GLOBAL HEAT HEALTH INFORMATION NETWORK

WORLD METEOROLOGICAL ORGANIZATION | World Health Organization

JOINT OFFICE FOR CLIMATE AND HEALTH

# Global Learning

# Extreme Heat Risk during the COVID19 Pandemic

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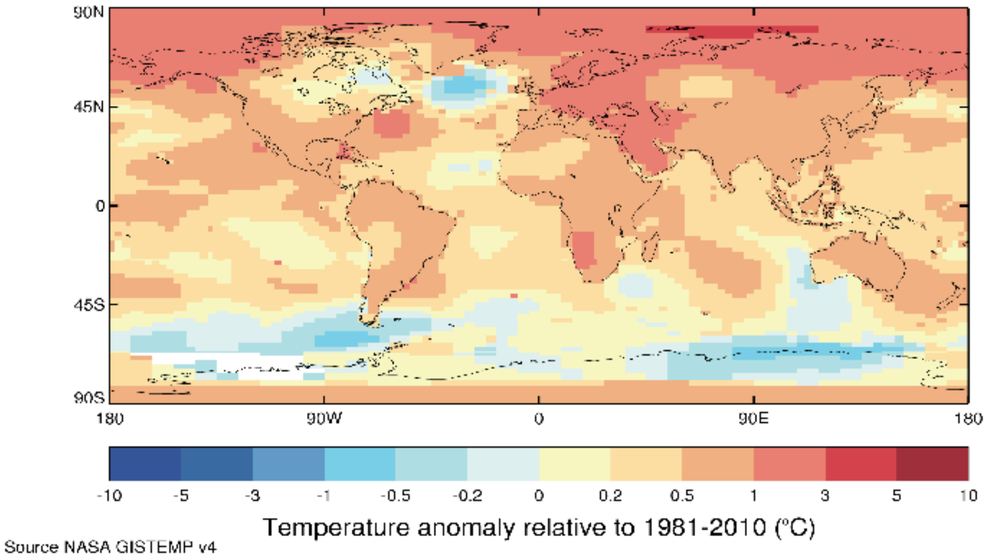
# GLOBAL TEMPERATURE RISE

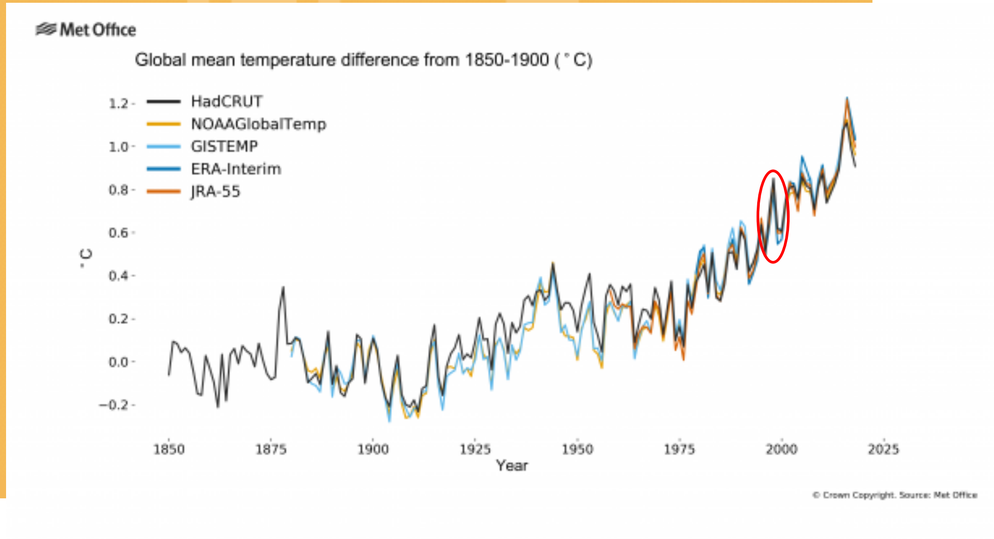



Source NASA GISTEMP v4

Global five-year average temperature anomalies (relative to 1981–2010) for 2015– 2019. Data are from NASA GISTEMP v4. Data for 2019 to June 2019.

## 2015–2019

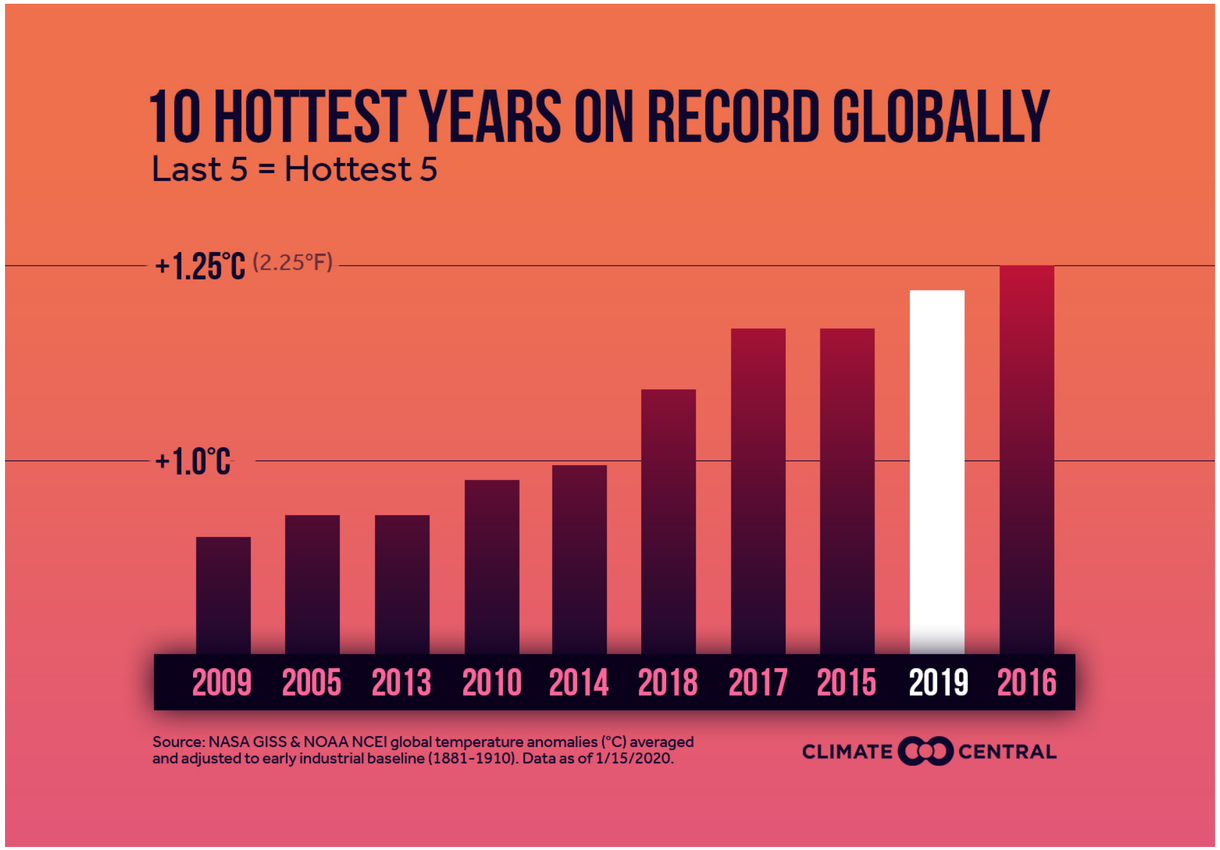
- Warmest five-year period
- 0.2 °C higher than 2011–2015



# 2020 WAS ANTICIPATED TO BE HOT

- Heat season starts earlier and lasts longer.
- Heatwaves are hotter, last longer, more frequent.
- 2020: Global January to April temperatures were record-breaking.
- 2020: Eastern Mediterranean saw earliest heatwave in over 150 years.


**Conclusion:**
WMO Report **2020** likely to be **one of the three** warmest years on record globally



# ANTICIPATED COMBINED RISKS COVID19 AND EXTREME HEAT



## ANTICIPATED CONCERNS

- Vulnerability
- Interventions
- Capacity
- Governance

# 1 Communities at risk to hot weather, became even more vulnerable

- Overlapping vulnerable populations
- Social isolation
- Socio-economic impacts of COVID-19
- Concentrated at-risk locations: Urban heat islands, informal settlements
- Risk perceptions reduce health seeking behavior

## Populations vulnerable to both heat stress and COVID-19

- Older people (>65 years and especially >85years).
- People with underlying health conditions:
  - Cardiovascular disease
  - Pulmonary disease
  - Kidney disease
  - Diabetes / obesity
- Mental health issues (psychiatric disorders, depression)
- Essential workers who work outdoors during the hottest times of the day or who work in places that are not temperature controlled.
- Health workers and auxiliaries wearing personal protective equipment
- Pregnant women
- People living in nursing homes or long-term care facilities, especially without adequate cooling and ventilation.
- People who are marginalized and isolated (experiencing homelessness, migrants with language barriers, old people living alone) and those with low income or inadequate housing, including informal settlements.
- People on medication: some medication for the diseases listed above impair thermoregulation. The impact of treatment for COVID-19 is currently unknown but should be monitored to assess any additional vulnerability.
- People who are currently managing COVID-19 at home (i.e. febrile), or who have been recently discharged from hospital for treatment with COVID-19, which can be associated with acute kidney injury.

# 2

## Public health prevention, advice and interventions for heat risks became:

- more difficult to implement
- potentially more expensive
- potentially less effective

- Indoor and outdoor cooling spaces
- Public uptake heat advisories
- Social outreach / door to door
- Fans and Cooling

# 3 Hot weather brings new challenges to frontline and health workers. Resilience of health systems is limited.

- PPEs increase heat stress
- Financial and human resources focused on COVID (and limited)
- Volunteer pool reduced
- Ambulatory service capacity limited

# 4 Decisions on how to manage COVID-19 and extreme heat made locally

- Many localities do not have coordinated heat plans or disaster management platforms
- Different jurisdictions decisions and actions may conflict
- Limited guidance on good practice
- Uncoordinated and ad-hoc decision-making can confuse the public on what is safe and what action to take

# Did amplified risks, result in increased deaths? European Snapshot: Heat + COVID-19

## UK

Highest observed Total cumulative all-cause excess mortality in summer 2020 (+2556 deaths) since start of Heatwave Plan for England.

Comparable to impacts of the 2003 heatwave (n= 2,234)

Severity and intensity of heatwave alone does not fully explain the magnitude of the impacts observed.

## FRANCE

Since 2003, the highest health figures during heat waves have been observed in 2020 (+1,924 deaths)

- Mortality from Covid-19 alone cannot explain the 1,924 excess deaths observed during heat waves.
- 2020 temperatures were sufficiently exceptional to explain a substantial excess mortality, especially since they affected regions sometimes not used to the heat.

**UK:** https://www.gov.uk/government/publications/phe-heatwave-mortality-monitoring/heatwave-mortality-monitoring-report-2020
**France** https://www.santepubliquefrance.fr/determinants-de-sante/climat/fortes-chaleurs-canicule/documents/bulletin-national/bulletin-de-sante-publique-canicule.-bilan-ete-2020

# WHAT MAY HAVE HAPPENED?

- **Decreased health seeking behavior:** for part of the population and thus increased their vulnerability to heat.
- **Reduced perception of heatwave risk**: Simultaneous and high visibility of Covid-19 prevention measures may have reduced the perception heat wave risk, which is already low.
- **Less noticeable prevention** compared to infection control
- **Manifestation of social inequalities** in health for certain vulnerable populations
- **Timing and characteristics of heat waves** may have influenced the consequences of summer heat.

Evaluations and studies recommended

# GLOBAL HEAT HEALTH INFORMATION NETWORK

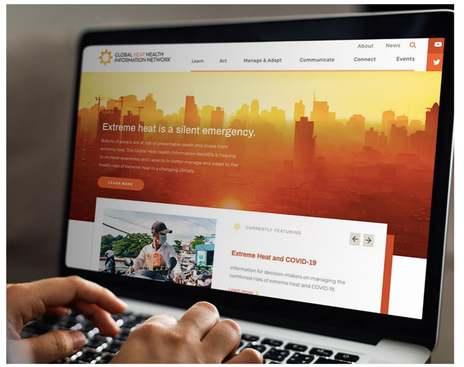
The Network is an independent, voluntary, member-driven forum of **scientists, practitioners, and policymakers** focused on enhancing existing efforts to address heat health risk.

Knowledge Broker

Go-to resource hub

Member-driven forum

Not a funding or grant-making mechanism

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# Extreme Heat and COVID-19 Information Series

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**10 weeks / 100 pages of guidance and evidence**

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# Extreme Heat and COVID-19 Information Series


**Technical Briefing document, 15 Q&As, and checklists**

- General Considerations and Evidence on Heat and COVID19
- Issues for health workers and facilities
- Issues for city authorities and heat action planners
- Checklist for Heat Action Planners
- Examples of good practice

**Help local authorities and health professionals**

1. consider ideas/scenarios situations that might be faced
2. answer questions – with evidence and existing guidance
3. find examples

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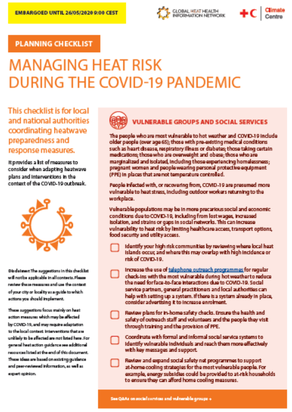
# Q&A Series: Issues for city authorities and heat action planners

- Air conditioning and ventilation
- Low-tech cooling options
- Communications and outreach
- Outdoor cool spaces
- Informal settlements
- Social services
- Cooling centres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PLANNING CHECKLIST

MANAGING HEAT RISK
DURING THE COVID-19 PANDEMIC

This checklist is for local and national authorities coordinating heatwave preparedness and response measures.

To provide a list of measures to consider when adapting heatwave plans and interventions in the context of the COVID-19 outbreak.

VULNERABLE GROUPS AND SOCIAL SERVICES

The people who are most vulnerable to hot weather and COVID-19 include older people (aged 65+), those with pre-existing medical conditions such as chronic lung disease or diabetes, people taking certain medications, those who are overweight and obese, those who are marginalized and isolated, including those experiencing homelessness, pregnant women and people wearing personal protective equipment (PPE) in places that are not temperature controlled.

People infected with, or recovering from, COVID-19 are presumed more vulnerable to heat stress, including outdoor workers returning to the workplace.

Vulnerable populations may be in more precarious social and economic conditions due to COVID-19, including from lost wages, increased isolation, and strains or gaps in social networks. This can increase vulnerability to heat risk by limiting healthcare access, transport options, food security and utility access.

- Identify your high-risk communities by reviewing where local heat islands occur, and where this may overlap with high incidence or risk of COVID-19.
- Increase the use of telephone outreach programmes for regular check-ins with the most vulnerable during hot weather to reduce the need for face-to-face interactions due to COVID-19. Social service partners, general practitioners and local authorities can help with setting up a system. If there is a system already in place, consider advertising it to increase enrolment.
- Review plans for in-home safety checks. Ensure the health and safety of outreach staff and volunteers and the people they visit through training and the provision of PPE.
- Coordinate with formal and informal social service systems to identify vulnerable individuals and reach them more effectively with key messages and support.
- Review and expand social safety net programmes to support at-home cooling strategies for the most vulnerable people. For example, energy subsidies could be provided to at-risk households to ensure they can afford home cooling measures.

See Q&As on social services and vulnerable groups >

**ASK OUR EXPERTS**

How should cooling centres be managed during the COVID-19 pandemic?

Strategies to prevent COVID-19 transmission in cooling centres include:

- opening only select locations in highly vulnerable areas
- maximizing the use of outdoor cool spaces
- increasing at-home cooling via energy utility assistance.

*(updated 22 May 2020)*

# Thank you

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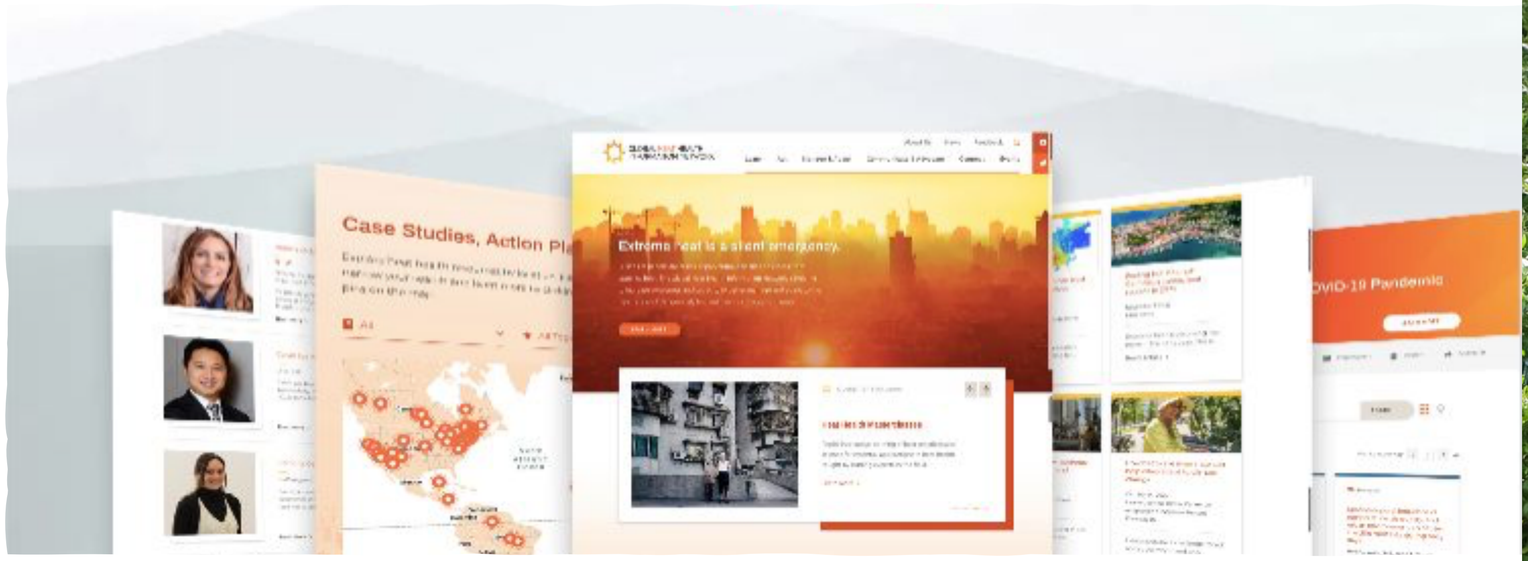


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