



GLOBAL **HEAT** HEALTH
INFORMATION NETWORK

GHHIN: Improving Community Response and Resilience to Extreme Heat Impacts on Health

Juli Trtanj

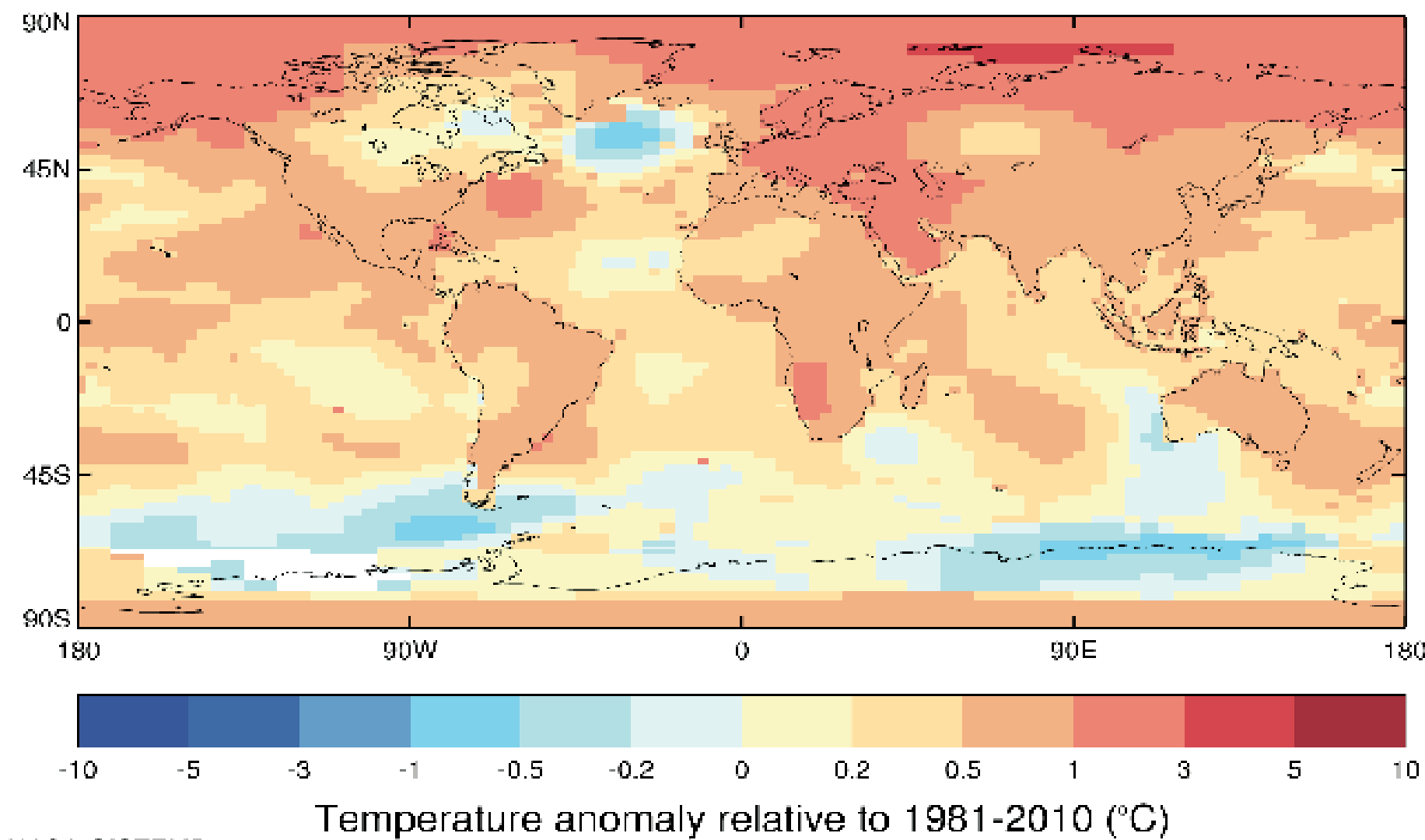
US National Oceanic and Atmospheric Administration
and

Joy Shumake-Guillemot
World Meteorological Organization

May 12, 2021 IFRC Asia-Pacific Regional Heatwave Meeting



GLOBAL TEMPERATURE RISE



Source NASA GISTEMP v4

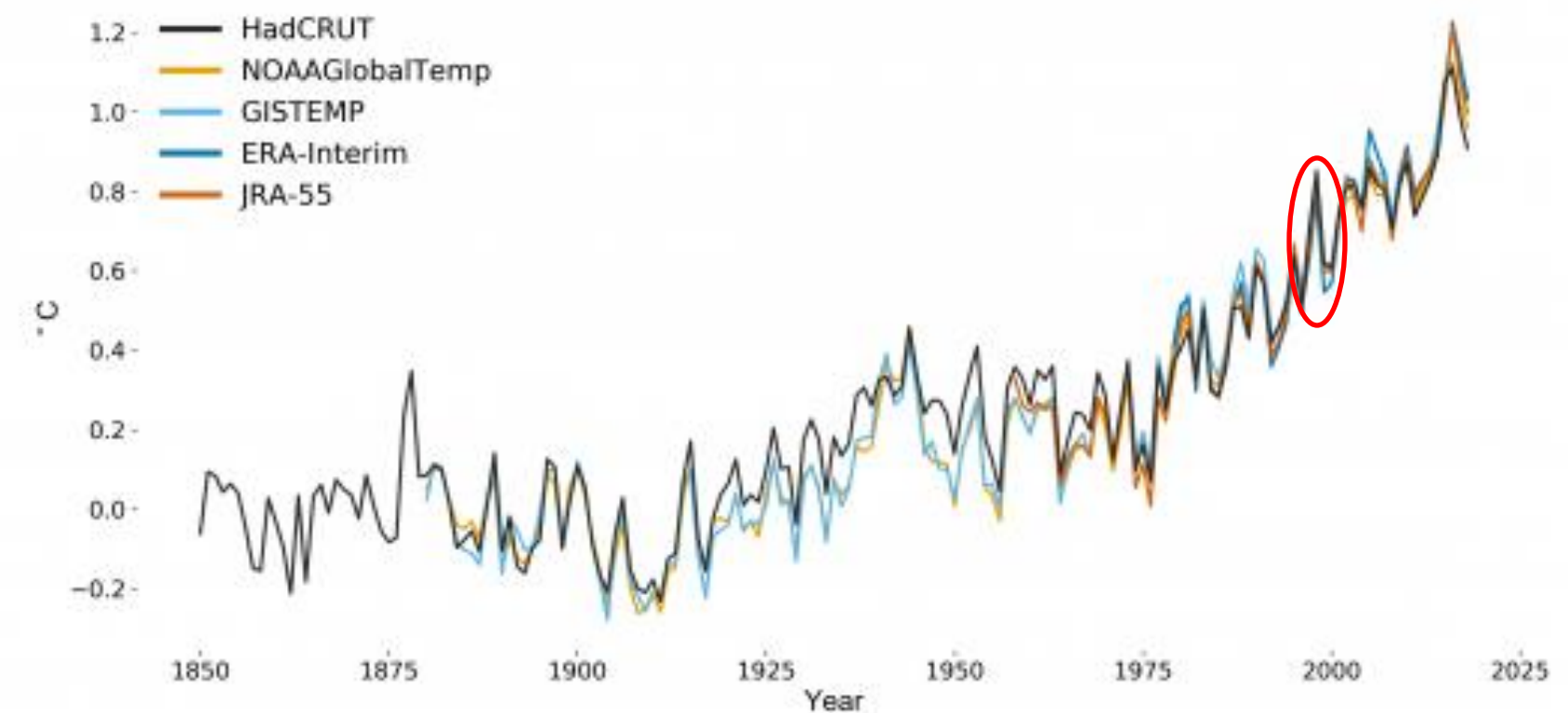
Global five-year average temperature anomalies (relative to 1981–2010) for 2015–2019. Data are from NASA GISTEMP v4. Data for 2019 to June 2019.

2015–2019

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

Met Office

Global mean temperature difference from 1850-1900 (°C)



© Crown Copyright. Source: Met Office



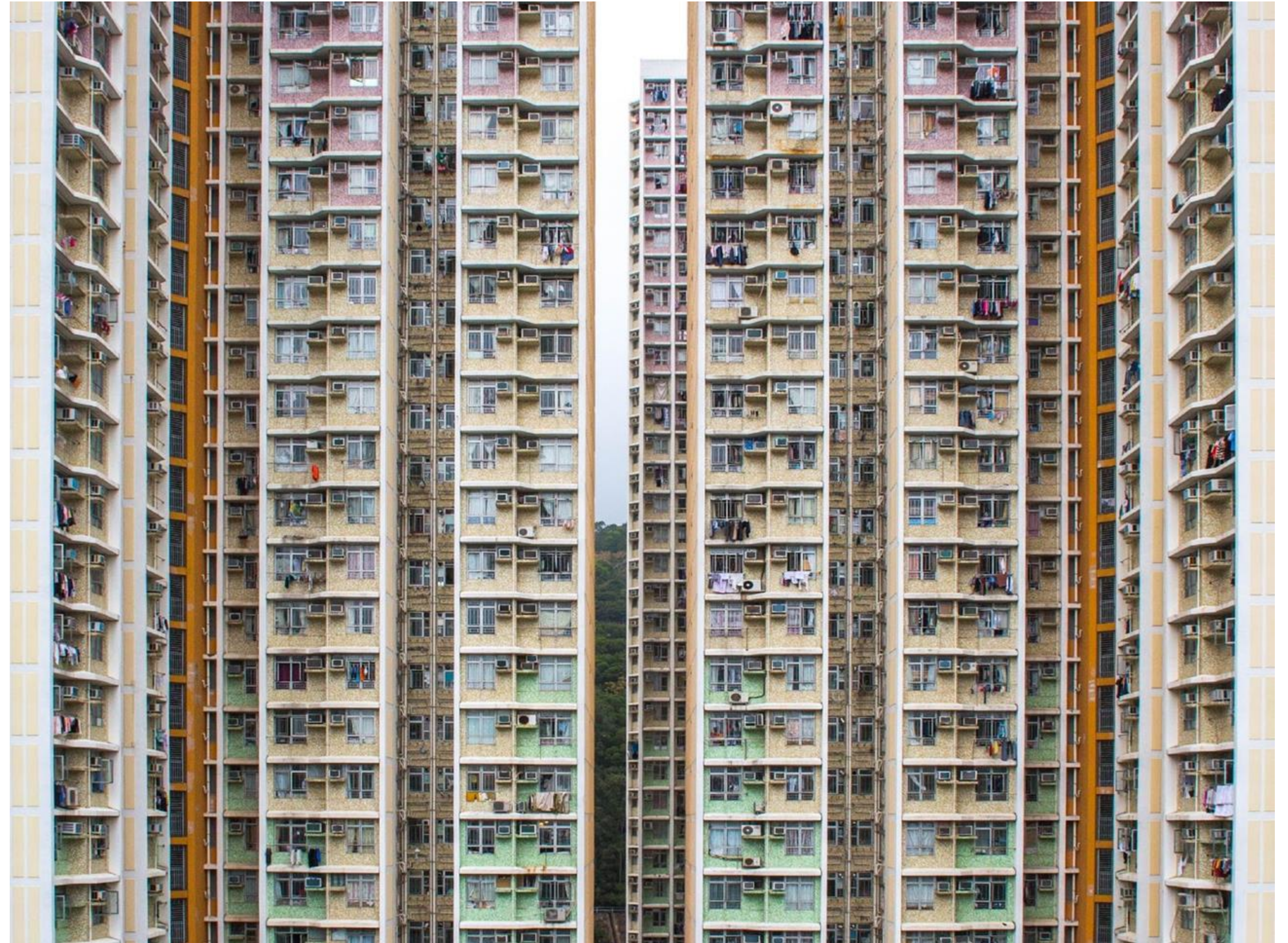
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#HEATHEALTH
www.ghhin.org

Urban environments magnify heat exposures

Dense and vertical constructions, extensive use of heat retaining materials, limited vegetation cover, and heat generation from energy use in cooling and transport all contribute to urban heat island effects.

Urban Heat Islands, and micro-heat islands within cities, increase exposure risk to local inhabitants.



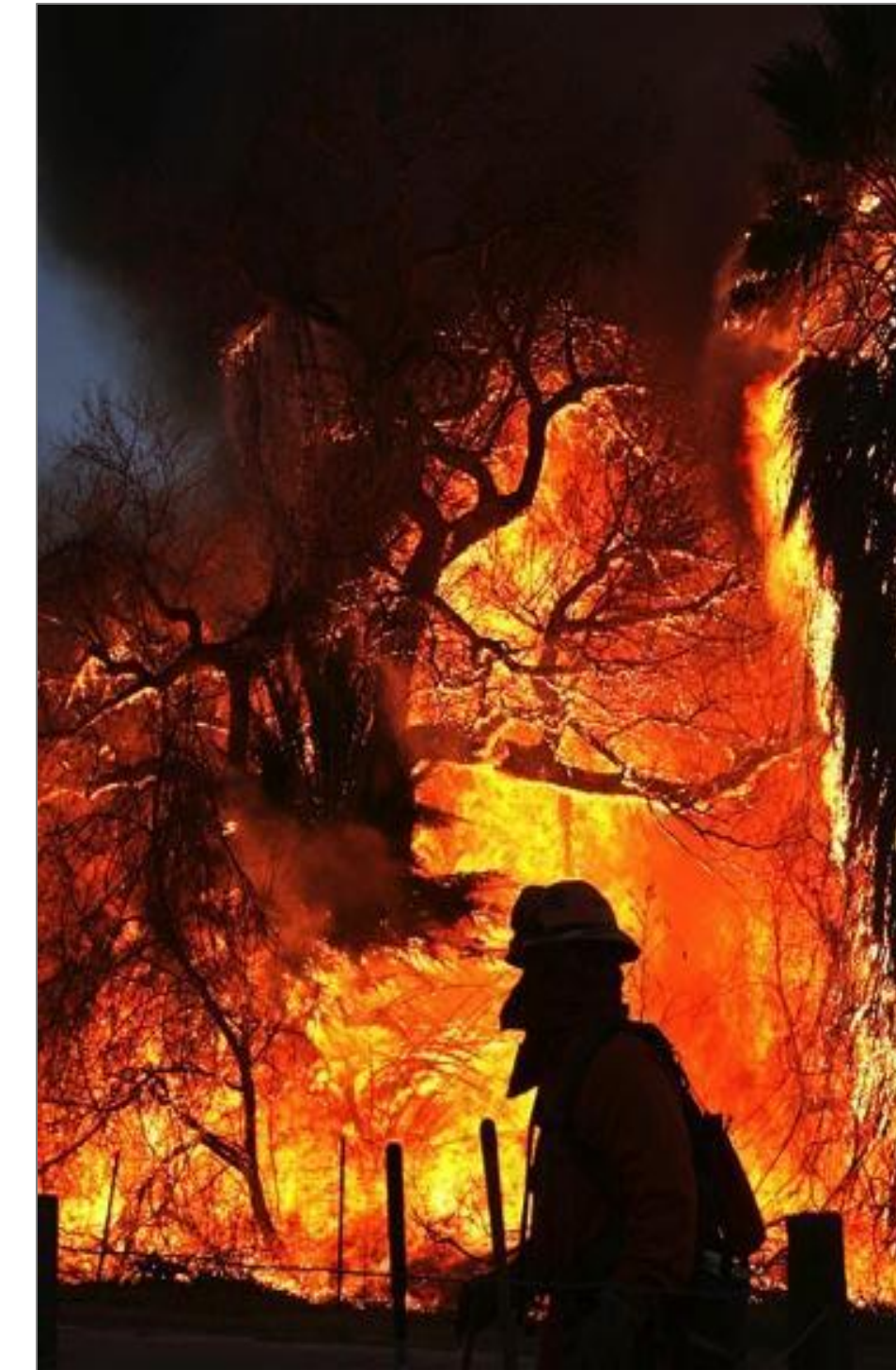
Occupational heat strain directly affects workers' health

Impacts include elevated risk of dehydration, kidney disease, work accidents, and lost work productivity.

Heat may be indirectly influencing global health in significant ways, as the loss of productivity and income hinders individual ability to live healthy and productive lives.



Heat AND.....



GHHIN - A GLOBAL KNOWLEDGE AND ACTION NETWORK - WHY?

The heat problem is Big, Silent, Diffuse, and Needs Action across the Globe

Urgency

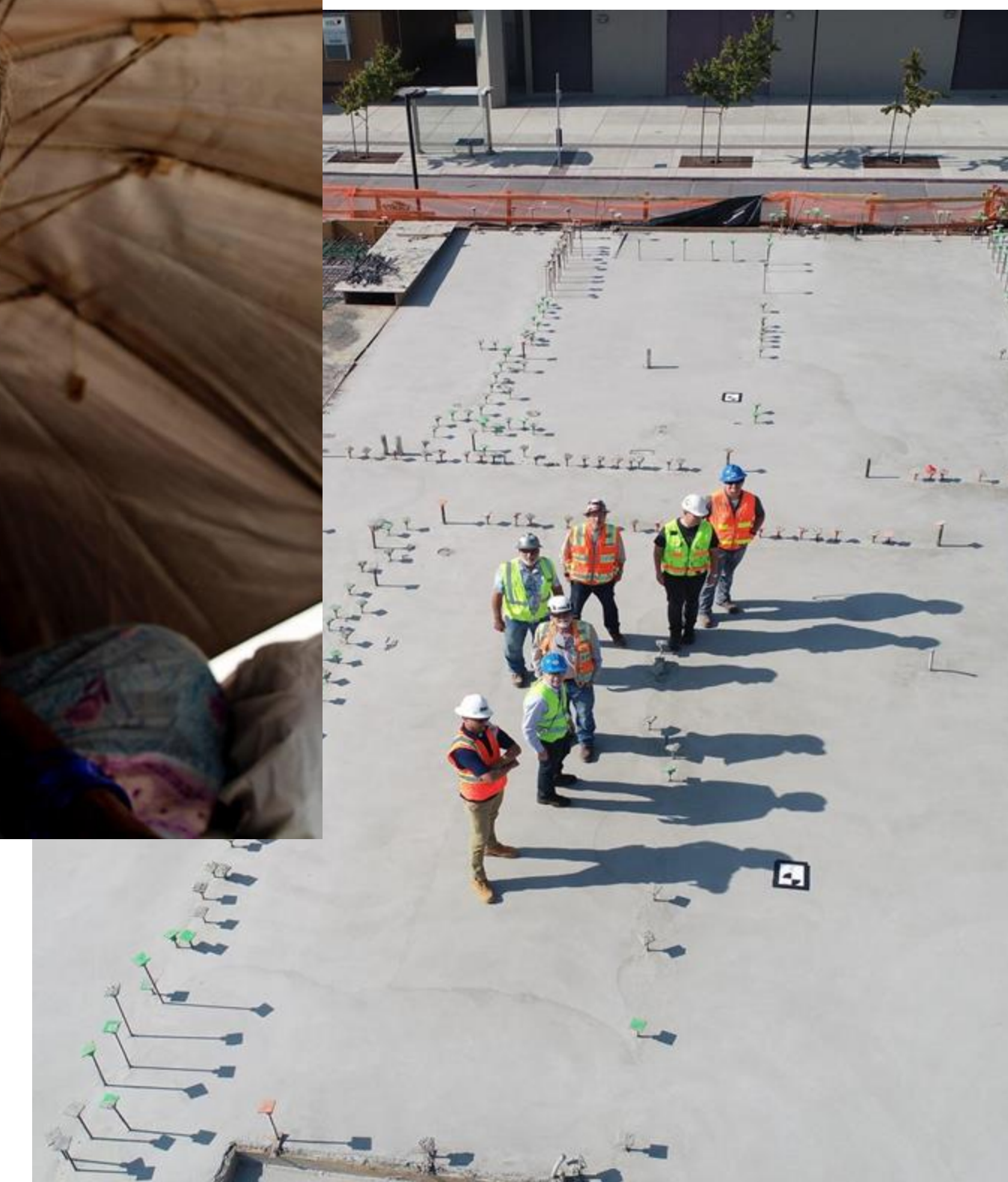
Awareness

Connectivity

Information

Capacity

Monitoring



**We can prevent a grand majority of heat impacts,
but we are missing opportunities to
work together more, better, and faster.**

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



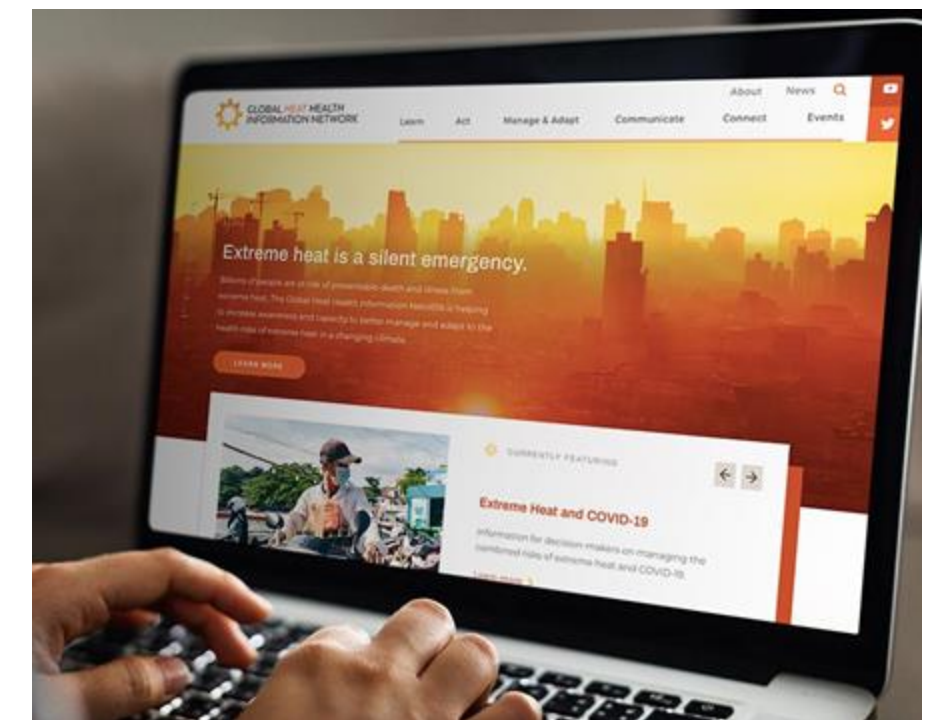
Go-to
resource hub



Member-driven
forum



Not a funding
or grant-making
mechanism



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WHO WE ARE

Government agencies / academic institutions / international organizations / NGOs / private sector and individuals in relevant fields

Diverse expertise and perspectives

Our members self-select, enhancing inclusion of a broad range of global organizations and professionals

Compatible motivation

The mission and values of our members are expected to be compatible with our vision.

Scientific integrity and shared principles

Members will be encouraged to uphold scientific integrity and principles of good public health practice.



Boston University



C40 Cool Cities Network



CCOUC



City University of Hong Kong



Climate Services for Resilient Development



Columbia University



Deutscher Wetterdienst



Durham University



GEO Health Community of Practice



Global Cool Cities Alliance



Global Framework for Climate Services



Heat Relief Network



HIWeather



Hong Kong Observatory



Hong Kong Red Cross



Imperial College London



Indian Institute of Tropical Meteorology



Integrated Research and Action for Development



ICOH Scientific Committee on Thermal Factors



Lancet Countdown on Climate and Health



US National Oceanic and Atmospheric Administration



Natural Resources Defense Council



Public Health England



Red Cross Red Crescent Climate Centre



Risk-informed Early Action Partnership



The Chinese University of Hong Kong



The University of Hong Kong



UK Met Office



University of Copenhagen



University of Washington



USAID



World Health Organization



World Meteorological Organization



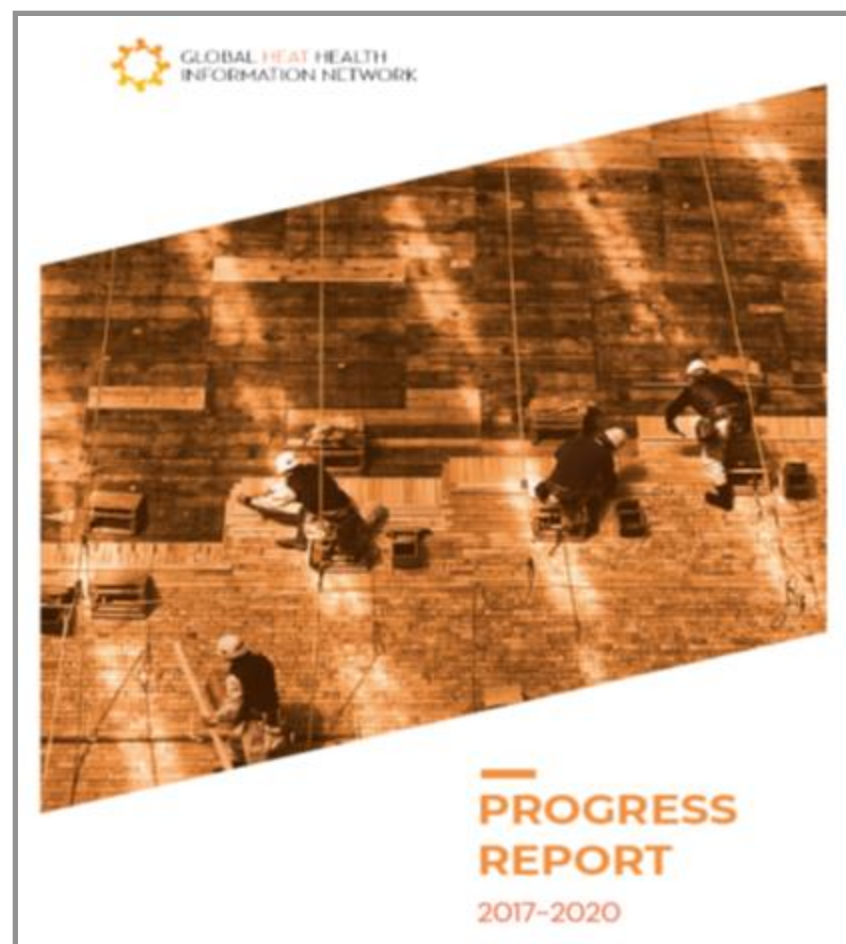
WONCA Working Party: Environment

GHHIN FOCUS



Call to Action from the
First Global Forum on
Heat and Health

December 2018 / Hong Kong, China



- 1. Awareness**
Urgently improving awareness of the disaster that increasing extreme heat poses to human health, wellbeing, and productivity worldwide.
- 2. Partnership**
Catalyzing and sustaining interdisciplinary partnerships and co-learning between research and practitioners across relevant government, academic, private sector and civil society bodies.
- 3. Synthesis**
Synthesizing and advancing science and technology available for decision making and risk reduction across sectors and time scales.
- 4. Expertise**
Improving access to expert resources and opportunities for learning, exchange, and engagement.
- 5. Leadership and Action**
Identifying and promoting action to address critical gaps in research, knowledge and action.

INTEGRATED FRAMEWORK APPROACH AND PRIORITIES

Priority Needs of
each pillar outlined



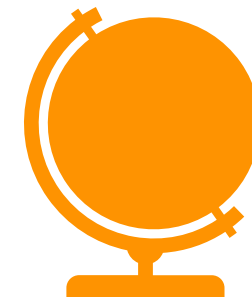
2021-2022 Activities

- Regional Networks
- Pilot projects
- New partnerships and partnership campaign
- Affiliated research
- Affiliated technical products

KEY ACTIVITIES

We help improve the **knowledge** and **capacity** of governments, organizations, and professionals to protect populations from the avoidable health risks of extreme ambient heat.

By bringing together the work and progress of its members we help create a more holistic picture of the needs, science, and strengths across the network.



Technical Workshops



Online Platform / Monthly Digest



Global synthesis + technical products



Global Forum Events / Calls



Learning events & exchange



Technical working groups

**2021 – 2023
Workplan just
approved**



Moving toward regional communities, pilot projects, new partnerships, and affiliated research and technical products

2020 IN ACTION



GLOBAL HEAT HEALTH INFORMATION NETWORK

SOUTH ASIA HEAT HEALTH SUMMIT
Pune, India / 14 February 2020

The South Asia Heat Health Summit is co-organized by the Global Heat Health Information Network, the Indian Institute of Tropical Meteorology, IIM, and others to build capacity, promote sharing, and encourage evidence-based policy and actions to improve the management of extreme heat risks. The regional summit will bring together interdisciplinary experts and practitioners to share experience and concerns, learn from each other, identify new solutions and opportunities, and raise awareness of the urgent need to protect ourselves and communities from extreme heat in a warming world.

Goals
The Summit aims to:

- strengthen the GHHIN network in the South Asia region by building connections and conversation between key actors to share what they're working on, what's working, and where attention is needed;
- take stock of progress and good practices to address extreme heat risks and identify emerging issues;
- build awareness of the urgent needs, challenges and opportunities surrounding heat health in the region;
- identify concrete opportunities for formal projects and collaborations to reduce the impact of extreme heat in South Asia.

Logistics and Pre-registration
The 1 day event will take place on 14 February 2020 at the ITM campus, following and in conjunction with the International Conference on Climate Services 6 (11-13 February 2020). Technical sessions and relevant posters on Heat Management and Climate and Health presented during ICCS-6 will be reflected as part of the same dialogue. The summit builds on outcomes from the 1st Climate Services for Health Forum (Colombo, 2016), which called for a regional community of practice on heat, and the 1st Global Heat Health Forum (Hong Kong, 2018), which outlined global priorities for heat action.

Registration: <https://bookchumpigghin.org/southasiasummit2020>
Cost: free
Location: Indian Institute of Tropical Meteorology (ITM)
Dr. Homi Bhabha Road, Pashan, Pune - 411 008
Contact: info@ghhin.org

South Asia Heat Health Summit
February 2020



Lorentz center **Hot but Habitable**
Innovating to Adapt to Heat Waves of the Future
Workshop @Snellius 9 - 13 March 2020, Leiden, the Netherlands

Scientific Organizers

- Hein Daanen, VU Amsterdam
- Peter van den Hazel, VGGM
- Hunter Jones, NOAA
- Joy Shumake-Guillemot, WMO

Topics

- Extreme Heat Events
- Health Risks of Higher Temperatures
- Labor Productivity in Rising Temperatures
- Future Challenges and Sustainable Solutions
- New Global Network
- Digital Systems-Based Solutions

www.lorentzcenter.nl

Hot but Habitable, Lorentz Center
March 2020



GLOBAL HEAT HEALTH INFORMATION NETWORK

TECHNICAL BRIEF
PROTECTING HEALTH FROM HOT WEATHER DURING THE COVID-19 PANDEMIC

COVID-19 amplifies the health risks of hot weather, presenting individuals and local decision-makers with new challenges on the optimal ways to stay safe from both hot weather and COVID-19. Communities around the world are facing unprecedented compound risks as the health and socio-economic impacts of the pandemic exacerbate already deadly heat risks.

The COVID-19 pandemic amplifies health risks for many people in hot weather. To reduce heat-related illness and loss of life authorities and communities should prepare for hot weather and heatwaves — in addition to managing COVID-19 — before extreme heat strikes.

The last five years (2015-2019) saw the hottest average temperatures ever recorded at a global scale, including more frequent, longer and hotter heatwaves on every inhabited continent. This year is also on track to be one of the hottest years on record and the same is true for the coming decade — consistent with climate change trends.

Authorities should expect and urgently prepare for hot weather and heatwaves, in addition to managing COVID-19. Concrete public health actions to reduce heat-related illness and death may need to be modified in locations where they are restricted, unavailable or in contradiction to public health measures to limit the transmission of COVID-19. These measures include: "leave hot apartments for public spaces", "go to public air-conditioned locations such as cooling centers, shopping malls, and libraries", "regularly check on vulnerable persons", "use fans to cool rooms without air-conditioning", and "seek urgent medical care if showing signs of heat stroke".

Furthermore, hot weather conditions may complicate COVID-19 responses by increasing patient loads, and creating occupational health risks for health workers and responders.

This unprecedented situation highlights the need to clarify issues and decision-making options. This technical brief describes key considerations for decision makers and practitioners on adapting existing plans, protocols and procedures for managing the risks of extreme heat during the COVID-19 pandemic. The accompanying Q&A series and checklists present further options, supporting evidence and resources to help all stakeholders and communities take informed action.

Heat and COVID-19 Information Series
May 2020



2 June 2020
Setting operational thresholds for Heat Early Warning Systems

Ross Thompson, Public Health England
Carolina Cerrudo, NMS Argentina




30 June 2020
Economic valuation of heat-health impacts and interventions

Shubhayu Saha, US Centers for Disease Control and Prevention
Vijay Limaye, Natural Resources Defense Council



16 June 2020
Innovating in urban planning and governance for heat health

Ladd Keith, University of Arizona
Sara Meerow, Arizona State University
David Hondula, Arizona State University



AHMEDABAD HEAT ACTION PLAN 2016
GUIDE TO EXTREME HEAT PLANNING IN AHMEDABAD, INDIA

21 July 2020
Developing an effective Heat Health Action Plan (HHAP) for your city

Kristie Ebl, University of Washington

Heat Health Masterclasses June-July 2020

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

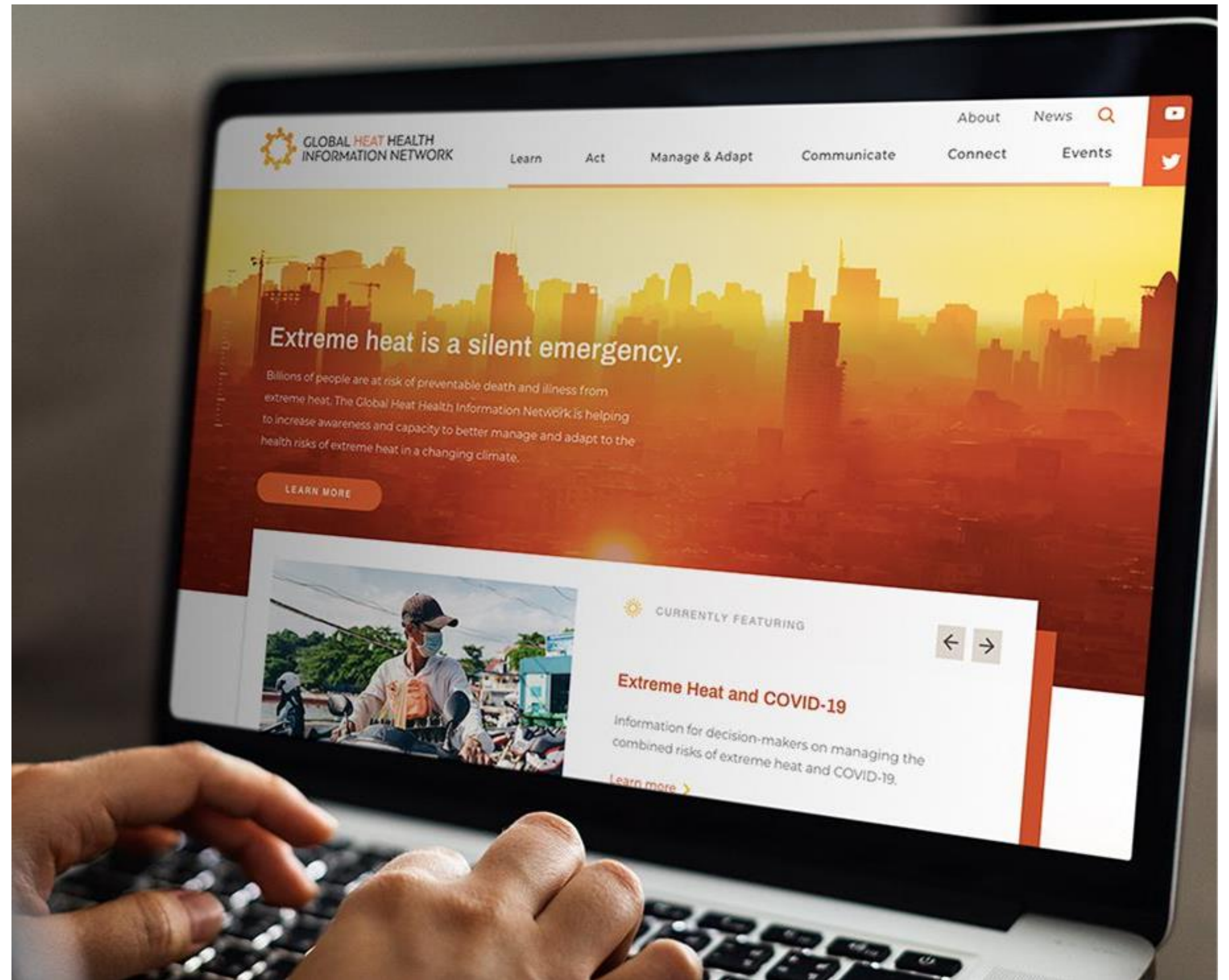
1. consider ideas/scenarios situations that might be faced
2. answer questions – with evidence and existing guidance
3. find examples

www.ghhin.org

New website is LIVE

New and improved features:

- heat health resource library and learning
- Easy to use tools and services directory
- Focus areas: work, urban, sports, etc
- Inventory/maps of heat health action plans case studies
- Expert and projects directory
- [coming soon] action platform / directory of evidence and evaluation of interventions



Opportunities for Collaboration

- . Provide more engagement with Disaster Risk and Response Community
- . Promote engagement with Decision Makers-especially local/on the ground
- . Innovate on advanced planning and preparedness on seasonal, annual and decadal time scales
- . Contribute to revising WMO Heatwave Guidance
- . Faciliate an Open Forum Dialogue on topic of choice with GHHIN
- . Support Regional Node
- . Contribute to Heat Action Platform--directory of evidence and evaluation of interventions
- . Subscribe to GHHIN Digest!

- . And.....

Thank you

www.ghhin.org

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GLOBAL **HEAT** HEALTH
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COVID+Heat Info Series Impact

800+ media mentions / 13+ languages (May)

20,000 visitors to website



Coronavirus disease (COVID-19): Ventilation and air conditioning

29 July 2020 | Q&A

What is ventilation?



What is WHO doing to address ventilation in the context of COVID-19?



WHO has contributed to guidance on ventilation and air-conditioning systems in the context of COVID-19, available [here](#).

WHO works closely with the World Meteorological Organization Joint Office for Climate and Health and the United States National Oceanic and Atmospheric Administration (NOAA) through the Global Heat Health Information Network to develop and update this guidance.

More Q&As on COVID-19 and ventilation in public spaces and buildings are available [here](#).



Дополнительную информацию можно получить по приведенным ниже ссылкам:

Рекомендации общественного здравоохранения о предупреждении последствий жары для здоровья:

<http://www.euro.who.int/en/public-health-advice-on-preventing-health-effects-of-heat>

ВОЗ призывает: спасайте человеческие жизни – соблюдайте чистоту рук в контексте COVID-19

https://www.who.int/infection-prevention/campaigns/clean-hands/WHO_HH-Community-Campaign_finalv3.pdf

Экстремальная жара и COVID-19

<https://www.ghhin.org/heat-and-covid-19>

“We find GHHIN’s work useful on a daily basis and share it extensively with our partners and stakeholders.”

- Health Canada Heat Division 21.10.20



partnerships to aid in these activities.

Box 10. Integration of the COVID-19 pandemic into heat-stress planning

In addition to dealing with climate change related health risks to the general population (such as heat stress), health workers and facilities will have to ensure that adaptation measures (e.g. heat-stress plans) integrate relevant current programmes and responses in a comprehensive way, rather than approaching climate change and health as a vertical programme.

The COVID-19 pandemic amplifies the health risks for the general population and health workers during extreme weather events. During hot weather for example, some groups – older people, persons with pre-existing health conditions, living in crowded or poor-quality housing – are susceptible to both COVID-19 disease and heat stress, which could add to the burden of health care facilities. Health workers may also be exposed to heat stress due to the use of personal protective equipment which may impede cooling. However, it is essential that health workers are protected from both infection and heat stress. Thus, crucial considerations for health services and systems in relation to heat stress safety and COVID-19 disease prevention include:

- Priority and focus by medical and public health workers on COVID-19 pandemic preparedness and response activities that may compromise the capacity of health services and systems to prevent and manage heat stress.
- Public fear of seeking health care during the COVID-19 pandemic that may result in preventable heat-related deaths.
- Heat stress that can present a range of symptoms similar to early COVID-19 disease symptoms.

Given the compound risks from heat stress and COVID-19 disease, it will be essential to integrate both considerations into awareness-raising communications, and strengthen coordination among decision makers. Communities and health services should update and review communications and heat action plans in a way that potential COVID-19 pandemic preparedness responses are properly integrated (such as physical distancing), and make periodic changes to these plans as the situation evolves. In these unprecedented circumstances, strategic and collaborative actions can significantly enhance community and health system resilience to prevent avoidable illness and death from hot weather during the COVID-19 pandemic.

Source: (69)