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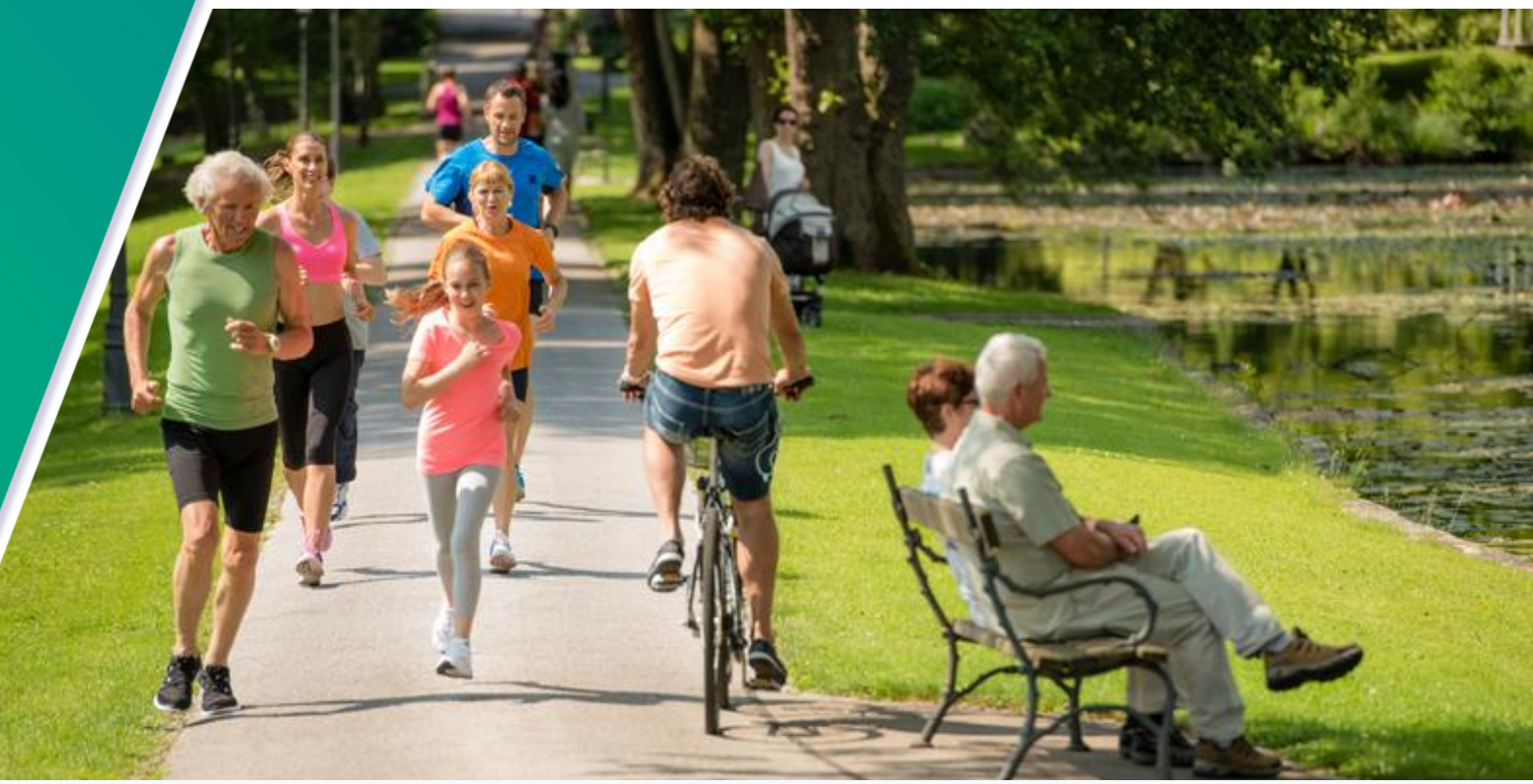

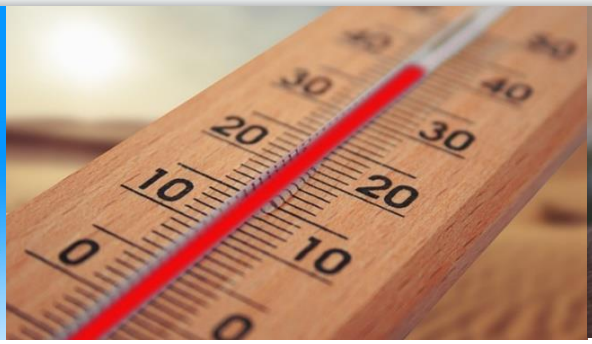

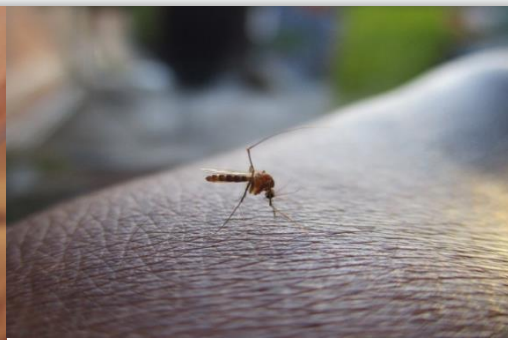

A guideline on climate adaptation and health

Summary of the 2nd draft

Version: December 2025

Life IP CLIMATE ADAPTATION NL-NASCCELERATE

Co-funded by the European Union

A guideline on climate adaptation and health

Summary of the 2nd draft

December 2025

Project title: 'Integration of health aspects in climate change adaptation measures: identification of preventive measures related to heat stress and infectious diseases (NL-NASCCELERATE)

Project acronym: LIFE20 IPC/NL/000006 – LIFE-IP NL-NASCCELERATE

Action: C.1.3 Integration of health in climate change adaptation measures: identification of preventive measures related to heat stress and infectious diseases

Deliverable: Guidelines draft 2

Beneficiary: Veiligheids- en Gezondheidsregio Gelderland-Midden

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In coöperation with: Academische Werkplaats Gezonde Leefomgeving, GGD Noord- en Oost-Gelderland, GGD Gelderland-Zuid, GGD regio Utrecht, GGD Amsterdam, Team GMV GGD'en Brabant, GGD Haaglanden, GGD Groningen, GGD Drenthe.

With special thanks to: GGD Rotterdam-Rijnmond, RIVM.

Note: the document is still under development. For the latest available version see: Klimaatadaptatie en gezondheid - Academische Werkplaats Gezonde Leefomgeving

EXECUTIVE SUMMARY

The program LIFE-IP NASSCELERATE (LIFE-IP Climate Adaptation) is funded by the European LIFE Integrated Projects (LIFE-IP) in 2021. The goal of LIFE-IP Climate Adaptation is to expedite the Dutch National Climate Adaptation Strategy (2016) and to gain knowledge that can be used for monitoring actions and results. The project 'Integration of health aspects in climate change adaptation measures: identification of preventive measures related to heat stress and infectious diseases' (Action C.1.3., hereafter 'Health in Climate Adaptation') is one of the actions of this program. This project is coordinated by GGD Gelderland-Midden with eight other municipal health services (GGDs) contributing to the project. Also, there is collaboration with RIVM and GGD Rotterdam-Rijnmond, both participants to other projects within the LIFE-IP program.

Deliverable:
'Guidelines draft 2': a guideline on climate adaptation and health

Climate change has a profound impact on human health. In the future, this impact will increase. Based on the Public Health Act (Wpg), municipal health services (GGDs) and municipalities have a responsibility in protecting and promoting health and a healthy environment. The increasing impact of climate change as well as the health implications of climate adaptation measures require broad commitment within GGDs.

The aim of the project Health in Climate Adaptation (Action C.1.3) is to deliver a guideline to assist GGD-professionals in advising municipalities and other stakeholders about climate adaptation and health. This guideline shows how to include public health aspects (e.g., how to improve and protect health) in climate adaptation measures and policy.
The guideline covers three environmental factors that are getting increasingly threatening to human health due to climate change: UV-radiation, heat stress, and infectious diseases. For each of these environmental factors, this guideline provides knowledge on exposure, health effects, vulnerable groups, stakeholder responsibilities and collaborations, opportunities for local policy and measures and tools.

UV-radiation
Skin cancer incidence is high in The Netherlands and has been increasing for decades. The most important cause is too much UV-radiation exposure. In the future, climate change will increase the exposure to UV-radiation. Climate adaptation measures can mitigate the risks and reduce the burden of this disease.
Most important risk groups are children, adolescents, people who spend much of their time outside and people who have a sensitive skin type (or had skin cancer before).
To prevent too much UV-radiation exposure, it is important to stay out of the sun, wear protective clothing and use sunscreen. GGD-professionals from various teams (youth health care, health promotion, environmental health, inspection of child care facilities, and research) can advise municipalities and other stakeholders about physical interventions (e.g., applying shadow measures) and inform risk groups to raise awareness and stimulate healthy behavior.
It is important to conduct an interdisciplinary approach on prevention of skin cancer. Skin cancer prevention can be integrated in municipal policy, such as policies on health, climate adaptation, green space and sports. It can be taken into account in spatial planning.
Prevention of skin cancer can be linked to other health goals, including reducing heat stress, promoting physical activity and creating attractive places to stay. Also, additional

stakeholders, like schools, childcare facilities and outdoor recreational areas can take measures on this topic.

Heat stress

Due to climate change, the number of hot days as well as the maximum temperatures will increase. This will cause more heat-related morbidity and mortality. Climate adaptation measures prevent health problems caused by heat. The most vulnerable groups for heat stress are elderly people and people with chronic diseases such as cardiovascular and respiratory diseases. Also, the housing situation, social environment and behavior of people can increase vulnerability to heat stress. Similar to UV-radiation, prevention of heat stress can be incorporated in municipal policy and measures of several stakeholders, like schools or day care facilities. GGD-professionals of several teams (the same teams that are named above in relation to prevention of skin cancer) can play a role in prevention of heat-related health problems. For a great part, the advice on prevention of heat stress and exposure to UV-radiation will be interrelated, as UV-radiation and heat stress greatly overlap in time (both season and time of day), but not entirely. Health promotion aimed at awareness raising and behavioral change are key factors. People need to know what to do to keep their bodies and dwellings cool during (successive) hot days. Extra care for vulnerable groups can be arranged in local heat plans. Schools and child care facilities can develop heat protocols. Also, physical interventions are needed in buildings and the environment, like sun protection screens for windows, creating shade and promoting green spaces and water in the living environment. It is important to also include possible negative health aspects of green spaces and water, such as the risk of an increase in allergens or an increase in pathogens that can cause infectious diseases.

Infectious diseases

Climate change can lead to the introduction of new infectious diseases and to increased occurrence of existing diseases in the Netherlands. Climate adaptation measures often consist of creating more green and blue (water) spaces in the living environment. This may increase exposure topathogens that can cause various infectious diseases with varying severity. Vulnerable groups are elderly people, babies, pregnant women and people with a compromised immune system. Just as with UV-radiation and heat stress, prevention of infectious diseases can be incorporated in municipal policies in the field of health, climate adaptation, green space, water and sports/physical activity. Municipal departments working on these themes and on maintenance of the outdoor space are important stakeholders in prevention of infectious diseases, as are the Water Boards. Examples of relevant measures are reduction of mosquitos by avoiding stagnation of water, cutting the grass in recreational areas to prevent tick bites, improving water quality and avoiding litter in swimming areas. Collaboration between GGD-professionals working on infectious diseases, environmental health and health promotion will become more important due to introduction of the Environment and Planning Act. Together these teams can advise municipalities interdisciplinary on e.g., spatial interventions. In addition, professionals working on youth health care and inspection of childcare facilities can play a role in informing parents, schools and childcare facilities about risks of infections and how to prevent infectious diseases. Green and blue space in the environment can cause health risks, but also brings health benefits and biodiversity. Therefore, it is important to take a balanced approach and to take both the negative and positive health aspects into account when considering climate adaptation measures.