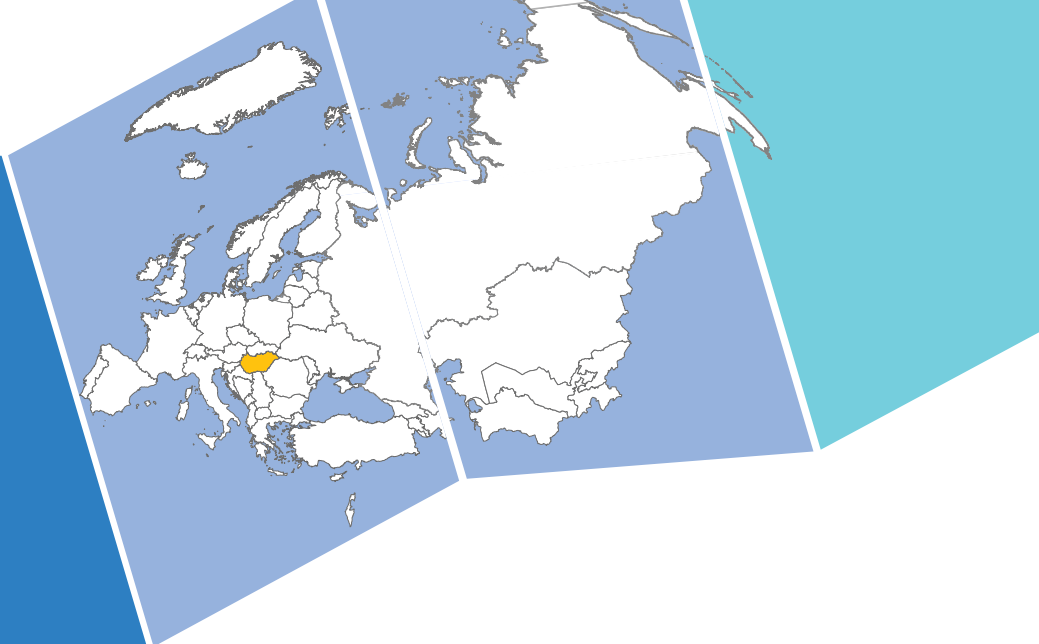


HUNGARY



CLIMATE CHANGE

Hungary has a typical European, continental climate, with warm dry summers and fairly cold winters. Depending on the geographic zone, the annual mean temperature has already increased by between 1 to 1.3 °C in the past thirty years. In line with the European trend, higher and more extreme temperatures have been observed, particularly during the past decade. The warming trend is projected to continue at a significant pace.

HEALTH EFFECTS

Heat-waves are a major concern in Hungary. Data for Budapest suggest that an increase in daily mean temperature of 5 °C would increase all-cause mortality by 10%, cardiovascular diseases incidence by 12%, and emergency ambulance calls by 15%. From 16 to 25 July 2007, the country suffered its most severe heat-wave ever, resulting in an excess mortality of 1170 cases nationwide. In Budapest, the excess mortality was 48.5%. On the basis of the regional climate model, excess mortality in summer is expected to increase by 45% between 2021 and 2050, as a result of an increase in the number of hot days.

Another concern is health risks from extreme precipitation, related to floods and water contamination. In 2006, after heavy precipitation, contaminated piped drinking-water caused an epidemic of more than 3000 cases of gastroenteritis of undetermined origin in Miskolc city. In addition, ecosystem and seasonal changes are affecting the range of disease vectors, and increases in the incidence

of Lyme disease and tick-borne encephalitis have been projected. As a consequence of the temperature increase, concentrations of pollen in the air are also affected; pollination of early spring trees with allergenic potential now starts one month earlier in the warmer years than in the early nineties.

HEALTH MEASURES TAKEN TO ADAPT TO CLIMATE CHANGE

General

Adaptation measures have been developed to deal with specific national concerns; these include increasing the energy efficiency of buildings, increasing water storage capacity in urban areas, improving passive cooling in urban areas to reduce heat stress, improving air conditioning and cooling of health and social care facilities.

Research is encouraged on food safety and security, healthy nutrition, and spread of parasites and fungi in agriculture, in support of plant protection and control of plant allergens. Interdisciplinary research in the field of health and social impact of climate change will be supported with the establishment of a national database.

Health system

In the health sector, a variety of actions have already been launched, such as alert and warning systems for heat, ultraviolet radiation, smog and pollen. A “real-time” surveillance system for emerging diseases, including a monitoring system for vectors and vector-borne diseases in humans and animals, is planned.



Young woman relaxes in the sunset, Budapest, Hungary

©Shutterstock.com

Efforts have been made to improve health care services during extreme weather situations, for example by disseminating information on the health effects of temperature. Special courses for general practitioners are planned.

CO-BENEFITS FOR HEALTH OF CLIMATE CHANGE MITIGATION MEASURES

Hungary has two mitigation strategies: the Green Investment Scheme and the National Energy Strategy. The health implications of these strategies have not been assessed. The Green Investment Scheme is a financial scheme that provides incentives for households to increase the energy efficiency of their existing home, using thermal insulation and passive solar energy. It is estimated that this scheme will lead to savings in energy consumption worth up to 30 billion forints (about US\$ 150 million) per year. The National Energy Strategy includes national energy-saving programmes, such as the National Energy Efficiency Action Plan and the Renewable Energy Strategy. Implementation of these plans could lead to savings of around 29×10^{15} joules (30 million kWh) per year by 2013.

REFERENCES

Hungarian Government. 5th National Communication to the UNFCCC. Hungary, 2009; http://unfccc.int/resource/docs/natc/hun_nc5.pdf

Páldy A. Health impact of climate change – major challenge of the 21st century. Presentation at the International Conference and Meeting of the Central and Eastern European Chapter of the International Society for Environmental Epidemiology, Celadna, Czech Republic, 2007; http://isee.zuova.cz/past_celadna.php#se1.

Dura G, Kiss Z, Bodnar J, Asztalos A, Papp E, Pandics T. Drinking-water-borne outbreak due to extreme weather events. Case study of a waterborne outbreak in Hungary 2006. *Medycyna Środowiskowa [Environmental Medicine]* 2009; 12 (1): 40-47.