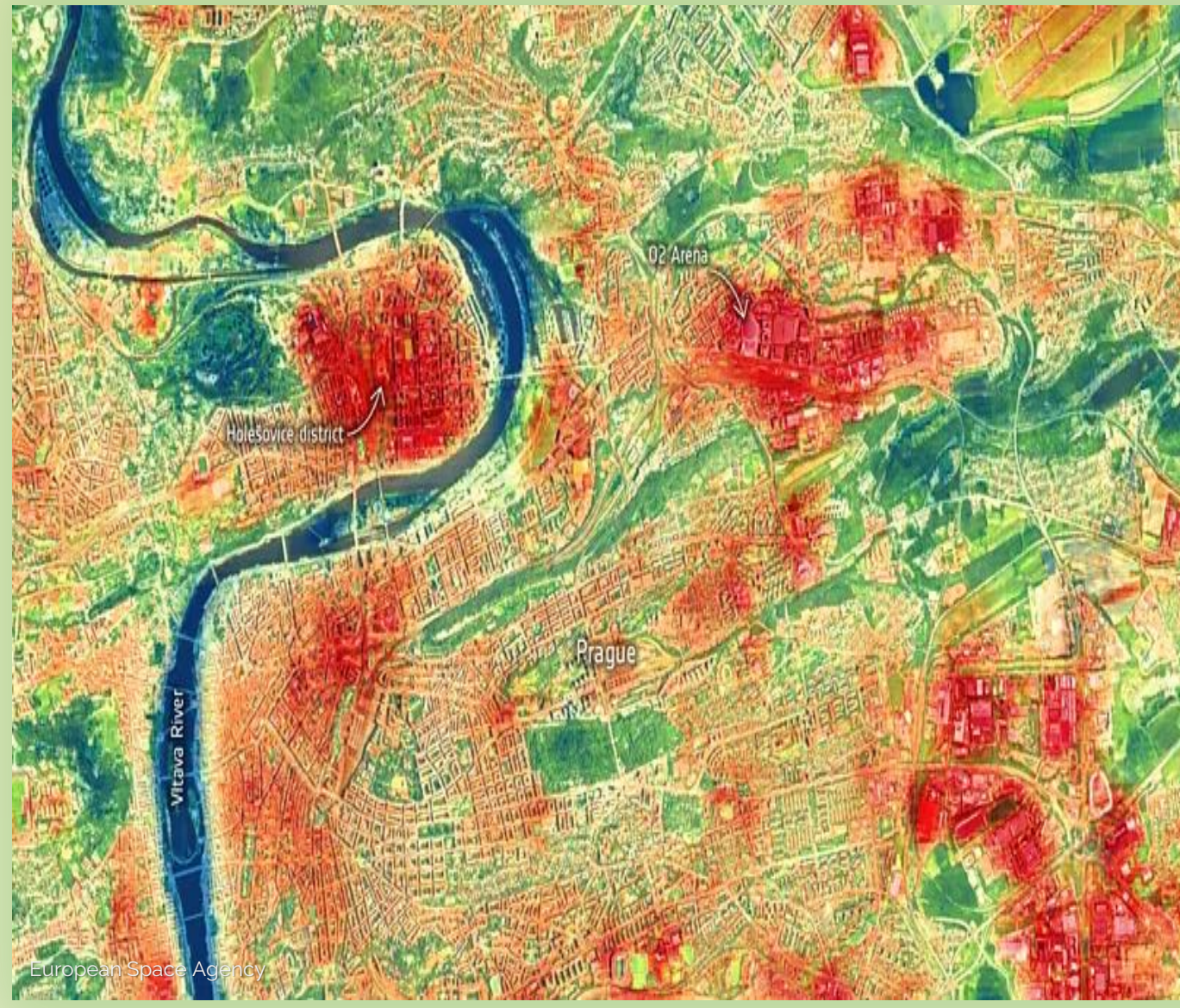


## TOOLS



### Satellite Images Show Urban Cooling

Satellite images reveal that green spaces, white roads, and water features are crucial in cooling cities during intense heatwaves. In Prague, blue ribbons from the Vltava River and green patches from parks offer relief from extreme temperatures, demonstrating how urban heat maps capture the cooling effects of these features. This data helps city planners identify hotspots and implement cooling strategies, crucial as heatwaves become more frequent and deadly due to climate change.

### URBCLIM – Urban Climate Modelling (VITO, Belgium)

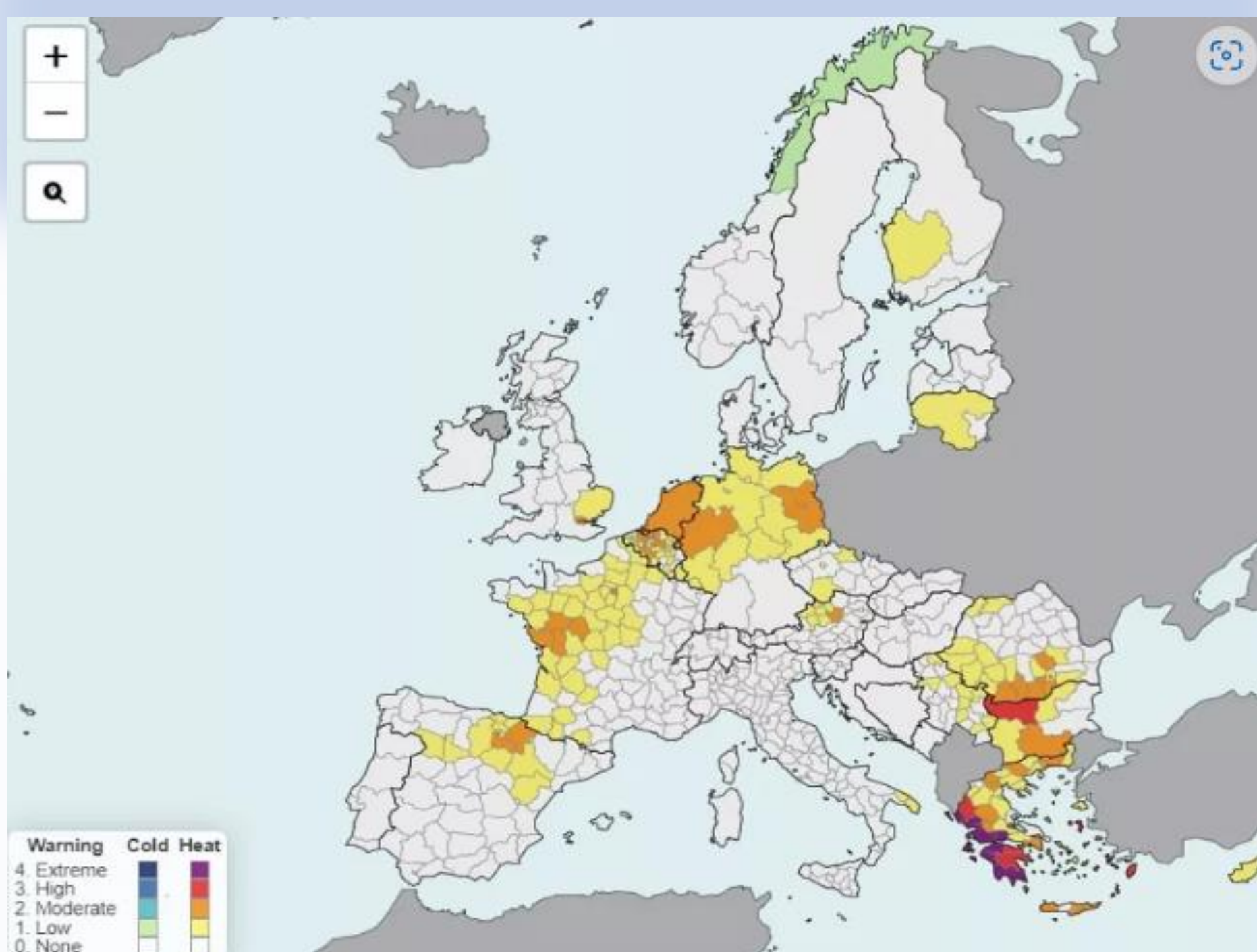
The UrbClim model, developed by VITO, uniquely simulates long periods at a high spatial resolution (~100 m). Its key applications include assessing the presence and intensity of urban heat islands and heat stress, projecting future climate impacts on cities, and evaluating adaptation scenarios to understand how green/blue measures can affect urban climates.

### UHeat

Arup's UHeat, a digital tool developed with UCL and the University of Reading, uses satellite imagery and climate data to analyze urban heat islands. It identifies heat-causing structures and suggests nature-based planning solutions to reduce temperatures, aiding cities in tackling the climate crisis effectively.

### Forecaster. Health – Heat and Cold Mortality Maps

Created by researchers at the Barcelona Institute for Global Health (ISGlobal), Forecaster. Health draws on the mortality database of the EU-funded research project EARLY-ADAPT, which currently holds data for 580 regions in 31 European countries. The tool displays a map showing warnings for the 580 regions with colour codes indicating four levels of heat- and cold-related mortality risk: low, moderate, high and extreme. Eventually, the plan is to develop the tool into a multi-hazard platform for Europe and the rest of the world.



The Forecaster.health map for 26 June, unfiltered by age or sex, shows that people in western Greece are most at risk from heat today. - ISGlobal

### European State of the Climate

Copernicus Climate Change Services and World Meteorological Organization produced an interactive map that shows key climate events reported in the European State of the Climate 2023. The State of the Climate in Europe 2023 offers a regional perspective of climate variability and its impacts on the European continent.



### Arsht-Rock Heat Action Platform

The Heat Action Platform is an interactive tool for city officials, practitioners, and financial institutions, providing guidance on mitigating extreme heat's human and economic impacts. The Assess section includes baseline assessments and identifying vulnerable communities. The Plan section focuses on education strategies, adaptation solutions, and funding projects. The Implement section guides creating Heat Action Plans, implementation, scaling, and monitoring and evaluation, offering both existing resources and custom solutions for regional or municipal levels.

### Thermal Comfort Tool

Developed by the Center for the Built Environment, Berkeley, University of California, this free, open-source, and user-friendly online tool can assist researchers, building practitioners, and policymakers in better understanding the conditions under which electric fans can be used to cool people safely.

### HeatRisk: NWS's New Tool for Forecasting Heat-Related Risks

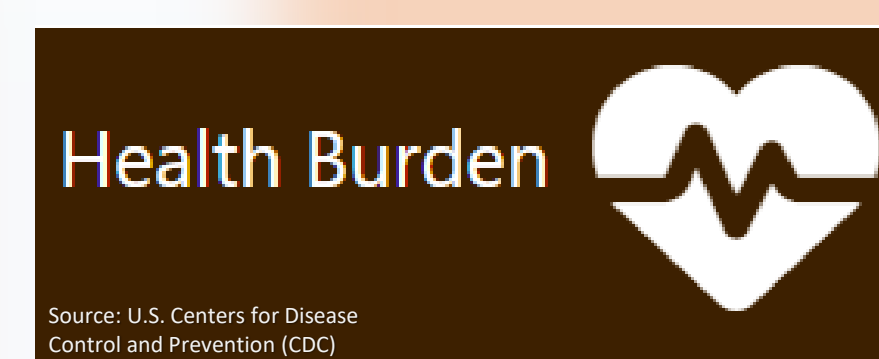
The National Weather Service's HeatRisk is an experimental tool designed to forecast heat-related risks over a 24-hour period using a colour-numeric index. It identifies at-risk groups and provides protection recommendations, utilizing high-resolution national forecast data to calculate daily HeatRisk values up to seven days ahead. HeatRisk helps communities, especially vulnerable populations, prepare for heat events by offering tailored information. Available nationwide since 2024, it complements other heat assessment tools like the Heat Index and Wet Bulb Globe Temperature.

### Heat & Health Tracker

The US Centers for Disease Control and Prevention (CDC) Heat & Health Tracker provides data on extreme heat's health impacts, featuring interactive maps and graphs. It covers the Health Burden (rate of heat-related illness ED visits), Heat Exposure (Heat Risk maps), and the Heat and Health Index (identifying vulnerable communities). This tool aids public health planning and community awareness, helping mitigate heat wave risks.

### Heat Resilient Cities Benefits Tool (C40 Knowledge Hub)

This Excel-based tool helps city planners quantify the health, economic, and environmental benefits of urban heat adaptation actions. Users can assess the impact of parks, water bodies, and cool surfaces, and scale results city-wide. It models reduced surface temperatures, lowering heat-related hospital admissions and economic costs.



See daily and historic rates of heat-related illness for workers and the public



Explore the 7-day national heat risk forecast, as well as historic trends, and



Identify communities where people are most likely to feel the impacts of heat