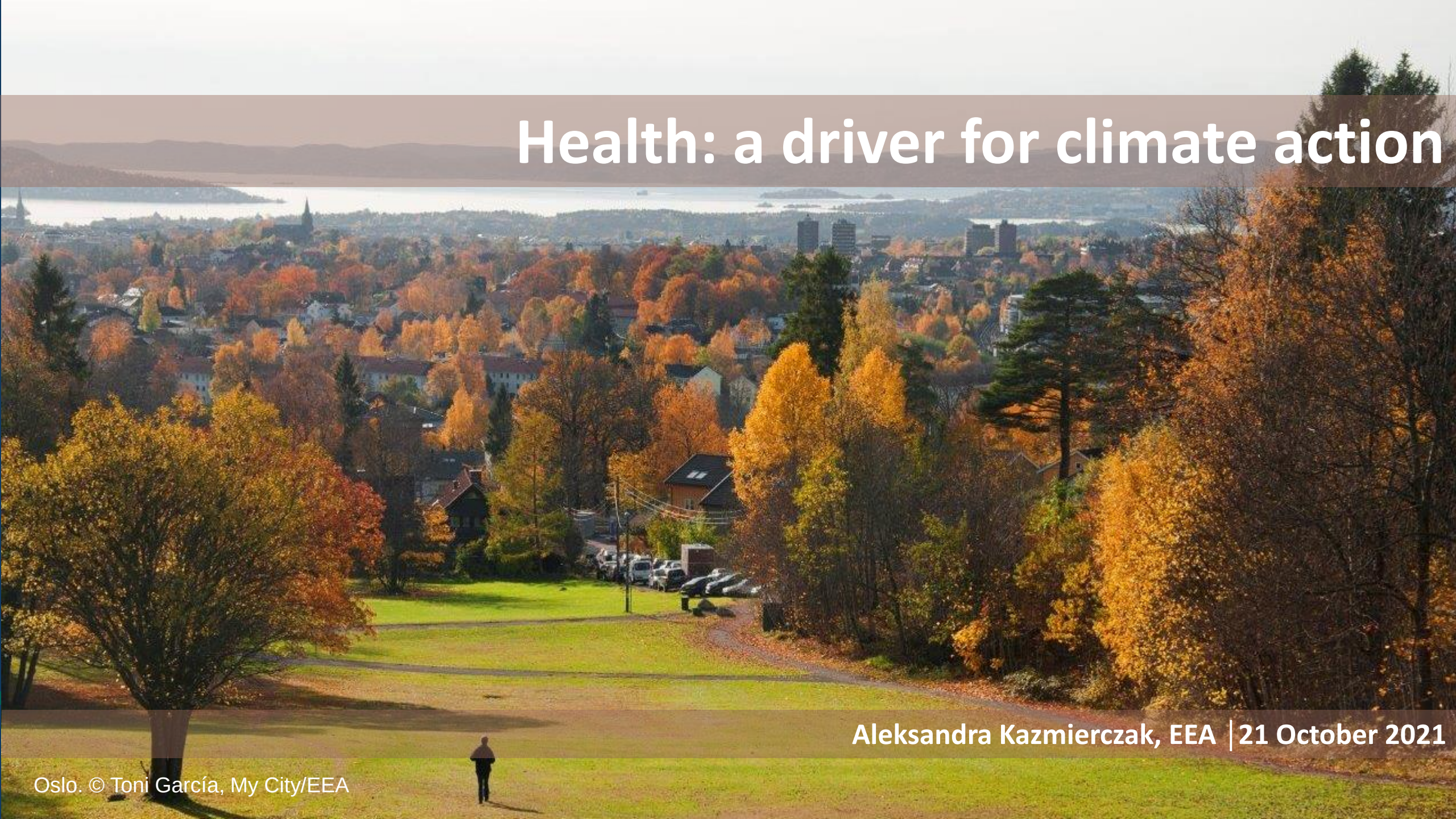
Health: a driver for climate action

Aleksandra Kazmierczak, EEA | 21 October 2021



Oslo. © Toni García, My City/EEA

European Environment Agency

Reference data: ©ESRI

EEA member and cooperating countries, 1 February 2020

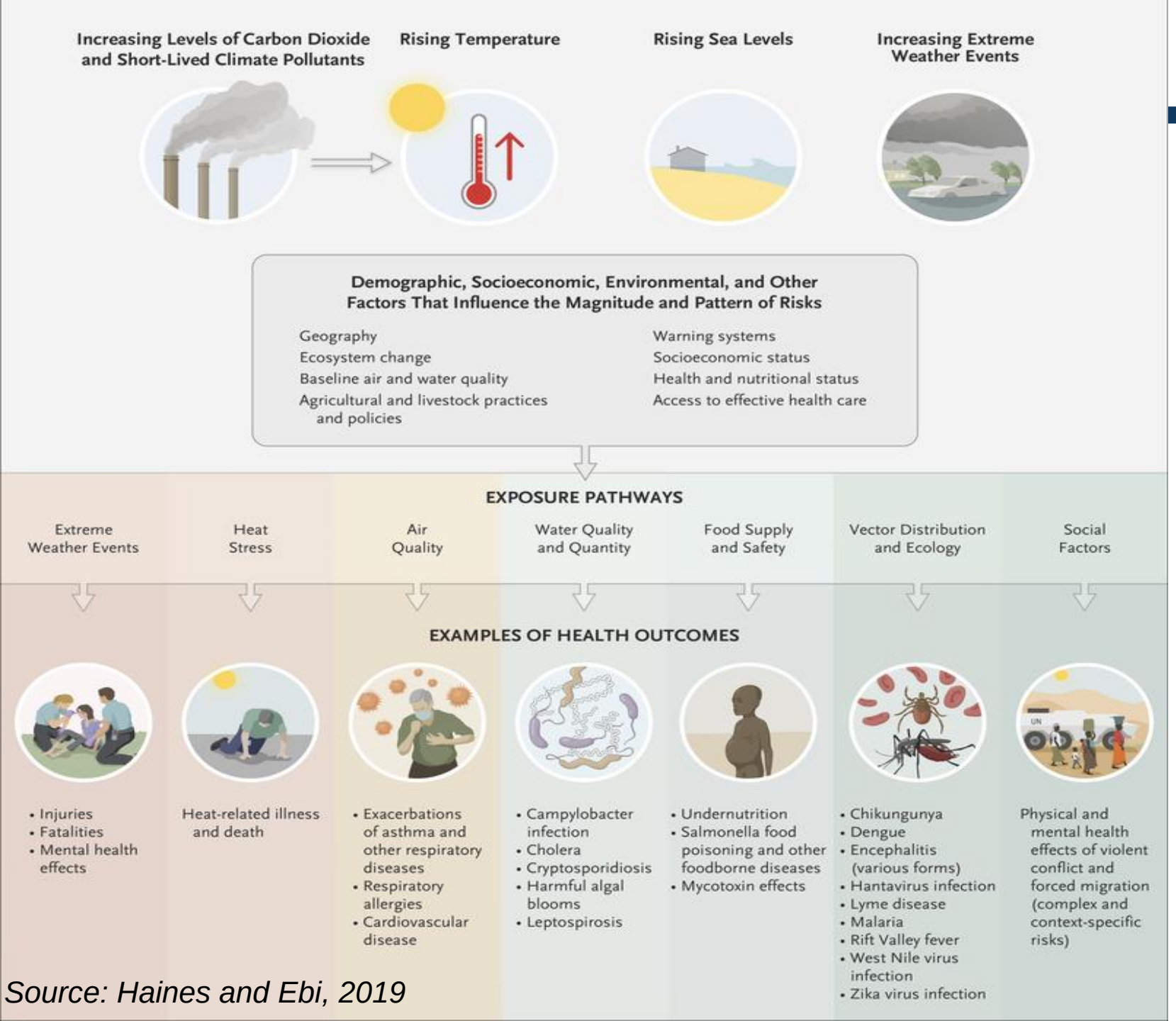
Member countries

Cooperating countries

*Kosovo under UNSCR 1244/99

- An independent EU agency
- Analysing, assessing and providing information
- An interface between science and policy
- 240 staff + network of 1800 experts in 38 countries

European Environment Agency



Source: Haines and Ebi, 2019

What we know

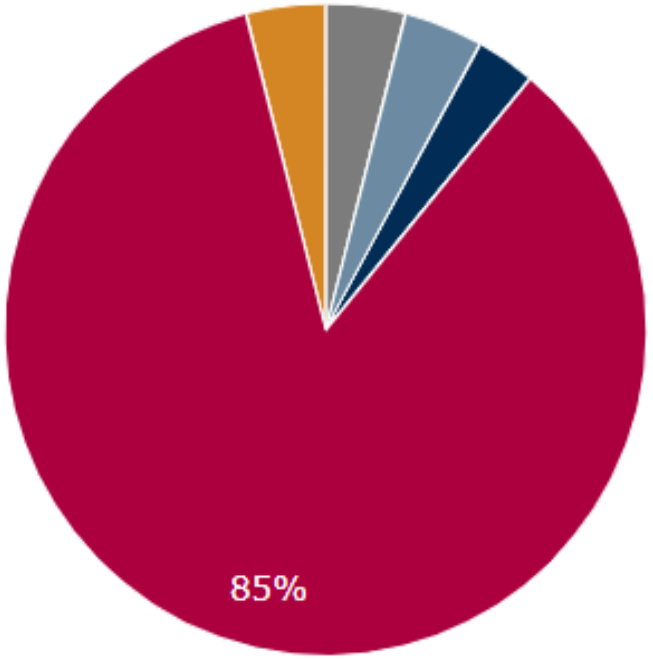
Climate change is already affecting human health

Projected climate change is expected to alter the geographical distribution and magnitude of health effects

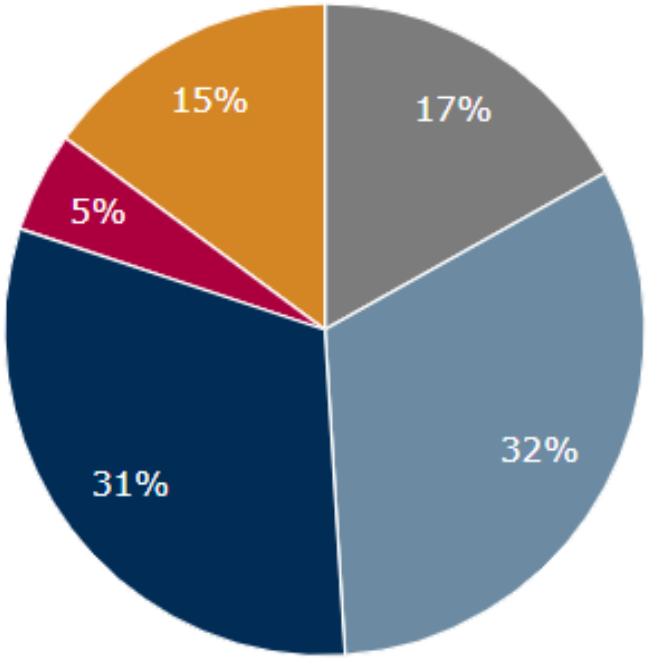
European Environment Agency

Climate- and weather-related losses in Europe

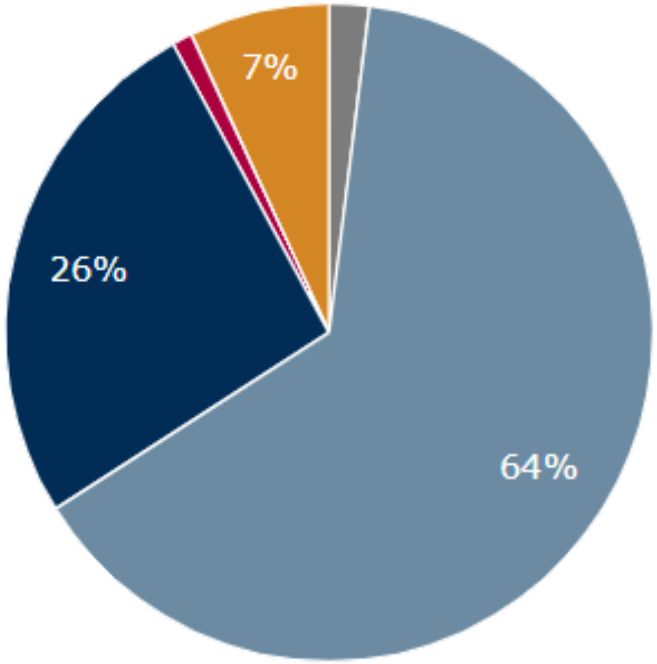
Fatalities



Total losses



Insured losses



- Geophysical events
- Meteorological events
- Hydrological events
- Climatological - Heatwave events
- Other climatological events

Almost 90,000 climate- and weather- related fatalities

EUR 430 billion economic losses (only 1/3 insured)

EU 27 + UK, 1980-2017

EEA, 2019, based on Munich Re data

European Environment Agency

Need for better understanding of risks

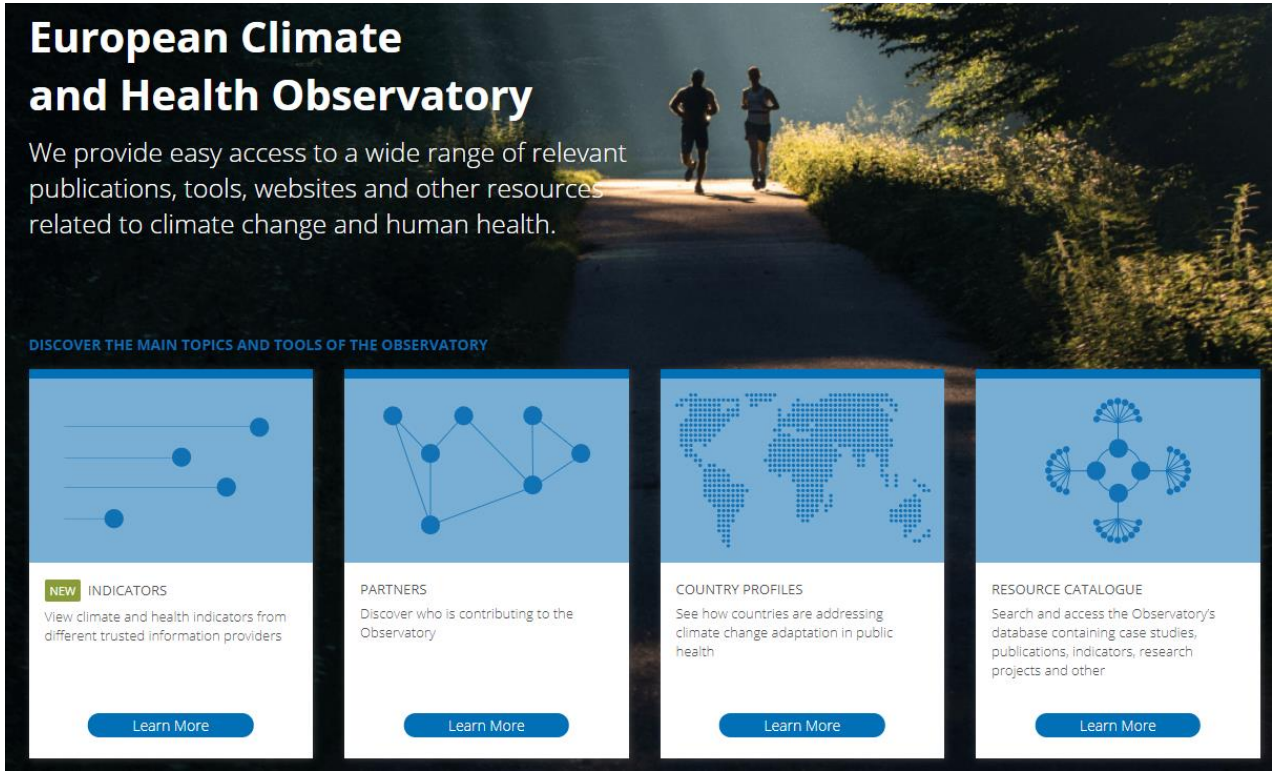
- EU Strategy on Adaptation to Climate Change (2021)

  - *We need a deeper understanding of the climate-related risks for health and greater capacity to counter them. Climate change related health threats are increasing; they are serious and can only be addressed across borders.*

  - *The Commission will establish a **European climate and health observatory** under Climate-ADAPT.*

European Climate and Health Observatory

- Aim
  - *to better understand, anticipate and minimise the health threats caused by climate change* (EU Climate Law)
- Objectives:
  - Improve the knowledge base for policy on climate change and human health
  - Bring together relevant organisations
  - Pool resources, expertise and tools
  - Facilitate learning across countries and organisations



https://climate-adapt.eea.europa.eu/observatory

European Environment Agency

European Climate and Health Observatory – Partnership

Observatory management group

EUROPEAN COMMISSION

EUROPEAN ENVIRONMENT AGENCY

Observatory partners

WORLD HEALTH ORGANIZATION - REGIONAL OFFICE FOR EUROPE

THE LANCET COUNTDOWN: TRACKING PROGRESS ON HEALTH AND CLIMATE CHANGE

EUROPEAN CENTRE FOR DISEASE PREVENTION AND CONTROL

EUROPEAN FOOD SAFETY AUTHORITY

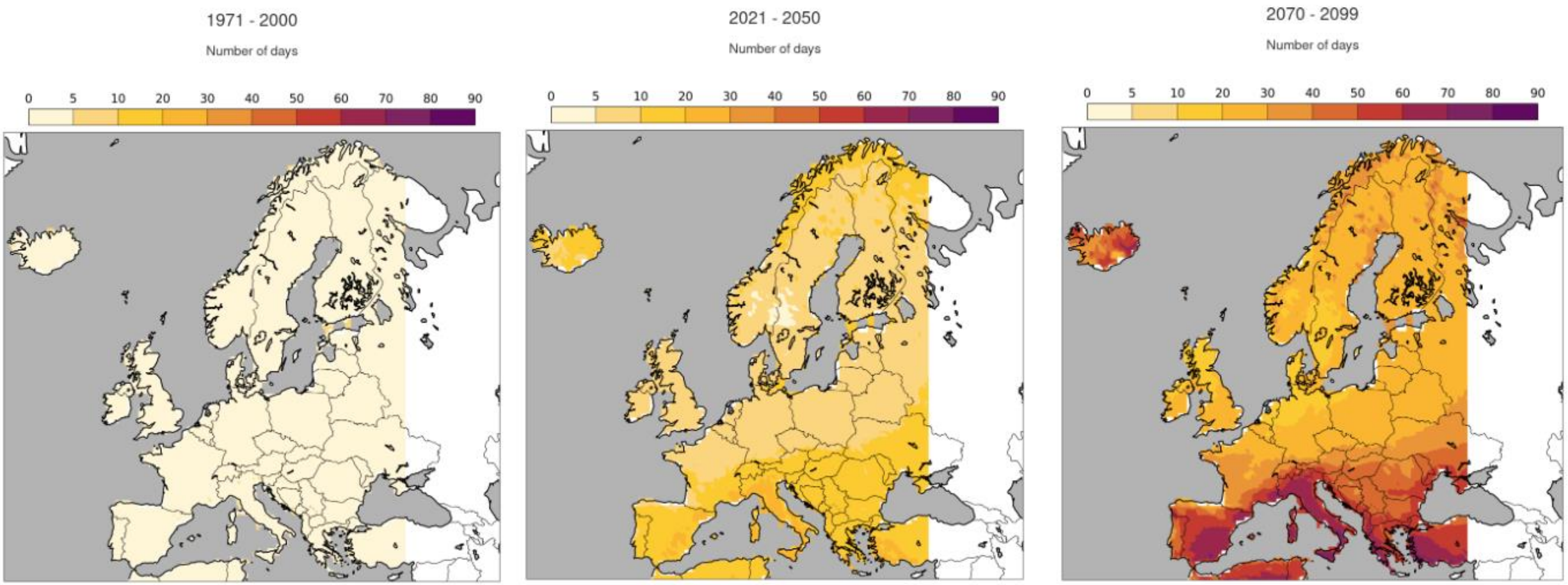
COPERNICUS CLIMATE CHANGE SERVICE AND COPERNICUS ATMOSPHERIC SERVICE

The Observatory – the story so far

- Launched in March 2021
- Report by Lancet Countdown and EEA
  - Main climate-related health risks in Europe
  - EU policy landscape
- Observatory workplan 2021-22 with thematic focus on **heat** and **infectious diseases**
- Developing portal compiling the relevant knowledge
- Ongoing user engagement and needs and requirements assessment

Heat as the greatest threat to health

Number of health-related heatwave days (RCP 8.5 scenario), C3S



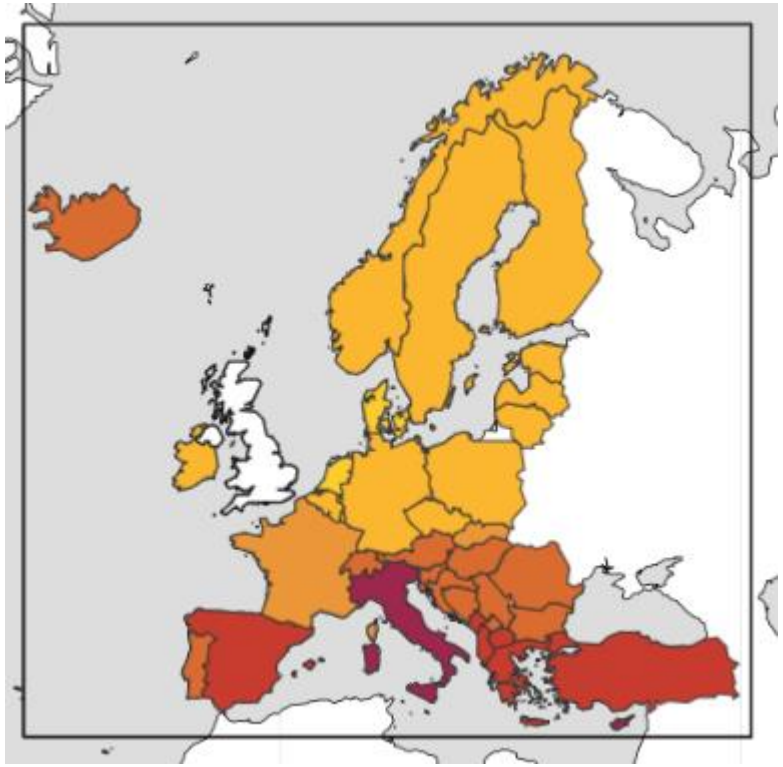
European Environment Agency

https://climate-adapt.eea.europa.eu/observatory/++aq++metadata/indicators/health-heatwave-high-temperature-and-humidity-1971-2099?bs=0

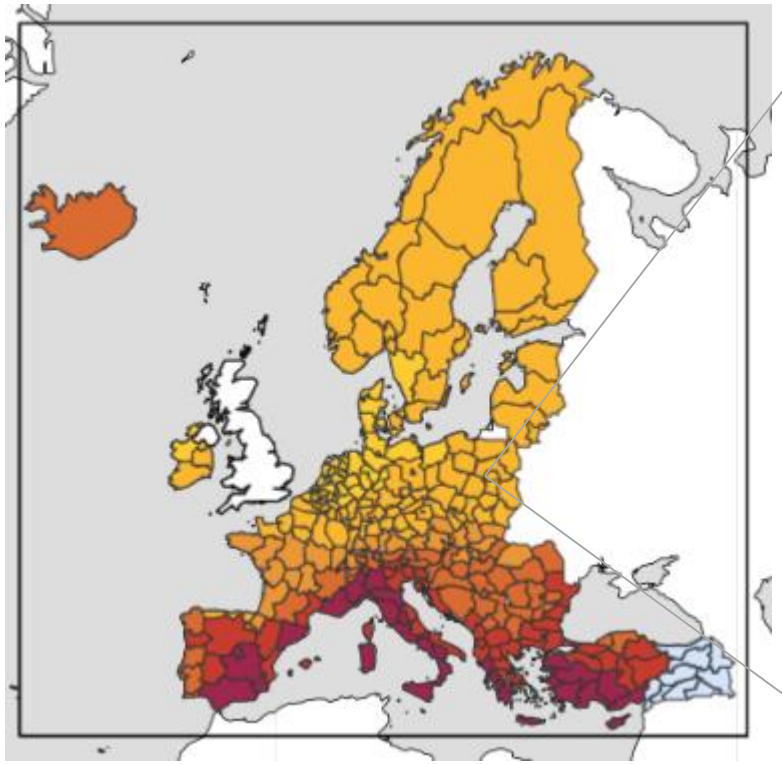
Heat as the greatest threat to health

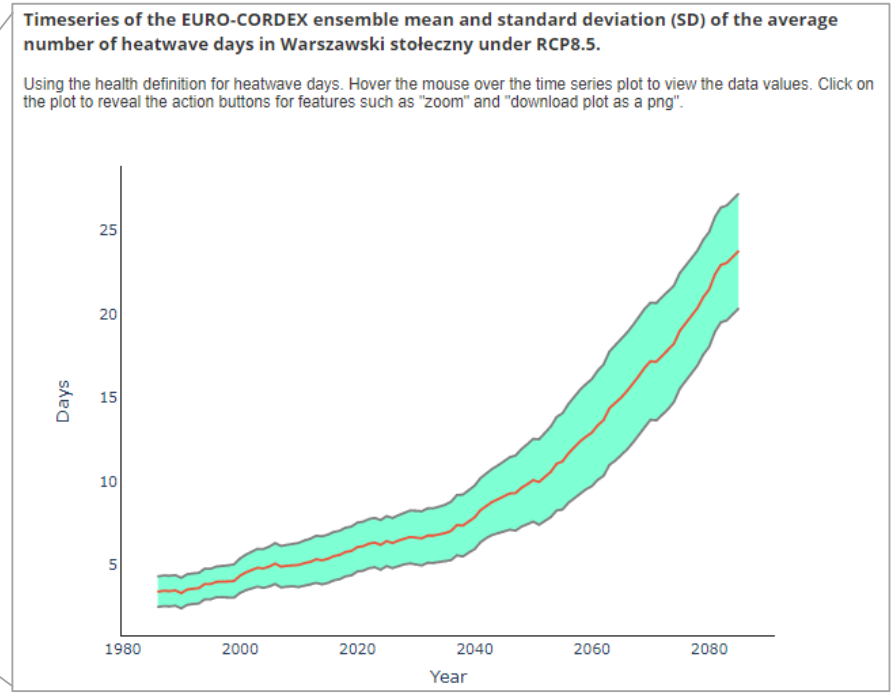
Number of health-related heatwave days (RCP 8.5 scenario, 2070-2099), C3S

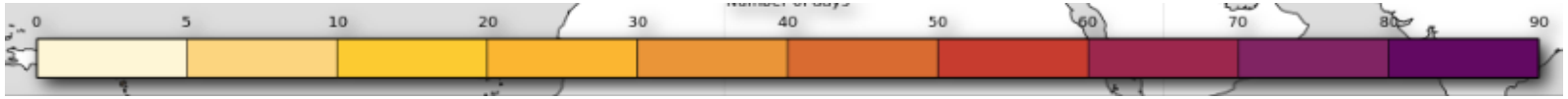
National level



Regional level







European Environment Agency

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Population vulnerability to heat stress in Europe

1990

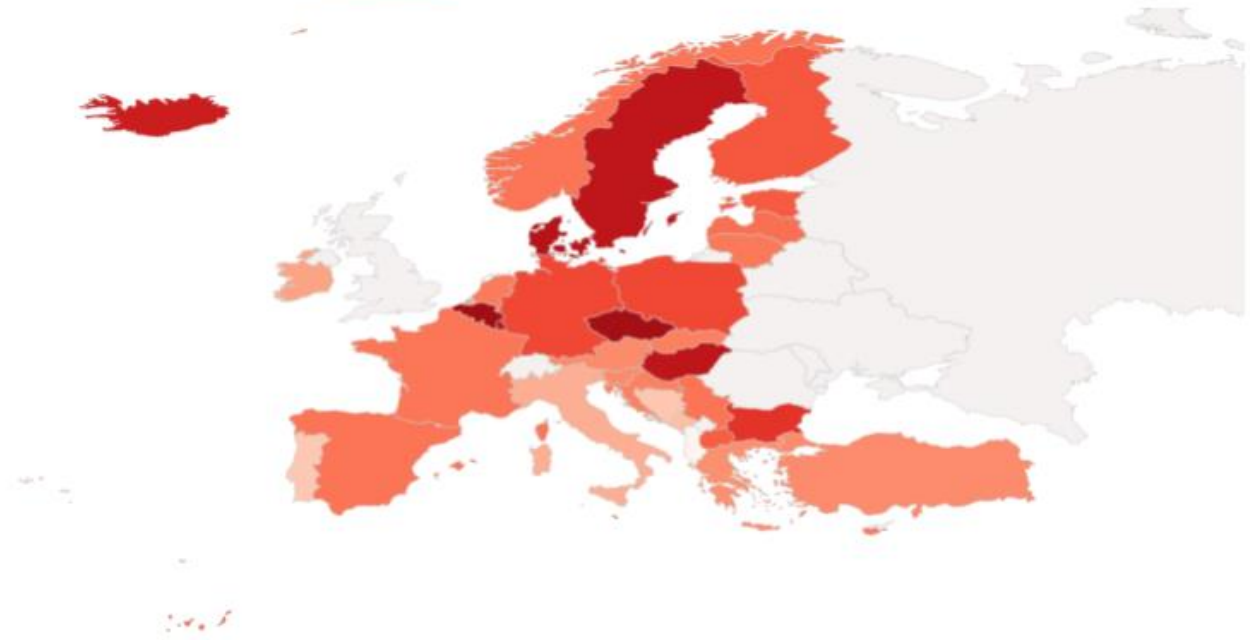
Population Vulnerability to Extremes of Heat in Europe

Heat vulnerability index

This indicator tracks the population's vulnerability to heat. It uses a composite index ranging from 0 to 100, which considers the proportion of the population over 65, prevalence of chronic diseases (chronic respiratory disease, cardiovascular disease, and diabetes), and the proportion of the population living in urban areas.

1990 | 2017

Heat vulnerability index 33 47



Please reference the 2020 Report of the Lancet Countdown if using this data •
For a full description of the indicator, see the 2020 report of the Lancet Countdown at lancetcountdown.org.
The 38 European Environment Agency (EEA) member and cooperating countries are individually presented.
Data on Kosovo (under UNSCR 1244/99) and Liechtenstein was not available.

2017

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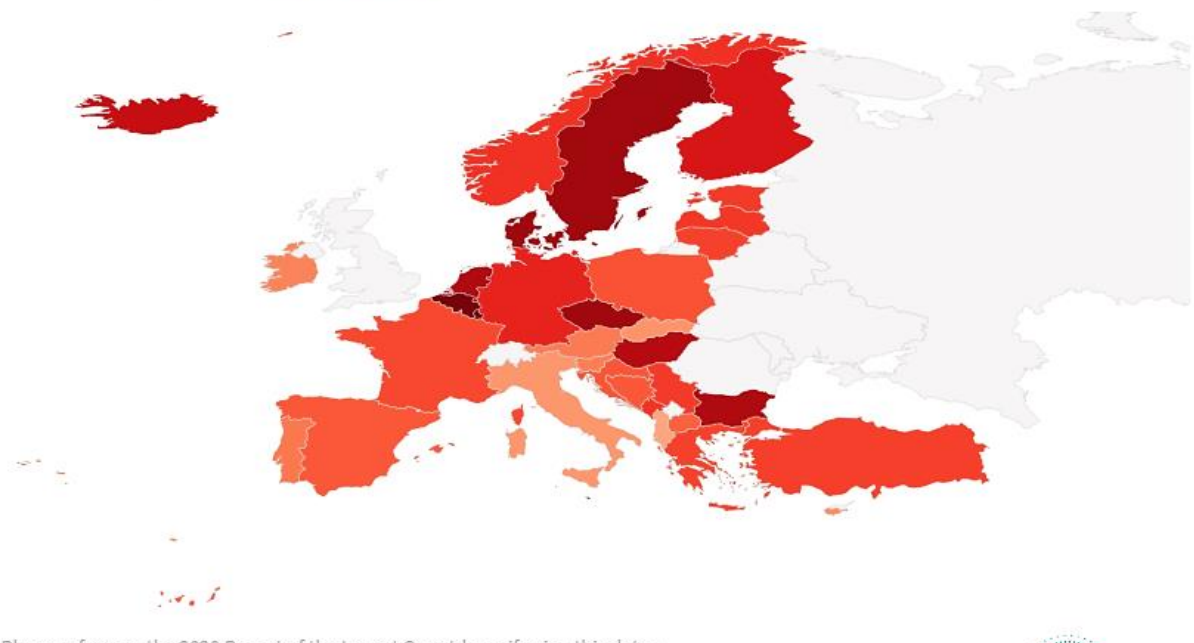

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https://climate-adapt.eea.europa.eu/observatory/++aq++metadata/indicators/vulnerability-to-extremes-of-heat?bs=0

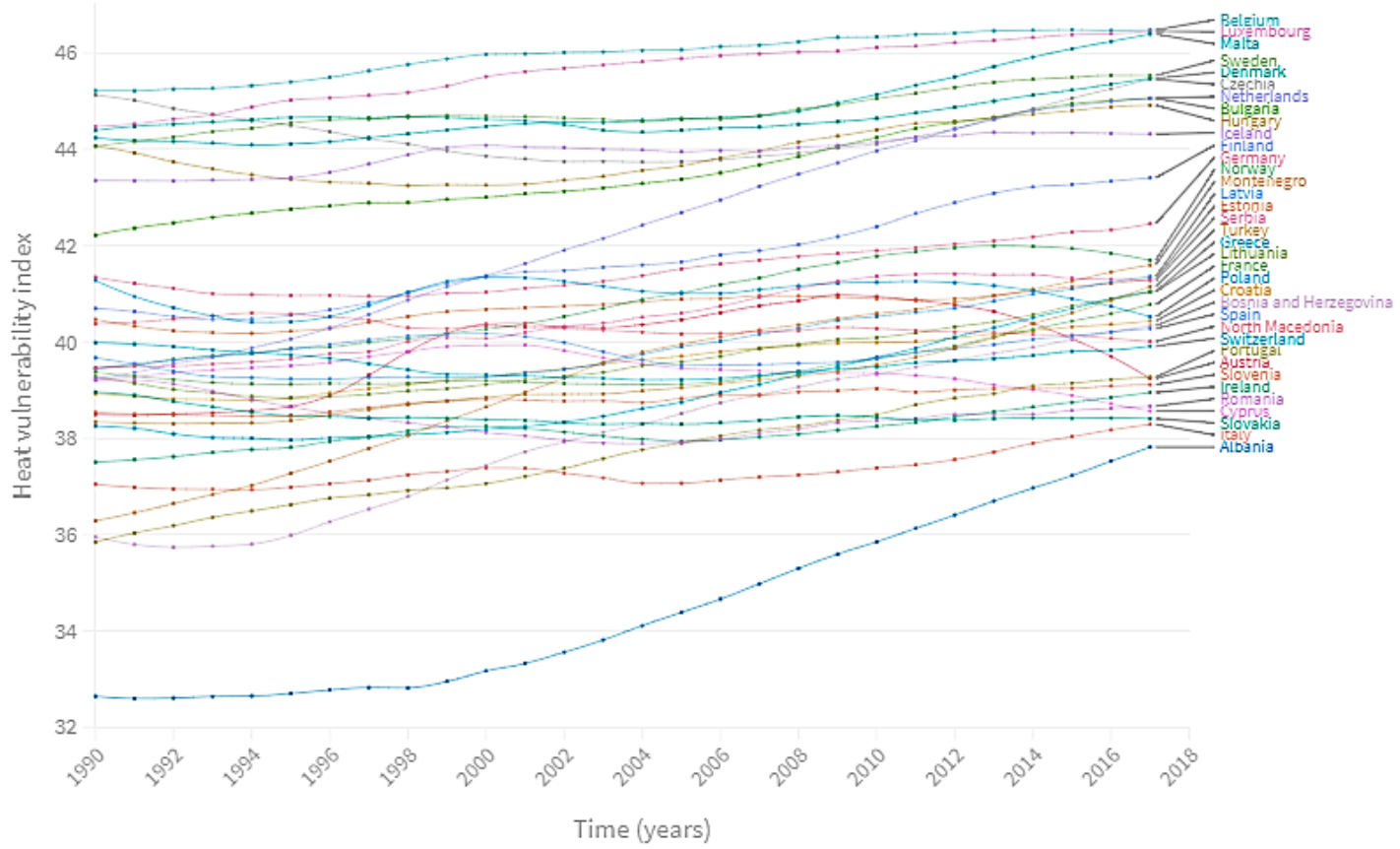
Population vulnerability to heat stress in Europe

Vulnerability to Extremes of Heat in Europe

Heat vulnerability index by country

This indicator tracks the population's vulnerability to heat. It uses a composite index ranging from 0 to 100, which considers the proportion of the population over 65, prevalence of chronic diseases (chronic respiratory disease, cardiovascular disease, and diabetes), and the proportion of the population living in urban areas.

Enter country or region to show

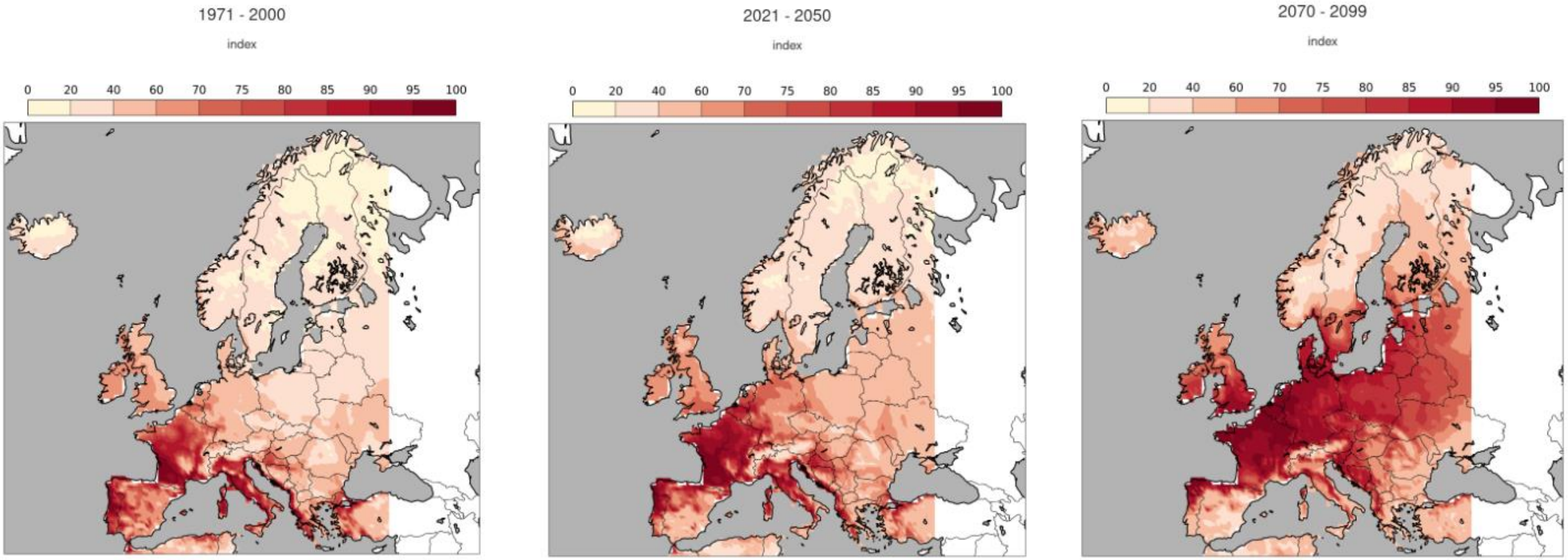


European Environment Agency

https://climate-adapt.eea.europa.eu/observatory/++aq++metadata/indicators/vulnerability-to-extremes-of-heat?bs=0

Emerging risks: climate-sensitive infectious diseases

Climatic suitability for tiger mosquito (RCP 8.5 scenario), C3S



European Environment Agency

https://climate-adapt.eea.europa.eu/observatory/++aq++metadata/indicators/climatic-suitability-for-the-tiger-mosquito-suitability-index-1971-2099?bs=0

Emerging risks: climate-sensitive infectious diseases

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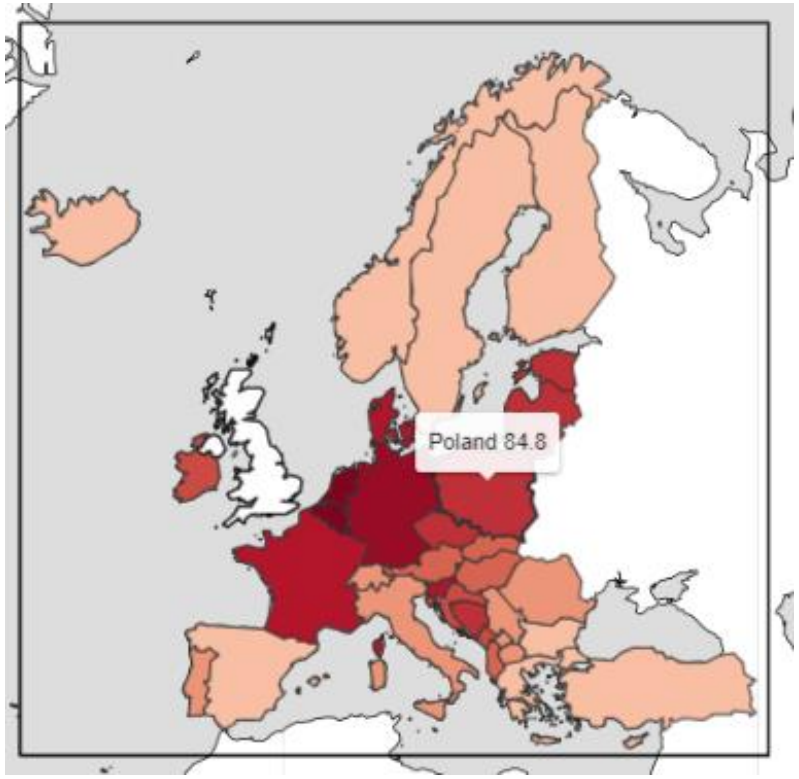
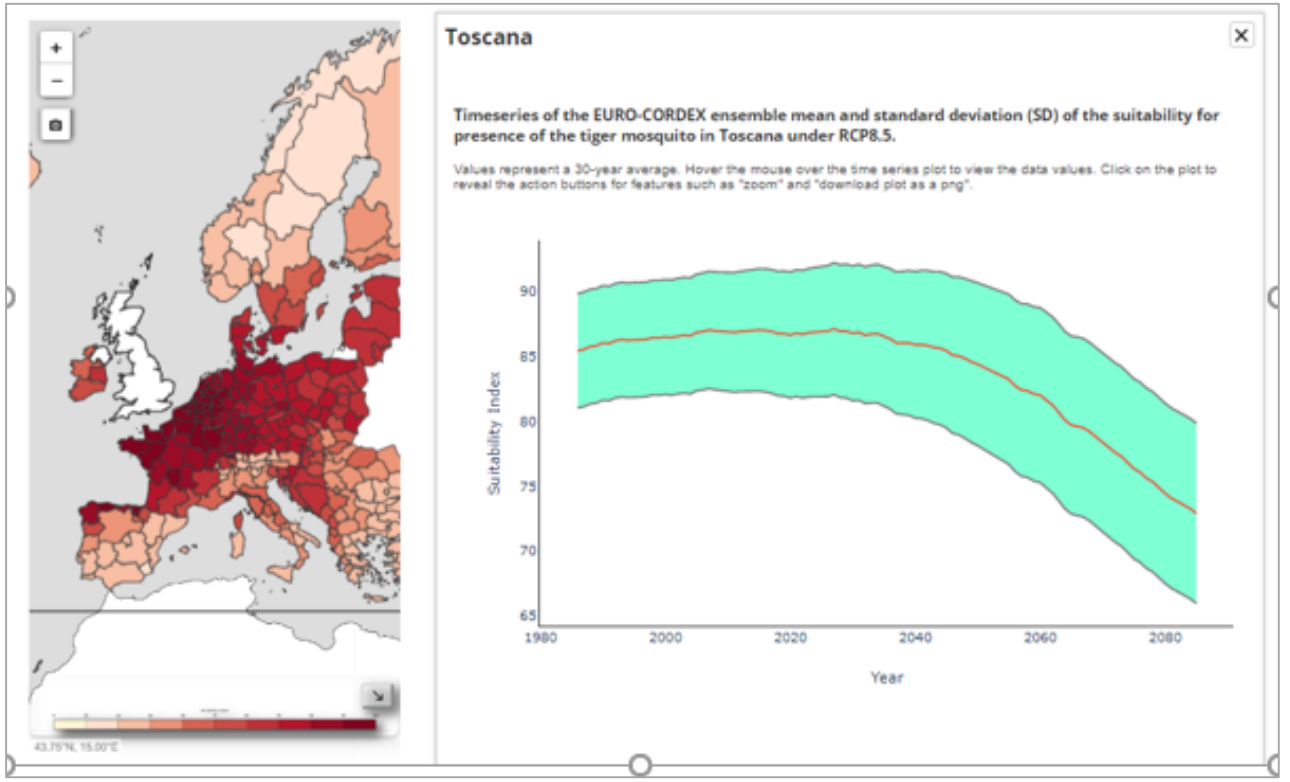
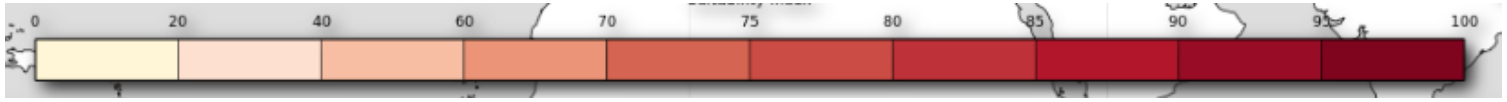


Regional level





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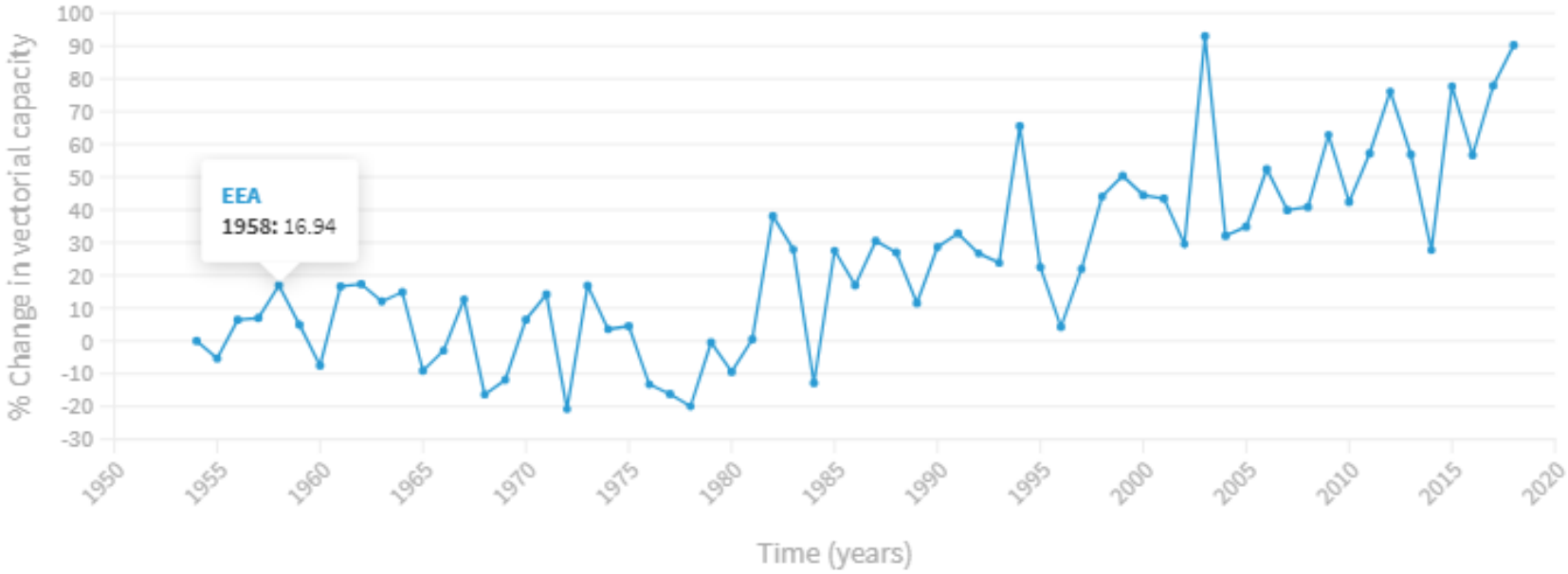
Emerging risks: climate-sensitive infectious diseases

Climate Suitability for the Transmission of Dengue in Europe

Change in vectorial capacity for the transmission of dengue from a 1950s baseline by Aedes albopictus over time in the EEA member and cooperating countries.

Vectorial capacity for the transmission of dengue from Aedes albopictus is calculated using a formula including: the biting rate of the mosquito; the probability of infection of the mosquito by the virus and transmission of the virus from the mosquito; and the daily survival probability of the mosquito, with each of these factors influenced by temperature. This calculation compares the vectorial capacity in 2013-2017 to the reference values for 1950-1954.



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LANCET COUNTDOWN: TRACKING PROGRESS ON HEALTH AND CLIMATE CHANGE

European Environment Agency

https://climate-adapt.eea.europa.eu/observatory/++aq++metadata/indicators/climate-suitability-for-infectious-disease-transmission-dengue?bs=0

Responses: national policies

Belgium

The sources used to compile the health and adaptation information for country profiles vary across countries. For EU Member States, information is based on their official adaptation reporting: 2021 adaptation reporting under the Regulation on the Governance of the Energy Union and Climate Action (see EU Adaptation Reporting, Climate-ADAPT Country Profiles) and 2019 adaptation reporting under the EU Greenhouse Gas Monitoring Mechanism Regulation. These two reporting mechanisms are together referred to here as "EU official reporting on adaptation". *Note: The relevant information has been copied from the EU official reporting on adaptation (submitted until July 21, 2021), without further elaborating the contents of the text. Some information, valid at the time of reporting, may no longer be valid today. Any necessary additions to the text are clearly highlighted.*

In addition, information collated in the Adaptation preparedness scoreboard country fiches (2018) and the WHO study on Public health and climate change adaptation policies in the European Union (2018) are presented. *Note: Some information, valid at the time of publication, may no longer be valid today.*

Information sources for non-EU member countries of the EEA are more limited.

Information from EU official reporting on adaptation. GovReg reporting (2021), MMR reporting (2019)

Health is addressed as a priority sector in the Belgian National Adaptation Plan (NAP). A lot of actions laid out in the NAP are transversal. Besides these actions, there are three health-specific actions:

- Measure 8 of the NAP: "Consideration of climate change impacts and adaptation needs under the future National Environmental Health Action Plan (NEHAP)"

An organisation was assigned to the task of carrying out the study of the impact of climate change on the healthcare system in Belgium. This will form the basis of, and provide a first insight into, the possible adaptation measures that can be taken to strengthen the resilience of the health system and avoid cascading effects. The study took place in early 2021 (January - June).

- Measure 9 of the NAP: "Make specialists in the field of healthcare aware of the effects of climate change (Health)"

The award was granted in 2018. The modules were delivered, and the thesis and launch of the test phases completed.

- Measure 11 of the NAP: "Coordination of preventive planning and management measures in case of climate change emergencies"

The Crisis Center is setting up a new structure to professionalize risk analysis by taking into account climate change on the different risk categories (man-made, natural, technological and health risks). Subsequently, a methodology will be developed to focus on the response to priority risks, both

Country profiles are based on reported data and existing overviews

European Environment Agency

Responses: implemented actions

12 Case studies | 17 Guidance | 15 Indicators | 20 Information portals | 115 Publicati rep | 55 | 10 | 1

What are you looking for?

Results 1 – 12 of 12 Display the

West Nile virus infection prevention and control measur
Case studies

West Nile virus (WNV) is a vector-borne pathogen, which can infect humans, mammals (interactions between pathogen, vector, vertebrate hosts, and the environment. Weathe changes in climatic conditions (temperature, precipitation, relative humidity, and winds) currently are not severely affected. WNV infection cases are recorded - on an annual ba infection outbreak was recorded in 2010, in the region of Central Maced...

Adapting to the impacts of heatwaves in a changing clim
Case studies

In the last century, heatwaves in Sweden occurred once every 20 years (the last being in (2003, 2007, 2010 and 2018) have been already experienced. The frequency of these ev will occur once every three to five years towards the end of the century. Heatwaves are in Stockholm County in east central Sweden, not far from the capital with a population prolonged high temperatures, which led among other things to proble...

Adapting to heat stress in Antwerp (Belgium) based on d
Case studies

The city of Antwerp, in order to better understand the problem of heat stress, commissi future temperatures and thermal comfort in the city. The research results indicate that climate change on the urban population as the amount of heatwave days in the city rais problem of heat stress in the city, adaptation measures at three different scales (city-wi scale, the installation of green roofs is made mandatory for new or r...

Social vulnerability to heatwaves – from assessment to implementation of adaptation measures in Košice and Trnava, Slovakia

Case studies

West Nile virus infection prevention and control measures in Greece

© ECDC

West Nile virus (WNV) is a vector-borne pathogen, which can infect humans, mammals (e.g., horses) and birds. Its transmission cycle is related to the interactions between pathogen, vector, vertebrate hosts, and the environment. Weather conditions have direct and indirect influences on this vector; changes in climatic conditions (temperature, precipitation, relative humidity, and winds) could lead to an increased spread of WNV also in areas that currently are not severely affected.

WNV infection cases are recorded - on an annual basis - in several European countries. In Greece, the first WNV infection outbreak was recorded in 2010, in the region of Central Macedonia (northern Greece). In the following years, the virus spread, with cases recorded in various regions. Further cases of WNV infection are expected in the future. In Greece, the surveillance of human WNV infection is annually implemented since 2010 (in the period May - November) by the Hellenic National Public Health Organization (NPHO). The goal is to promptly identify human cases of WNV infection and monitor their temporal and geographical distribution, in order to guide targeted prevention measures. In the long term, surveillance aims to quantify the disease burden, and identify seasonal, geographical, and demographic patterns, and populations at risk. In addition, enhanced surveillance of animal WNV infection (in horses and wild birds) is also implemented by the national animal health authorities.

Sharing of the existing knowledge

- Resource catalogue
  - Aimed at non-technical audience (policy makers)
  - Publications, tools, projects, case studies (implemented)
  - Climate-related risks to human health; vulnerability; exposure; responses in policy and practice

Information can be submitted to:
climate.adapt@eea.europa.eu

https://climate-adapt.eea.europa.eu/observatory

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