An Overview of the Arsht-Rockefeller Resilience Center’s Extreme Heat Work

June 24, 2021
• 1.6 billion people in 970 cities will face extreme heat conditions by 2050 (C40, 2018)

• Heatwaves pose a mortal risk to human health: 70,000 people died during the 2003 heatwave in Europe alone.

• Extreme heat does not affect people equally. In 67% of US communities, majority non-white neighborhoods have less tree cover than white neighborhoods, even after accounting for trends in income (McDonald et al., 2021)

• Arsht-Rock has taken on several lines of work to address extreme heat, within and outside of EHRA

• EHRA’s vision: A world without heat-related deaths or loss of livelihoods
Arsht-Rock Extreme Heat Workstreams

- Education of Decisionmakers Linked to Vulnerable People Working Group
- Policy Working Group
- Finance and Risk Transfer Working Group
- Implementation Working Group
- Heat - Health Science Advisory Panel

- Economic Impact Analysis
- Heatwave Naming and Ranking
- Knowledge Sharing and Events
- Race to Resilience (COP26)
- Communications Outreach

City Champions for Heat Action
Extreme Heat Resilience Alliance Members

Cities/Counties:
- City of Athens, Greece
- City of Chennai, India
- City of Melbourne, Australia
- City of Mexico City, Mexico
- City of Miami, Florida
- City of Miami Beach, Florida
- City of Tel Aviv, Israel
- Miami-Dade County, Florida

Individuals
- Annette Detken, Director, Climate Risk Solutions Management, Limited
- Dr. Aaron Bernstein, Director, Center for Climate, Health, and the Global Environment at Harvard T.H. Chan School of Public Health (Harvard Chan C-CHANGE)
- Jeff Goodell, New York Times Best Selling Author & Contributing Editor, Rolling Stone
- The Honorable Ricardo Lara, California Insurance Commissioner (elected), California Department of Insurance

Organizations:
- Adrienne Arsht-Rockefeller Foundation Resilience Center at the Atlantic Council
- American Forests
- Basel Agency for Sustainable Energy
- Bechtel
- Care Earth Trust
- CCRIF SPC
- The Centre for Disaster Protection (Quality Assurance Partner)
- Cities Climate Finance Leadership Alliance
- Climate Policy Initiative
- Climate Resolve
- ETH Zurich, Weather and Climate Risks Group Global Infrastructure Basel
- FSD Africa
- International Federation of the Red Cross, Americas Zone
- Insurance Development Forum
- National Center for Atmospheric Research, Regional Climate Applications; Dr. Caspar Ammann, Project Scientist III, Boulder, CO
- Pathfinder International
- Resilient Cities Network
- The Red Cross Red Crescent Climate Centre
- The Risk-informed Early Action Partnership (REAP)
- The Rockefeller Foundation
- Swiss Re
- University of Pennsylvania, Cities Climate-Resilient Infrastructure
EHRA’s Goal and Focus Areas

• Protect lives and livelihoods from extreme urban heat, with a focus on the most vulnerable people and communities.

• EHRA is supported by a Heat Health Science Advisory Panel

• EHRA will meet its goal by:
  • Educating decisionmakers linked to vulnerable communities about the risks and impacts of extreme heat and how to reduce them;
  • Developing policy recommendations to create the enabling conditions for effective heat risk reduction interventions;
  • Providing better access to affordable capital for long-term interventions and to extreme heat risk transfer products to build physical and financial resilience to heat;
  • Implementing replicable, effective on-the-ground interventions to reduce heat risk and impacts.

EHRA will make every effort to leverage existing good work and not duplicate
Heat-Health Science Advisory Panel

Overview: In order to ground EHRA’s work in the latest, rigorous scientific evidence, the Heat-Health Science Advisory Panel provides inputs into EHRA’s working groups. The Panel is composed of expert scientists from a range of fields and experiences including climate, human health, medicine, social and behavioral science and more.

Members:

• Dr. Caspar Ammann, Project Scientist III, National Center for Atmospheric Research
• Dr. Aaron Bernstein, Director, Center for Climate, Health, and the Global Environment at Harvard T.H. Chan School of Public Health (Harvard Chan C-CHANGE)
• Dr. Larry Kalkstein, CEO, Applied Climatologists & Professor Emeritus, University of Delaware
• Dr. Simon Mason, Columbia University, International Research Institute for Climate & Society
• Dr. Jisung Park, Assistant Professor of Public Policy at the University of California, Los Angeles
• Dr. Madeleine Thomson, Senior Science Lead for Climate Change and Health and Interim Head, Our Planet our Health, Wellcome Trust
• Dr. V. Kelly Turner, Assistant Professor, Urban Planning, Luskin Center for Innovation, University of California Los Angeles
• Dr. Gregory A. Wellenius, Professor of Environmental Health, Boston University School of Public Health
EHRA Metrics Task Force

Overview:

• The Metrics Task Force supports EHRA with developing output, outcome, and impact indicators for EHRA's working group's activities.

• The Task Force tracks progress against these indicators for the purpose of reporting this information to relevant stakeholders such as partner cities and donors.

• The Task Force will also develop a metrics and indicators framework for cities to measure the impact of their heat-related interventions, addressing the current gap that exists in this field.
Heatwave Naming and Ranking – A Retail Strategy to Trigger Behavior Change & Build a Culture of Awareness & Preparation
Heatwave Naming and Ranking Initiative

Overview:
• Awareness of extreme heat risk and impacts is lacking and the warning and response systems from governments are often not sufficient. These efforts start in the US and will go global in late 2021.
• In the US, ranking heatwaves and designing tailored response systems will improve upon the current NWS heat advisory/warning system, better communicate the issue to the public, save lives and protect economies and supply chains.
• Arsht-Rock and its committee of multi-disciplinary scientists offer technical expertise on human health, extreme heat, and heatwave ranking systems to provide technical support with modifying the existing NWS heatwave warning system or developing a new ranking system.
• The initiative has created a detailed roadmap containing general components and actions needed to build out such a system in a pilot environment.
• In working with pilot cities, we will support a comprehensive effort encompassing heatwave ranking, related policy, stakeholder action, mass communication, and measurement of effectiveness.

US Pilot Regions:
• Kansas City, Missouri
• Los Angeles County, California
• Miami-Dade County, Florida
Relevant policies are triggered

Relevant resources dispersed

Existing NWS forecast data collected

Heat Risk or Hazard value generated

NWS Ranking Issued

Local NWS Warning and Outreach Coordinator communicates with…. 

Plausible risk reduction behavior in general public

General behavior change recommendations

Public Mass Communication Organizations:
• Local news networks
• Public health authorities with ability to issue alerts
• ?

Risk reducing measures are taken by stakeholders serving vulnerable people

Specific action/decision recommendations

Crucial Stakeholders:
• Federally qualified health centers
• Nursing and care homes
• Social workers
• Housing advocates
• Outdoor employers
• Schools
• Religious Organizations
• ?

Likely mortality and morbidity avoided

Finance mechanisms activated

Atlantic Council
Adrienne Arsht-Rockefeller Foundation Resilience Center
City Champions for Heat Action (CCHA)

Overview:
• City Champions for Heat Action is a cornerstone EHRA initiative which brings together elected leaders of major cities and counties around the world to reduce heat risk for their citizens. CCHA contains two tracks:
  
  • Core Partner Cities: This group of 3-5 cities will work closely with EHRA to reduce the heat risk and impacts that their residents face, and will receive extended technical assistance from EHRA; a ready-to-implement roadmap for decision-makers; and a connection to a network of global cities working to address heat risks. Members of CCHA commit to appointing a Chief Heat Officer who will accelerate existing efforts, coordinate ongoing work, and intensify focus on dealing with extreme heat for vulnerable people.
  
  • #HeatSeason Partner Cities: This group of cities will commit to highlighting the risks of heat to their residents - and potential solutions - during their summers, whether in the Northern or Southern Hemisphere. They will use comms materials produced by Arsht-Rock as part of the ongoing #HeatSeason campaign and amplify the message that the "silent killer" of heat must be addressed around the globe.

Members:
• Athens, Greece
• Freetown, Sierra Leone
• Miami-Dade County, Florida, USA
• Potential additional members include Cairo, Buenos Aires, Chennai, Los Angeles County, and Sydney
EHRA’s #HeatSeason 2021 Campaign
If Hurricanes & Fires have a season – so should Heat. Awareness saves lives.
THANK YOU