European Climate and Health Observatory

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9 June 2023

European Environment Agency

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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 about the environment
- An interface between science and policy

https://www.eea.europa.eu

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European Climate and Health Observatory

European Commission

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ecdc EUROPEAN CENTRE FOR DISEASE PREVENTION AND CONTROL

efsa European Food Safety Authority

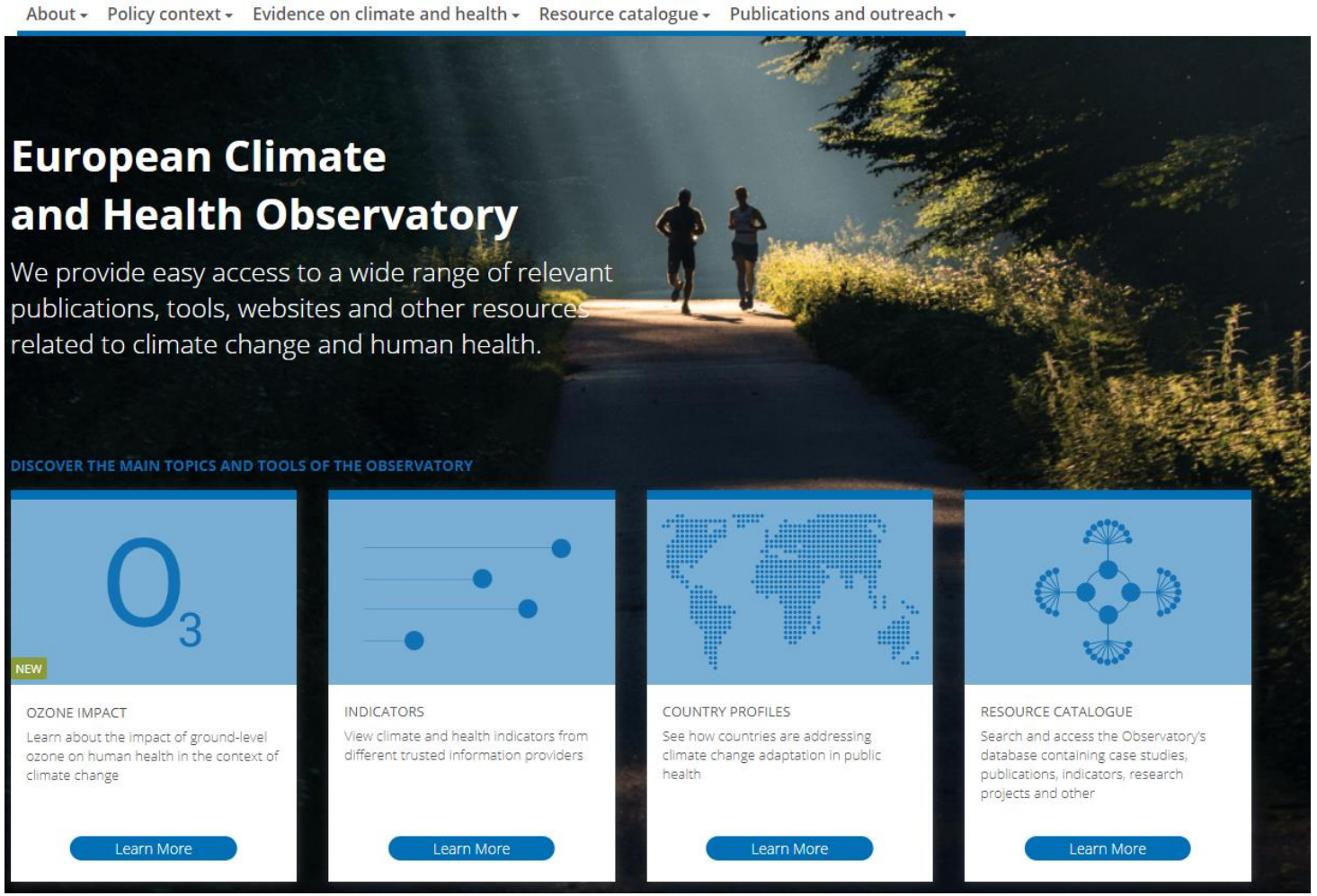
Copernicus Europe's eyes on Earth

World Health Organization REGIONAL OFFICE FOR Europe

LANCET COUNTDOWN: HEALTH AND CLIMATE CHANGE IN EUROPE

ASPHER The Association of Schools of Public Health in the European Region

Public Health Institutes of the World IANPHI



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

Why is the Observatory needed?

- 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.*

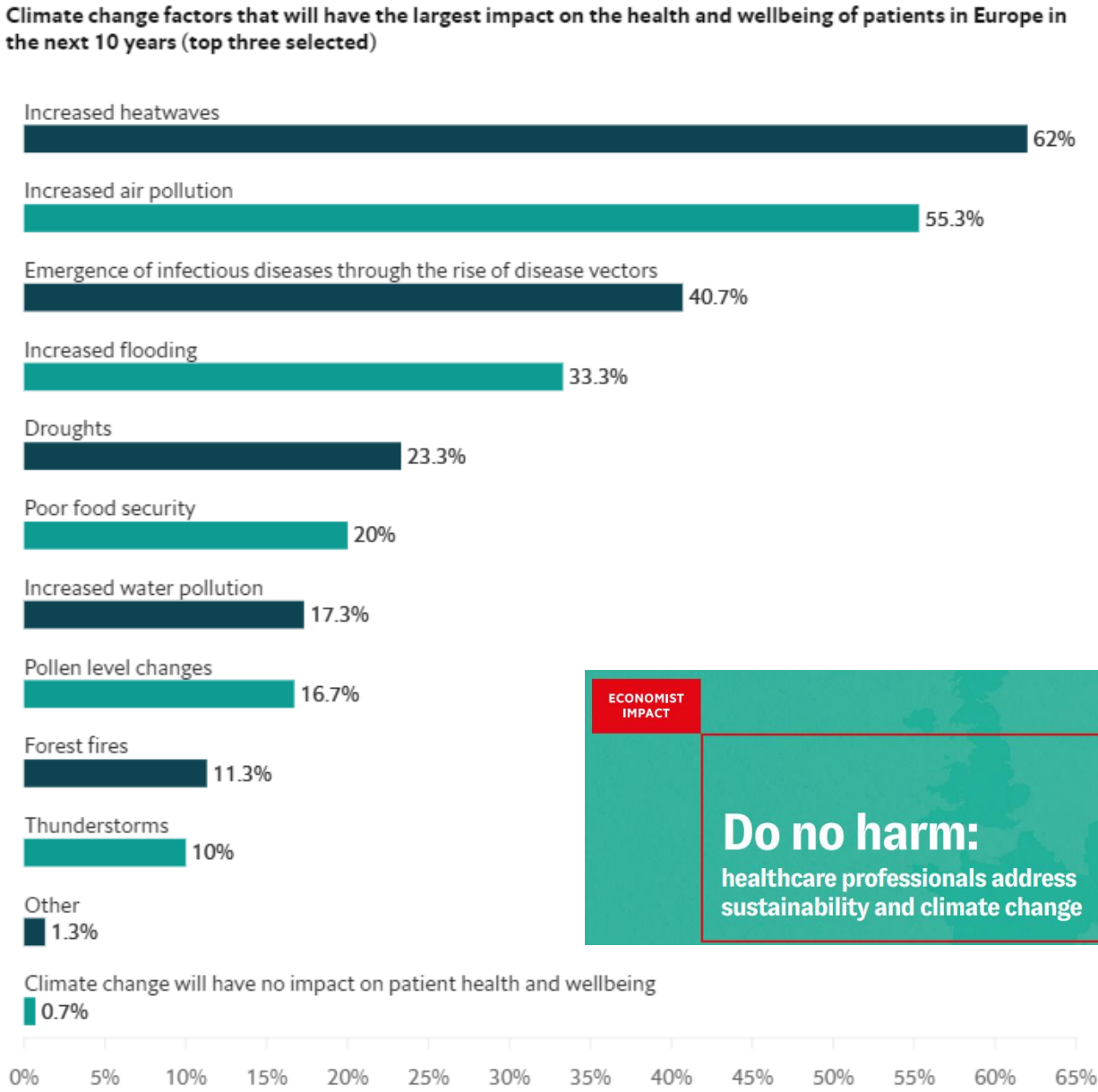
- EU Climate Law 2021
  - *the Commission has launched a European climate and health observatory (…) **to better understand, anticipate and minimise the health threats caused by climate change.***

The strategic objectives of the Observatory

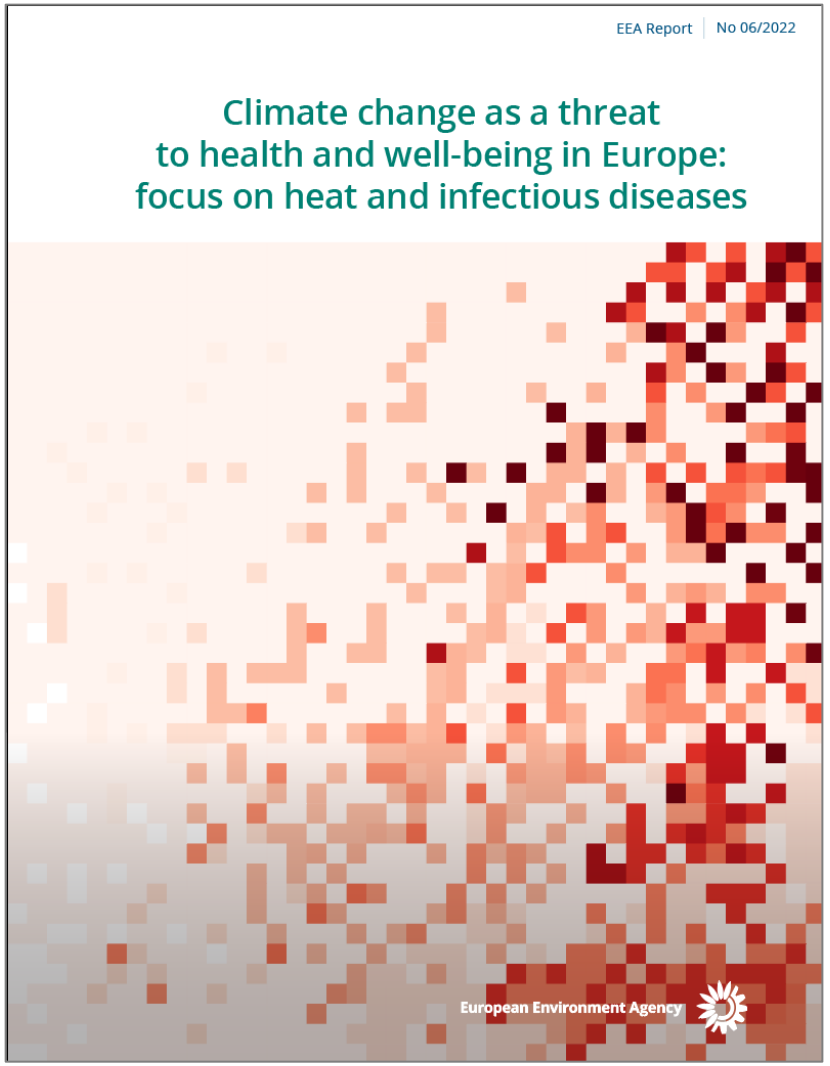
1. Observatory users can monitor key climate-related health risks, impacts and adaptive responses through robust indicators
2. National and sub-national health policies and systems can integrate adaptation more systematically and consistently
3. Public authorities have greater capacity to anticipate and prevent climate-related threats to health in a timely manner
4. The health community in Europe is climate-literate and better involved into adaptation decision-making
5. Evidence-based efficient, effective and inclusive adaptation solutions and public health and healthcare interventions are widely known

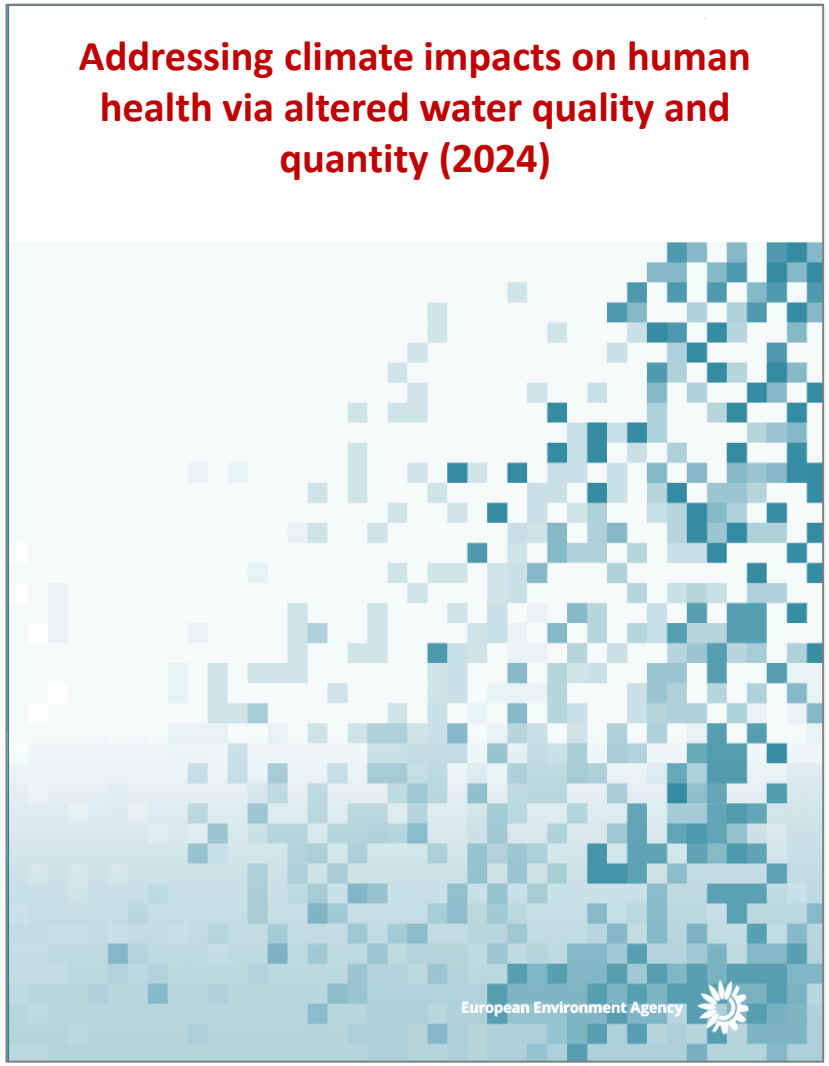
The Observatory workplans

- Direction decided with partners, including Eionet input
- **Workplan 2021-22**: heat and infectious diseases
- **Workplan 2023-24**: Water, climate change and health; climate and health literacy
- Other topics of relevance and interest to the partners



Examples of outputs, content and activities





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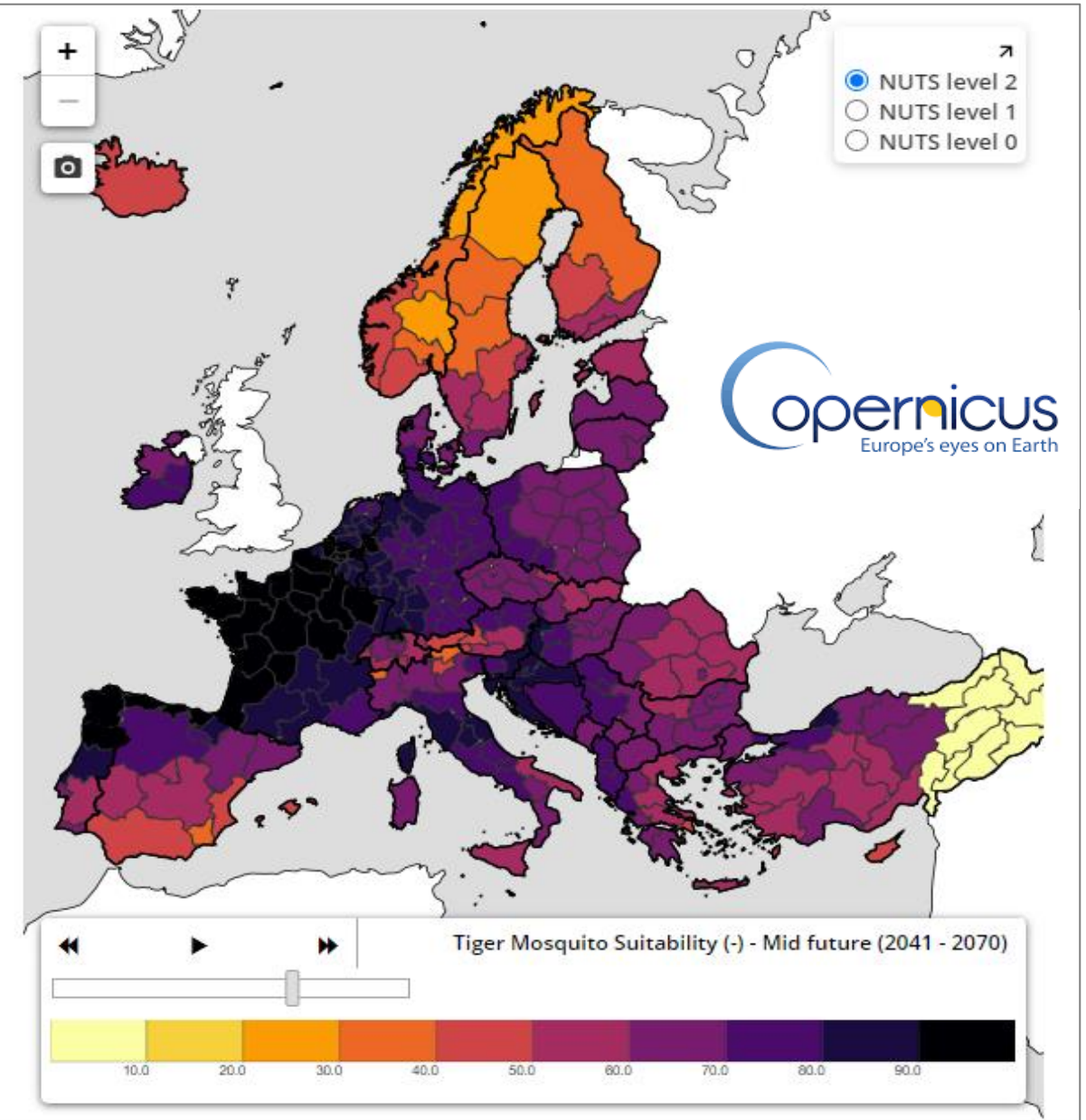
Indicators based on climatic data



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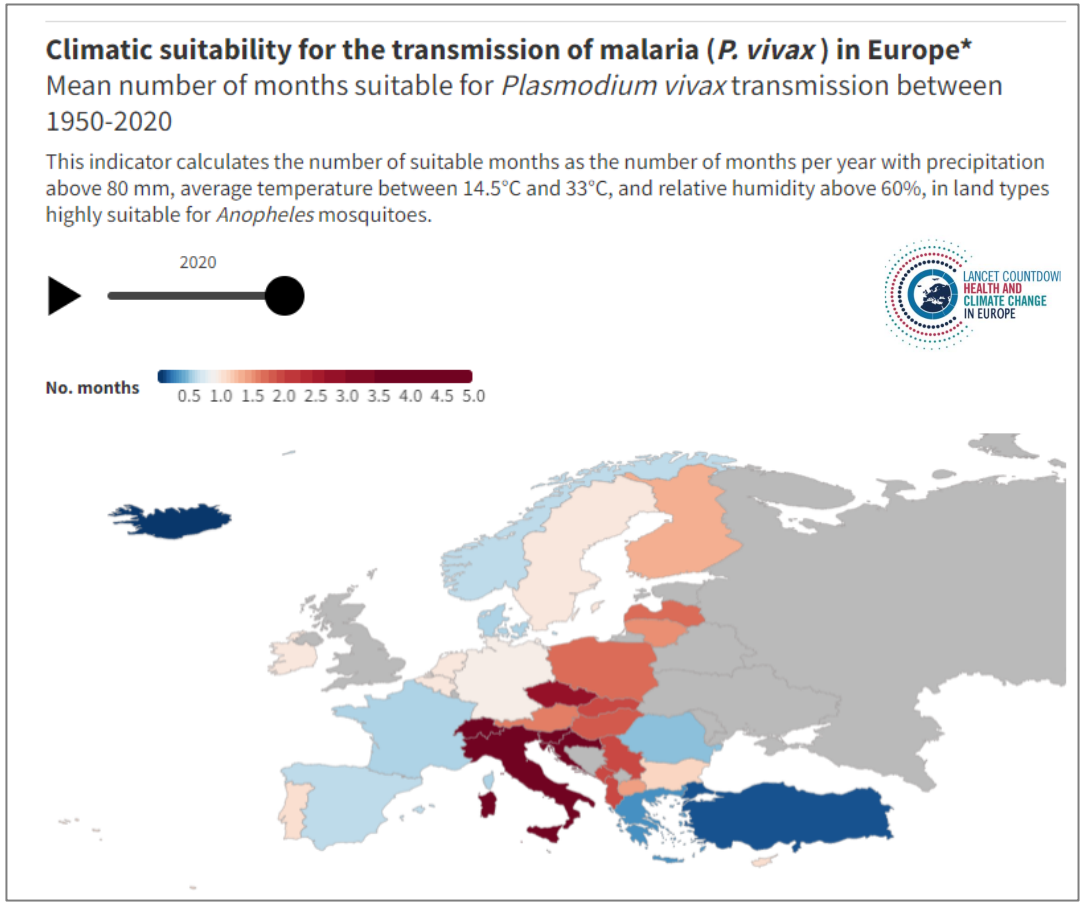

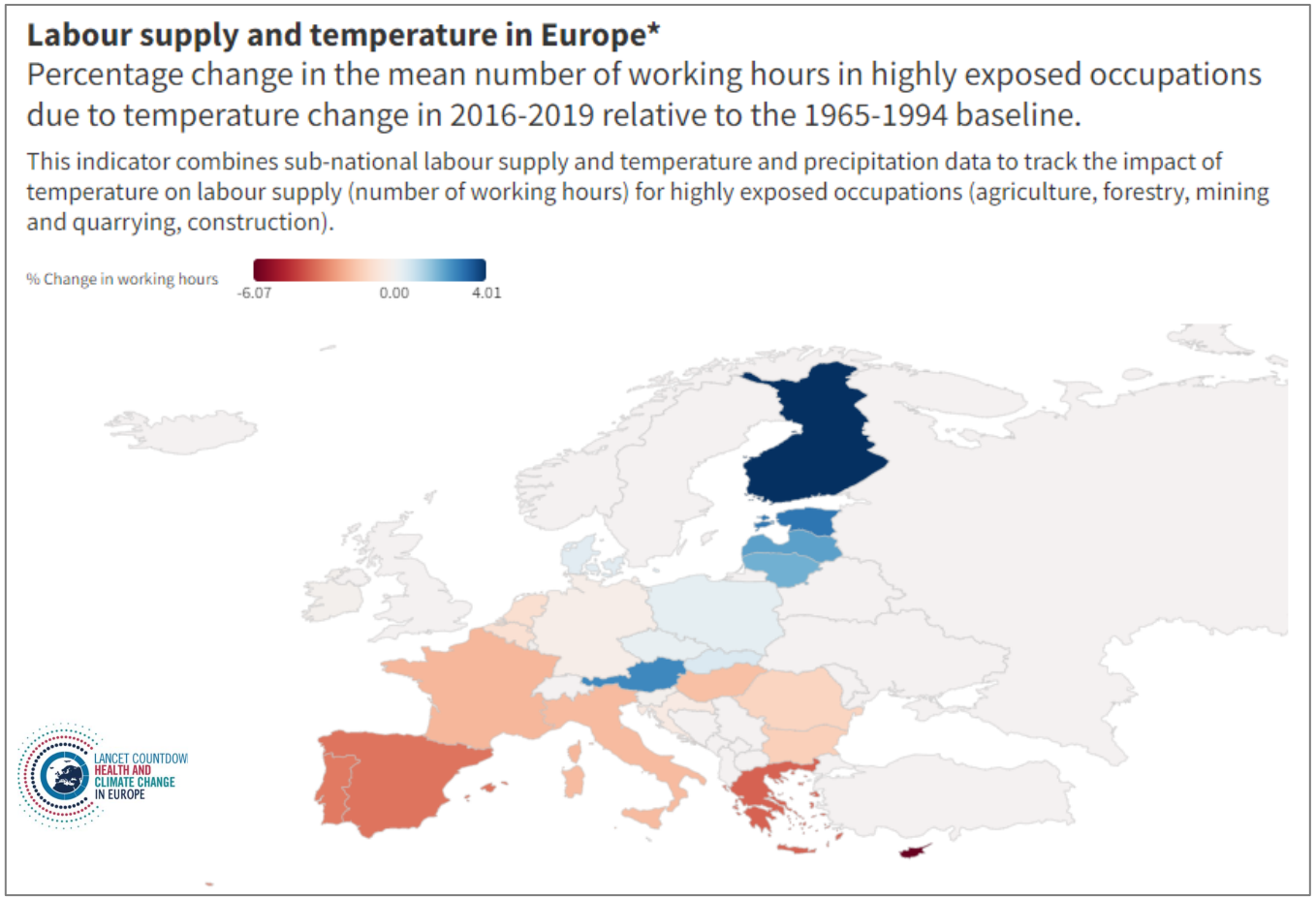

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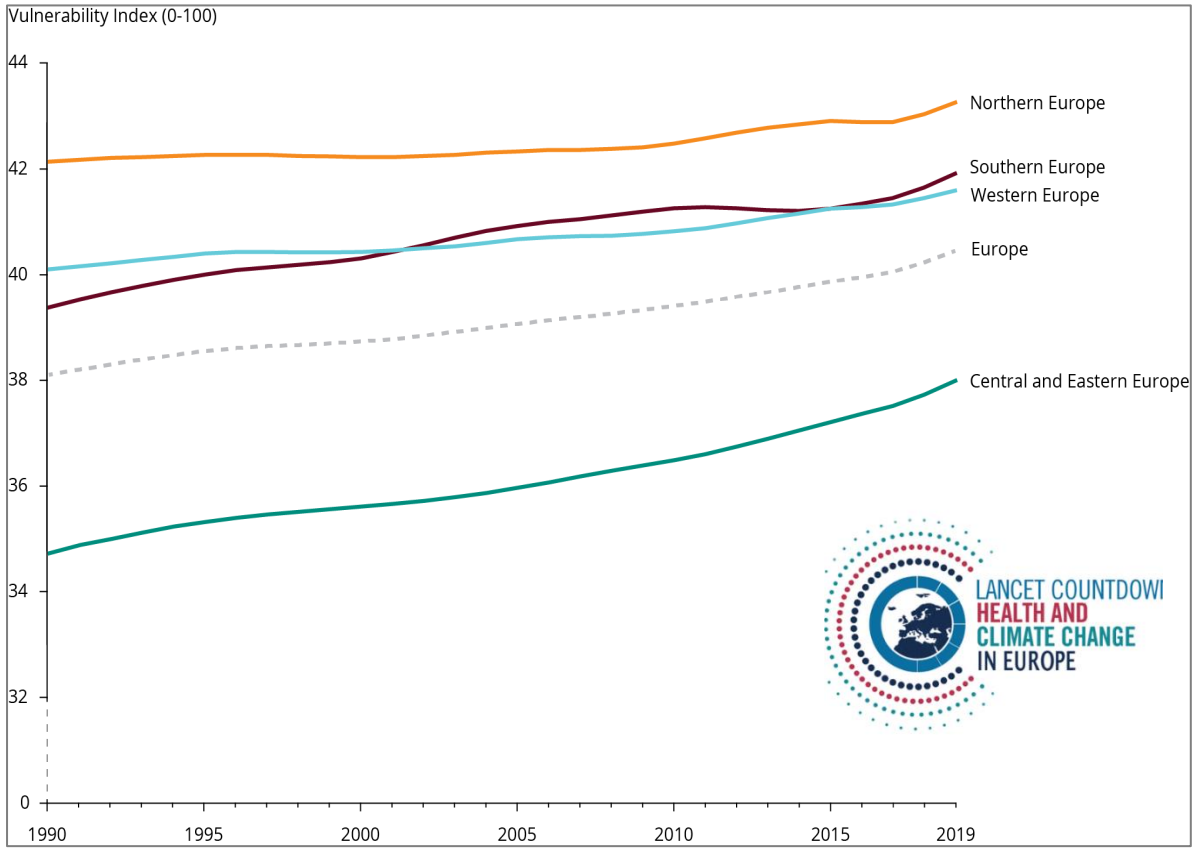
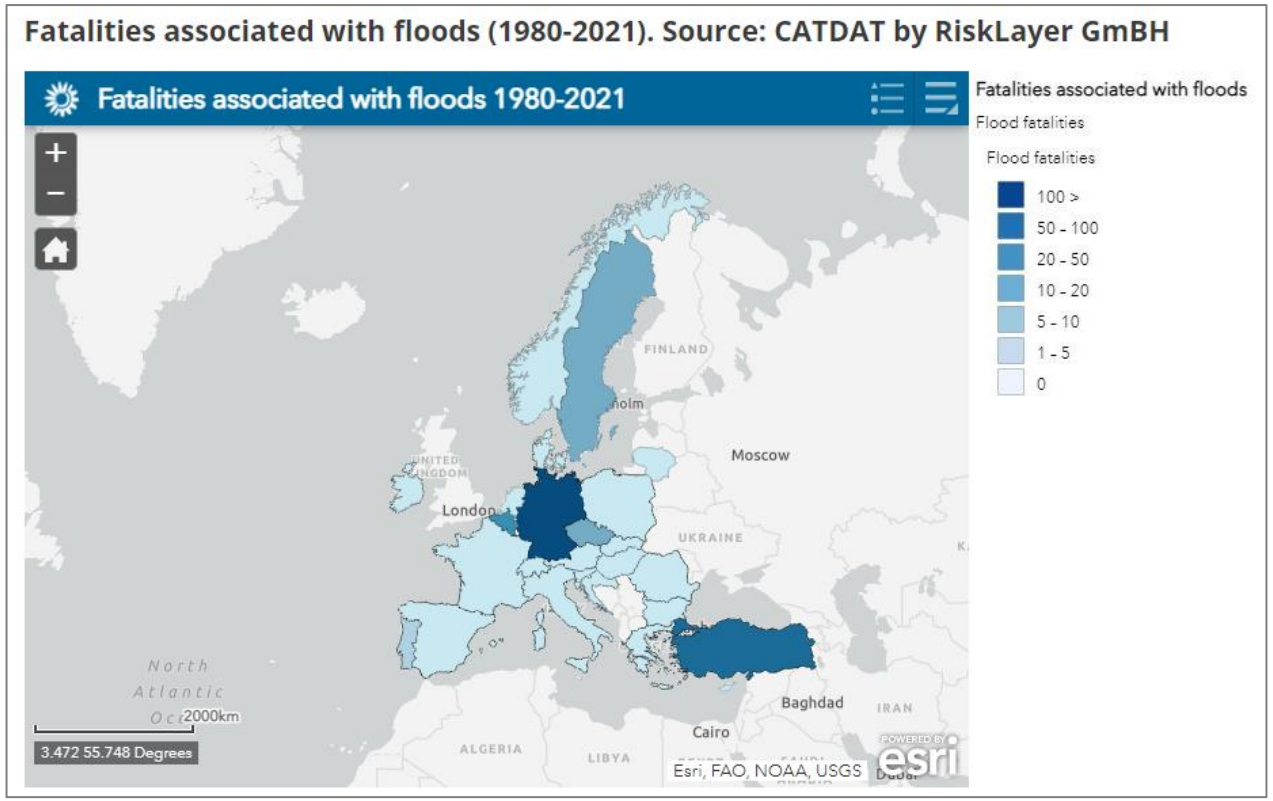
Other indicators - examples





Information derived from EO data + other datasets

Percentage of educational facilities within UHI > 2 °C in 100 European cities

● > 80 ● 60 - 80 ● 40 - 60 ● 20 - 40 ● < 20

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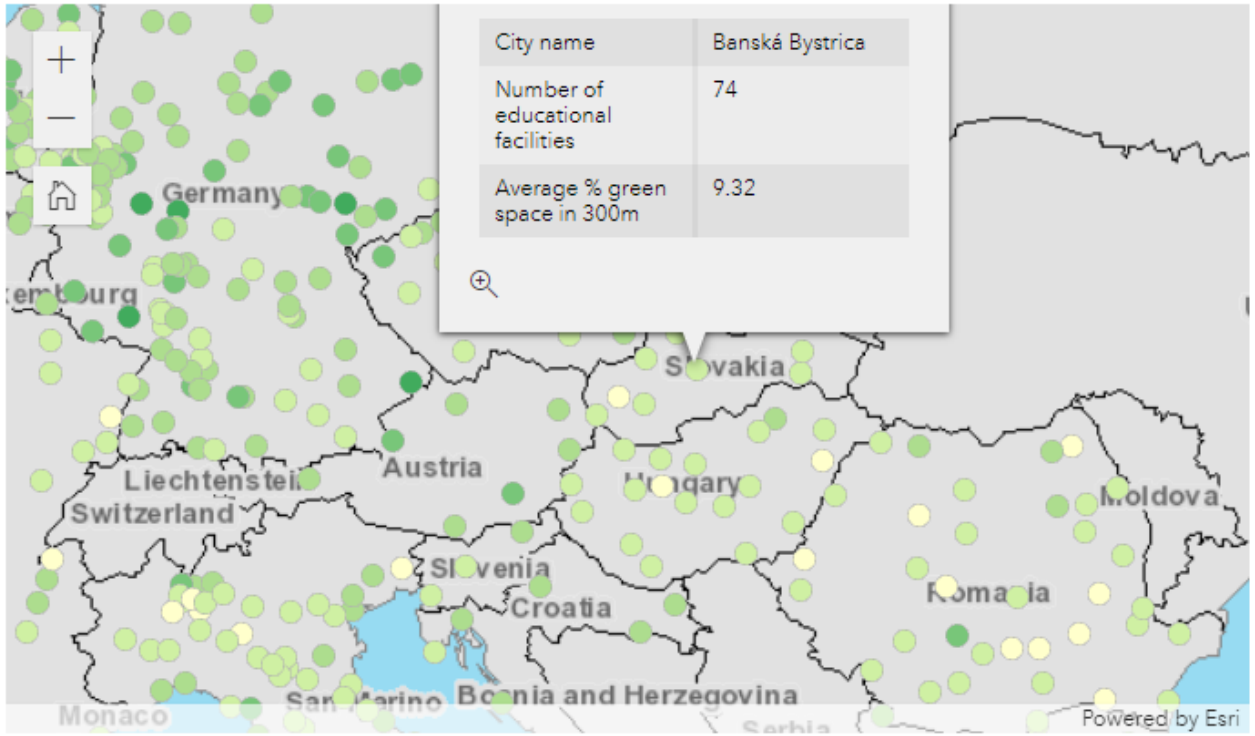
Information derived from EO data + other datasets

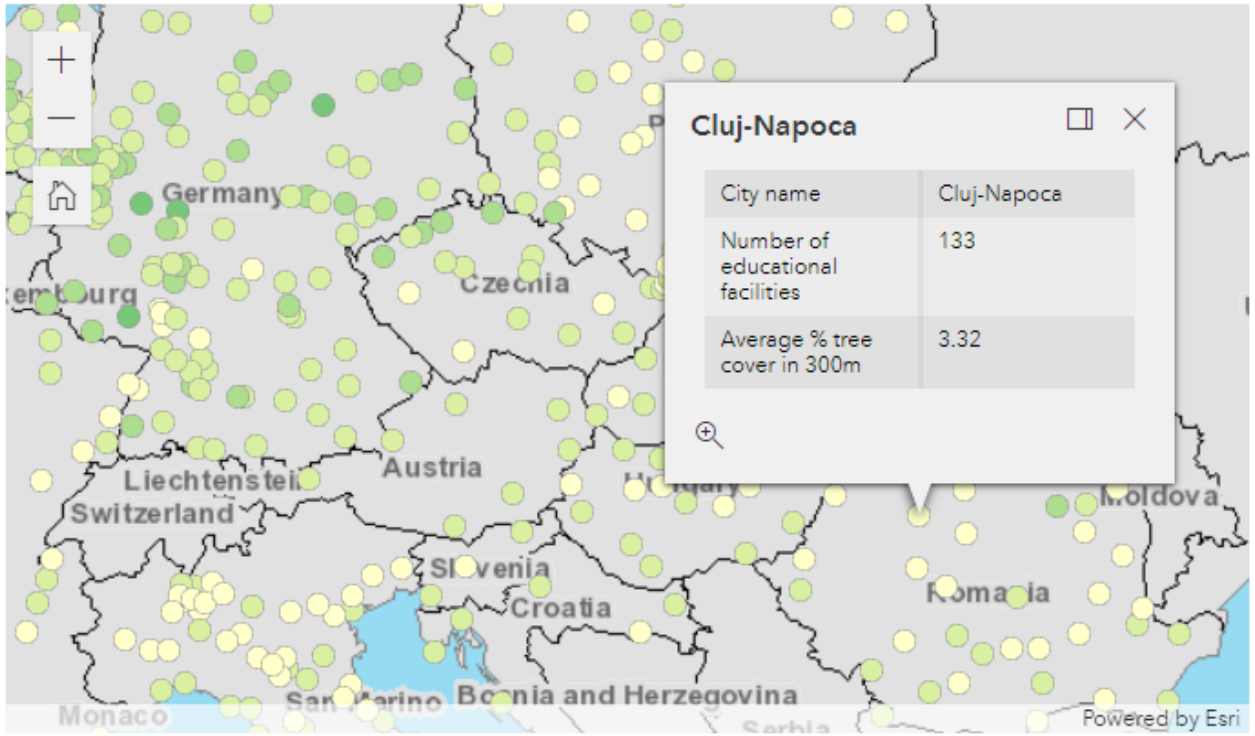
Average percentage of urban green space within 300m distance from educational facilities in European cities



Average % green space in 300m

> 40 | 30 - 40 | 20 - 30 | 15 - 20 | 10 - 15 | 5 - 10 | ≤ 5

Average percentage of urban tree cover within 300m distance from educational facilities in European cities



Average % tree cover in 300m

20 - 30 | 15 - 20 | 10 - 15 | 5 - 10 | ≤ 5

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Short-term forecasts

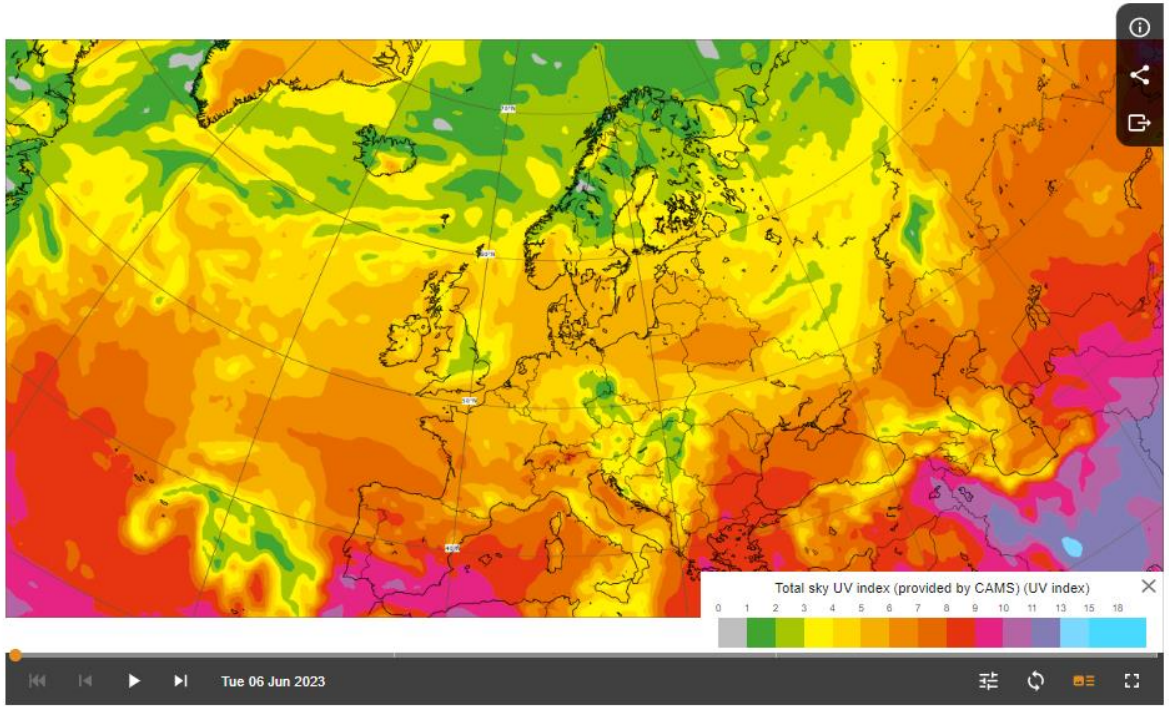
Four-day forecast of UV Index from Copernicus Atmosphere Monitoring Service (CAMS)

The viewer provides the maximum daily value of clear-sky and total-sky UV Index (based on satellite data processed by CAMS and utilising WHO methodology) as an indication of the amount of the UV radiation across Europe forecasted for the next four days.

Use this icon to select the date, UV index and region of interest

Click on this icon to view the map in full screen mode

By clicking on the map, the UV Index maximum values for a given location can be viewed, accompanied by a chart showing changes in hourly UV Index values over the forecast period.



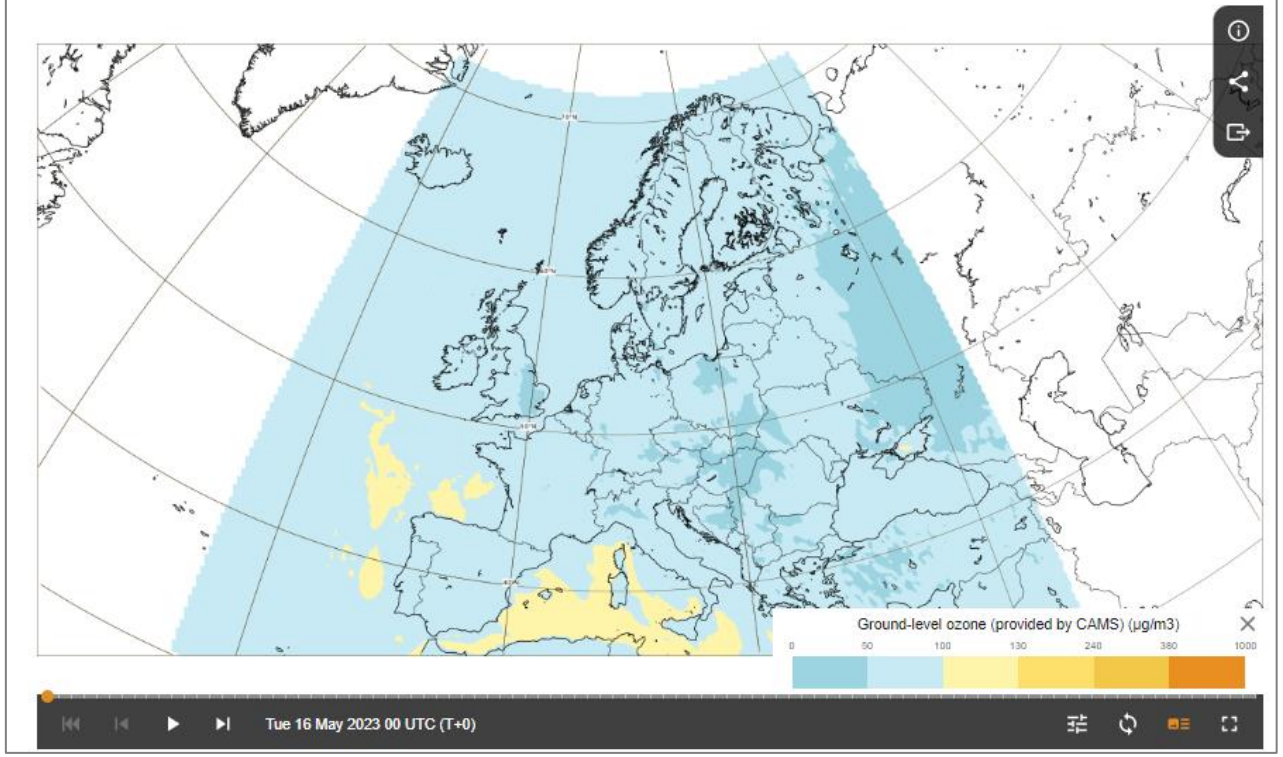
Four-day forecast of ground-level ozone from Copernicus Atmosphere Monitoring Service (CAMS)

The viewer provides the forecasted hourly concentrations of ground-level ozone (based on satellite data processed by CAMS).

Use this icon to select the date and region of interest

Click on this icon to view the map in full screen mode

By clicking on the map, a chart showing the changes in hourly ground-level ozone concentrations over the forecast period in a given location can be viewed.



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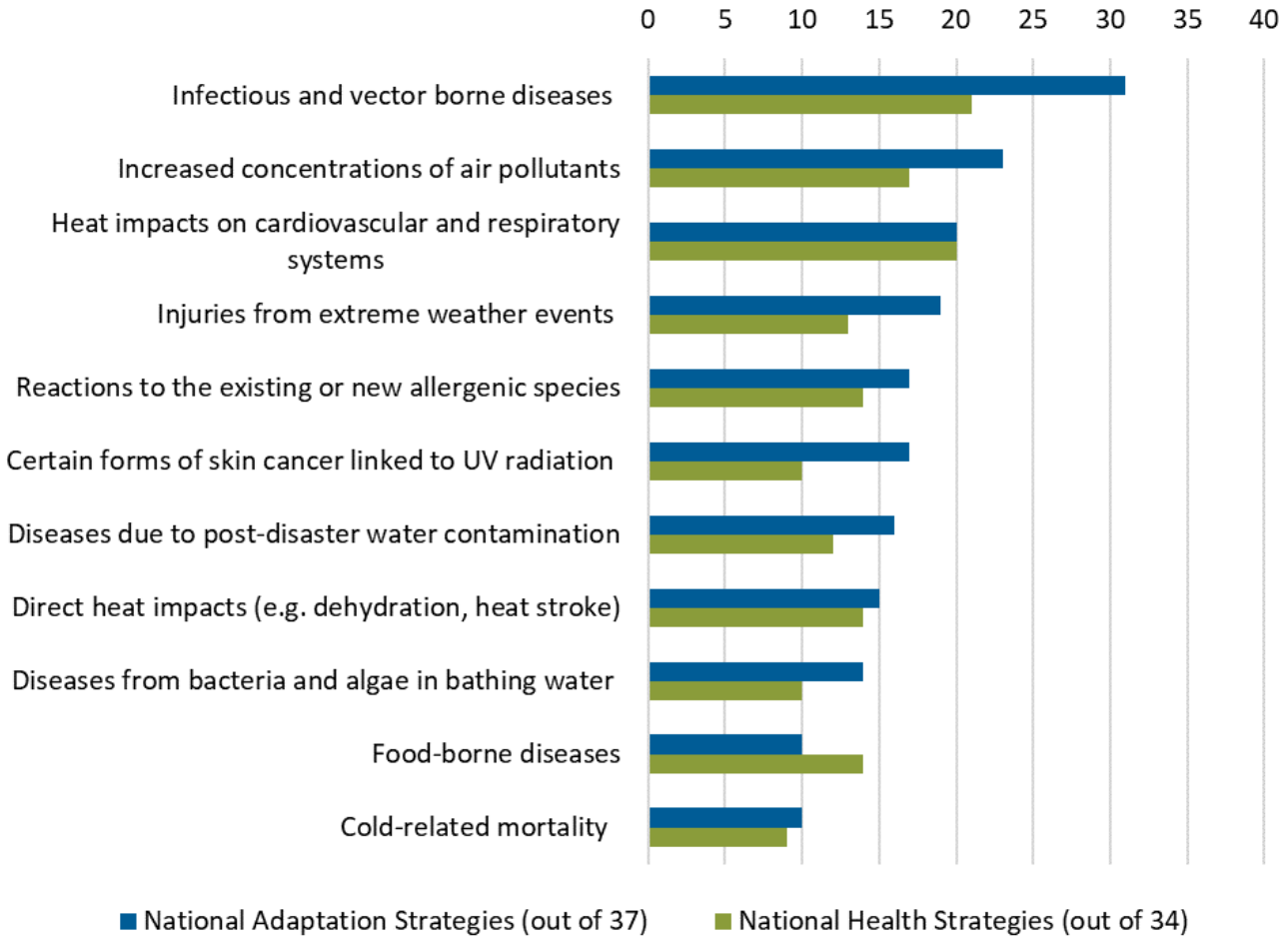
Solutions in policy and practice

2022 national adaptation policy / national health strategy analysis



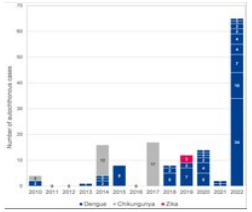
Protecting outdoor agricultural workers from extreme heat in Puglia, southern Italy

© Sabina Baseggio

Average annual temperature in Italy has increased by 1.1°C since 1880, and with that the exposure of people to heatwaves. High temperatures create uncomfortable or even dangerous working conditions for health that may reduce both working hours (labour supply) and workers' performance during these working hours (labour productivity; Dasgupta et al., 2021). The number of occupational injuries related to exposure to extreme temperatures has significantly increased in Italy. Due to future warming, the southern Italian regions are projected to suffer the highest declines in labour productivity in Europe (Schleypen et al., 2020).

The region of Puglia experienced prolonged high temperatures during June and July 2021, reaching as high as 40°C is some places. Along with declining productivity, the climatic conditions

Reducing the risk of local dengue transmission in France

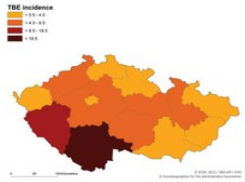


© Amandine Cochet

The risk of local outbreaks of dengue is growing in many areas across Europe due to increasing urbanisation and globalisation. In addition, the global warming increases climatic suitability in Europe for *Aedes albopictus,* an invasive mosquito species acting as a vector for the dengue virus. In France, *Aedes albopictus* is already widespread. In 2022, its presence was detected in the majority of the French mainland administrative districts (*départements*).

Dengue is a mandatory notifiable disease in France since 2006. This allows monitoring the number of cases and outbreak events. The number of autochthonous transmissions of dengue has been increasing since the first detection of autochthonous cases in 2010, and achieved a record high in 2022, raising a public health concern. To prevent the risk of transmission of dengue (as well as other diseases carried by *Aedes albopictus*, such as chikungunya and Zika), enhanced surveillance is implemented in the administrative districts where *Aedes albopictus* is established and when it is active (between May and November). This includes awareness-raising

Tick-borne encephalitis (TBE) surveillance in Czechia



© ECDC 2012

Being endemic in 27 European countries, tick-borne encephalitis (TBE) is the most widespread tick-borne viral disease in Europe. Every year, it afflicts thousands of people with a neuroinvasive illness (ECDC, 2012). Over the last decades, the reported incidence of TBE increased and the disease spread to new areas. Several aspects of global change contribute to this evolution, notably climatic changes that facilitate endemic areas to shift northwards and to higher altitudes. But besides, also modified habitat structure and wildlife community composition, and socio-economic changes affecting demography and health services availability contribute to the spread of the disease.

Czechia has one of the highest incidences of TBE in Europe. Changing epidemiological conditions have led the country to implement a national surveillance system to better prevent health risks. While TBE diagnosing and reporting has a longer history in Czechia, the country now operates a comprehensive national surveillance system, combining early warning, disease reporting and prevention.

Managing mosquito borne disease through EYWA: a European tool to support public health authorities in preventing epidemics

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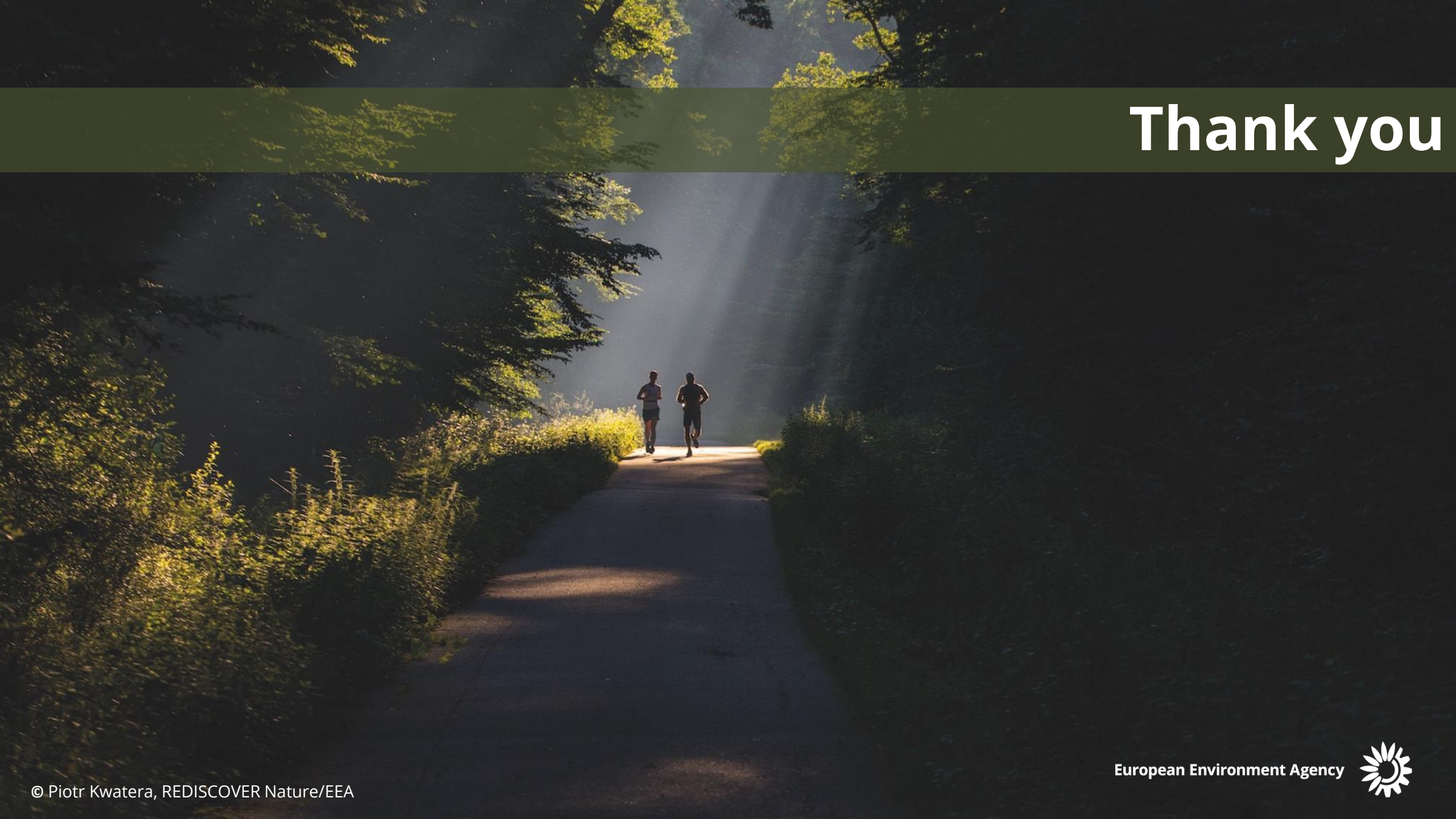
(Case study focussed on the use of a tool)

Climate change, globalisation and other drivers are altering ecological conditions for mosquitoes and some areas are becoming more suitable for new species, including various infectious diseases carried by them. Globally, Mosquito-Borne Diseases (MBDs) infect almost 700 million people every year and are present in over 100 countries, causing millions of deaths annually.

Thank you



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