European Environment Agency

- An independent EU agency
- Analysing, assessing and providing information about the environment
- An interface between science and policy

https://www.eea.europa.eu
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

![Percentage of climate change factors affecting health and wellbeing in Europe](chart.png)
Examples of outputs, content and activities

Climate change as a threat to health and well-being in Europe: focus on heat and infectious diseases

Addressing climate impacts on human health via altered water quality and quantity (2024)
Indicators based on climatic data
Indicators based on climatic data

Climatic suitability for the transmission of malaria (P. vivax) in Europe*
Mean number of months suitable for Plasmodium vivax transmission between 1950-2020
This indicator calculates the number of suitable months as the number of months per year with precipitation above 80 mm, average temperature between 14.5°C and 33°C, and relative humidity above 60%, in land types highly suitable for Anopheles mosquitoes.

Labour supply and temperature in Europe*
Percentage change in the mean number of working hours in highly exposed occupations due to temperature change in 2016-2019 relative to the 1965-1994 baseline.
This indicator combines sub-national labour supply and temperature and precipitation data to track the impact of temperature on labour supply (number of working hours) for highly exposed occupations (agriculture, forestry, mining and quarrying, construction).
Other indicators - examples
Information derived from EO data + other datasets

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

- ≥26
- 21-25
- 16-20
- 11-15
- 6-10
- <5

Cluj-Napoca

- City name: Cluj-Napoca
- Number of educational facilities: 133
- Average % tree cover in 300m: 3.32
Short-term forecasts

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

The viewer provides the maximum daily value of clear-day 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.

- Click on 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.

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**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).

- Click on this icon to select the date and regions 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.
Solutions in policy and practice

2022 national adaptation policy / national health strategy analysis

- Infectious and vector borne diseases
- Increased concentrations of air pollutants
- Heat impacts on cardiovascular and respiratory systems
- Injuries from extreme weather events
- Reactions to the existing or new allergenic species
- Certain forms of skin cancer linked to UV radiation
- Diseases due to post-disaster water contamination
- Direct heat impacts (e.g. dehydration, heat stroke)
- Diseases from bacteria and algae in bathing water
- Food-borne diseases
- Cold-related mortality

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

Reducing the risk of local dengue transmission in France

Tick-borne encephalitis (TBE) surveillance in Czechia

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