



Mount
Sinai



IATSE Goes Green! A Conversation with the BGA Panelist Bios



Ismail Nabeel | Professor, Mount Sinai

Ismail Nabeel, MD, MPH, MS is an Associate Professor in the Department of Environmental Medicine and Public Health at the Icahn School of Medicine at Mount Sinai. Dr. Nabeel has expertise in Internal Medicine, Occupational/Environmental Medicine, and Clinical Informatics. He has always been interested in Climate Change and its impacts on workers' health in multiple different working environments. Over the course of years, he has published a series of articles providing in-depth guidance on the clinical competencies for occupational and environmental medicine practitioners to protect workers' health in the impending climate change crisis. He was instrumental in the development of Climate change specific podcasts called "***Climate conversations***" exploring the impact of climate change on workers' health. For the past five years, he has been working on the development of "Pocket Ark" - a collaborative effort to enhance the health and safety of the construction workers working in the flood zones. In 2023, he also received the P-30 grant on Climate Change and Health which looks at flooding and its impact on respiratory illness.



Molly Braverman | Director, Broadway Green Alliance

Molly Braverman (she/her) is the Director of the Broadway Green Alliance. She previously served as the Managing Director of Theatre Horizon, a non-profit professional theatre company in Norristown, PA. She has worked as a Stage Manager on Broadway, Touring Broadway, and regionally, having spent three years on the road with the National Tour of Wicked and continuing to serve as a substitute Stage Manager on Wicked and Hamilton. She is currently a Senior Consultant in strategic planning for Theatre Projects and is serving a four-year term as an elected Committeeperson for Philadelphia's Ward 2 Division 12. Molly is an active member of the Actors Equity Association where she is the co-leader of their Climate Action Team.



Resource Handout

Anywhere Resources

- Broadway Green Alliance Resources:
 - [Green Captain Program](#)
 - [Toolkits and Guides](#)
 - [Video Learning Resources](#)
 - [Case Studies](#)
 - [Theatre Climate Pledge](#)
 - [Theatrical Material Reuse Database](#)
- [Theatre Green Book](#)
- [Sustainable Production Toolkit](#)
- [Arts + Climate](#)
- [Sustainable Practice in the Arts](#)
- [Reverb](#)
- [Natural Resources Defense Council](#)
- [Climate Reality Project](#)
- [350.org](#)

NYC Resources

- [BGA Recycling Programs, Binder Project, and Times Square Drives](#)
- [BGA NYC Theatre Greening Grants](#)
- [Big Reuse](#)
- [FabScrap](#)
- [Wearable Collections](#)
- [Materials for the Arts](#)
- [Superhero Clubhouse](#)
- [WE ACT for Environmental Justice](#)
- [New York League of Conservation Voters](#)

BGA Summer 2023 Read, Watch, and Listen Lists

- [Watch List](#)
- [Listen List](#)
- [Reading List](#)



The Impact of Climate Change | Webinar Resources

IATSE: <https://iatse.net/>

- IATSE Safety Hotline: **844 IA AWARE | (844) 422-9273**
- Education webpage: <https://iatse.net/education/>
- IA Education For All GoToWebinar Channel: <https://www.gotostage.com/channel/iaeducationforall>
- IATSE Green Committee: <https://iatse.net/take-action/greencommittee/> – for more information about IATSE Green Initiatives and how your Local can get involved, contact the Green Committee: iatsegreen@iatse.net
- IATSE Disaster Response Committee: <https://iatse.net/take-action/disasterresponse/>

IATSE Training Trust Fund: <https://www.iatsetrainingtrust.org/>

- TTF Safety First! Online Curriculum: <https://www.iatsetrainingtrust.org/safetyfirst>
- OSHA Courses: <https://www.iatsetrainingtrust.org/osha>
- OSHA Outreach Training: <https://www.iatsetrainingtrust.org/osha>
- Useful Links: <https://www.iatsetrainingtrust.org/useful-links>

Occupational Safety and Health Administration (OSHA): <https://www.osha.gov/>

- Medical and First Aid: <https://www.osha.gov/medical-first-aid>
- OSHA Outreach Training Program: <https://www.osha.gov/training/outreach>
- Heat Illness Prevention: <https://www.osha.gov/heat>
- Safe + Sound Campaign: <https://www.osha.gov/safeandsound>

Mt. Sinai Selikoff Centers for Occupational Health: <https://www.mountsinai.org/care/occupational-health>

- OccPod – The Official ACOEM Podcast: <https://acoem.org/Social-Media/OccPod-The-Official-ACOEM-Podcast>

Broadway Green Alliance: <https://www.broadwaygreen.com/>

Industry Specific Resources

- Sustainable Production Toolkit: www.sustainableproductiontoolkit.com
- Centre for Sustainable Practice in the Arts: www.sustainablepractice.org
- Julie's Bicycle: <https://juliesbicycle.com/>
- Theatre Green Book: <https://theatregreenbook.com/>
- Green Spark Group: <https://www.greensparkgroup.com/>
- Training Opportunities through Green Spark Group: <https://green-spark-knowledgehub.thinkific.com/>
- Earth Angel : <https://www.earthangelsets.com/>
- Green Production Guide: <https://www.greenproductionguide.com/>
- Download the Green Production Guide Toolkit: <https://www.greenproductionguide.com/tools/>

General Resources

- U.S. Environmental Protection Agency: <https://www.epa.gov/>
- Climate Reality Project: www.climateRealityproject.org
- Natural Resource Defense Council: www.nrdc.org
- WE ACT for Environmental Justice: www.weact.org
- AirNow: <https://www.airnow.gov/>



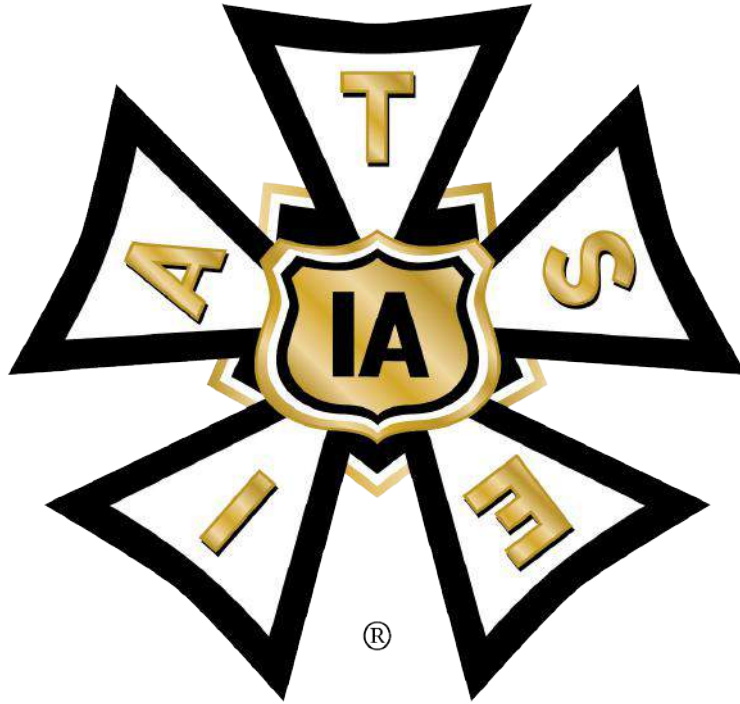
The Impact of Climate Change on IATSE Worker Safety and Health

With the Mt. Sinai Selikoff Centers for Occupational Health and the Broadway Green Alliance



**Mount
Sinai**

*Selikoff Centers for
Occupational Health*



BROADWAY

green  alliance

OSHA's Annual Safe + Sound Week

August 7-13, 2023



AUGUST 7 - 13, 2023

Thursday, August 10 from 12:00pm to 3:00pm EDT

Safety Rebroadcast Marathon:

- ✓ Hearing Loss Prevention for IATSE Workers
- ✓ Sun Exposure and Heat Related Illness



**Save
the
Dates**

Handouts

Handout 1 – Presenter Bios

Handout 2 – BGA Resource Page

Handout 3 – The Impact of Climate Change Webinar Resources

Handout 4 – PDF of PowerPoint Slides

Handout 5 – Safe + Sound Week 2023 Flyer



Presented by

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Molly Braverman

Director of the Broadway Green Alliance

Disclosure Statements

Hospital/Organization: Department of Environmental Medicine and Public Health-
Icahn School of Medicine at Mount Sinai

Name of Activity: **The Impact of Climate Change on IATSE Worker Safety and Health**

Date and Time: Tuesday, August 9, 2023 - 12:30 PM to 2:30 PM

Location of Activity: Icahn School of Medicine at Mount Sinai

Disclosure Statement

The faculty participants, moderators and planners do not have any financial arrangements or affiliations with any commercial entities whose products, research or services may be discussed in these materials. No commercial funding has been accepted for this activity.

Takeaways



Learn about how climate change can impact the health and safety of IATSE workers

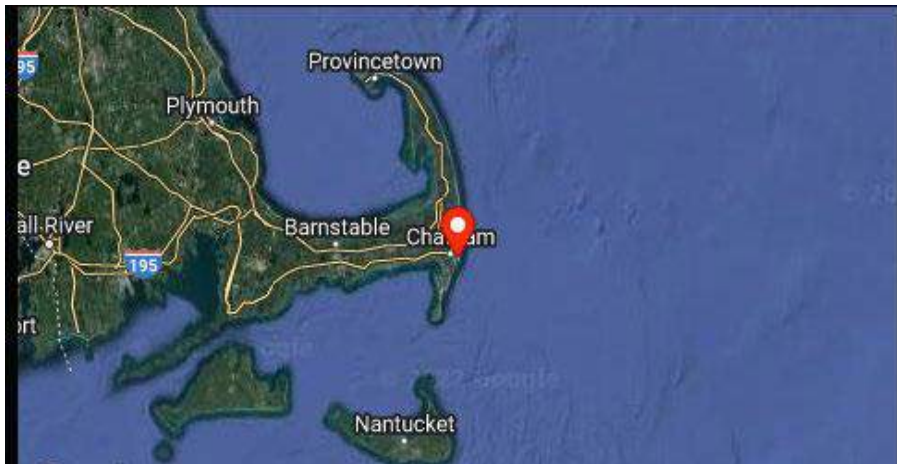
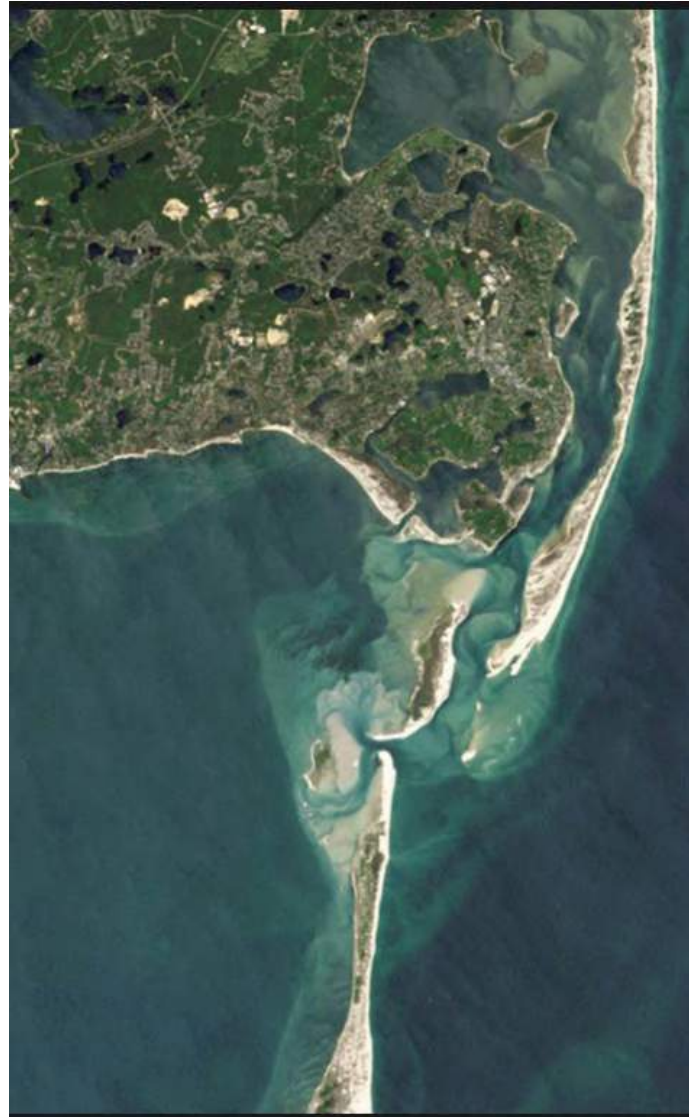


Review industry-specific scenarios and discuss ways to protect your health in a changing climate



Identify key organizations, resources, and trainings for further learning

The southeastern coast of Cape Cod, Massachusetts, changes constantly under the influence of currents, tides, waves, and storms. For example, in the **1984** image, the barrier spit (the long, narrow strip at the eastern edge) known as North Beach is unbroken. The Patriot's Day storm in **2007** cut an inlet through it, and the southern part became North Beach Island. Researchers have identified a cycle that repeats roughly every 150 years, in which the barrier is breached, regenerates, stretches southward, and is breached again. The lower islands, too, reform under the ever-changing conditions



Changing Coastline (1984-2020)

Climate Impact Map

Absolute Level

Change From Historical

Show me **Average Annual Temps** under High emissions (RCP 8.5) with a Median probability

Historical 1981-2010

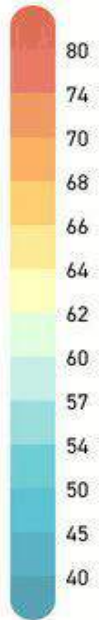
Next 20 Years 2020-2039

Mid-Century 2040-2059

End of Century 2080-2099

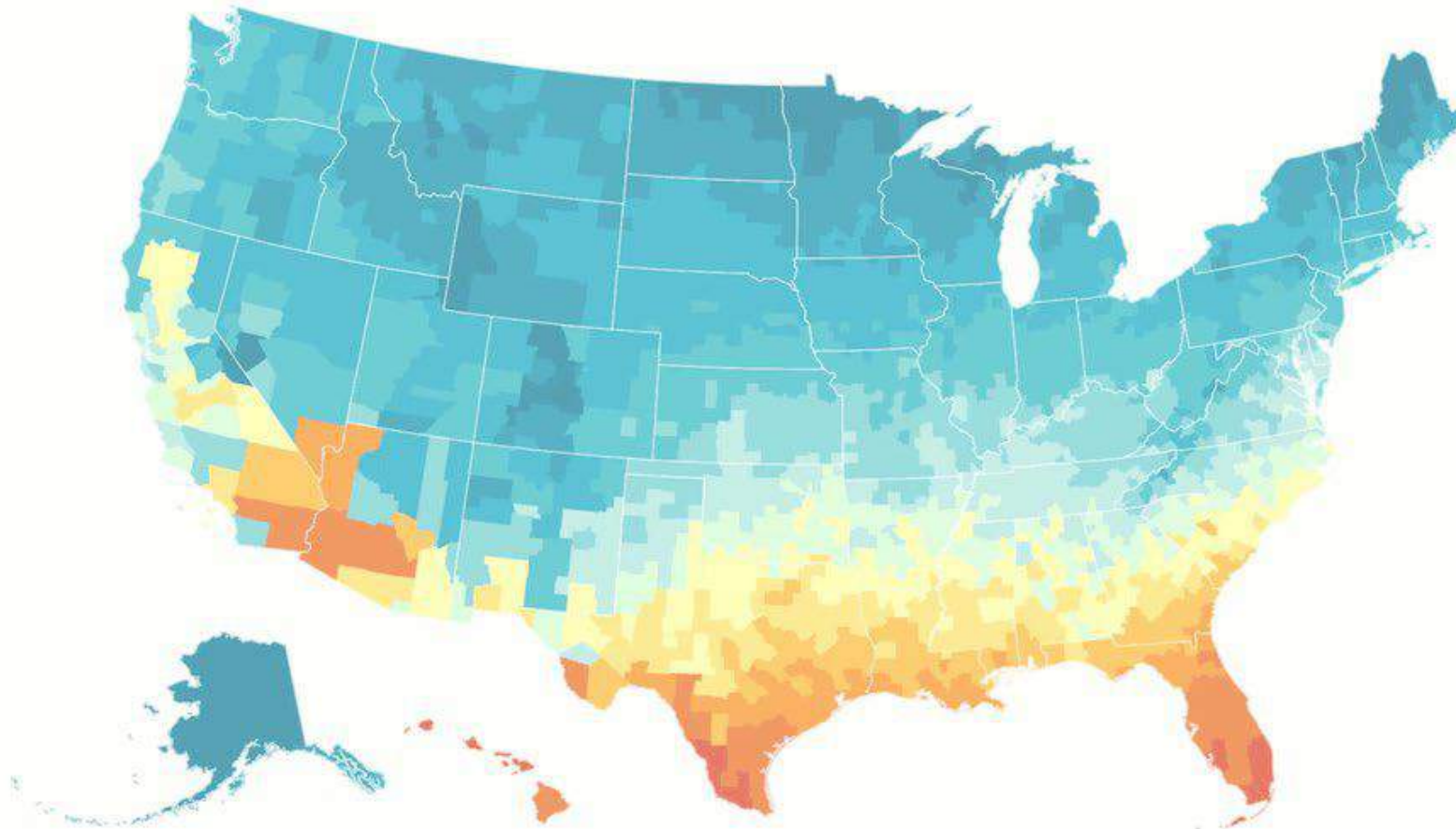
United States Map

Global Map

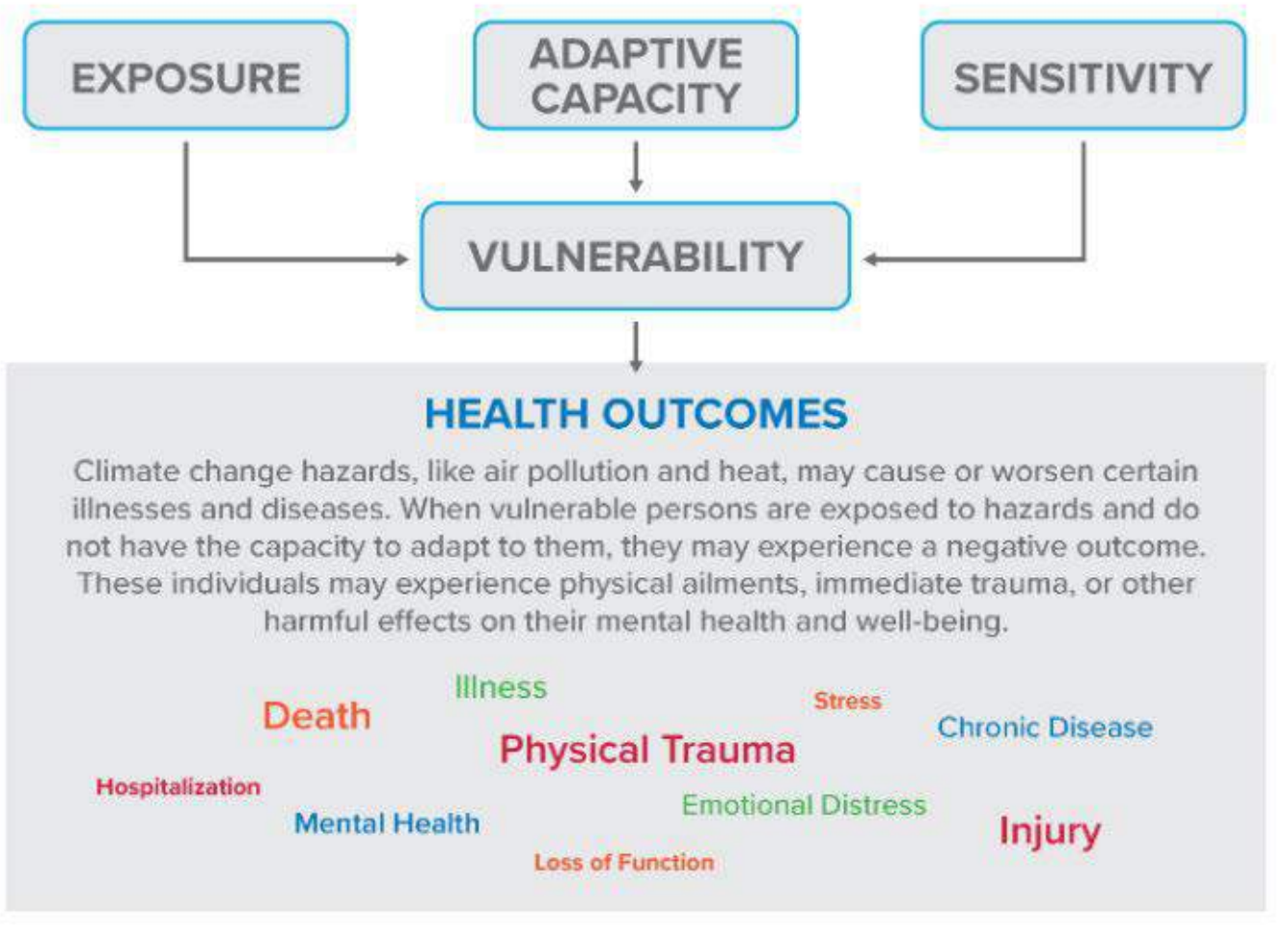


Temperature

°F °C



Health Impacts of Climate Change



The health effects of climate change include respiratory and heart diseases, pest-related diseases like [Lyme disease](#) and [West Nile Virus](#), water- and food-related illnesses, and injuries and deaths. Climate change has also been linked to increases in violent crime and overall poor mental health.

COMMUNITIES OF COLOR

Some communities of color living in risk-prone areas face cumulative exposure to multiple pollutants.

Adaptation plans that consider these communities and improve access to healthcare help address social inequities.

OLDER ADULTS

Older adults are vulnerable to extreme events that cause power outages or require evacuation.

Checking on elderly neighbors and proper emergency communication can save lives.

CHILDREN

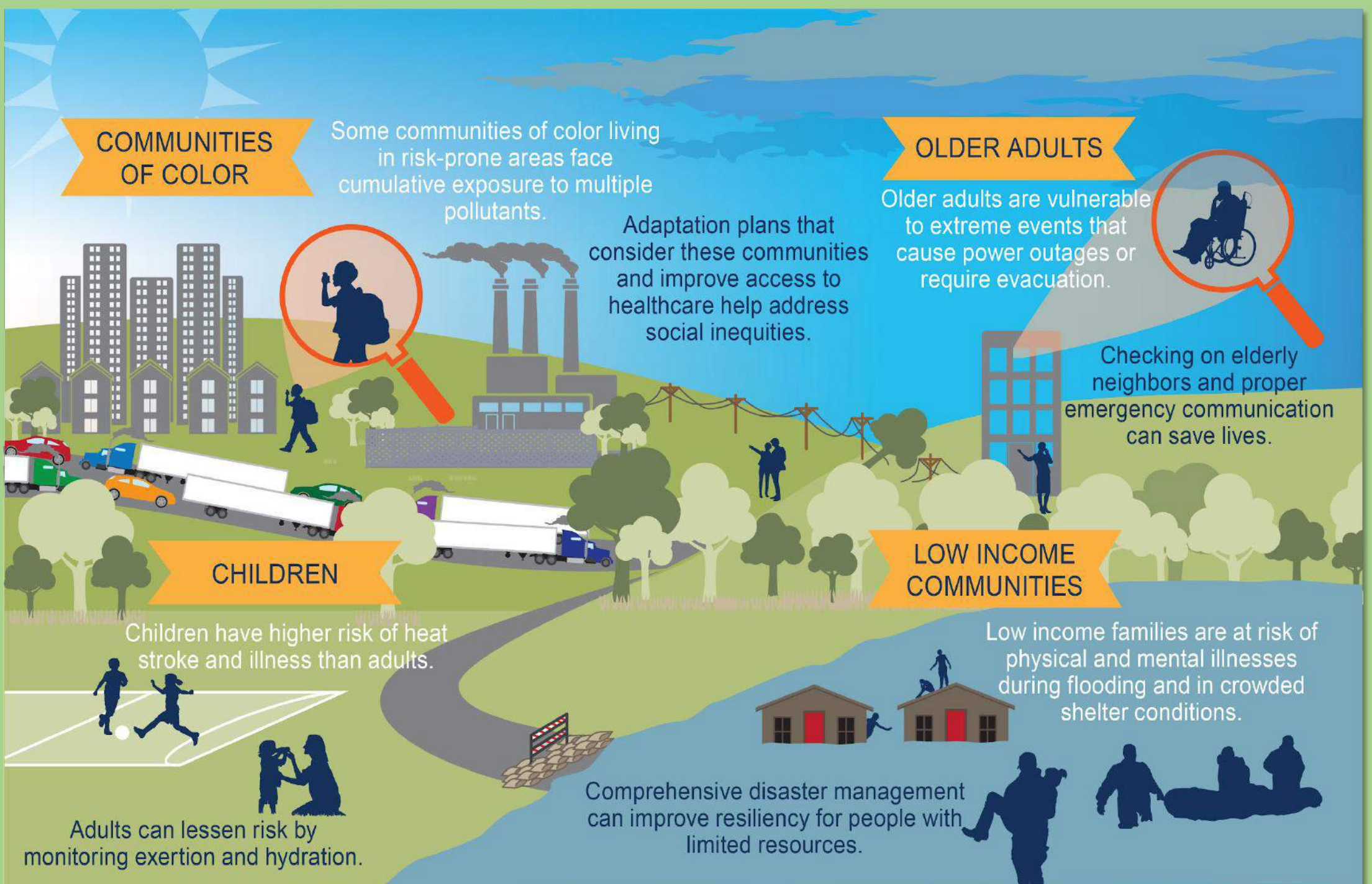
Children have higher risk of heat stroke and illness than adults.

Adults can lessen risk by monitoring exertion and hydration.

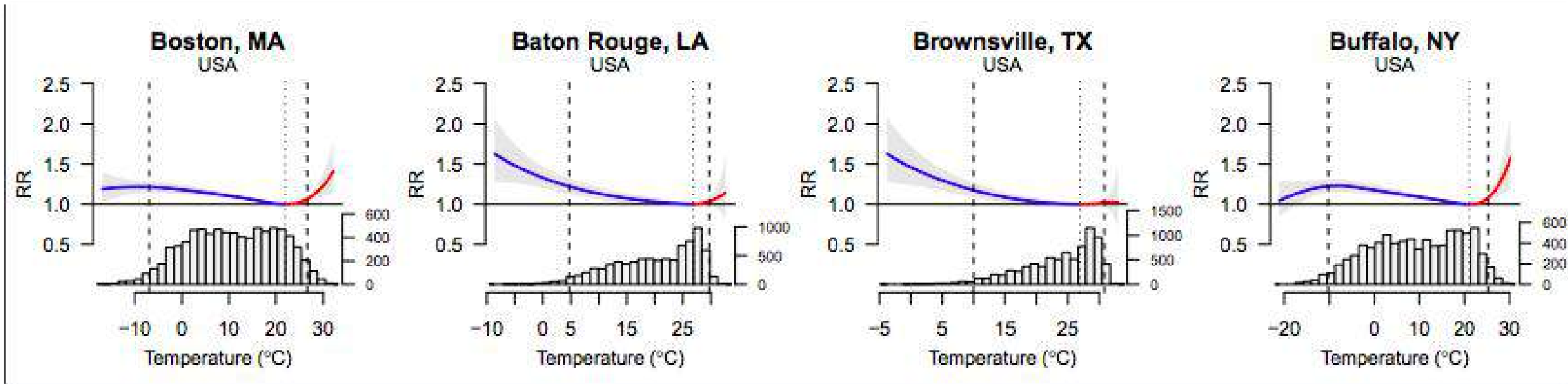
LOW INCOME COMMUNITIES

Low income families are at risk of physical and mental illnesses during flooding and in crowded shelter conditions.

Comprehensive disaster management can improve resiliency for people with limited resources.



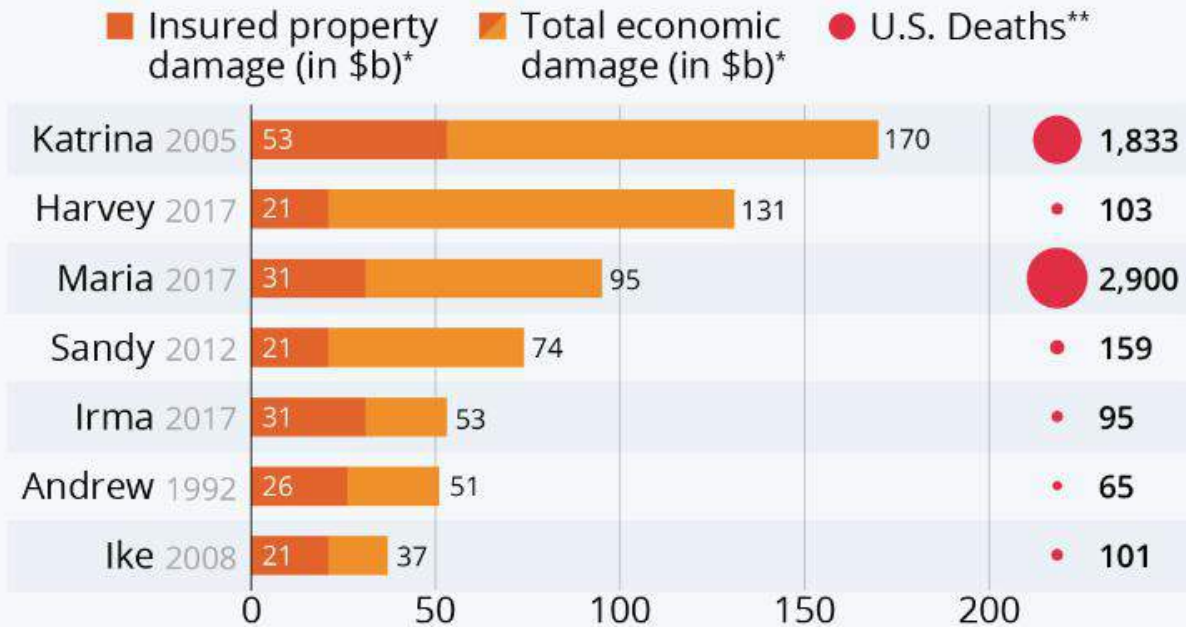
Relative Risks of Temperature Changes Across Four US Cities



You can see how below-average temperatures (blue curve) in warm cities are deadlier, and the opposite effect with higher temperatures (red curve) in cooler cities. - [The Lancet](#)

The Costliest and Deadliest Hurricanes to Hit the U.S.

U.S. damages and death tolls for the costliest hurricanes on record to impact the U.S.



* Adjusted for inflation ** Mainland and territories (Maria: minimum of deaths)

Sources: NOAA, International Insurance Institute



statista

Hurricane Harvey cost an estimated \$125 billion in damage.

- This makes it the second-most costly hurricane to hit the U.S. mainland since 1900, behind Hurricane Katrina.
- Harvey was a Category 4 storm that hit Texas on August 25, 2017.
- It caused extreme flooding in Houston and the surrounding area.



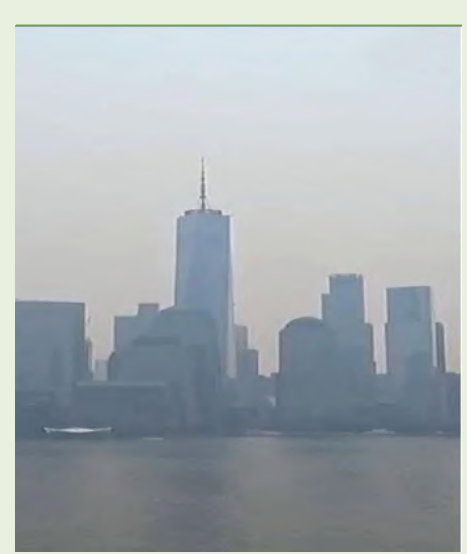
Scenario 1

Wildfire Smoke & Air Quality

Hector is a camera operator with nearly fifteen years of work experience. After working on commercials since he started out, Hector wanted to make a career transition, and recently landed his first gig on a major motion picture. This is a huge career opportunity for him.

Filming was scheduled in a large metropolitan area, but during the second week of shooting, wildfires in the area began to affect the air quality on location. The sky looked hazy and smelled like a campfire. Members of the crew started experiencing eye and throat irritation from breathing the air outside. Eventually, the second AD started passing out the K95 masks left over from COVID.

The masks helped some, but Hector has asthma and experienced trouble breathing through the mask and the haze. Air Quality Alerts have been issued lasting through the next week. Hector is worried that he will have to choose between finishing the movie and protecting his health.



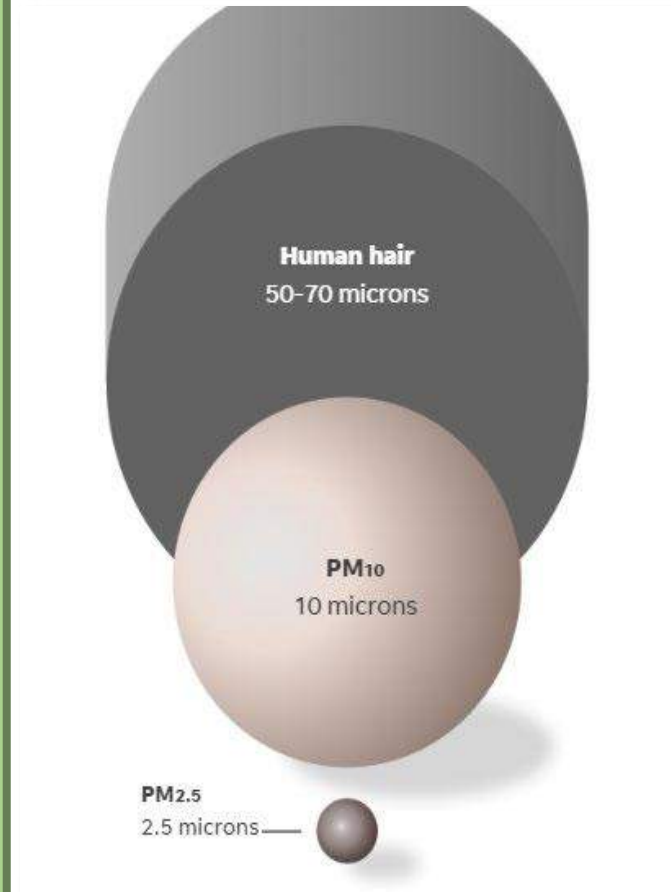
AQI Basics for Particle Pollution

AQI Basics for Particle Pollution

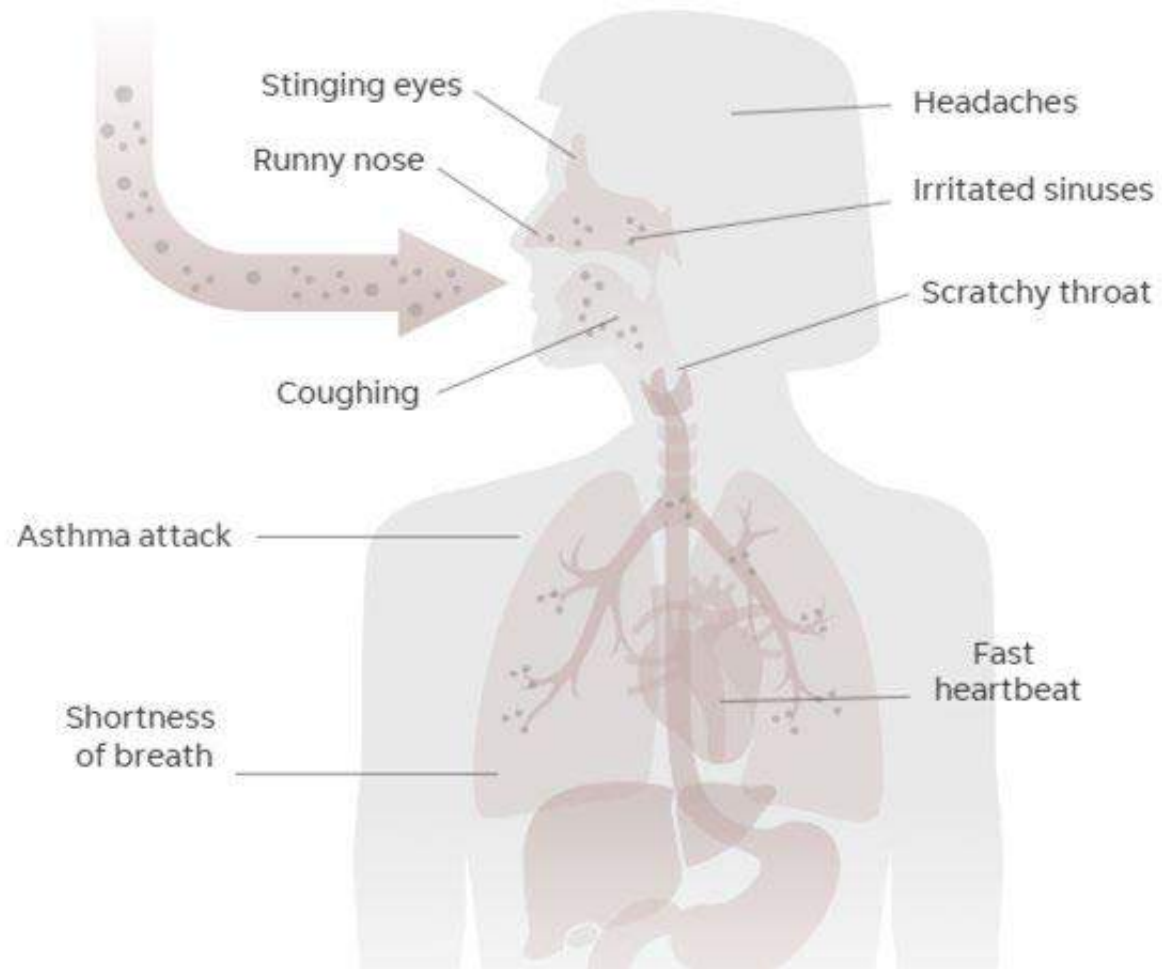
Air Quality Index	Who is at risk?	What to do?
Green: 0 to 50 Good	Air quality is good.	It's a great day to be outside.
Yellow: 51 to 100 Moderate	People unusually sensitive to air pollution.	Air quality is acceptable. Consider making outdoor activities shorter and less intense. If you are coughing or have shortness of breath take it easier. Everyone else: It's a good day to be active outside.
Orange: 101 to 150 Unhealthy for Sensitive Groups	Sensitive (at-risk) group: people with heart or lung disease, older adults, children and teens, pregnant people and those who exercise or work outdoors.	Sensitive group: Make outdoor activities shorter and less intense. Take more breaks. Keep medicine handy. Everyone else is less likely to be affected.
Red: 151 to 200 Unhealthy	Everyone	Sensitive group: Avoid long or intense outdoor activities. Consider rescheduling or moving activities indoors. Everyone else: Reduce long or intense outdoor activities. Take more breaks.
Purple: 201 to 300 Very Unhealthy	Everyone: Health Alert	Sensitive groups: Avoid all physical activity outdoors. Reschedule or move activities indoors. Everyone else: Avoid long or intense outdoor activities. Consider rescheduling or moving activities indoors.
Maroon: 301-500 Hazardous	Everyone: Health Warning	Everyone: Avoid all outdoor physical activities. Sensitive groups: Keep activity levels low at home.

Impact of Wildfires/Smoke on Human Health

- 366 on the air quality index—24 times the World Health Organization recommended exposure guideline.
- It briefly had the worst air quality of any city in the world.
- New York City hospitals experienced the highest number of ER visits for asthma-related conditions for all of 2023.
- Wildfire smoke has been linked to health conditions ranging from
 - Cardiac arrest to preterm birth
 - Asthma exacerbation are the most common and usually seen very early.
 - Cause of the respiratory challenge is the fine particulate matter - way smaller than the size of the hair



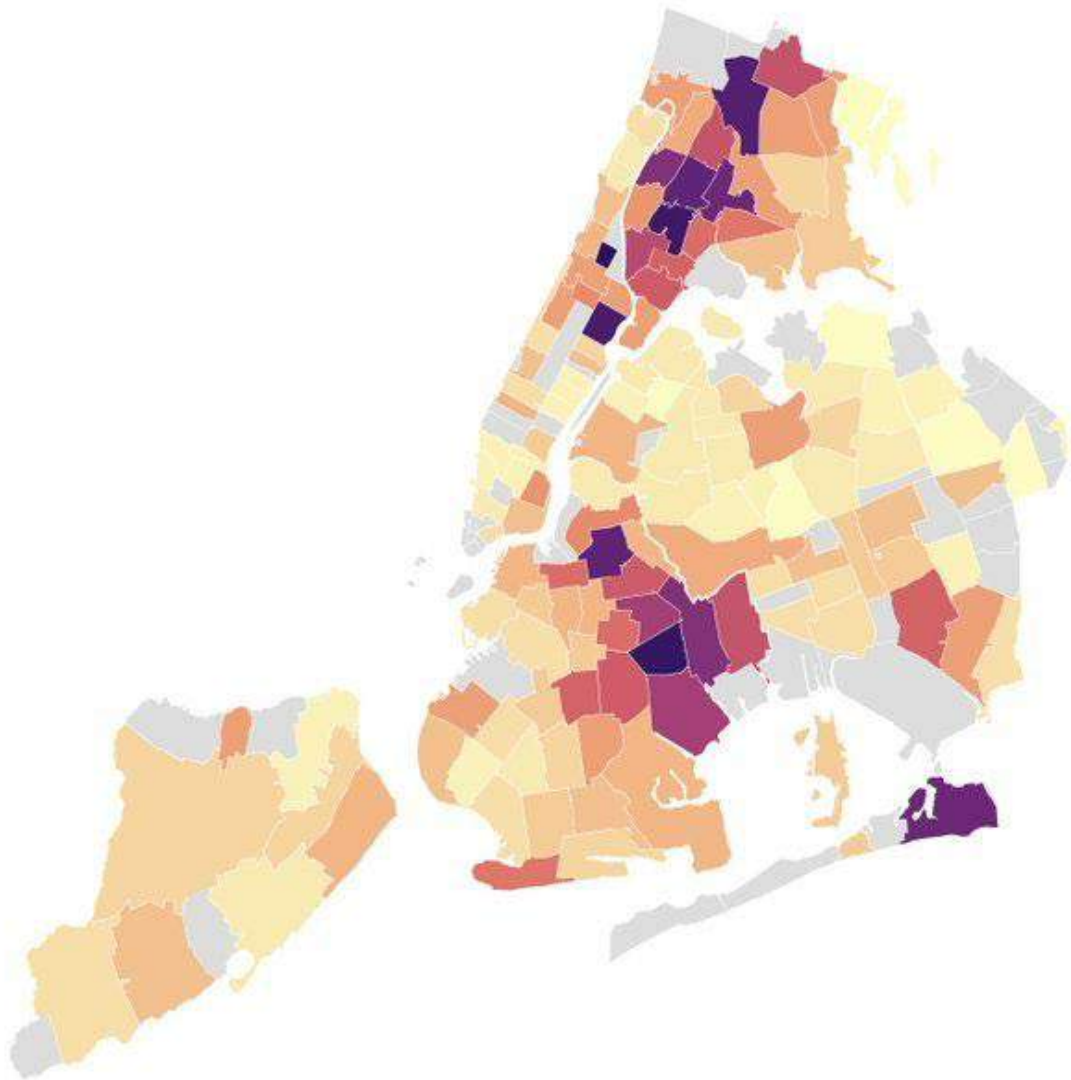
Health effects of smoke and pollution



Depending on what's burning – grasslands, trees, vegetation, or buildings – wildfire smoke can contain toxic chemical substances including carbon monoxide, carbon dioxide, acid gases, sulfur dioxide, nitrogen oxides, benzene, toluene, styrene, metals and dioxins.



Asthma-related emergency room visits in NYC: June 6-10, 2023



Source: NYC Department of Health and Mental Hygiene • Get the data • Created with Datawrapper

Wildfire Smoke Peak in NYC

- 70% of asthma-related ER visits were in ZIP codes with predominantly Black & Brown residents.
- 60% in higher poverty rates than the city overall.

Gothamist A non-profit newsroom,
powered by WNYC.

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NEWS

Asthma ER visits during NYC smoke haze were highest in high-poverty, Black and Latino areas



Scenario 2

Flooding

Monique is the head carpenter at a medium-sized theatre in her city. One night, while Monique and her crew were loading out a show, the city was hit by a torrential rainstorm. The river that runs through the city is prone to flooding. Knowing this, the local crew hurried to finish the load-out to avoid getting stuck in the storm.

Thankfully, everyone made it home safely, but the rain didn't let-up for another two days. Water-levels reached unprecedented levels and much of the city's downtown area – including the theatre – were impacted by the flood waters. Due to extensive water damage, the theatre had to cancel two months' worth of shows for repairs.

The whole crew is upset that their livelihood is on hold, but Monique can't stop thinking about how frequently it's been flooding in recent years and what would've happened if someone got stuck in the flood waters on the way home.

Hurricane Sandy - A Force to Reckon With!



On October 29, 2012, Superstorm Sandy hit New York City, flooding many coastal areas and claiming the lives of 44 New Yorkers.



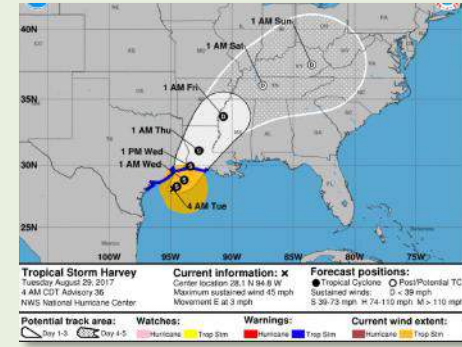
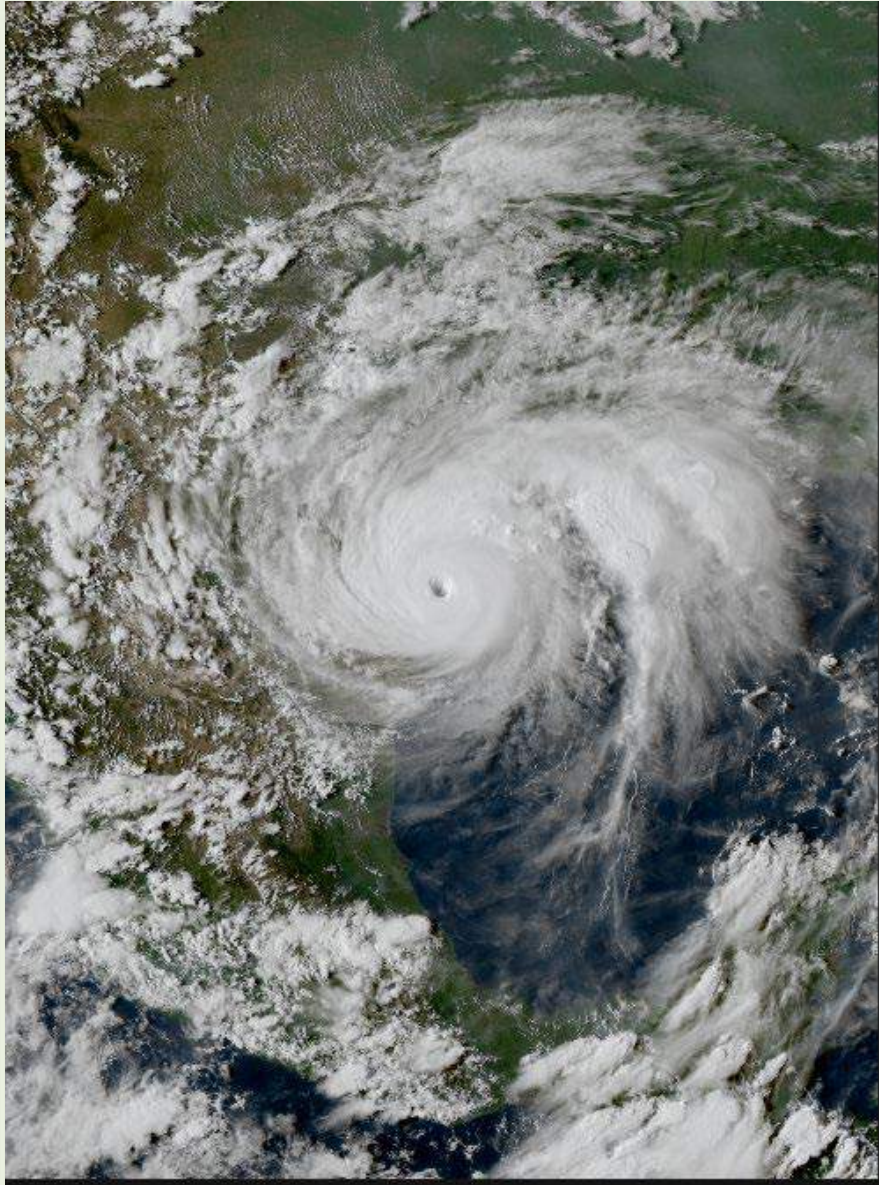
Hurricane Harvey

Ravaged Texas
coastline in 2017



Hurricane Harvey

August 27, 2017



The Hurricane Harvey Outreach Protection Plan Resident and Worker Survey



Proper donning of N-95 respirators were both felt to be effective in the educational value by a large majority of participants



William Brett Perkison

Majority of participants with pre-existing respiratory disease reported an exacerbation of respiratory related symptoms in the four weeks following Hurricane Harvey

Floods with Immediate and Long-Term Impacts on Human Health

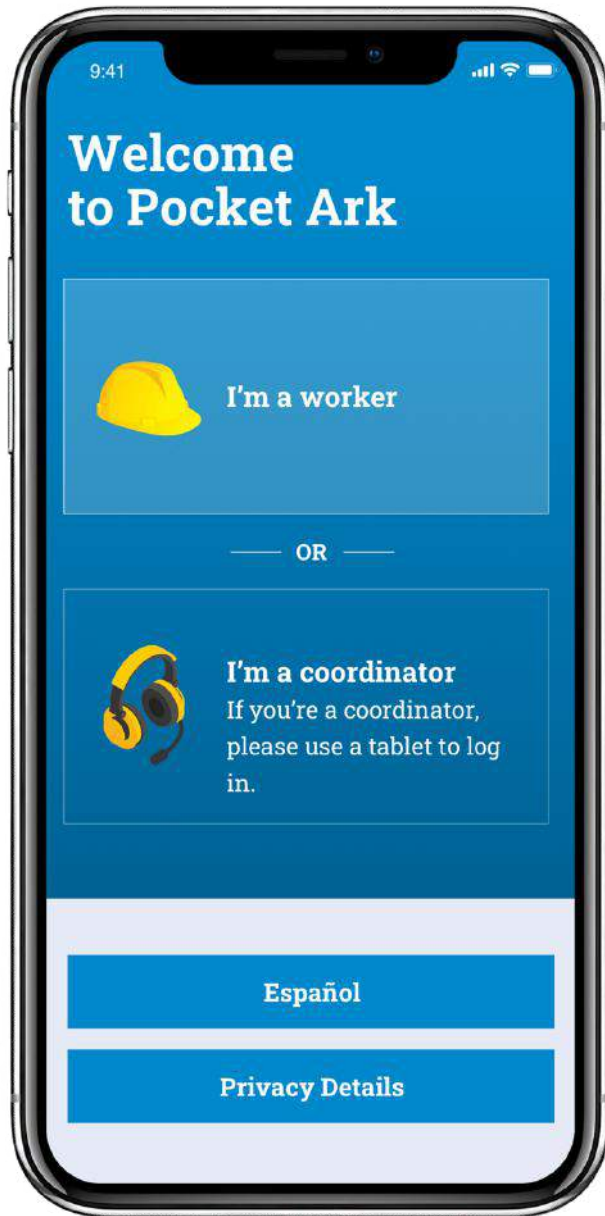
- Drowning: A top-of-mind health risk of flooding
- Musculoskeletal Injuries
- Hypothermia; animal bites

- Infectious diseases:
 - Diarrheal illnesses like cholera; typhoid fever
 - Respiratory infections
 - Diseases borne by insects

- Mental health issues:
 - Anxiety, depression, and post-traumatic stress disorder

- Contaminated floodwaters: Can contain bacteria, parasites, viruses, agricultural waste, chemicals, and raw sewage

- Long-term impacts of flooding - not fully known



Agile development of innovative, interactive hazard recognition and mitigation tools/learning e-platforms for workers involved in the rescue and recovery operations in diverse flooding environments.

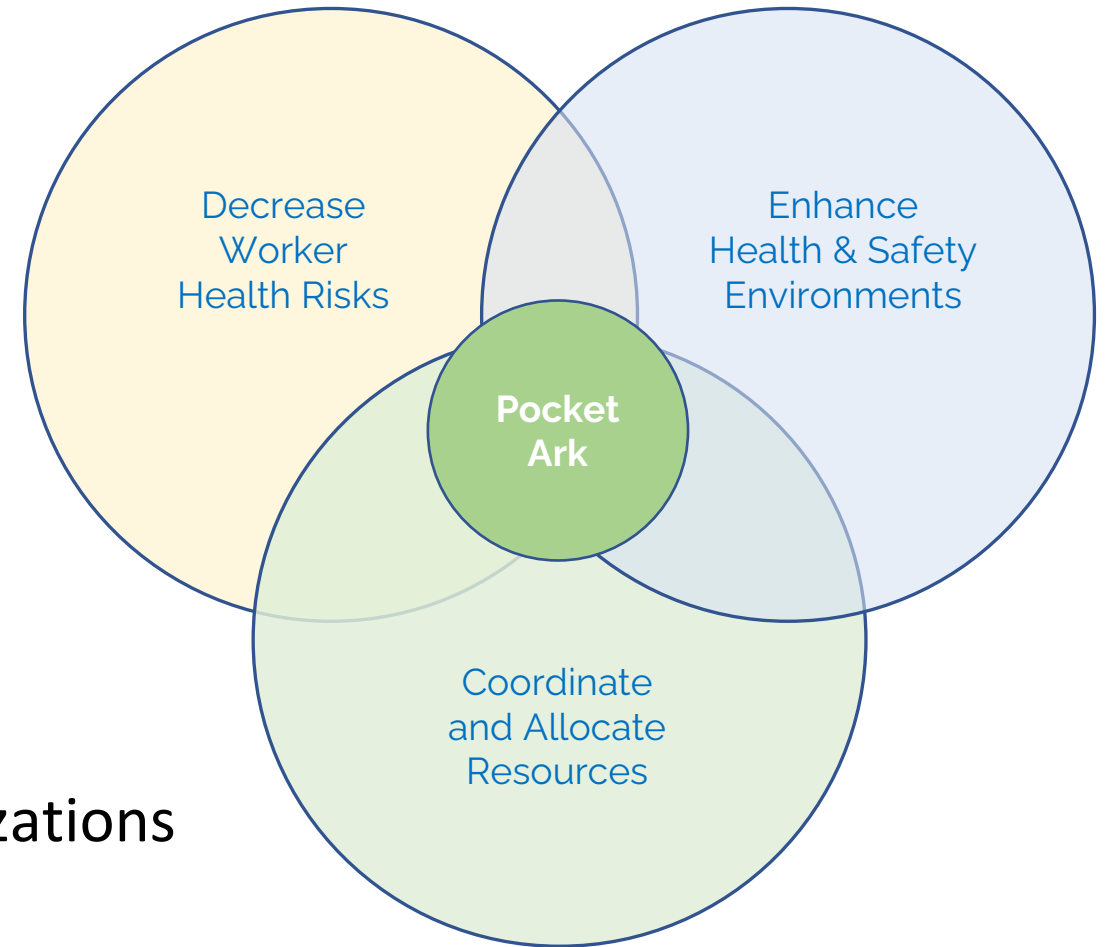
...also known as... ***Pocket Ark***

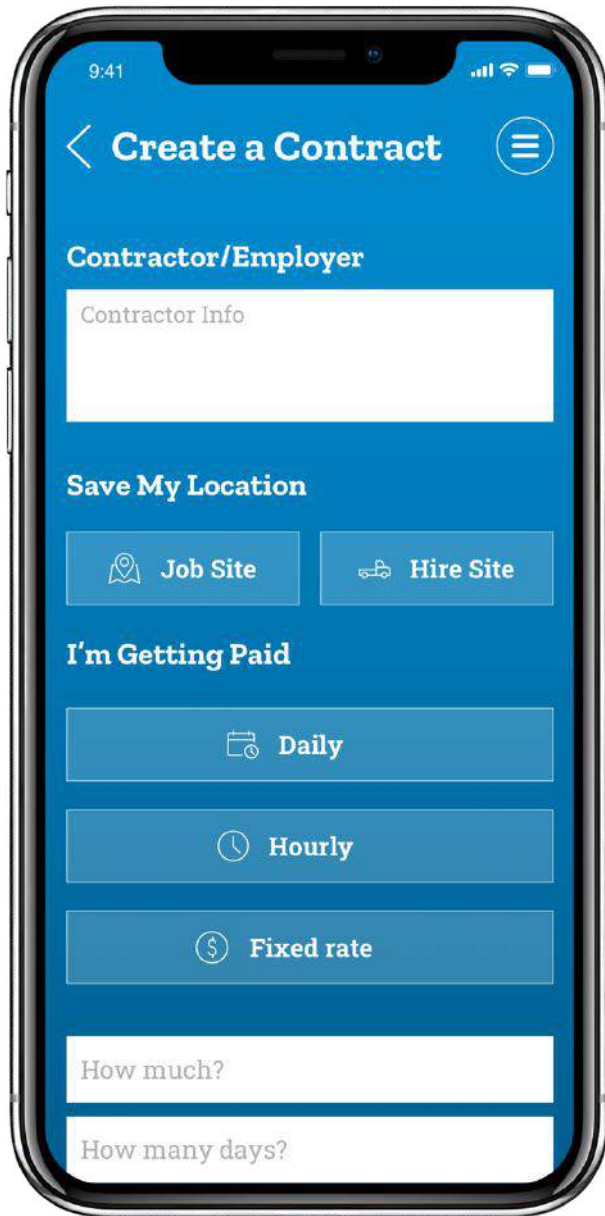
**Phase I SBIR funded by
National Institute of Environmental Health Sciences (NIEHS)
Grant #R43 ES030580**

Stakeholders & Potential Impact of hurricanes

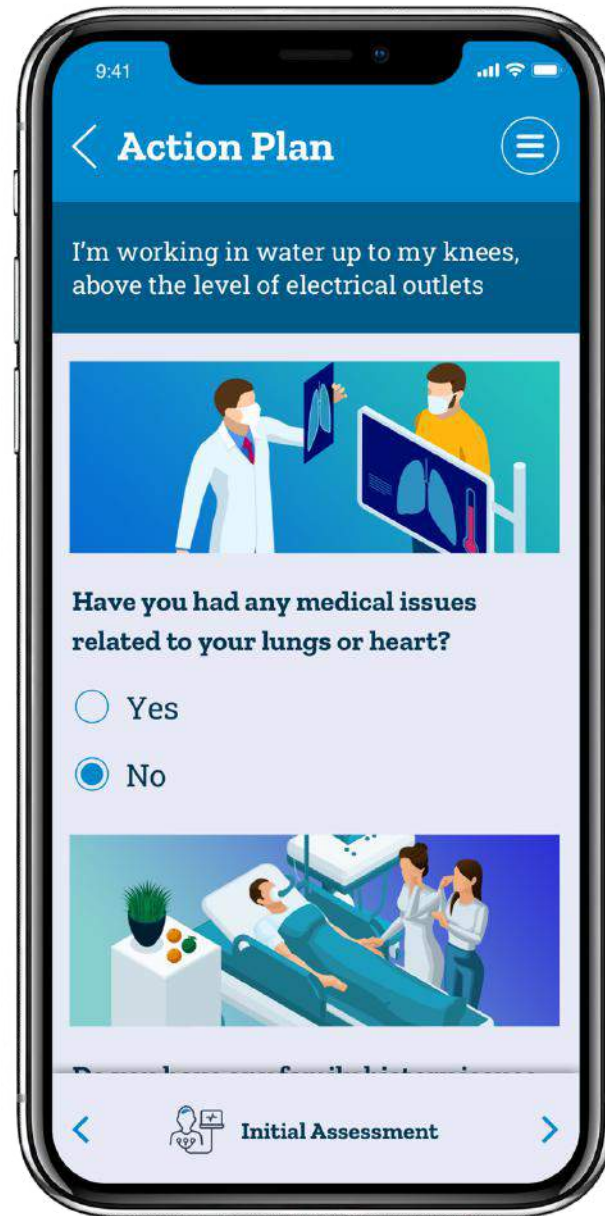
- Utility of Pocket Ark

- Workers
- Community Organizers
- Advocacy Organizations
- Public Health Agencies
- Government Agencies
- Construction Industry
- Other Disaster Preparedness/Relief Organizations





Worker Protection

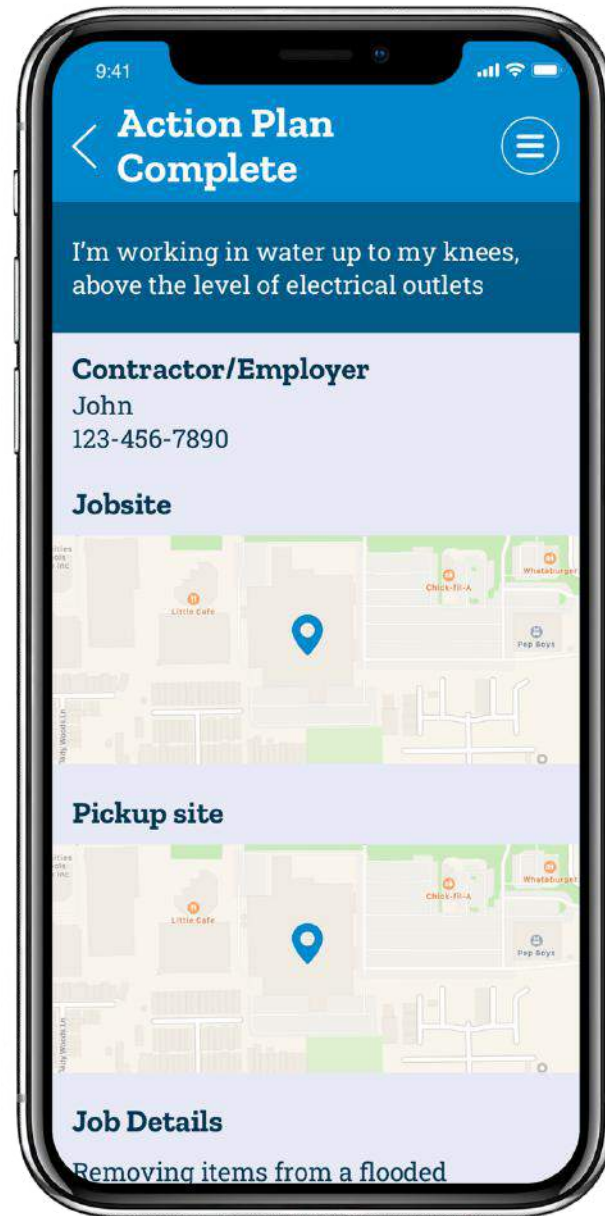
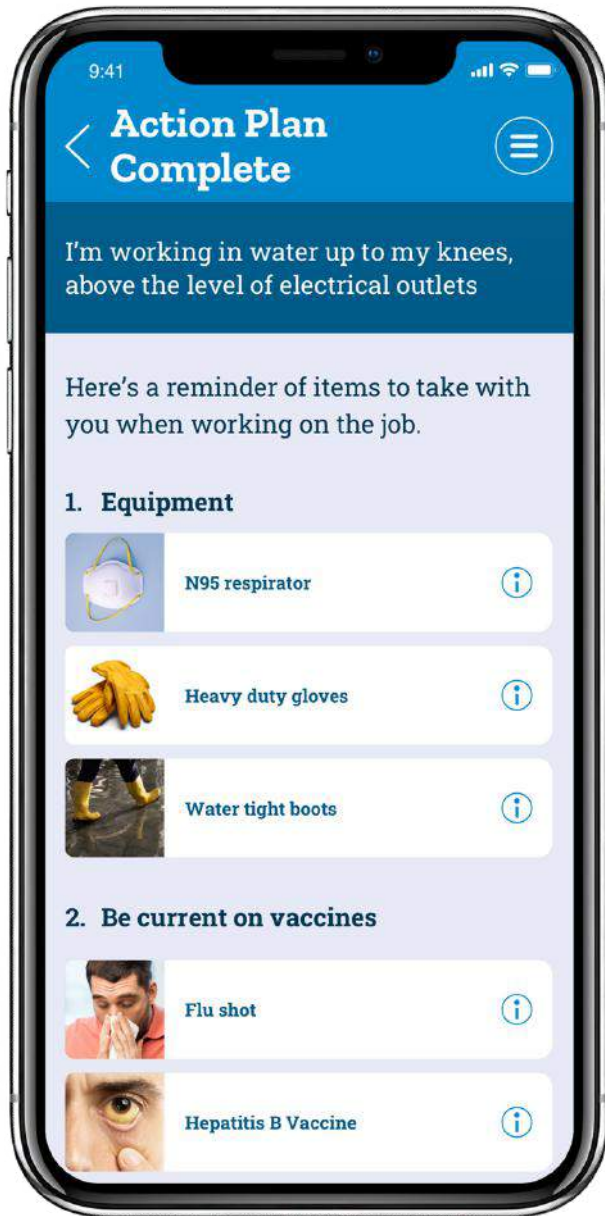


Health Risk Assessment



Assessment, training, & action plan

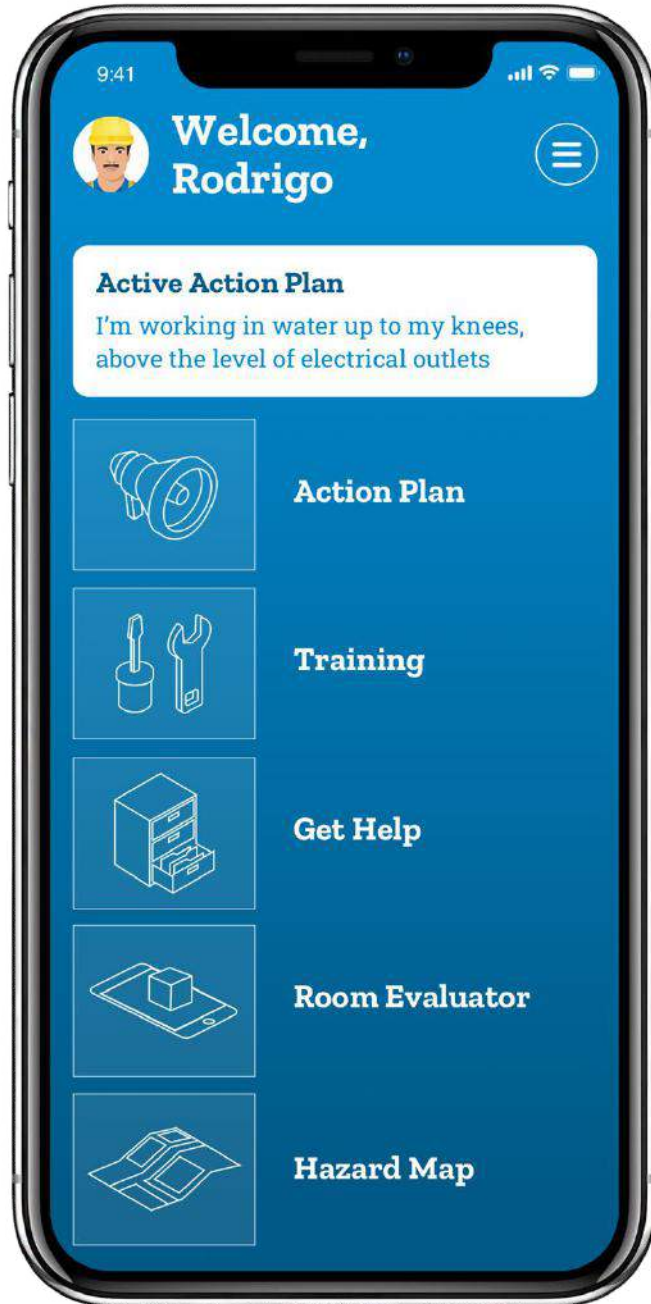
Scenario: I'm a WORKER being recruited or deployed to help with post-flood cleanup.



Assessment, training, & action plan

Scenario: I'm a WORKER being recruited or deployed to help with post-flood cleanup.

Action Plan Recommendations

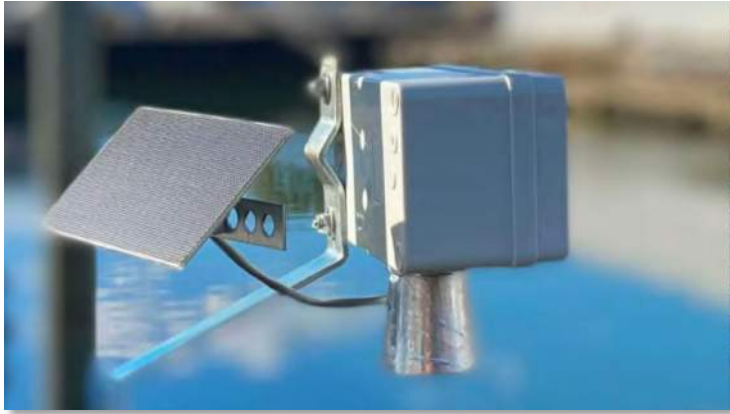


Worker onboarding & training

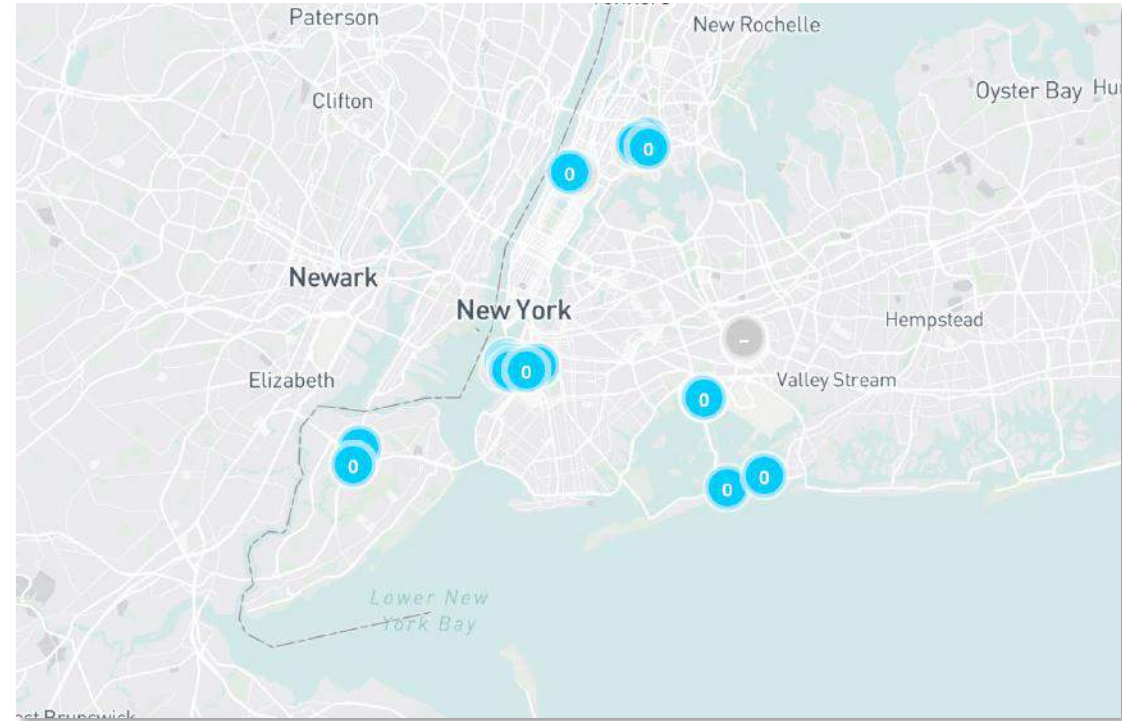
Scenario: I'm a WORKER being recruited or deployed to help with post-flood cleanup.

- 1 Readiness-oriented action plan
- 2 Self-guided training
- 3 Resources
- 4 On-Site Tools
- 5 Realtime Data Feed

The Hurricanes vs. the micro flooding environments and risk of respiratory illness



A multi-institutional collaboration, FloodNet, is addressing this challenge of micro flooding through the design, manufacture, and deployment of novel, low-cost, open-source sensors in flood-prone areas across NYC. Involving The City of New York, the NYU Tandon School of Engineering, The City University of New York (CUNY)



There is growing evidence that the **micro flooding** events markedly different from the Hurricane based **macro flooding** events like "Hurricane Sandy/Harvey/Katrina" and its impact on the acute respiratory illness in the flood prone communities.

Kontowicz E, Brown G, Torner J, Carrel M, Baker KK, Petersen CA. Days of Flooding Associated with Increased Risk of Influenza. J Environ Public Health. 2022 Jun 3;2022:8777594. doi: 10.1155/2022/8777594. PMID: 35692665; PMCID: PMC9187473.



Scenario 3

Heat Illness

Sharon was recently hired in the costume department for a low budget production. She is young, new to the entertainment industry, and eager to start her career.

A few weeks into filming, a record-breaking heatwave struck the area. While shooting on location, the employer set-up shaded areas and water for the on-set workers, but most of the people in the costume department work in an old trailer. The trailer is far away from set and the air conditioning hasn't worked for a couple of days. Usually, this is only a minor inconvenience, but the heatwave has made working in the trailer unbearable.

One day while in the trailer, Sharon noticed that one of her colleagues named Gavin looked disoriented. When Sharon asked if Gavin was okay, she noticed that his speech was garbled, and that he had a dazed look in his eyes. Recognizing something was wrong, Sharon ran to get the medic.

Later, she learned that Gavin was suffering from heat illness. Sharon is happy she got help for him when she did but is shocked because she thought you could only get heat illness by exercising outdoors in the sun.

Outdoor WORKERS Impacted by the extreme heat

Specific jobs, such as outdoor work, can increase a worker's risk of exposure to extreme heat and to heat-related illness.



Direct impact of extreme heat

Heat stroke: A medical emergency that occurs when the core body temperature rises above 104.9F

Dehydration: A loss of water in body tissues caused by sweating, vomiting, or diarrhea

Heat exhaustion: Occurs when the body loses too much water and salt from sweating during hot temperatures

Heat rash: A skin irritation caused by excessive sweating during hot, humid weather

Heat syncope: A sudden dizziness that can happen when you are active in hot weather

Extreme heat can cause flare-ups in chronic conditions such as migraine, arthritis, asthma, kidney disease, hypertension, type 2 diabetes, and cardiovascular disease.

It can also worsen mental health and increase the chances of being injured at work, having a heart attack, or getting an infection.

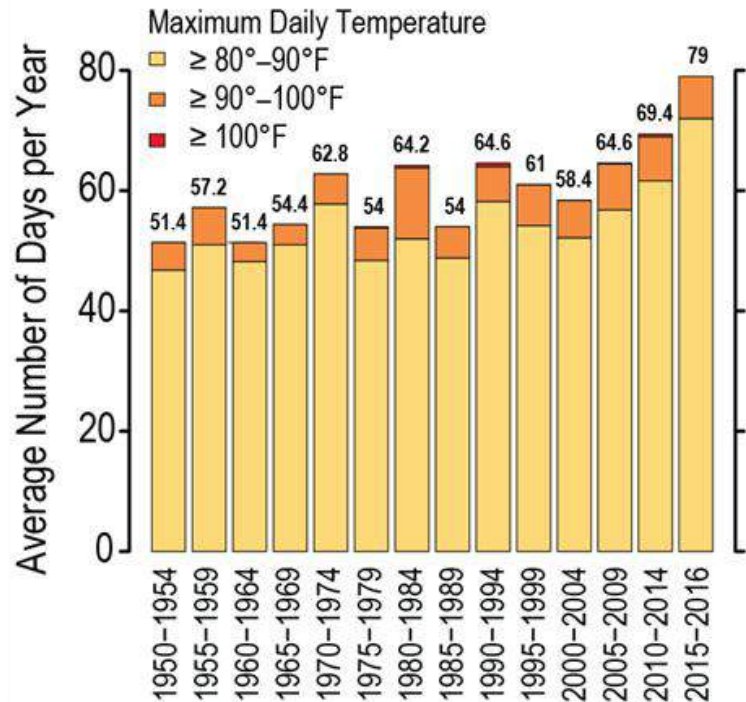
Using psychiatric medication can also impact the regulation of heat in the body.

Number of Days per Year with Extreme Heat In RI

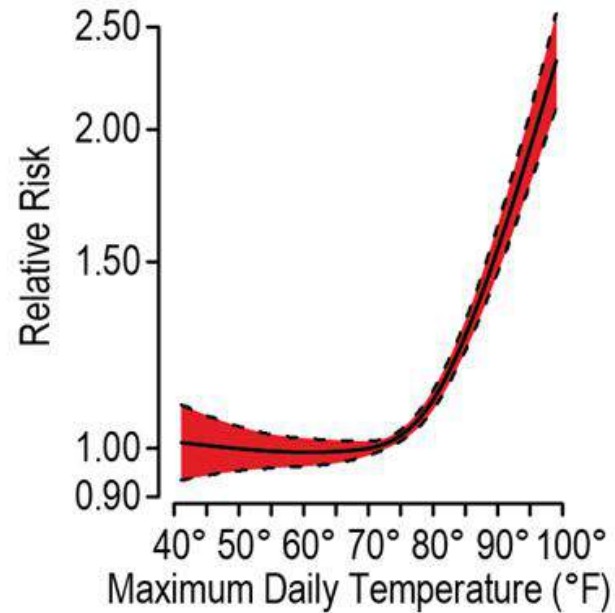
Maximum Daily Temperature and Health - Related Emergency Room Visits

Future Heat - Related Emergency Room Visits

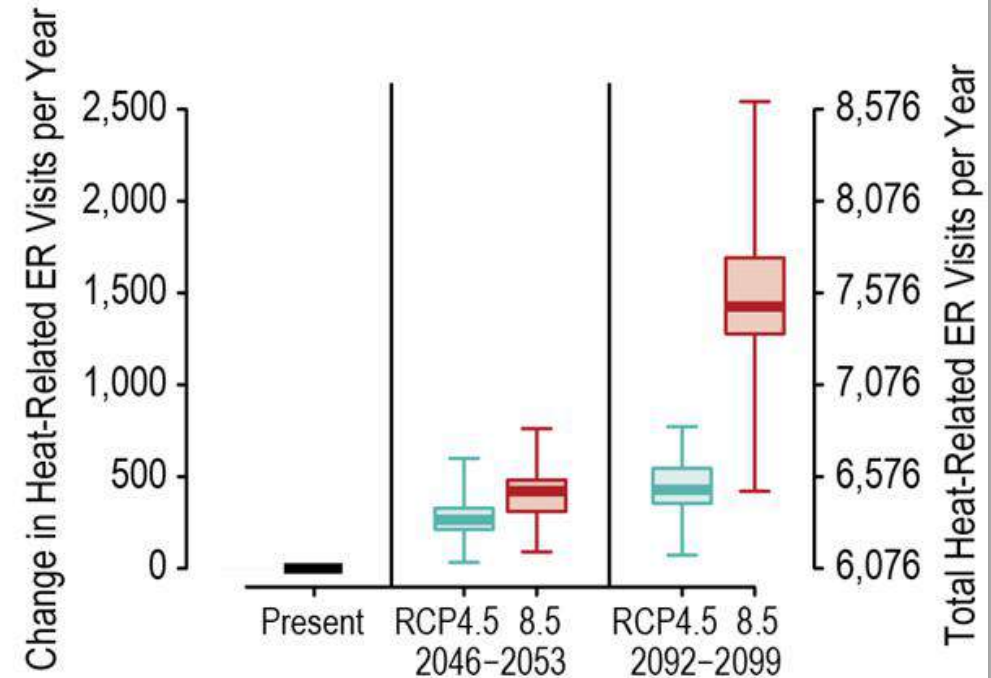
Number of Days per Year with Extreme Heat in RI



Association Between Maximum Daily Temperature and Heat-Related Emergency Room Visits



Projected Number of Future Heat-Related Emergency Room Visits





- Warmer weather is related to an **increase in traumatic injuries for outdoor agricultural workers** in central and eastern Washington
- The researchers reported on more than **12,200** traumatic injury workers' compensation claims filed by agricultural workers from 2000 to 2012.

Spector, June T., et al. "A case-crossover study of heat exposure and injury risk in outdoor agricultural workers." *PLoS one* 11.10 (2016): e0164498.

Heat and Ultraviolet Effects in US agricultural workers

Cumulative Incidence of Acute Kidney Injury in California's Agricultural Workers

- In 295 agricultural workers, AKI after a summer work shift was detected in 35 participants (11.8%).

Hydration Status, Kidney Function, and Kidney Injury in Florida Agricultural Workers

- Approximately 53% of workers were dehydrated (USG ≥ 1.020) pre-shift and 81% post-shift
- 33% of participants had AKI on at least one workday.
- The odds of AKI increased 47% for each 5-degree (°F) increase in heat index.



BEAT THE HEAT: Extreme Heat

Heat-related deaths are preventable

WHAT: Extreme heat or heat waves occur when the temperature reaches extremely high levels or when the combination of heat and humidity causes the air to become oppressive.

WHO: Children, Older adults, Outside workers, People with disabilities

WHERE: Houses with little to no AC, Construction work sites, Cars

HOW to AVOID: Stay hydrated with water, avoid sugary beverages, Stay cool in an air conditioned area, Wear lightweight, light-colored, loose-fitting clothes



DID YOU KNOW?

Those living in **urban areas** may be at a greater risk from the effects of a prolonged heat wave than those living in rural areas.

Sunburn can significantly slow the skin's ability to release excess heat.

Most **heat-related illnesses** occur because of overexposure to heat or over-exercising.

During 1999-2009, an average of **658** people died each year from heat in the United States.

\$30 BILLION estimated total cost of the 2012 US drought and heatwave.

Heat-related deaths are preventable

WHAT:

Extreme heat or heat waves occur when the temperature reaches extremely high levels or when the combination of heat and humidity causes the air to become oppressive.

WHO:

Children, Older adults, Outside workers, People with disabilities

More males than females are affected

WHERE:

Houses with little to no AC, Construction work sites

HOW to AVOID:

Stay hydrated with water, avoid sugary beverages, Stay cool in an air conditioned area



During extreme heat the temperature in your car could be deadly!

Outside Temperature 80°





Scenario 4

Natural Disasters

Logan is the business agent of a broadcast local in a medium-sized city. The local is mostly made up of sports broadcast employees that work in the city's arenas. Basketball is popular in the city, and the basketball arena employs a lot of members during the winter/spring months. Winters are typically mild in the region, and snow is rare.

One morning before a big game, Logan received a weather alert that snow was forecast for that afternoon. Although there was a cold front in the area, nobody was too worried about it because snow was so uncommon. The storm hit within a few hours, causing accidents, major traffic delays, and causing many workers to be late and some to miss the game entirely. The total snow fall was less than 3 inches, but the impact was catastrophic because residents were not used to driving in those conditions.

The next day, Logan received a call from the arena's GM screaming that the amount of absenteeism was unacceptable, and that the union is in breach of their contract. Logan is shocked by the GM's accusations and doesn't know what to do since this was the result of a natural disaster.

How Can We Make A Difference?

EXPOSURE

Exposure is contact between a person and one or more biological, psychosocial, chemical, or physical stressors, including stressors affected by climate change.

SENSITIVITY

Sensitivity is the degree to which people or communities are affected, either adversely or beneficially, by their exposure to climate variability or change.

ABILITY TO ADAPT

Adaptive capacity is the ability of communities, institutions, or people to adjust to potential hazards such as climate change, to take advantage of opportunities, or to respond to consequences.



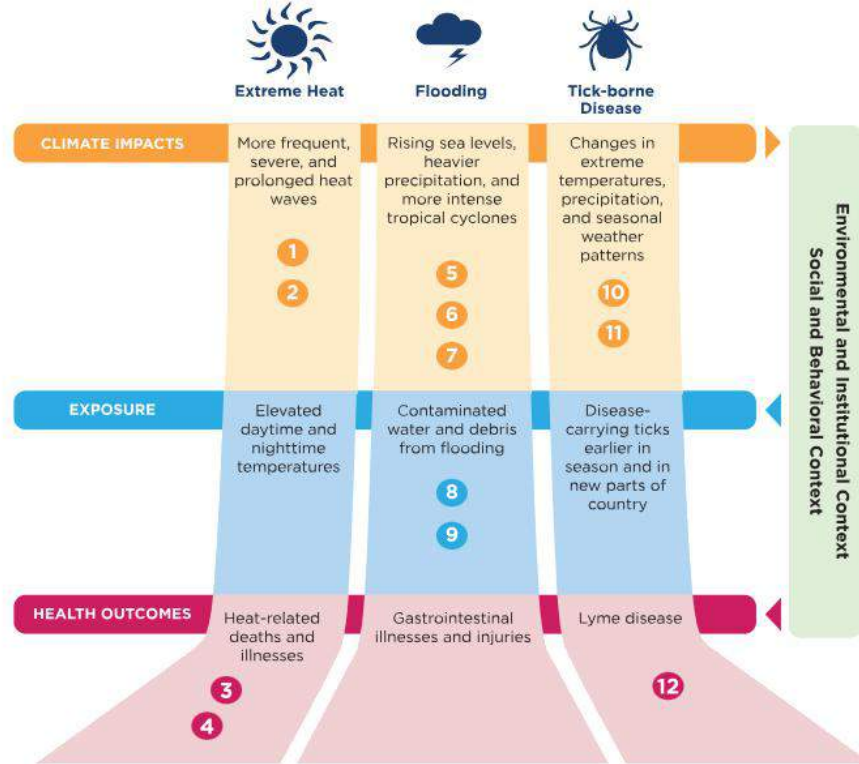
VULNERABILITY

of Human Health to Climate Change

HEALTH OUTCOMES

Injury, acute and chronic illness (including mental health and stress-related illness), developmental issues, and death.

Connecting Climate Change Indicators to Health Pathways



Where EPA's climate change indicators fit into each example exposure pathway:






- 1 High and Low Temperatures
- 2 U.S. and Global Temperature
- 3 Heat-Related Deaths
- 4 Heat-Related Illnesses
- 5 Sea Level
- 6 Heavy Precipitation
- 7 Tropical Cyclone Activity
- 8 River Flooding
- 9 Coastal Flooding
- 10 High and Low Temperatures
- 11 U.S. and Global Precipitation
- 12 Lyme Disease

BROADWAY

green  alliance



HOW IS YOUR TERROR TODAY?

1	2	3	4	5
 <p>Sh-h-h. I am sleeping.</p>	 <p>I am awake.</p>	 <p>What?</p>	 <p><u>WHAT?!?</u></p>	 <p><u>WHAT?!?!?</u></p>

r.cw

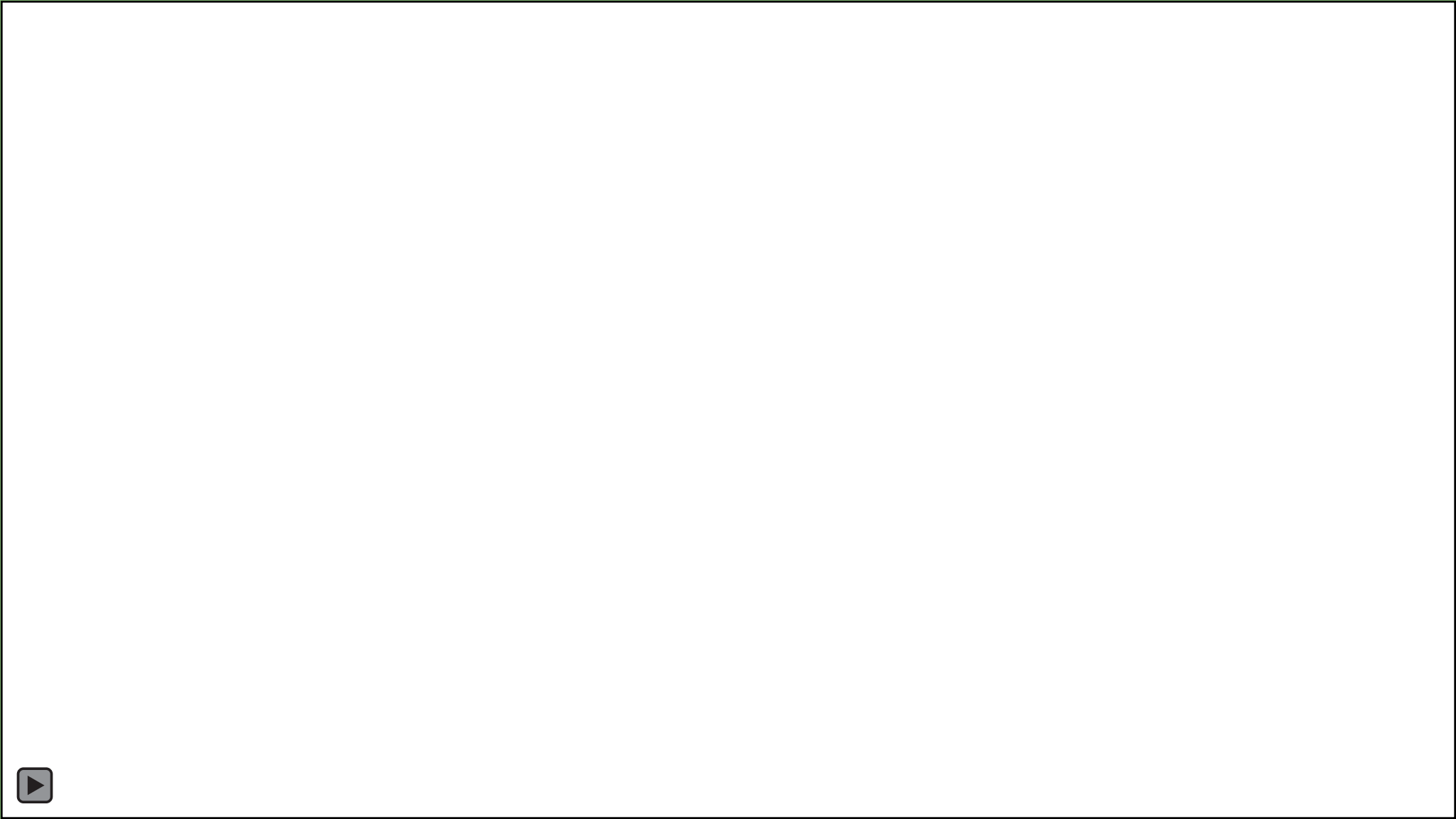
THE SOLUTIONS ARE HERE

IT IS EASY
BEING GREEN

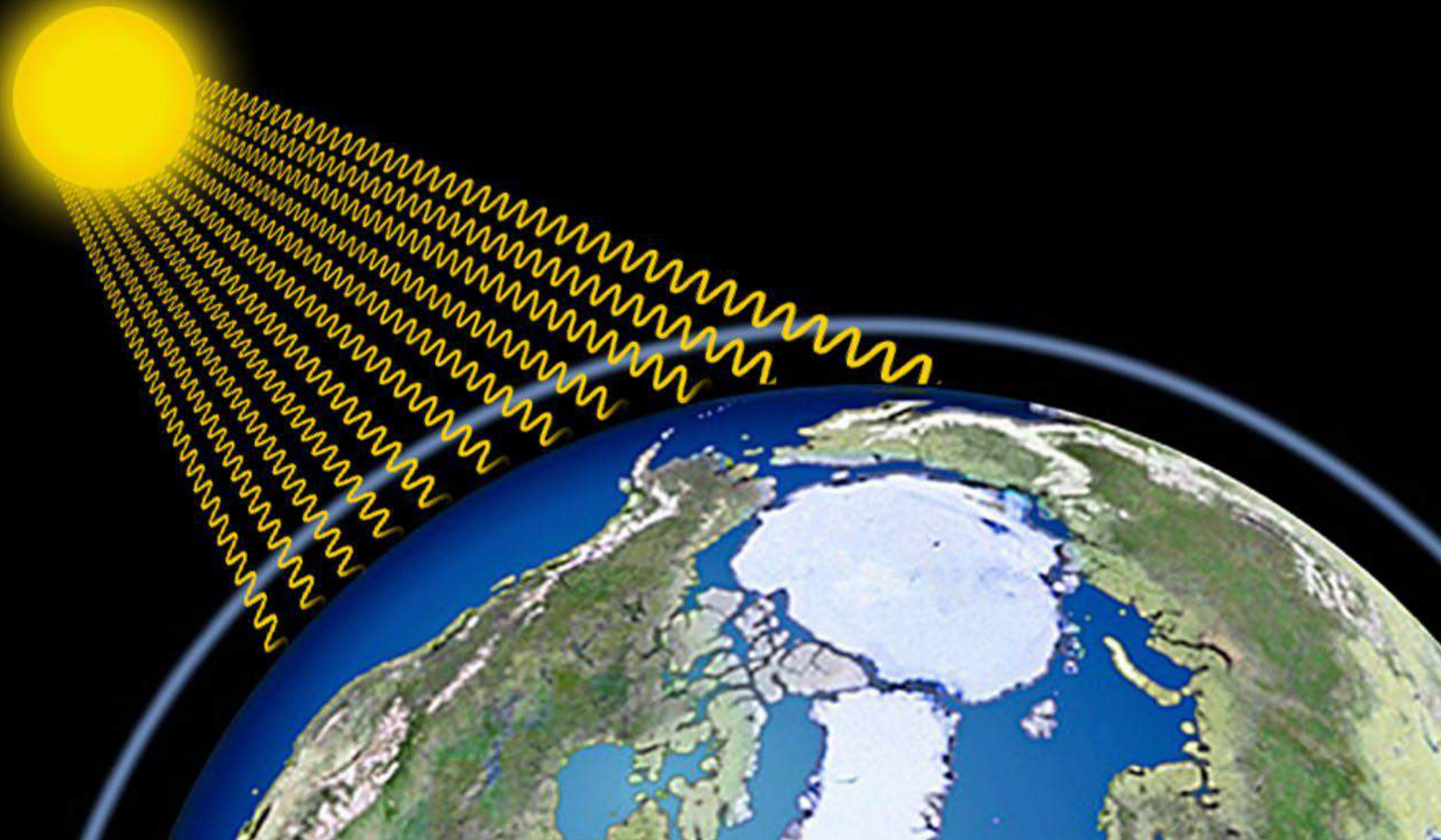


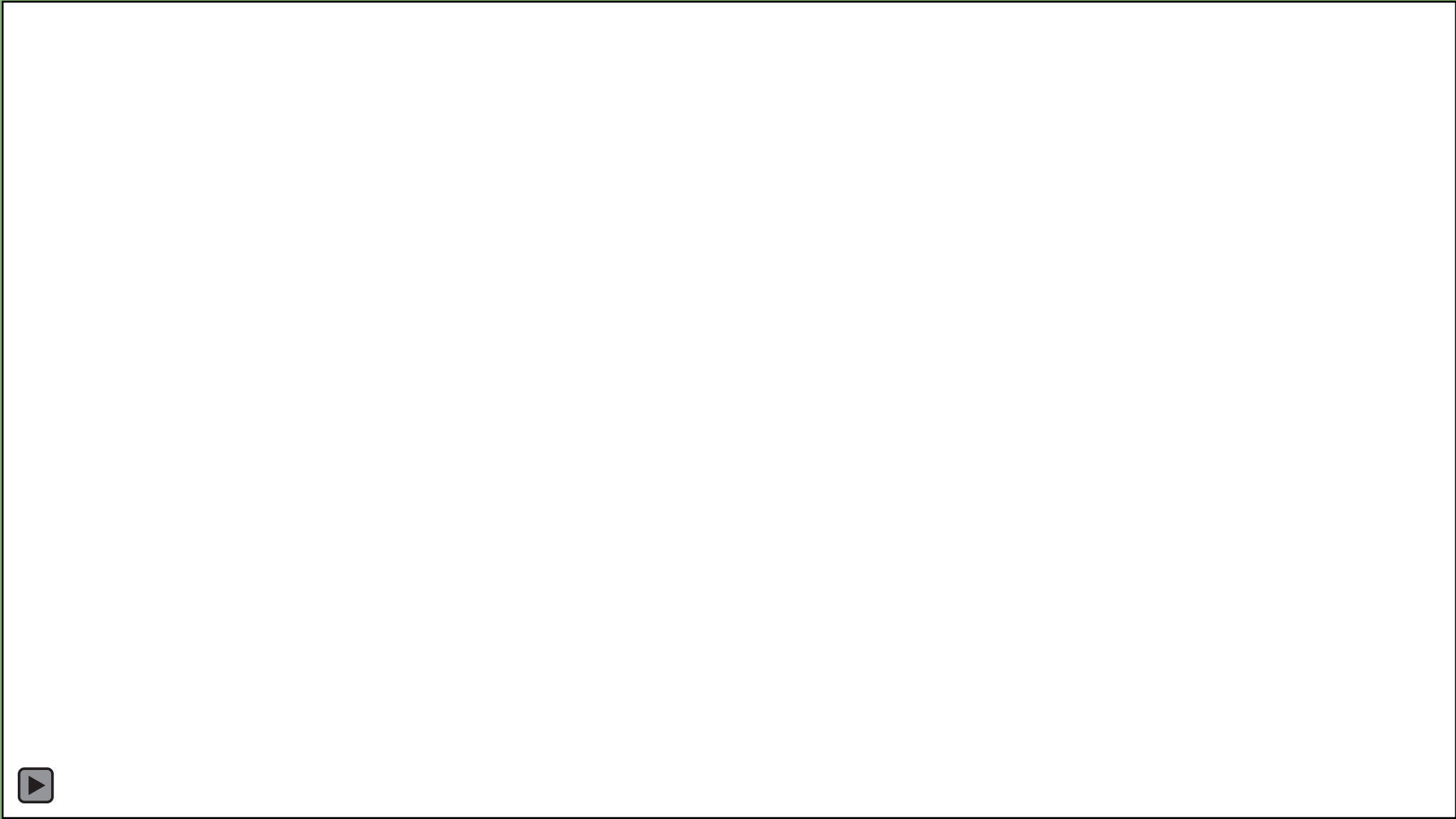
A large white wind turbine stands prominently in the foreground on the left, with its three blades extending outwards. In the background, a series of smaller, similar wind turbines are spaced across a flat, brownish landscape under a clear, bright blue sky. The overall scene is a clean, open field dedicated to wind energy.

**Globally, wind could
supply worldwide
electricity consumption
40 times over**



Enough solar energy reaches Earth **every hour**
to fill all the world's energy needs **for a full year**









INSPIRE, EDUCATE, MOTIVATE

The Broadway Green Alliance (BGA) inspires, educates and motivates the entire theatre community and its patrons to implement environmentally friendlier practices.

BGA CORE PRINCIPLES

NUMBER ONE:

It's impossible to be "green" -
you can only be greener .



BGA CORE PRINCIPLES

NUMBER TWO:

Actions - big and small -
add up.



BGA CORE PRINCIPLES

NUMBER THREE:

Climate neutrality is insufficient.



BGA CORE PRINCIPLES

NUMBER FOUR:

There is no climate justice
without racial justice.



OK, BUT WHAT
CAN WE DO
ABOUT IT?

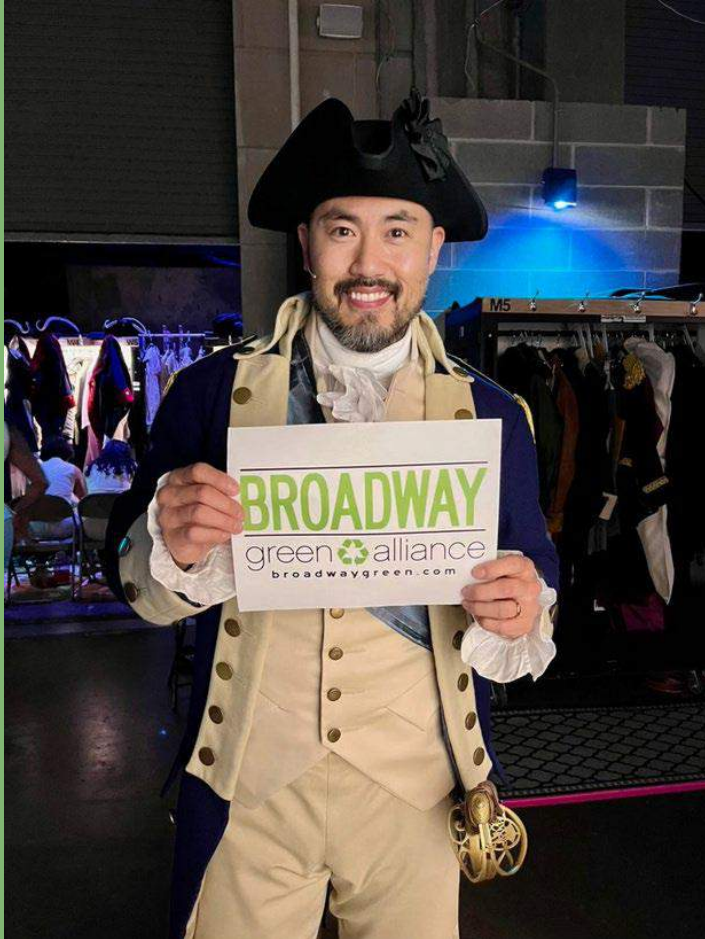




TAKE ACTION
IN YOUR
COMMUNITY

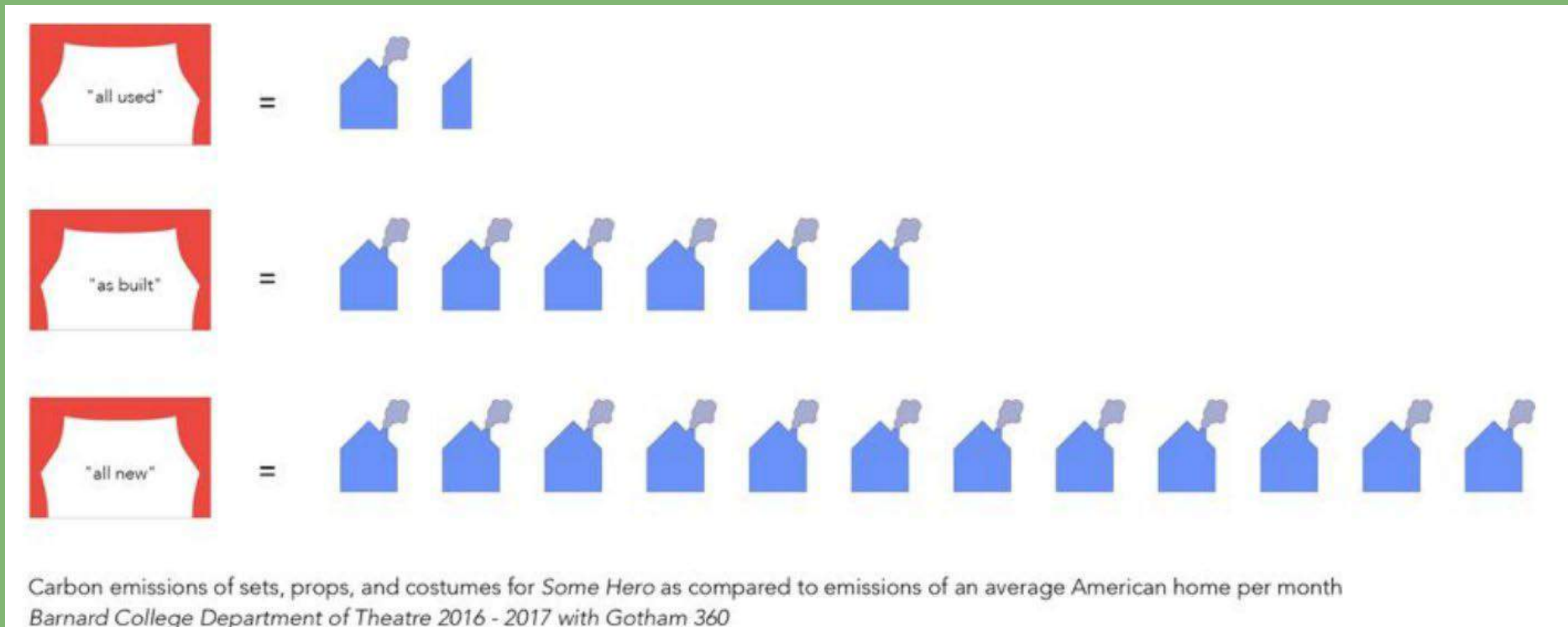


OUR
COMMUNITY



THEATRE IS
FULL OF
CREATIVITY BY
CONSTRAINT

REGIONAL + NON-PROFIT THEATRE:





AROUND THE COUNTRY

GREEN CAPTAIN PROGRAM



THEATRE CLIMATE PLEDGE



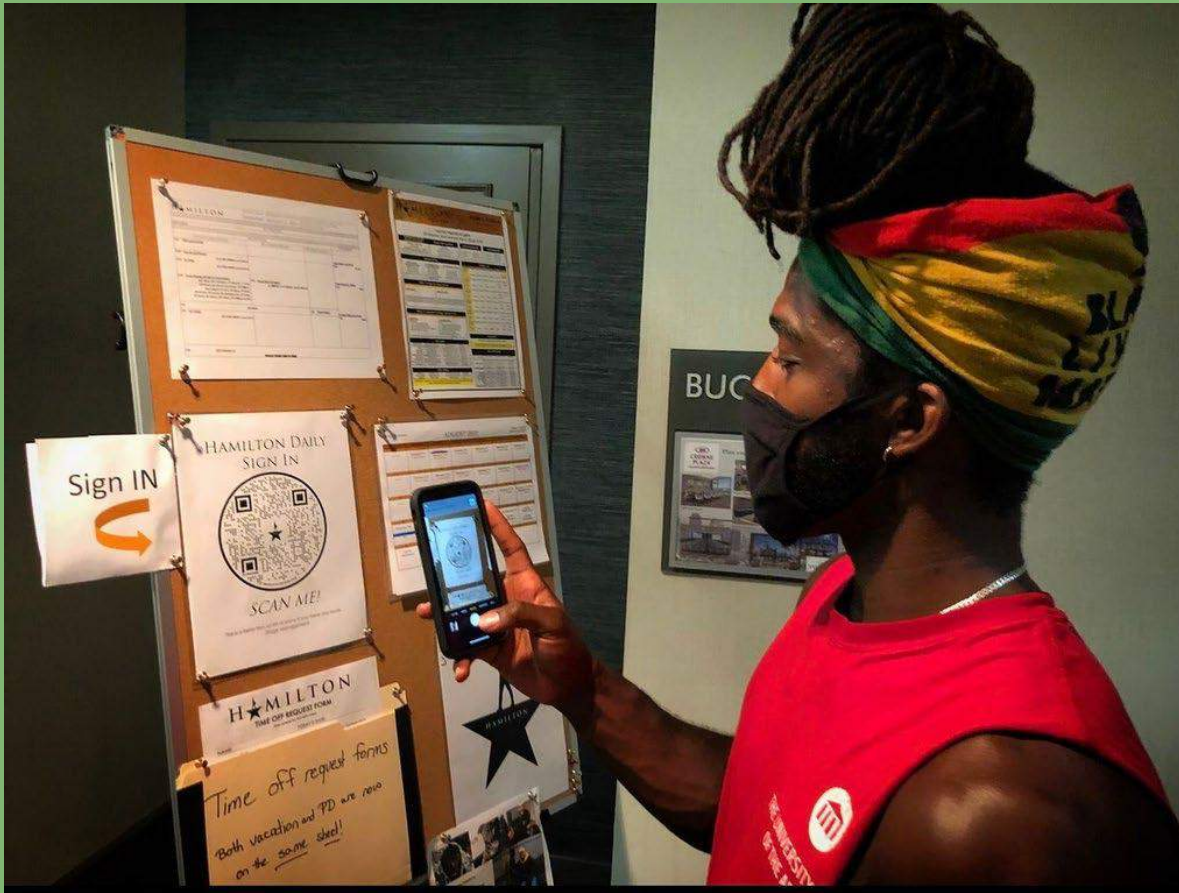
BGA THEATRICAL MATERIAL REUSE, RECYCLING, & SOURCING FACILITIES DATABASE





BGA RESOURCES

- Toolkits and Guides
- Video Learning Resources
- Case Studies



DIGITAL SOLUTIONS



stephenkallas

EDUCATION



COLLECTION
DRIVE
TODAY!

BROADWAY
green alliance
broadwaygreen.com

IF YOU TAKE A PHOTO WITH AN ENTERTAINER, PLEASE NOTE THEY EXPECT A TIP



I ♻️
BROADWAY

AGLI
WAITRESS
THE HIT BROADWAY MUSICAL

BROOKLYN THEATRE • 250 W 47TH ST • WAITRESSTHEMUSICAL.COM

NEW
YORK
CITY

BGA RESOURCES

- In-Office Recycling and Upcycling Collections
- Times Square Recycling Collection Drives
- NYC Theatre Greening Grants
- The Binder Project



NYC RESOURCES

- Big Reuse
- Materials for the Arts
- FabScrap
- The Binder Project
- Scenery
- Wearable Collections
- ArtCube
- TDF Costume Collection





AROUND THE WORLD

There's a Global Movement....

CONSCIOUS COSTUME

LET'S ART & SCIENCE

ARTS ON TOUR

BAEREDYGTIG SCENEKUNST NU

BROADWAY GREEN ALLIANCE

AUSTRALIAN PRODUCTION DESIGN GUILD

MANCHESTER INTERNATIONAL FESTIVAL

INSTITUTO DISTRITAL DE LAS ARTES

CENTRE FOR SUSTAINABLE PRACTICE IN THE

ARTS

ÉCOSCÉNO

QUO ARTIS

JULIE'S BICYCLE

CREATIVE CARBON SCOTLAND

CANADIAN GREEN ALLIANCE

ØSTERBRO TEATER

KI CULTURE

MITOS21

PARIS OPÉRA

ECOSCENOGRAPHY

BAEREDYGTIG SCENEKUNST NU

CREATIVE CARBON SCOTLAND

SCÈNE ÉCORESPONSABLE

ARTISTS CITIZEN ON TOUR

THEATRE GREEN BOOK

ARTS VIVANTS, ARTS DURABLES

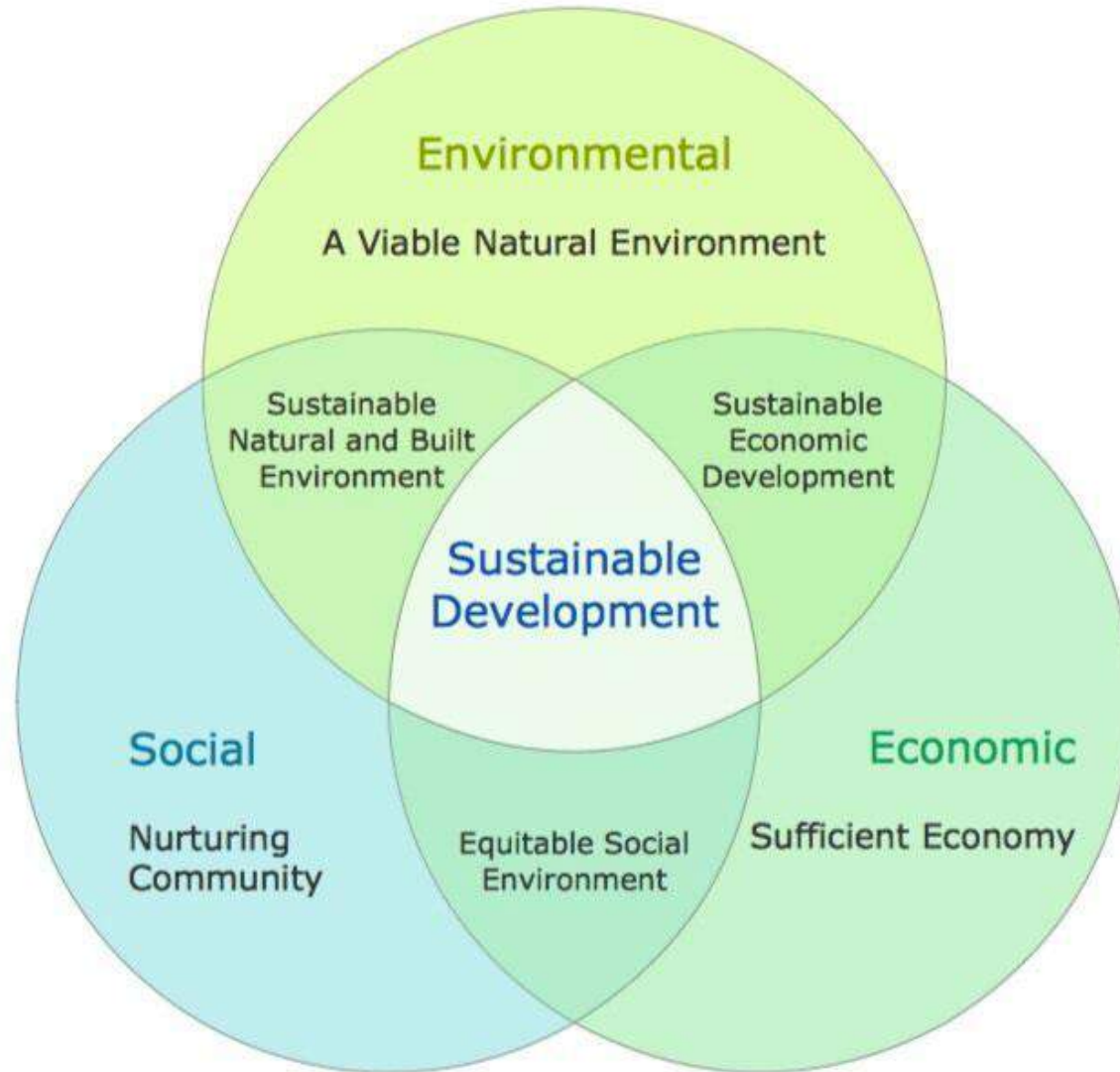
CREATIVE GREEN

EUROPEAN THEATRE CONVENTION

EDIBLE NEST STUDIO

NATIONAL THEATRE LONDON

A HOLISTIC APPROACH





Ursula Wolfe-Rocca

@LadyOfSardines



It can be overwhelming to witness/experience/take in all the injustices of the moment; the good news is that **they're all connected.** So if your little corner of work involves pulling at one of the threads, you're helping to unravel the whole damn cloth.

5:11 PM · Feb 23, 2022 · Twitter Web App

BROADWAY

green  alliance



@broadwaygreenalliance

Questions?



Email: officerinstitute@iatse.net

OccPod

**The Official American College of
Occupational and Environmental
Medicine (ACOEM) Podcast**





IATSE Green Committee

For more information visit:

<https://iatse.net/greencommittee/>

Or contact: iatsegreen@iatse.net

***Plan for normal,
prepare for surprises***

**IATSE Disaster
Response Committee**





Start a Disaster

Response Committee

at Your Local!

Contact Andrew (Roo) Oyaas for tips on where to begin: aoyaas@iatse.net

For more info visit:

<https://iatse.net/disasterresponse/>



Webinar Resources

IATSE: <https://iatse.net/>

- IATSE Safety Hotline: 844 IA Aware | (844) 422-9273
- Education Page: <https://iatse.net/education/>
- IATSE Green Committee: <https://iatse.net/take-action/greencommittee/> – for more information about IATSE Green Initiatives and how your Local can get involved, contact the Green Committee: iatsegreen@iatse.net
- IATSE Disaster Response Committee: <https://iatse.net/take-action/disasterresponse/>

IATSE Training Trust Fund (TTF): <https://www.iatsetrainingtrust.org/>

- OSHA Outreach Training: <https://www.iatsetrainingtrust.org/osha>
- TTF Safety First! Curriculum: <https://www.iatsetrainingtrust.org/safetyfirst>

Mt. Sinai Selikoff Centers for Occupational Health: <https://www.mountsinai.org/care/occupational-health>

- OccPod – The Official ACOEM Podcast: <https://acoem.org/Social-Media/OccPod-The-Official-ACOEM-Podcast>

Broadway Green Alliance: <https://www.broadwaygreen.com/>

Occupational Safety and Health Administration (OSHA): <https://www.osha.gov/>

- Safe + Sound Campaign: <https://www.osha.gov/safeandsound>
- Heat Illness Prevention Campaign: <https://www.osha.gov/heat>

Webinar Resources (Continued)

INDUSTRY-SPECIFIC RESOURCES

Sustainable Production Toolkit: www.sustainableproductiontoolkit.com

Centre for Sustainable Practice in the Arts: www.sustainablepractice.org

Julie's Bicycle: <https://juliesbicycle.com/>

Theatre Green Book: <https://theatregreenbook.com/>

Green Spark Group: <https://www.greensparkgroup.com/>

- Training Opportunities through Green Spark Group: <https://green-spark-knowledge-hub.thinkific.com/>

Earth Angel : <https://www.earthangelsets.com/>

Green Production Guide: <https://www.greenproductionguide.com/>

- Download the Green Production Guide Toolkit: <https://www.greenproductionguide.com/tools/>

GENERAL RESOURCES

U.S. Environmental Protection Agency: <https://www.epa.gov/>

Climate Reality Project: www.climateRealityProject.org

Natural Resource Defense Council: www.nrdc.org

WE ACT for Environmental Justice: www.weact.org

AirNow: <https://www.airnow.gov/>

AUGUST 7 - 13, 2023

Thursday, August 10 from 12:00pm to 3:00pm EDT

Safety Rebroadcast Marathon:

- ✓ Hearing Loss Prevention for IATSE Workers
- ✓ Sun Exposure and Heat Related Illness



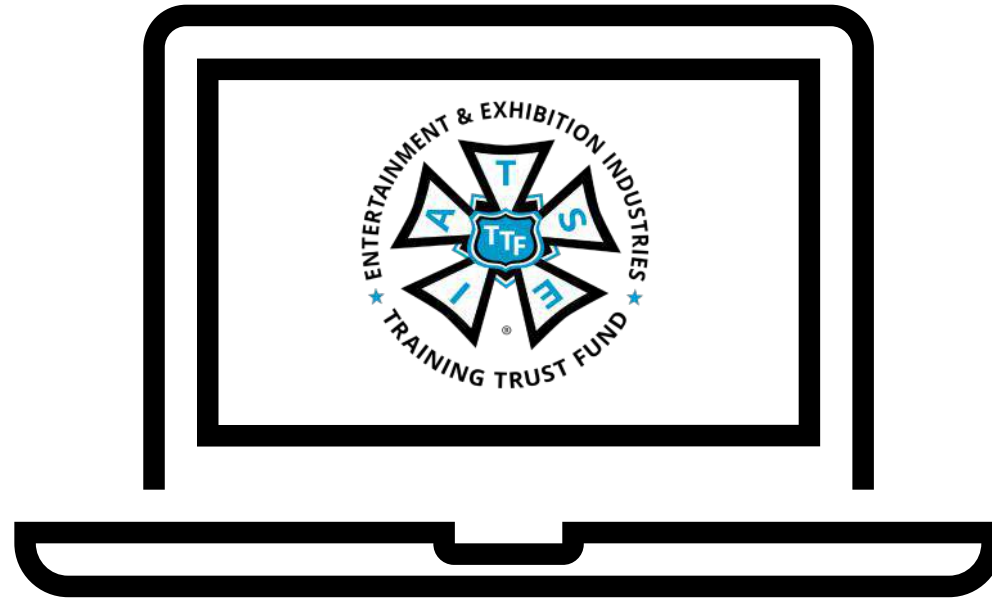
**Save
the
Dates**

IATSE Education for All Webinar Channel

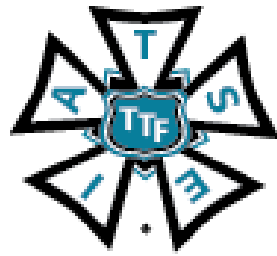


<https://www.gotostage.com/channel/iaeducationforall>

IATSE Training Trust Fund



<https://www.iatsetrainingtrust.org/>



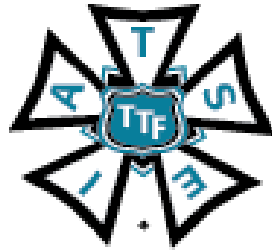
IATSE ENTERTAINMENT & EXHIBITION INDUSTRIES
TRAINING TRUST FUND
PROVIDING TRAINING OPPORTUNITIES FOR THE IATSE WORKFORCE

Interested in learning more about Safety and Health hazards in your workplace?

Sign-up for **TTF Safety First!** through the IATSE Training Trust Fund. The **TTF Safety First!** curriculum has 20 online safety modules to choose from, including a 45-minute Hazard Identification & Safety in the Work Environment course.

For more information, visit:

<https://www.iatsetrainingtrust.org/safetyfirst>



IATSE ENTERTAINMENT & EXHIBITION INDUSTRIES
TRAINING TRUST FUND
PROVIDING TRAINING OPPORTUNITIES FOR THE IATSE WORKFORCE

OSHA 10/General Industry with a focus on the
Entertainment Industry

&

OSHA 10/Construction with a focus on the
Entertainment Industry

For more information, visit:

<https://www.iatsetrainingtrust.org/osha>



Mount Sinai *Selikoff Centers for Occupational Health*

To learn more, call us at 888-702-0630,
or visit us at www.mountsinai.org/selikoff.



@SinaiOccMed



@WorkerHealth

Thank you!

BROADWAY
green  alliance

<https://www.broadwaygreen.com/>



The Impact of Climate Change on IATSE Worker Safety and Health

With the Mt. Sinai Selikoff Centers for Occupational Health and the Broadway Green Alliance

Take the IATSE Member Census today!



Be a Census Ambassador!

Share the QR code, text, email, printed flyers, post at meetings and websites