



EXTREME HEAT RESILIENCE ALLIANCE

 Atlantic Council

 Adrienne Arsht-
Rockefeller Foundation
Resilience Center

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RESILIENCE ALLIANCE

With rising temperatures – particularly in cities – inflicting negative health and economic impacts across the globe, the Adrienne Arsht-Rockefeller Foundation Resilience Center (Arsht-Rock) formed the *Extreme Heat Resilience Alliance* (EHRA) in [August 2020](#) to protect people from extreme heat. The growing frequency, duration, and intensity of heat waves – which align with the last decade being the hottest ever recorded – will affect more than 3.5 billion people by 2070, 1.6 billion of whom will live in dense urban areas, according to some projections. By the turn of the next century, without preventive measures, projections suggest that heat waves may affect 75% of people on the planet.

As temperatures rise, the urban poor will likely remain susceptible, suffering from a combination of medical conditions (e.g., cardiovascular or respiratory diseases) that are exacerbated by heat, and living in communities with insufficient means to reduce the effects of high temperatures (e.g., inadequate resources to invest in tree cover).

Acknowledging the need for a concerted effort to address the impacts of rising temperatures, Arsht-Rock assembled a multi-sectoral coalition committed to achieving results. This coalition, the Extreme Heat Resilience Alliance, has the following vision and goal:

***Our Vision: A world without heat-related deaths and loss of livelihoods.
Our Goal: To protect lives and livelihoods from extreme urban heat with a focus on
the most vulnerable people and communities.***

The creation of EHRA reflects widespread agreement that a lack of awareness of heat risks and impacts among decisionmakers is a critical problem. Another barrier to mitigating heat risk is a lack of targeted policies and formalized governance around extreme heat. For cities that have identified extreme heat as a key risk, lack of available funding for long-term heat risk reduction investments as well as for short-term preparation and response to extreme heat represents yet another major roadblock.

EHRA is comprised of global city leaders and experts in public health, finance, humanitarian assistance, disaster management, climate science and risk, insurance and public infrastructure. We will focus our collective capabilities and reach through the following workstreams:

- **Educating decisionmakers** linked to vulnerable communities about the risks and impacts of extreme heat and how to identify and reduce them;
- Developing **resources** to create the enabling conditions for the passage of **effective heat risk reduction policies**;
- Facilitating access to **affordable capital for long-term interventions and to extreme heat risk transfer products** that build physical and financial resilience to heat;
- Supporting the implementation of replicable, **effective on-the-ground extreme heat reduction interventions**.

Further, the Alliance recognizes the imperative of science-based decision-making and will be supported by expert scientists from a range of fields and experiences including climate, human health, medicine, social and behavioral science and more.

Other key activities may include: providing an assessment of the cost of heat waves to cities or mapping heat risk and impacts within cities; launching a resource platform and toolkit to be used by decisionmakers as they work to understand their heat risk and develop approaches to reducing or protecting people from heat; creating pre-heat wave, forecast-based public insurance and financing mechanisms; launching a campaign to engage decisionmakers about reducing the risks of extreme heat to vulnerable people; and building new access to capital for cities to invest in heat-reducing interventions.

EHRA's Metrics Task Force supports the Alliance 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, donors, and the Race to Resilience campaign. Additionally, the Task Force will 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.

In April 2021, the EHRA launched City Champions for Heat Action, a cornerstone program of the Alliance. The CCHA initiative 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 decisionmakers; and a connection to a network of global cities working to address heat risks. Miami-Dade County, Florida, Athens, Greece and Freetown, Sierra Leone have signed on as the founding “core partner cities” of CCHA.
- **Heat Season 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 communications materials produced by Arsht-Rock as part of the ongoing #HeatSeason campaign and amplify the message that the threat of heat must be addressed around the globe.

The Extreme Heat Resilience Alliance will address extreme urban heat through the following workstreams:

Educating Decisionmakers Linked to Vulnerable Communities

There is widespread agreement that a lack of awareness and understanding of the risk and impacts associated with extreme heat must be addressed in conjunction with meaningful on-the-ground action. Extreme heat is known as the “silent killer” – we must raise awareness about this threat to effectively reduce it. Thus, our first, foundational, workstream for the Alliance will be education of key decisionmakers and stakeholders around extreme heat. This work will include:

- Quantification of risks and impacts of extreme heat in urban areas, and subsequent education of decisionmakers around heat risks and impacts in their region
- Launching a targeted campaign to increase heat risk-literacy and knowledge of actions to reduce heat among decisionmakers
- Development and coordination of a shared EHRA resource platform, containing inputs from all four working groups
- Creation of an EHRA “toolkit” for decisionmakers, containing context and best practices for each area of EHRA’s work

Policy and Governance

Another key barrier to mitigating heat risk is the lack of targeted policies and formalized governance around the extreme heat issue. Extreme heat is not always identified as a natural disaster or declarable emergency, nor is one government agency usually responsible for the various sectors that suffer from the impacts of extreme heat. As a coalition, we will focus on creating the enabling conditions for policy action on extreme heat by addressing these issues. This work will include:

- Mapping existing policies which reduce heat risk and impacts, with case studies and interviews with decisionmakers to provide greater insight into the key factors that make these policies successful
- Developing a research framework for assessing the heat and health impacts of government policies

Finance and Risk Transfer

For cities that have identified extreme heat as a key risk, lack of available funding both for long-term investments to reduce urban heat as well as for short-term preparation and response to extreme heat events remains a barrier to addressing this risk. Extreme heat response efforts often require cities to use funds allocated to other important efforts, reducing cities’ overall financial resilience. The coalition will seek to create financial and risk transfer products to build financial resilience to heat, which will include:

- Identifying and/or designing innovative financing approaches to unlock resources for undertaking specific, on-the-ground and often long-term interventions that reduce heat risk, such as urban forests and installing cooler surfaces
- Designing risk-transfer parametric products and other insurance-based solutions that reduce the financial burden from extreme heat events
- Exploring “forecast-based triggers” for heatwave-response funding that would pay out before the worst point of an extreme heat event to allow for quick liquidity for cities to deploy immediate response and preparation activities, such as evacuation of vulnerable populations and cooling station set-up

Implementation of On-the-Ground Extreme Heat Mitigation Measures

Finally, the coalition will support implementation of on-the-ground heat mitigation measures – identified by experts and long-time practitioners in the field – by:

- Leveraging an existing evidence-base of heat interventions to educate decisionmakers and key stakeholders on effective heat-reduction interventions
- Providing technical assistance on implementation of projects, including early warning system, nature-based solution, and cool surface projects
- Supporting ongoing initiatives and scaling existing efforts to new locations
- Creating an Implementation Hub, to be housed within EHRA’s resource platform, to organize resources on implementation best-practices and funding/partnership opportunities

EXTREME HEAT RESILIENCE ALLIANCE MEMBERS

ORGANIZATIONS

- **Adrienne Arsht-Rockefeller Foundation Resilience Center at the Atlantic Council**
- **American Forests**
- **Basel Agency for Sustainable Energy (BASE)**
- **Bechtel**
- **Care Earth Trust**
- **CCRIF SPC**
- **The Centre for Disaster Protection (Quality Assurance Partner)**
- **City Climate Finance Leadership Alliance**
- **Climate Policy Initiative**
- **Climate Resolve**
- **ETH Zurich, Weather & Climate Risks Group**
- **FSD Africa**
- **Global Infrastructure Basel**
- **International Federation of Red Cross and Red Crescent Societies (including representation from the Red Cross Red Crescent Climate Center & the Global Disaster Preparedness Center)**
- **Insurance Development Forum**
- **Pathfinder International**
- **Resilient Cities Network**
- **The Risk-informed Early Action Partnership (REAP)**
- **The Rockefeller Foundation**
- **Swiss Re**
- **University of Pennsylvania, Cities Climate-Resilient Infrastructure Financing Initiative**

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***

**Member of Resilient Cities Network*

INDIVIDUALS

- **Annette Detken**, Director, Climate Risk Solutions Management
- **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

EXECUTIVE COMMITTEE

- **Kathy Baughman McLeod**, Director and Senior Vice President, Arsht-Rock, Atlantic Council
- **Tiziana Bonzon**, Manager, Climate, Migration and Resilience, International Federation of Red Cross and Red Crescent Societies
- **Xavier Castellanos**, Under Secretary General, National Society Development and Operations Coordination, International Federation of Red Cross and Red Crescent Societies
- **Jad Daley**, President and CEO, American Forests
- **Guy Deknuydt**, Climate Action Plan Officer, City of Tel Aviv, Israel
- **Sophie Evans**, Head of Country Programmes, The Centre for Disaster Protection
- **Jorge Gastelumendi**, Director, Global Policy, Arsht-Rock
- **Eleni Myrivili**, Advisor, City of Athens, Greece & Senior Fellow, Arsht-Rock
- **Mauricio Rodas**, Former Mayor of Quito, Ecuador & Senior Fellow, Arsht-Rock
- **Rebecca Scheurer**, Director, Humanitarian Initiatives, Arsht-Rock
- **Dr. Gregory A. Wellenius**, Professor of Environmental Health, Boston University School of Public Health
- **Vikram Widge**, Senior Advisor, Climate Finance, Climate Policy Initiative

EHRA HEAT HEALTH SCIENCE ADVISORY PANEL

- **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. 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

PARTNERSHIPS

- **Race to Resilience**

To learn more about the Extreme Heat Resilience Alliance, please contact Jen Manaloto: jmanaloto@atlanticcouncil.org.

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