

## **CLIMATE AUGMENTATION OF ERYTHEMAL UV-B RADIATION DOSE DAMAGE IN THE TROPICS AND GLOBAL CHANGE**

### **Abstract**

Skin cancer (UV carcinogenesis) causing erythematous solar ultraviolet-B (UV-B) radiation dosages received at tropical latitudes are about five times higher compared to mid-latitudes. The tropical environment also experiences high levels of temperature and humidity which are detrimental to human health. We show that more significantly, prevailing high levels of temperature, humidity and UV-A also directly augment the environmental UV-B dosages, doubling the UV-B damaging effect. Additionally, this can be further impacted in a significant way by future climate change. This understanding is particularly important for human health to populations in the tropics and should be taken into account when evaluating the UV-B radiation and climate impact on immune deficiency, viral infections and other environmental health considerations in the context of present and future climate scenarios.