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European Region

# Preventing health effects from heat in the WHO European Region

Bonn, Germany
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# HEALTH THREATENING HIGH TEMPERATURES

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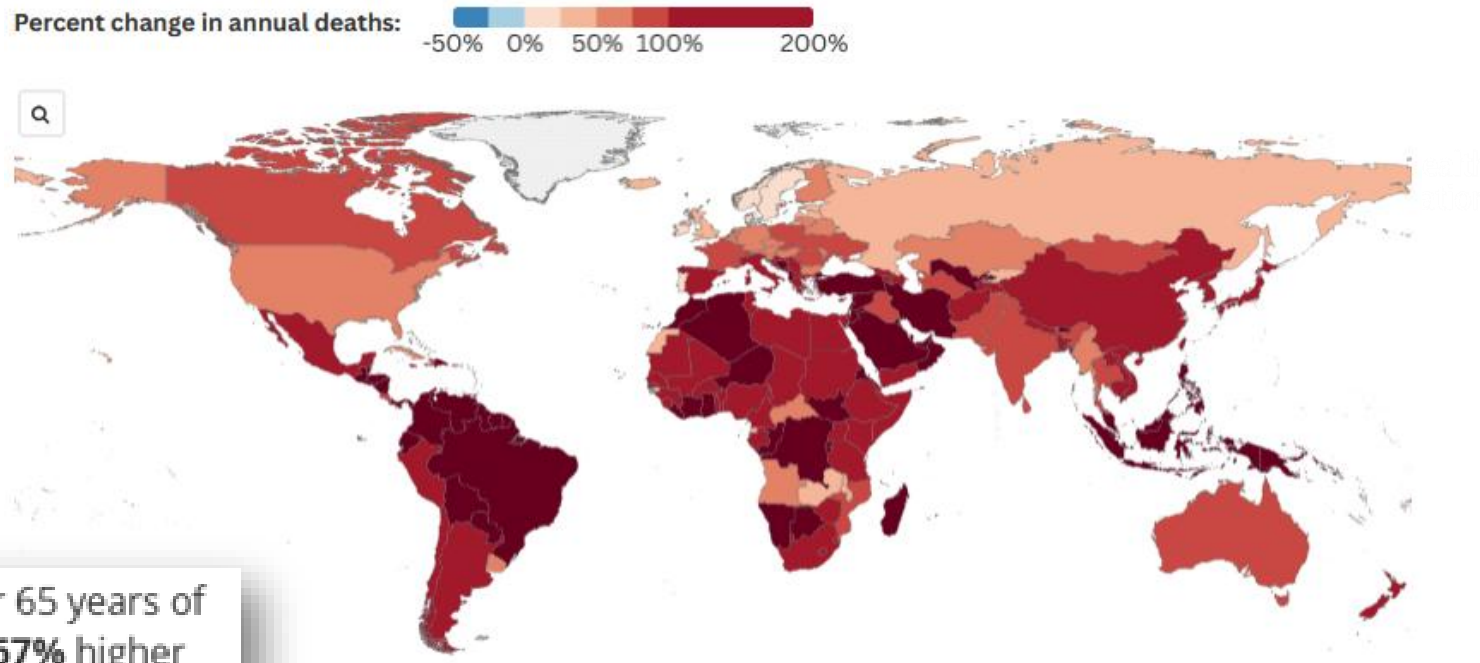
## The 2024 Global Report of the Lancet Countdown

**The latest Lancet Countdown report reveals the health threats of climate change have reached record-breaking levels.**




In 2023, heat-related deaths of people over 65 years of age reached the highest level recorded, **167%** higher than in 1990–99

Please reference the 2024 Report of the Lancet Countdown if using this data •
For a full description of the indicator, see the 2024 report of the Lancet Countdown at lancetcountdown.org

LANCET COUNTDOWN: TRACKING PROGRESS ON HEALTH AND CLIMATE CHANGE

# HIGHER, FURTHER, HOTTER

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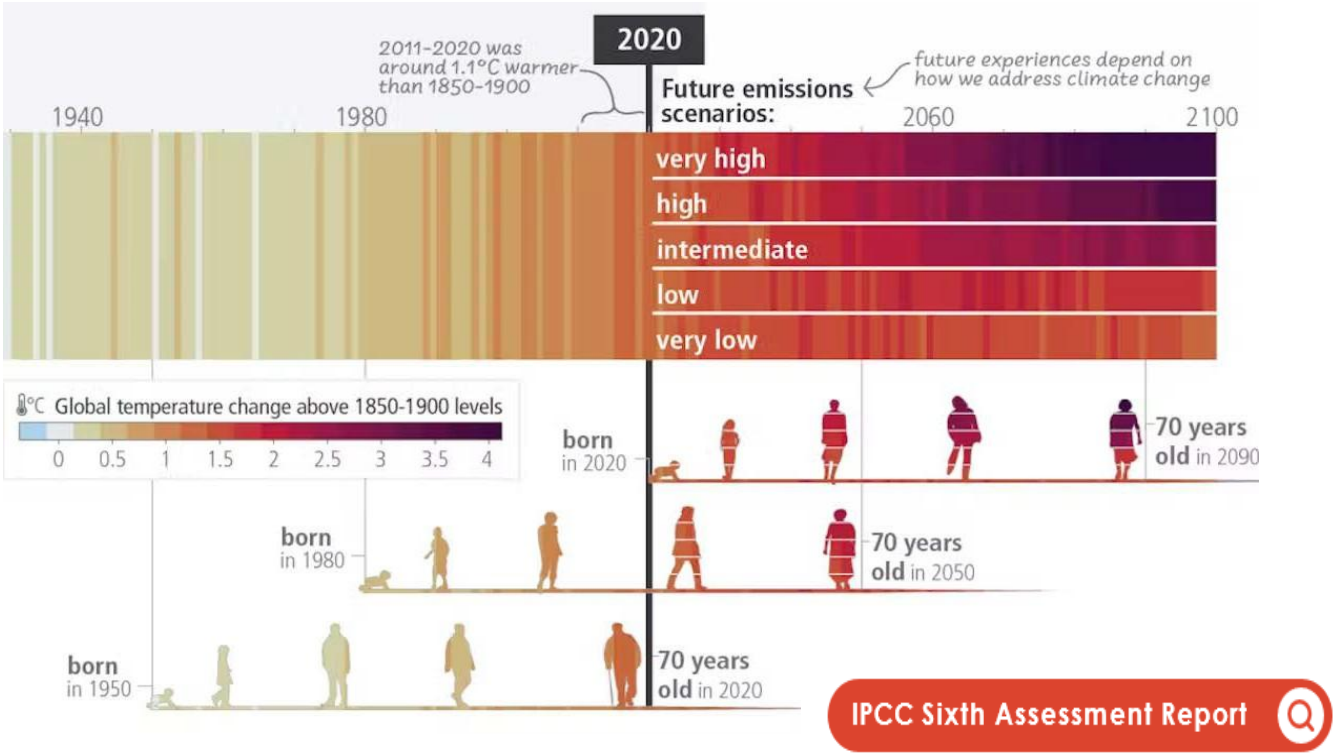
- Climate change is projected to significantly increase population exposure to heat-related morbidity and mortality.
(HIGH CONFIDENCE)
- Heat is a growing health risk due to burgeoning urbanization.
(VERY HIGH CONFIDENCE)
- Strong geographical differences in heat-related mortality are projected to emerge later this century.
(VERY HIGH CONFIDENCE)




European temperature increases more than 2x the global average and is projected to increase by +2.5°C to +7°C by 2100

# IN THE WHO EUROPEAN REGION

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The three warmest years have all occurred since 2020

2023 reached a record number of days with 'extreme heat stress'

19 of the 23 most severe heatwaves in Europe since 1950 occurred since 2000, and four in the last three years

Person-days of heatwave exposure increased by 97% in the last decade

Heat-related deaths increased on average to 17.2 per 100,000 inhabitants in the last decade

2022 heat killed 60,000+ Europeans

2023 heat killed 47,000+ Europeans

# HEAT IS AN ALL-OF-SOCIETY PROBLEM

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## Heat is an all-of-society problem

### PEOPLE

**Heat exacerbates risks of:**
Social inequity, Illness and death

**Requiring action from:**
Public health; labour; social sectors; physiology; medicine; sports; etc.

### ENVIRONMENT

**Heat exacerbates risks of:**
Fires; poor air quality; water scarcity and drought; cyclones; UV radiation

**Requiring action from:**
Environment; meteorology; climatology; etc.

### INFRASTRUCTURE

**Heat exacerbates risks of:**
Urban heat islands; emergency and power service disruptions; poor quality housing

**Requiring action from:**
Architecture, engineering, urban planning; etc.

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# MANDATE IN WHO/EUROPE

# PUBLIC HEALTH EMERGENCY

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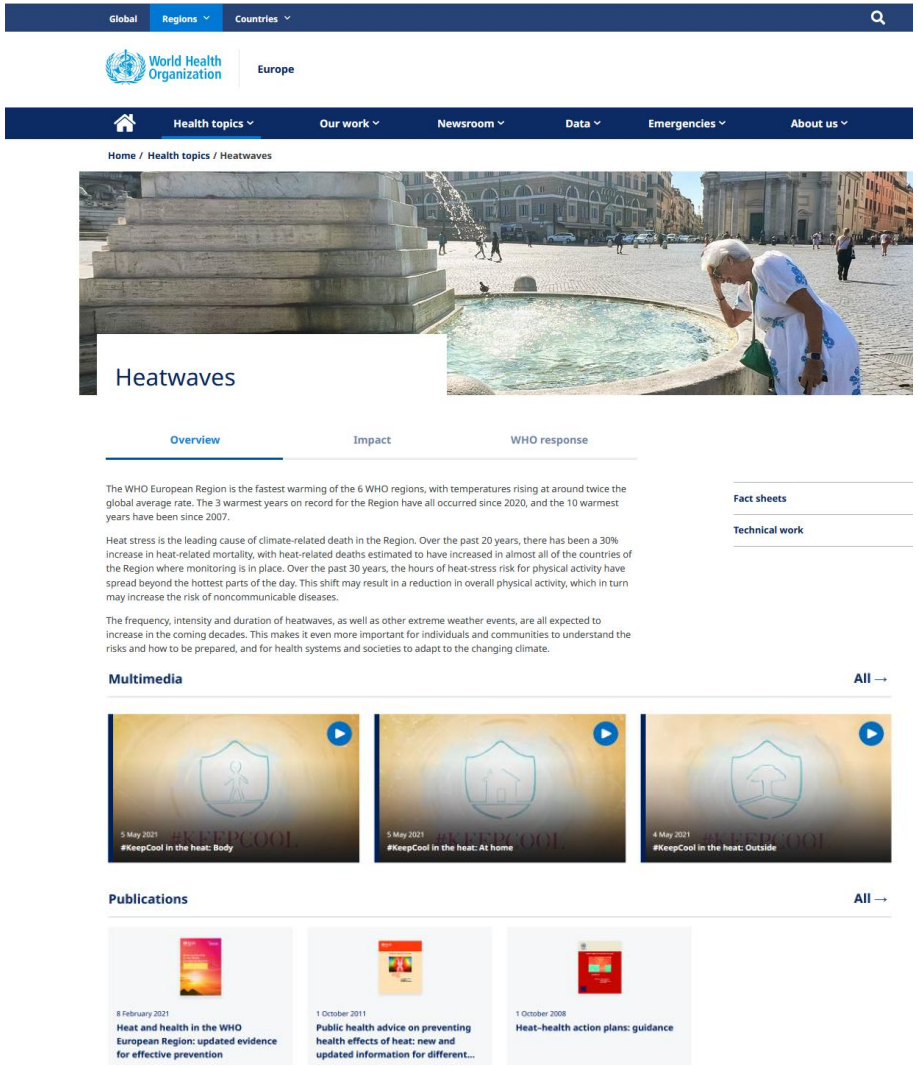


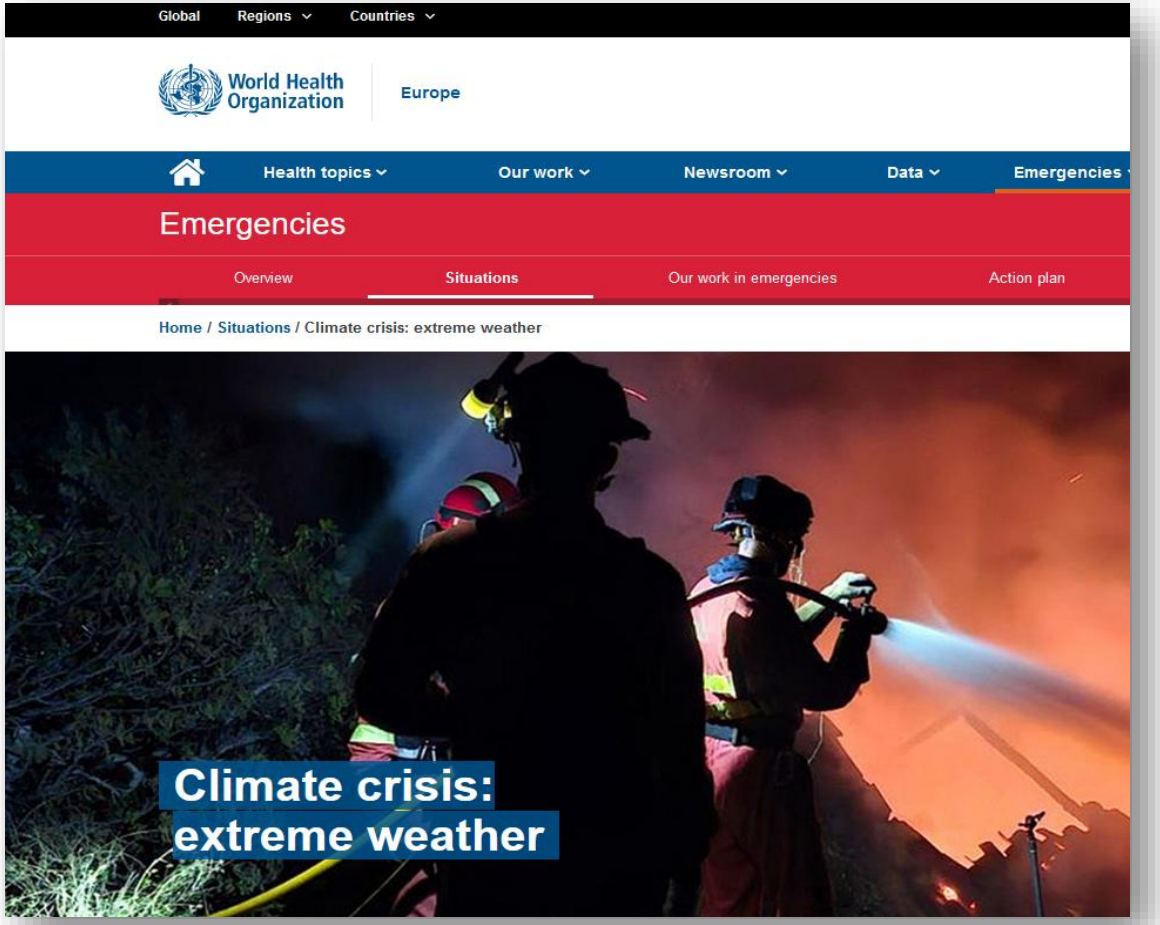

# 7th MINISTERIAL CONFERENCE ON ENV. & HEALTH

(Budapest, 5–7 July 2023)

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- Tackle climate change, environmental pollution and loss of biodiversity
- Build forward better from COVID-19, including actions for urban resilience
- Protect vulnerable populations and vulnerable life stages

# CLIMATE & HEALTH IN THE BUDAPEST DECLARATION

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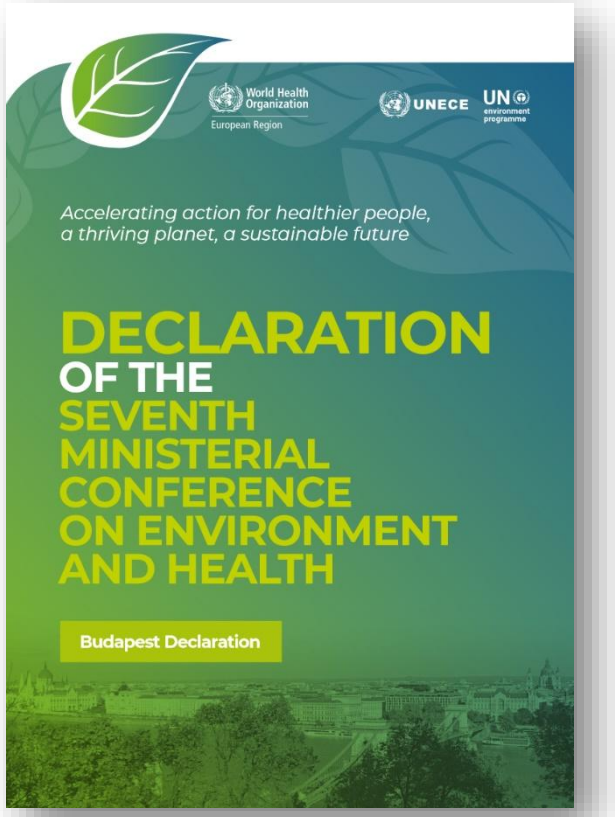


1. Making **health systems and facilities** climate-resilient, environmentally sustainable, and decarbonized
2. Establishing **health-centred targets** in national planning, in particular in the National Determined Contributions
3. Developing, updating, and implementing **Health National Adaptation Plans**
4. Developing and updating **heat-health action plans**
5. Establishing requirements to ensure the climate resilience of **water and sanitation** services
6. Strengthening **natural disaster** risk reduction policies and climate-informed health **early-warning and surveillance** systems
7. Strengthening the **climate-literacy of health professionals**

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# HHAP GUIDANCE UPDATE

# HHAP PROCESS IN WHO/EUROPE

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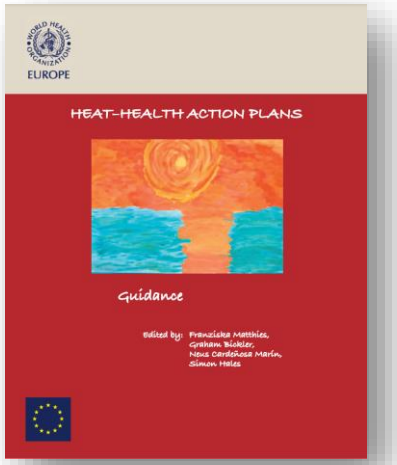
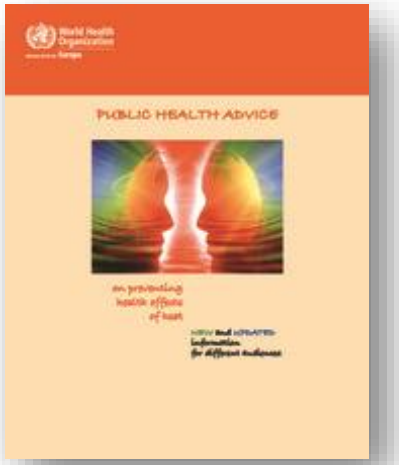
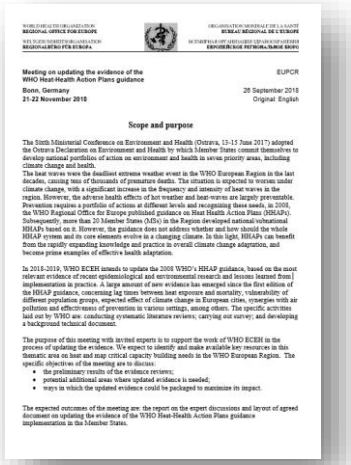


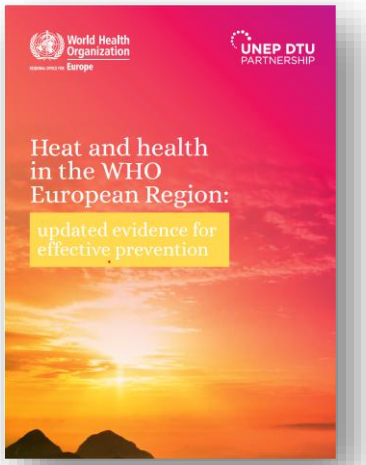

2008




2011




2018




2021

**WHO Heat-Health Action Plans Guidance**

**Second edition**

2023-2025

# EVIDENCE REVIEW

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- Most comprehensive evidence review on HHAPs to date
- Over 600 scientific sources, both conventional peer-reviewed and governmental
- Expert group-steered, fully peer-reviewed
- Comprehensive WHO/Europe national and local HHAP country survey
- Organized around the 8 core elements of the WHO 2008 HHAP guidance

# EVIDENCE REVIEW

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## Countries with HHAP

Austria
Belgium
Croatia
France
Germany
Hungary
Italy
Lithuania
Luxembourg
Malta
Netherlands
North Macedonia
Portugal
Spain
Sweden
Switzerland
Tajikistan
Turkmenistan
United Kingdom

## Implementations of core elements

| HHAP Core Element | Core element fully implemented | Core element partially implemented |
|---|---|---|
| Agreement on a lead body | 65% | 35% |
| Accurate and timely alert system | 94% | 6% |
| Heat-related health information plan | 76% | 24% |
| Strategies to reduce heat exposure | 47% | 53% |
| Particular care for vulnerable groups | 65% | 35% |
| Preparedness of health and social systems | 41% | 35% |
| Long-term urban planning | 35% | 35% |
| Real-time surveillance, M&E | 24% | 29% |

Martinez, G. S., Kendrovski, V., Salazar, M. A., de'Donato, F., & Boeckmann, M. (2022). Heat-health action planning in the WHO European Region: Status and policy implications. *Environmental Research*, *214*, 113709. https://doi.org/10.1016/j.envres.2022.113709

# UPDATED CORE ELEMENTS

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## GOVERNANCE

ESTABLISH A GOVERNANCE STRUCTURE FOR HEAT-HEALTH ACTION

## HEAT-HEALTH WARNING SYSTEM

IMPLEMENT AN ACCURATE AND TIMELY WARNING SYSTEM FOR ACTION

## VULNERABLE POPULATIONS

ENSURE CARE FOR THOSE AT RISK

## COMMUNICATIONS

DEVELOP A HEAT-HEALTH COMMUNICATIONS PLAN

## HEALTH SYSTEM RESILIENCE

STRENGTHEN HEALTH SYSTEM PREPAREDNESS AND RESPONSE

## REDUCTION IN HEAT EXPOSURE

PROTECT PEOPLE FROM HEAT.

## SURVEILLANCE

ESTABLISH TIMELY SURVEILLANCE AND DETECTION FOR HEAT-HEALTH ACTION

## MONITORING, EVALUATION AND LEARNING

ESTABLISH A PROCESS FOR REVIEW AND IMPROVEMENT

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# EXAMPLES

# THE HEAT PREVENTION PLAN
# Santé publique France

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**The shock of August 2003 in France**

~15,000 excess deaths in ~ two weeks

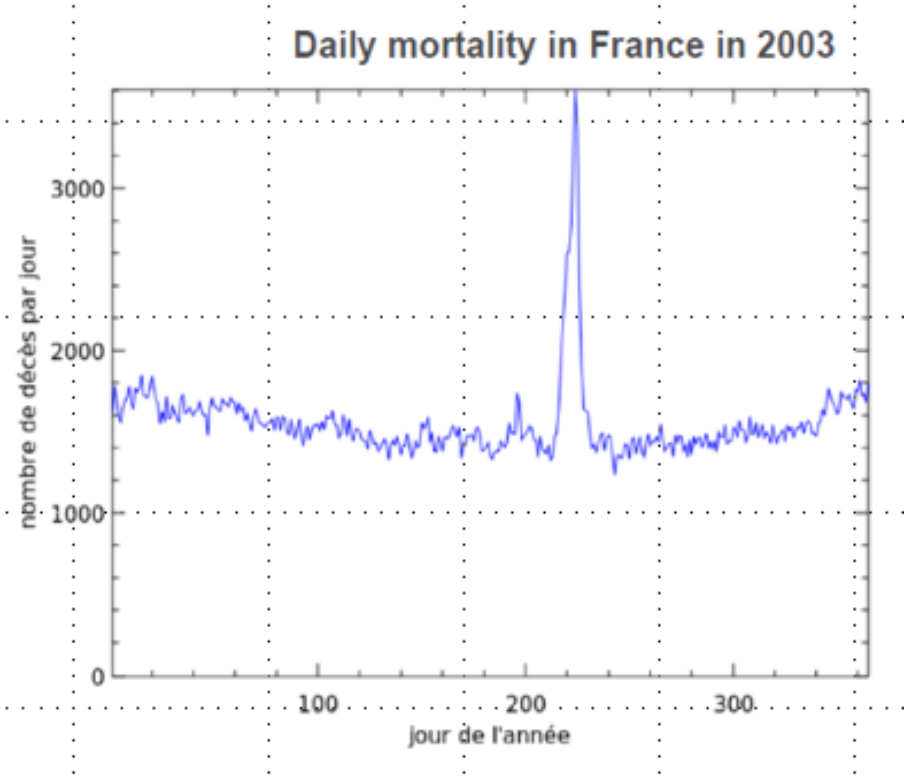
The lack of coordination and information sharing was a major obstacle to public response during the 2003 heatwave

**2004: National heat prevention plan and warning system**

Multiple actors and actions to anticipate, to warn, to protect

In 2024, 10 ministries were involved in the heat prevention plan (Health, Environment, Security, Economy, Agriculture, Sports, Labour, Education, Culture, Justice)

**Warning system** → Collaboration between Météo-France, Santé publique France, and the Ministry of Health



# HEALTH DATA IN THE HEAT HEALTH WARNING SYSTEM

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**Before: Epidemiological studies to choose evidence-based warning thresholds**

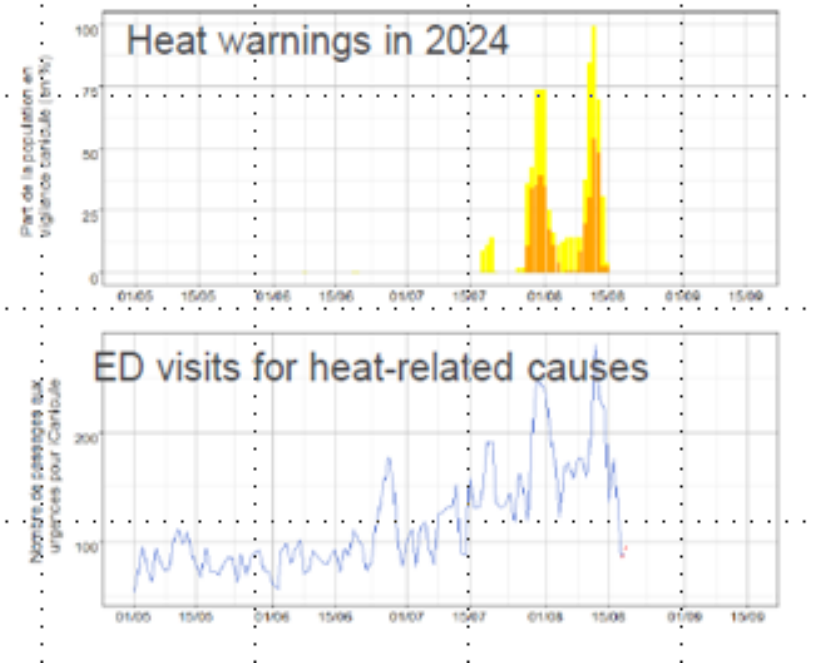
- Warning decisions are based on temperature forecasts

**During: Near-real-time surveillance system to support decision-making**

- Syndromic surveillance system collecting and monitoring mortality and morbidity impacts (1-day delay)
- Mortality data from a sample of municipalities (15-day delay to obtain interpretable trends)
- Trends in morbidity do not predict trends in mortality

**After: Impact assessments, analyses of risk factors, evaluation of the efficiency of interventions**

- Mortality and morbidity impacts
- Risk perception, communication.

# LESSONS LEARNT

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**A warning system needs to be robust and adaptable**

- Rapidly evolving situations, multiple exposures
- Requires good communication between actors throughout the year
- The system must work even if it is 50°C and the computers are breaking down

**Warning based on temperature forecasts are efficient and sufficient**

- Because prevention actions are costly, some people may want to wait for the observation of a health impact to act → but then it is too late!
- Collective expertise is key to decision-making → during heat waves, we can have several meetings per day with Météo-France and the Ministry of Health

**Communication before, during, and after summer is essential to maintain awareness and the willingness to act**

- Risk perception is still low
- Warning fatigue is a real problem

# ITALIAN HEAT HEALTH ADAPTATION PLAN

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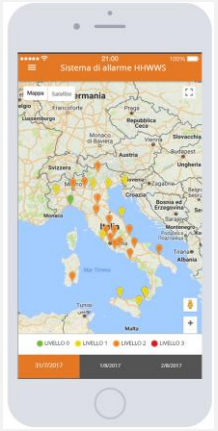
## MONITORING AND WARNING SYSTEM

### Heat warning system

National APP
"Caldo e Salute"




27 city-specific warning systems

3-day forecast warning bulletin largely disseminated

Prevention measures modulated according to the level of warning

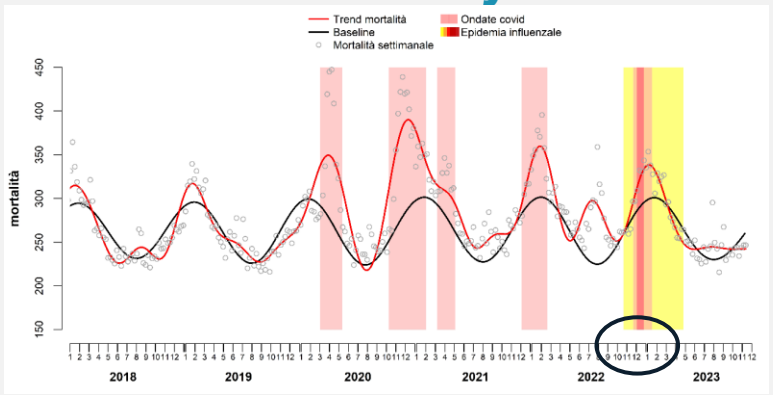
## COMMUNICATION

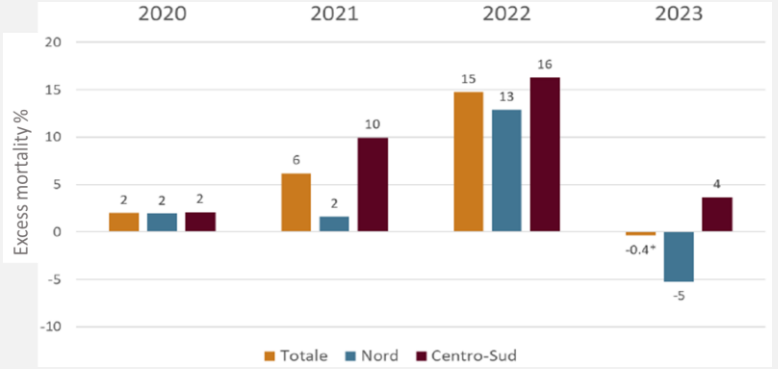
### Summer 2023 information campaign


Targeted national/regional/local campaigns
(web, TV, social, testimonial, etc.)

## EPIDEMIOLOGICAL SURVEILLANCE

### Daily mortality surveillance system



# REVISION OF THE AUSTRIAN HEAT PROTECTION PLAN

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Working group

Advisory board

NATIONAL

Press conference
19th June 2024

# National Heat Protection Plan | Modular design

## based on WHO recommendations

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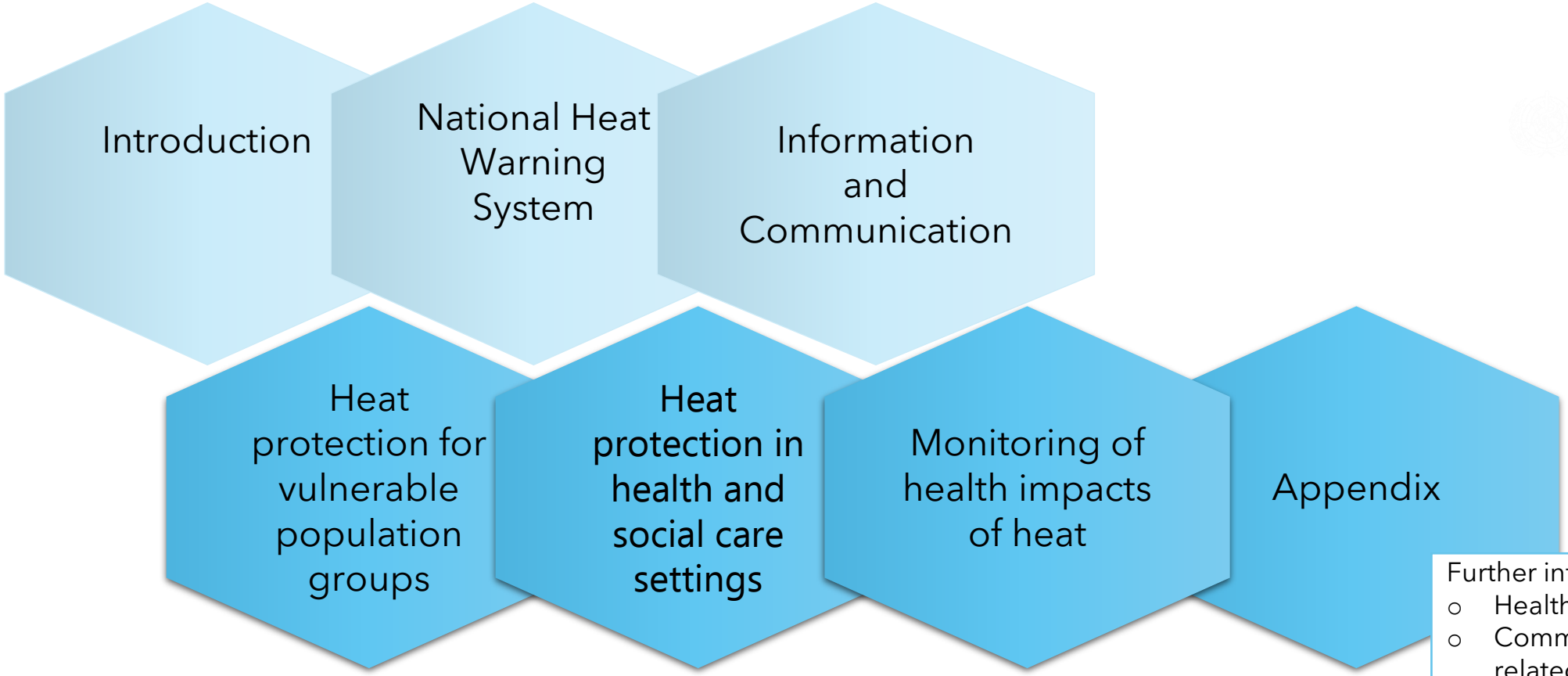


Further information on
- Health effects of heat
- Communication of heat-related health information
- Innovative warning systems

# HEAT WARNING SYSTEM AND DISSEMINATION

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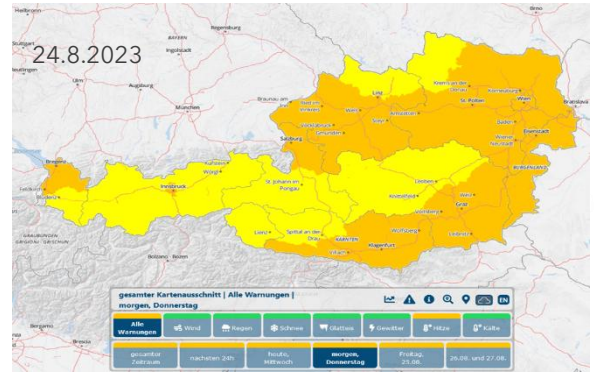
GeoSphere Austria

- Weather forecast
- Heat warning system




Ministry of Health

- Heat phone
- Social media campaign
- Information via health portal

Federal states

- Specific heat action/protection plans

# ADDRESSING VULNERABLE POPULATION GROUPS & HEALTH AND SOCIAL CARE SETTINGS

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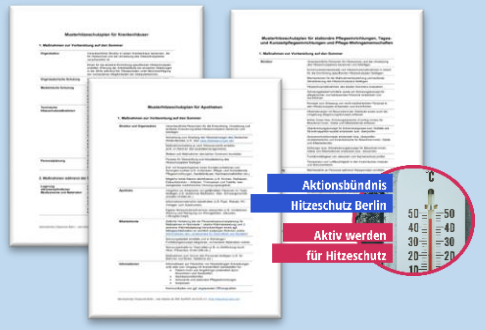
- Lists of possible measures at local and/or regional level in cases of heat and heat-related stress for vulnerable population groups
- List of recommended measures to prepare for, protect against and respond to heat and heat-related stress in health and social care settings

Toolbox for accessibility and support for vulnerable population groups with best practices examples



Toolbox for heat protection plans for health and social care settings with best practices examples





# MONITORING THE IMPACT OF HEAT ON HEALTH

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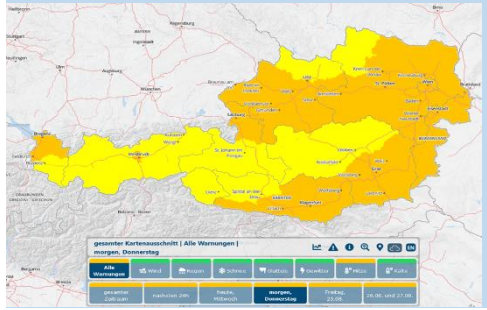
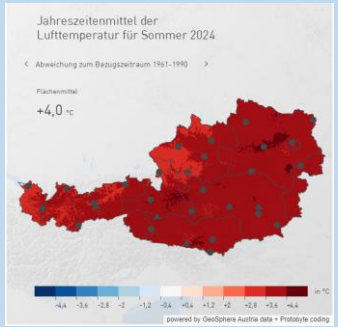
- Heat mortality monitoring
  - Estimate of heat-associated excess mortality including 95 % confidence interval, Austria, summer periods
- Heat morbidity monitoring
  - Hospital admissions based on selected ICD-10 codes

Toolbox for meteorological parameters and climate overviews



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# Thanks

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