

# Tourism climate potential for Luxembourg

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For tourism, information on thermal comfort/stress conditions as well as aesthetical and physical parameters is important. For Luxembourg, projections of future changes of a large number of factors were made, focused on the impact on tourism: cold stress, heat stress, thermal comfort, sunshine/cloud cover conditions, vapour pressure (sultriness), wind velocity, relative humidity (foggy days), and number of dry and wet days.

These projected changes were assessed for eight combinations of future time periods, emissions scenarios and climate models, namely: two periods (2021–2050 (near future) and 2071–2100 (far future)), two SRES-emission-scenarios (A1B and B1), and two models. These results were compared with the reference period 1971–2000.

According to these results, largest changes occur for cold stress, vapour pressure and heat stress. The projections show a statistically significant decrease of the number of days with cold stress for all eight combinations, and a significant increase of the number of days with heat stress in four out of eight combinations. The results for sultriness (high vapour pressure) show a consistently substantial increase for most combinations.

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