that a wide range of measures can be effective in reducing the impact of skin cancer. Australia now has comprehensive prevention programs and it has been estimated that the return on a national skin cancer prevention media campaign is approximately $2.32 for every dollar invested, through reduced healthcare costs.

Conclusion This review summarises the impact of UV exposure on skin cancer prevalence in Australia. The policy priorities include reducing UV exposures, education programs and early intervention. These strategies also have the potential for broader applicability in the prevention of other occupational risks.

Ultraviolet (UV) and blue-light components of optical radiation can affect the eye with a photochemical mechanism; both acute and/or long term effects can be induced. By large, the most diffuse source of optical radiation is Solar Radiation (SR) that includes both components. Among factors influencing SR exposure one of the most important is outdoor work: only in Europe outdoor-workers (OWs) are about 15 million. Another factor specifically relevant to the eye is reflection as, for anatomical reasons, the eye is less protected from reflected rays. As a consequence the presence of highly reflecting surfaces, like fresh snow or water, can increase eye exposure. In OWs various adverse chronic eye effects, involving different structures of the eye, can be found, as pterygium, cataract and macular degeneration. We reviewed scientific studies on eye effects of optical radiation in OWs. The results confirm an increased risk of the abovementioned adverse effects, but knowledge on various aspects is largely insufficient. Among relevant aspects deserving further studies are the evaluation of lifetime ocular exposure to ultraviolet radiation and blue-light considering both occupational and leisure activities, and possibly integrating subjective questionnaires with objective data, as UV effective irradiance, available through meteor-climatic databases or field measurements. Individual aspects to be adequately investigated must include among other, also the possible presence of reflection, protective habits as the use of hats (type, frequency, etc.) and of sunglasses (frequency, shape, UV/blue light filters, etc.). These aspects are extremely important especially for the development of more adequate preventive measures.

Introduction UV radiation in the form of sunlight is Australia’s most prevalent occupational carcinogen. It is estimated that 37% of the male working population and 8% of the female working population are significantly exposed to solar radiation at work.

Methods A review was performed of the current research literature, together with published national policies and best practice guidelines.