World Health Organization

WHO EPI-WIN DIGEST

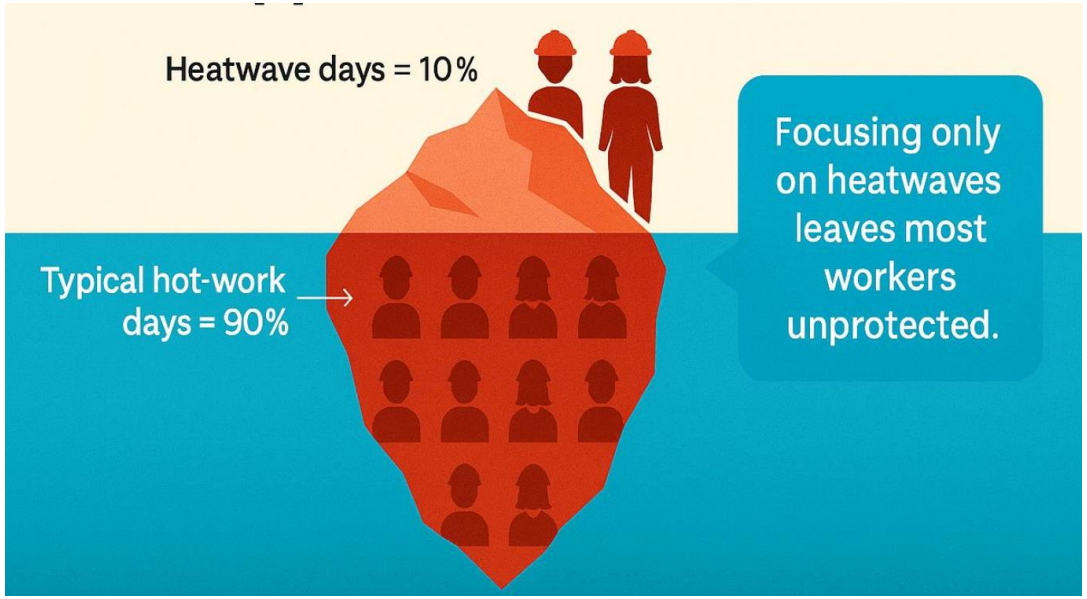
Managing the heat: Strengthening public health preparedness for mass gatherings in a warmer world

9 July 2025

World Health Organization

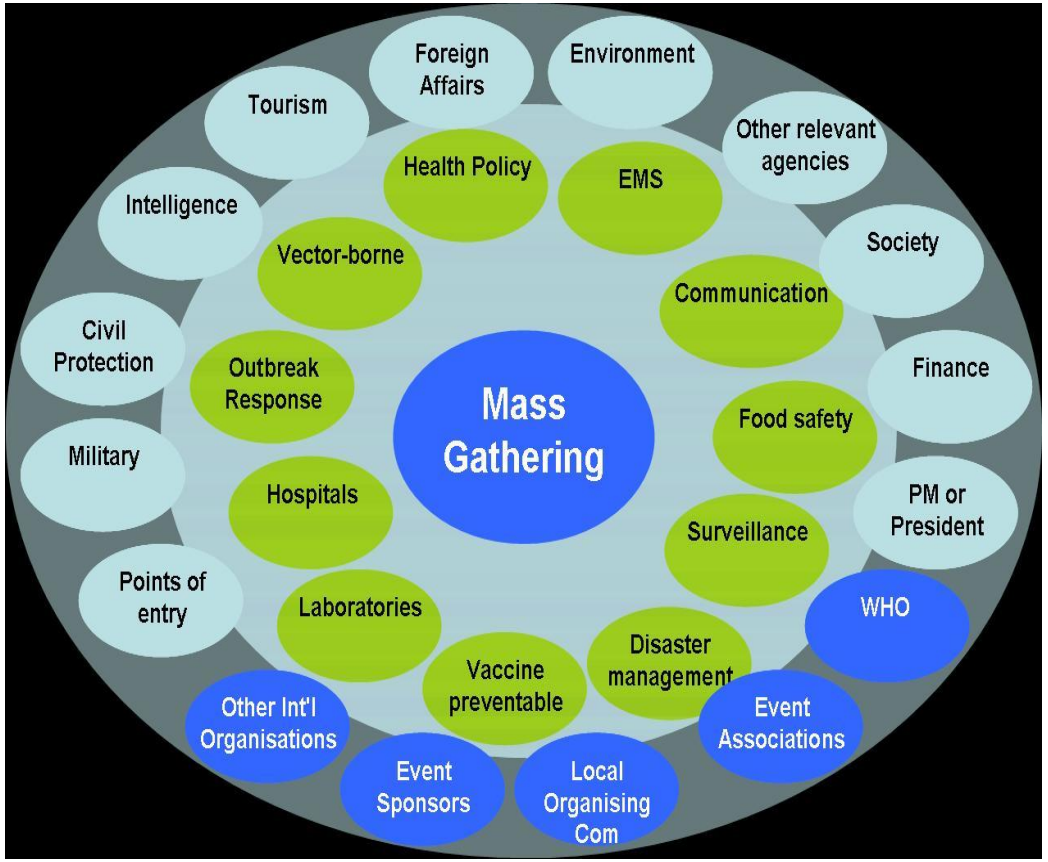
Mass gatherings in a warmer world

- Warmer temperatures have caused risks to health in various mass gatherings including sports, cultural and religious events causing some events to be cancelled.
- Nine out of ten (9/10) worker exposures to excessive heat, and eight out of ten (8/10) occupational injuries linked to excessive heat, occur outside of a heatwave.
- In most countries, provisions referring to heat in existing laws are often general and do not adequately address the intensifying climate change-related dangers many workers face daily.



- Quick development of policy and legislation may lead to ineffective policies causing threat to health and safety.
- There is a need to adopt a standardized policy approach to address heat stress.

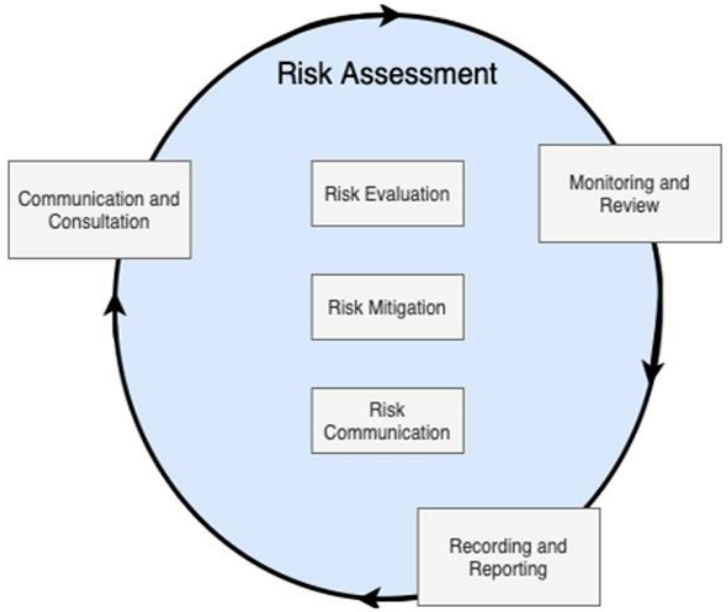
WHO Role Mass Gatherings



- WHO's key role in **provision of technical guidance and support** to Member States and Event organizers on MG events
- **WHO does not have the mandate to enforce any action with regard to a mass gathering** (modification, postponement, cancellation, etc.) or to authorize that it may proceed.
- **Strategic risk assessment** throughout the cycle of event for planning and operations, including the identification of hazards, assessment of their likelihood of occurring, and their potential impact
- Legal bases: EB paper 2012 & WHA resolution 2024

A risk-based approach for mass gathering health risk management

- Risk evaluation, which aims at identifying and quantifying the baseline risks associated with the gathering;
- Risk mitigation, which proposes a series of precautionary measures aimed at decreasing the baseline risk of the gathering; and
- Risk communication, which prompts the timely and proactive dissemination of information on the process, rationale, purpose and limits of the precautionary measures adopted, with the aim of enhancing adherence by event attendees.



World Health Organization

Mass gathering management: Before, During and After

Before

- Conduct risk assessment using an all-hazard risk approach
- Develop, test, and evaluate contingency planning
- Enhance surveillance for domestic and international signal detection
- Promote collaboration with relevant partners, institutions, and authorities
- Build capacity through technical guides and training sessions

During

- Monitor and evaluate signals and data, subsequently disseminate reports
- Respond to emergent alerts
- Identify and document challenges for future improvement and successes

After

- Evaluate health outcomes
- Document lessons learned and provide insights to improve future mass gathering planning, health infrastructure and capacities

Areas of WHO's overarching support available for mass gatherings host countries and event organizers: **BEFORE, DURING, AFTER** the event

Country experience: Malaysia

Rising temperatures in Malaysia, with an average increase of 0.2°C per decade, necessitate proactive health measures during mass gatherings.

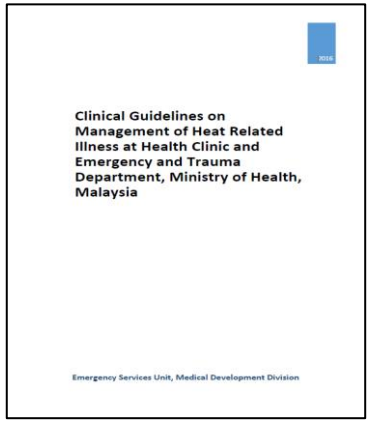
Vulnerable populations, such as children and the elderly, require targeted education and resources to manage heat-related health risks effectively.

Healthcare services must be adequately prepared to manage heat-related illnesses, reinforcing the importance of first responders and emergency protocols.

Early warning system

Level	Status	Temperature
No warning	Normal	Less than 35°C
Level 1	Alert	Highest daily temperature more than 35°C until 37°C for three consecutive days
Level 2	Heatwave	Highest daily temperature more than 37°C for three consecutive days
Level 3	Emergency	Highest daily temperature more than 40°C for three consecutive days

Guidance documents



World Health Organization

Country experience: Malaysia

Advisory to other agencies:

1. Adjustments to the activity : avoid outdoor events during peak heat hours
2. Provide cooling measures : set up cooling stations with fans, shade, and misting tents in public areas.
3. Early warning & risk communication - heat alerts & reminders on hydration
4. Medical & health services - first responders are ready
5. Workplace or community guidelines

- Health education and awareness

World Health Organization

Country experience: Mexico – Preparing for the 2026 World Cup

- The health sector is proactively preparing for the 2026 Soccer World Cup by implementing continuous epidemiological surveillance for health effects related to extreme weather, particularly during the heat season.
- Coordination among multiple government levels and agencies is crucial for effective health safety management during mass events, indicating a comprehensive approach to public health.
- The focus on timely and reliable data collection on health damages highlights the importance of informed decision-making in emergency health responses.
- The comprehensive operational model incorporates various health components, including mental health, disease prevention, and health regulation, showcasing the multidimensional nature of health care during large-scale events.
- Past experiences from previous mass events inform the operational strategies, allowing for improved responses to potential health emergencies during the World Cup.

Comprehensive Health Care Operational Model for Multi-Threat Emergencies

Areas of action

- **Health Units:**
  - ✓ Health centers
  - ✓ Hospitals
- **Temporary Shelters**
- **Community:**
  - ✓ Stadiums
  - ✓ Fan Festival
  - ✓ Team base camps
  - ✓ Coordination centers
  - ✓ Hotels
  - ✓ Shopping centers
  - ✓ Tourist sites
  - ✓ Transit Routes
  - ✓ Public transport
  - ✓ Air, land, and sea ports

Damage and Health Risks

Care for Injured and Sick

Prevention and Control of Diseases and Health Risks

Operation instances:

Health Sector: Secretaria de Salud, IMSS, IMSS-B, ISSSTE, SEDENA, SEMAR, PEMEX, DIF.

Other: Red cross, PAHO/WHO

Health Components

1. Coordination
2. Medical and emergency care
3. Mental health
4. Epidemiological surveillance
5. Laboratory
6. Health regulations (water and food safety)
7. Basic sanitation
8. Health promotion and risk communication (travel and health)
9. Vector control
10. Social communication
11. Administration and finance
12. Other actions:
    - Vaccines and immunization
    - Sexually transmitted infections (STIs)
    - Maternal and child health
    - Etc.

Health Emergency Information System (SIESA)

2025 Año de La Mujer Indígena

Mass events, outbreaks, disasters, CBRN

Country experience: Zanzibar – Sauti ze Buzara

Focus event: **Sauti za Busara** or "Sounds of Wisdom" in Stone Town, Zanzibar.

- It is one of Africa's best and most respected music events, attracting ore than 20,000 attendees.

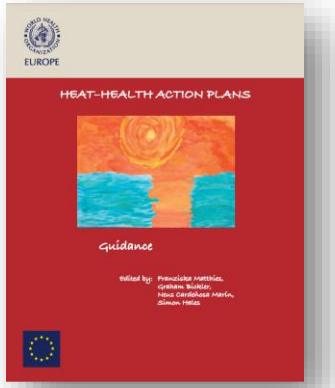
Pre-event	During the event	Health & safety measures during the event	Post event
Risk-assessment Multi-sectoral preparatory committee Stakeholder collaboration Organizing mitigation measures e.g. medical, logistics, security and RCCE	Medical teams Surveillance Communication	Prevent from prolonged exposure to direct sun Create or establish Queues and Signaled paths for pedestrians to control crowds Prevent Disease Transmission – Infection Preventions and Control measures	Debriefing Data analysis

World Health Organization

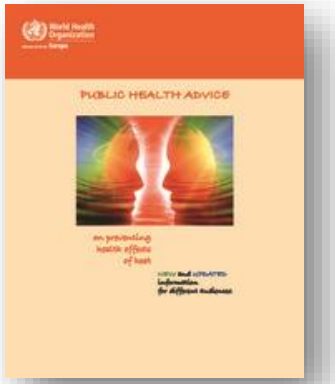
Heat health action plans in WHO/Europe

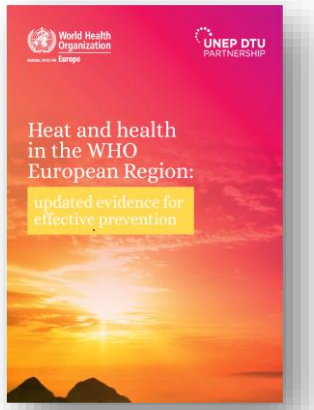
World Health Organization
European Region

2008



2011





2021

WHO Heat–Health Action Plans Guidance

Second edition

2023- 2026

Countries with HHAPs

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

Why Heat-Health Action Plans matter?

- Prevent avoidable deaths
- Protect the most vulnerable
- Enable early action
- Reduce the burden in the health system
- Proactive planning is cheaper and more effective than reactive response
- Foster cross-sector coordination

Without adaptation, heat-related deaths in Europe would have been 80% higher in 2023—especially among the elderly.
(Gallo et al., Nature Medicine)

Urgent action needed: Only 21 of 53 European countries have HHAPs—faster implementation is critical.

Second edition of the Heat-Health Action Plan guidance

World Health Organization
European Region

UPDATED CORE ELEMENTS

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

Second edition to strengthen …

- communication on climate change and heat responses
- public health advice
- specific interventions to reduce heat exposure
- preparedness of social and care systems

User Action Briefs

A go-to resource with clear, practical actions to protect health from heat—tailored for sectors to act before, during, and after summer and extreme heat events

Public health message bank

Ready-to-use heat—health messages, tailored for different settings, built for those who inform and protect

Strengthening public health preparedness: WHO Europe

Responding to heat:
#KeepCool campaign

4 key actions

- Keep out of the heat
- Keep your home cool
- Keep your body cool and hydrated
- Keep in touch

..including more granular tips for various settings

Good practices
- Targeting summer mass gathering events early on
- Tailor to each setting (MG in park, City center, etc.)
- Public health authorities and CSO joint campaigns
- Outreach activities through communities (for us, with us)
- Information materials in event zones, such as emergency/health zones / cooling zones / hydration points / information points

...partnerships, partnerships, partnerships!

World Health Organization

Beat the Heat - Flagship Initiative Against Extreme Heat and Health Risks in Workplaces and Major Events

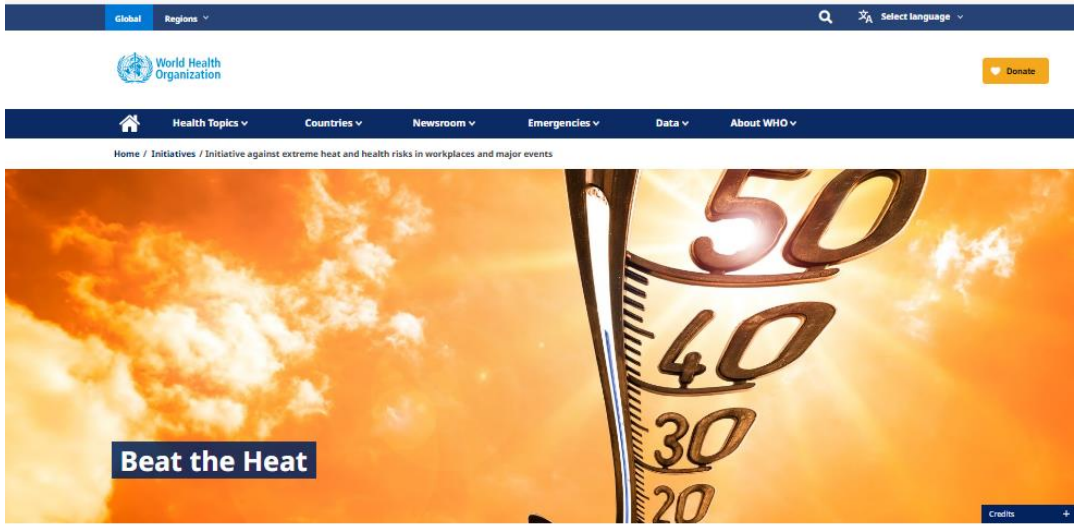
To use international guidelines and tools to protect workers and the public from extreme heat, air pollution, and harmful sun exposure.

To help workplaces and event organizers learn how to handle heat, UV exposure and air pollution better.

To make health systems, including services for workers and the environment, stronger to protect people in high-risk areas.

To create ways to talk to and work with communities to keep workers and event attendees safe from heat, air pollution, and harmful sun exposure.

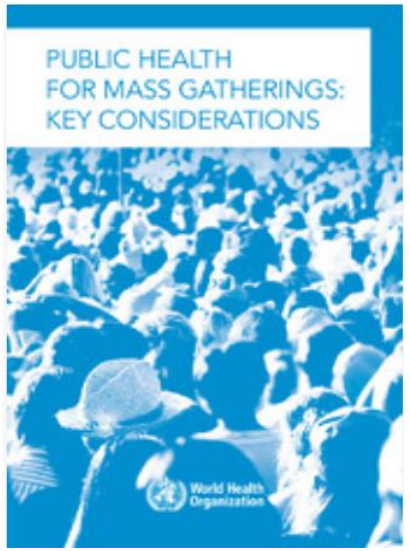
To inform people about heat-related health risks and how to prevent them, and to push for strong rules and monitoring to keep everyone safe in the long run.



Initiative against extreme heat and related environmental health risks in workplaces and major events

Resources

- Public health for mass gatherings: key considerations, **2nd edition ongoing**
- Public Health Preparedness for mass gatherings events
- WHO Generic All-Hazards Risk Assessment Tool for Mass Gathering Events ("WHO MG All-Hazards RA Tool") Web Application
- WHO Global Mass Gathering Intelligence Platform
- **Tailoring event-based surveillance using open sources: practical guide for mass gatherings**:
- **Practical guide for the planning of MGs Simulation Exercise and After-Action Review**
- **Risk Communication and Community Engagement Readiness and Response Toolkit Series: Mass Gatherings**
- **WHO Website:** Managing health risks during mass gatherings (who.int)
- Initiative against extreme heat and health risks in workplaces and major events



World Health Organization

EPI-WIN webinar

- View webinar "Managing the heat: Strengthening Public Health preparedness for mass gatherings in a warmer world"
- Speakers
  - Nedret Emiroglu, Health Emergency Core Capabilities (ECC), WHO
  - Andreas Flouris, Professor of Physiology, University of Thessaly, Greece
  - Thahirahtul Asma' Bt. Zakaria, Senior Principle Assistant Director, MOH Malaysia
  - Yaneth Fortunata Lopez Santiago, Director of Epidemiological Surveillance, Non-Communicable Diseases, MoH Mexico
  - Yussuf Sadi, Case management and IPC Team Lead, MoH Zanzibar
  - Marisol Yglesias Gonzales, Technical Officer for Climate Change Adaptation and Health, WHO EURO
  - Amaia Artazcoz Glaria, Technical Officer, Border Health and Mass Gatherings Unit, WHO
  - Ivan Ivanov, Lead, Occupational and Workplace Health, WHO
  - Joanna Esteves Mills, Technical Officer, WASH, WHO
  - Ninglan Wand, Unit Head, Border Health and Mass Gatherings, WHO