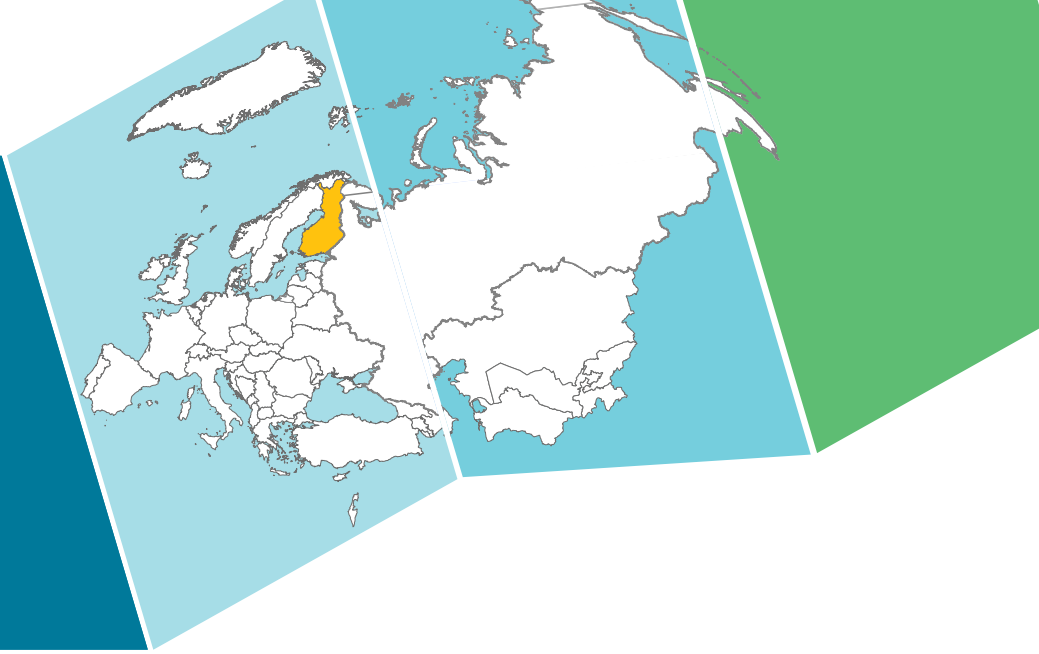

FINLAND

CLIMATE CHANGE

Most regions of Finland have a humid climate, with an average monthly temperature of less than 10 °C for eight months or more. Snow covers the ground from December to April in southern Finland, and from October to April in the north. Most of the country, including the Gulfs of Bothnia and Finland, are often icebound in winter.

Finland's mean annual temperature is expected to rise by 2–6 °C by the end of the century. The temperature rise is projected to be greater in winter than in summer, and greater in the north of the country than in the south. Annual precipitation is also expected to rise by some 10%, and the increase will be more pronounced in winter. Climate change could have have advantageous effects, as there could be less demand for energy for heating in winter, and crop yields and forest growth may increase and increased thermal security will lower mortality. However, some natural sources of livelihood, such as those linked to biodiversity and good quality water resources, could be at risk.

HEALTH EFFECTS

Changes in the frequency, duration and intensity of extreme climatic events, such as cold-waves, heat-waves, storms (whirlwinds in eastern Finland) and floods may have health impacts, though recent risk assessments seem quite reassuring. In general Finland is much less flood prone than many other European regions. The change in seasonality and concentration of pollen and algal bloom and increased air pollution from wild fires in Eastern Europe might have adverse health effects. The vector-borne diseases, such as tick-borne encephalitis, borreliosis and other emerging infections, might be affected by climate change, though social social change and changes in agriculture and forestry are known to affect strongly the spread of these disease.

HEALTH MEASURES TAKEN TO ADAPT TO CLIMATE CHANGE

A National Strategy for Adaptation to Climate Change was launched in 2004, and its implementation was evaluated in 2009. The evaluation noted that there is now a reasonable understanding of the impact of climate change in Finland and a recognition of the need for adaptation measures in water resource management, flood risk management and the transport sector (road, rail and maritime administration). The health and social sectors have started to take some limited adaptation measures (see box).

At the moment, the Health Protection Act requires municipal health protection authorities, in cooperation with other authorities and institutions, to make emergency preparations and take precautionary measures required to prevent, investigate and eliminate health hazards caused by extreme weather events, in particular floods, storms and heavy rainfall. Experience so far indicates that the Finnish health protection network and infectious disease control, through a combination of official action, efficient distribution of information, and effective use of experience and technology, is well placed to protect the population from infectious diseases caused by flooding.

Girl picking flowers

Photo: ©Heikki Ketola/Kuvaliiteri

CO-BENEFITS FOR HEALTH OF CLIMATE CHANGE MITIGATION MEASURES

In Finland, the focus is on the potential health risks of mitigation measures, rather than the health benefits. Potentially negative effects of measures such as the use of biomass combustion (leading to air pollution), windmills (causing noise), and thermal insulation of buildings (leading to mould formation) are a concern.

MEASURES TAKEN TO ADAPT TO CLIMATE CHANGE IN THE SOCIAL SERVICES AND HEALTH CARE SECTORS

Public administration and planning

- Networking has been launched between climate researchers and health care and social services personnel; as a result, know-how has been increased, especially on infectious diseases.
- A guide on emergency situations in environmental health has been prepared, which lists emergency situations related to weather events.

Research and information

- The Finnish Meteorological Institute has plans to introduce warning systems for heat-waves, cold-waves, and heavy rain, possibly taking into account the risk of waterborne epidemics from contaminated water after heavy rain.
- Generic action models have been prepared, based on research on emergency situations arising from special circumstances.
- The Ministry of Agriculture and Forestry, Finnish Environment Institute and Regional Environment Centres issue weekly reports on algal bloom in summer, with the aim of increasing knowledge of the risks associated with it.
- Research on, and communication about, the increased risk of infectious diseases are carried out in all emergency situations where significant numbers of people are at risk of falling ill.

Economic and technical measures

- In the context of preparedness planning the Ministry of Social Affairs and Health updates a guide on emergency situations in environmental health, including risk management in the event of a power cut during a cold spell as cold in general is ten times more challenging than warm or hot whether from public health perspective.
- The classification of indoor air was revised in 2008 as a step towards ensuring e.g. adequate ventilation and thermal comfort in housing.

Private

- A guide on the ventilation of residential buildings was published in 2009.

REFERENCES

Finland's National Strategy for Adaptation to Climate Change. Ministry of Agriculture and Forestry, 2005; http://www.mmm.fi/attachments/ymparisto/5kghLfz0d/MMMjulkaisu2005_1a.pdf

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