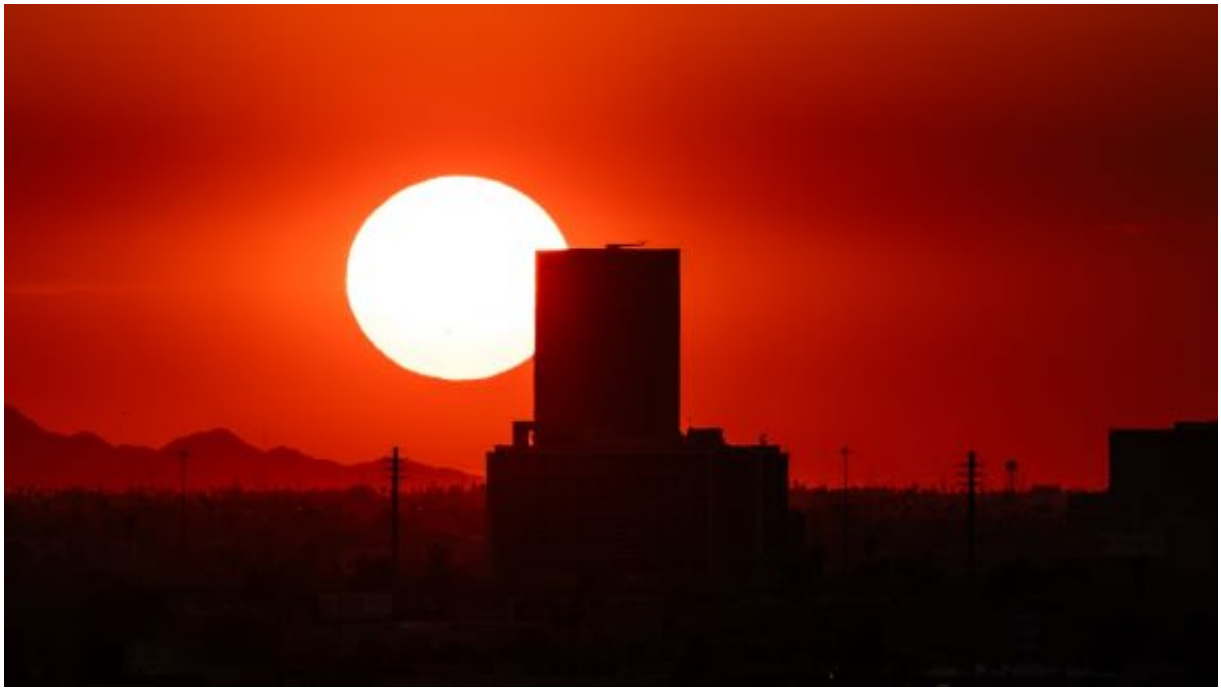
September 2024

Julie Ann Wrigley Global Futures Laboratory
Arizona State University

Global Futures: Now



The start of a new academic year marks the beginning of the end of summer and the transition into cooler weather. But for Phoenix, Tuesday, September 12 set several new heat records: 109 consecutive days of 100 degrees Fahrenheit (37.8 degrees Celsius) or more. 2024 was the hottest summer on record with an average temperature of 99 F, following the previous record of 97 F set in

2023. The number of 110 F days for Phoenix stands at 61, again representing a record. And finally, the number of 90 F nights as of September 12 stands at 39, again setting a record.

Phoenix stands out as the hottest U.S. urban center, with the city's rapid growth intensifying its urban heat island effect, the phenomenon where population density combined with concrete, asphalt and similar materials used in the built environment amplify already extreme temperatures, creating a dangerous, sometimes deadly environment, especially for vulnerable populations. Last year in Maricopa County, the summer heat - a record at the time - claimed the lives of 625 people, a significant surge in the span of a decade. Of those victims, nearly half were unhoused individuals, succumbing to the extreme conditions at bus stops, makeshift shelters and tents, or around pavement and sidewalks. The remaining half died in homes with inadequate cooling or outside while riding bikes or going for walks.

Prolonged heat exposure can be life threatening, especially for children, the elderly and those with chronic diseases. Excessive heat can quickly damage the central nervous system, the brain and other vital organs, worsen existing cardiovascular or respiratory medical conditions, disrupt sleep, alter hormone levels, increase cortisol and render certain medications less effective. Last week, another unprecedented heat wave hit the western states with millions of people from southwest Oregon through California and western Nevada experiencing triple-digit temperatures. In the United States, extreme heat now accounts for more deaths than hurricanes, tornadoes and floods combined.

Record-high temperatures are not exclusive to the Western Hemisphere. On the other side of the world, during the 2024 Hajj pilgrimage to Mecca, Saudi Arabia, more than 1,300 people died as a result of scorching temperatures of 120 degrees Fahrenheit (ca. 49 degrees Celsius). Despite efforts by Saudi authorities to mitigate the situation - including providing healthcare services and deploying emergency security forces - the fierce climate proved fatal for hundreds of people.

The rising toll of lives lost due to extreme heat serves as a stark reminder of the urgent and escalating climate crisis that threatens many regions of our

world. The path to averting further catastrophe demands not just acknowledgment of this crisis but immediate, decisive action for all sectors - governments, corporations, academic institutions and individuals. At the Julie Ann Wrigley Global Futures Laboratory, our mission is to catalyze transformative change by forging partnerships that span local, national and global boundaries.

Last month, the Julie Ann Wrigley Global Futures Laboratory's Decision Theater hosted a meeting with the German Federal Ministry for Economic Affairs and Climate Action. The discussions centered not only on policy and structural change but also on how socioeconomic transformation can be a driver of sustainable growth and local employment. These conversations are not isolated; they are the foundation for real-world strategies that can shift the course of our response to the global climate change challenge.

Similarly, in partnership with the ASU Center for Negative Carbon Emissions, the Global Futures Laboratory engaged with the U.S. Trade and Development Agency to explore sustainable energy solutions that can be scaled with international partners. The panel, which included leaders from industry, government and academia, focused on how U.S. innovations, when deployed in global partnerships, can catalyze the global energy transition.

Without a rapid transition of the energy system, the climate change impact problem cannot be solved. Raising public awareness and fostering educational initiatives are equally vital. Recently, Impact Water – a pillar of the Arizona Water Innovation Initiative – collaborated with teachers to develop water literacy curricula for K-12 students. Through community-based workshops, Impact Water aims to equip the next generation with the tools and understanding to tackle water-related challenges as they pertain to our desert region.

The fight against the global climate crisis requires collective action and commitment at every level of society. Equally important to enacting robust policies is educating and empowering the next generation of changemakers. Adopting a holistic, multifaceted approach is how we can mitigate suffering and loss of life due to climate extremes. While the problem at hand might seem

immense, I remain hopeful that through concerted efforts on the part of governments, corporations and individuals, extreme heat and other climate and societal challenges can be addressed before the climate crisis turns into a climate catastrophe.

Peter Schlosser
Vice President and Vice Provost of Global Futures

What is wet-bulb temperature? Jennifer Vanos featured in Live Science

Scientists often use wet-bulb temperature, a measurement that accounts for both the air temperature and the amount of humidity in it, to measure the effects of extreme heat on the human body. Jennifer Vanos, associate professor in the School of Sustainability, further explains the uses — and limitations — of wet-bulb temperature measurements.

Read more

David Guston: What we talk about when we talk about impact

David Guston, associate vice provost for discovery,

engagement and outcomes at the Global Futures Laboratory, published an essay in Issues in Science and Technology. The quarterly journal is published by the National Academy of Sciences and Arizona State University. In his essay, Guston discusses the nuance of measuring impact, particularly within an academic and research context.

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Arizona Water Innovation Initiative to support “water literacy” for K-12 students

In collaboration with teachers, who will help lead the creation of water literacy curricula, a new workshop series aims to equip K-12 students with the tools necessary to understand and tackle water-related challenges. The project is supported by Impact Water - Arizona, a pillar of the Arizona Water Innovation Initiative. After curriculum development, the” Water Literacy in the Desert” project team plans to pilot it in Arizona schools, with a workshop scheduled to take place in January 2025 to gather feedback from participating teachers.

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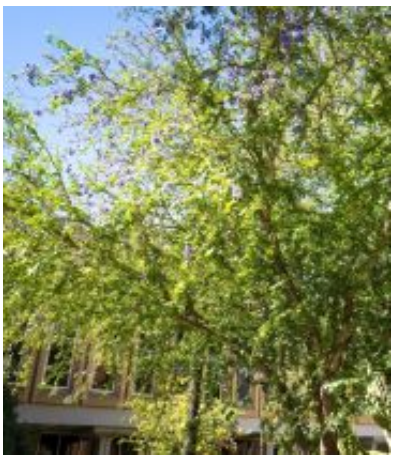
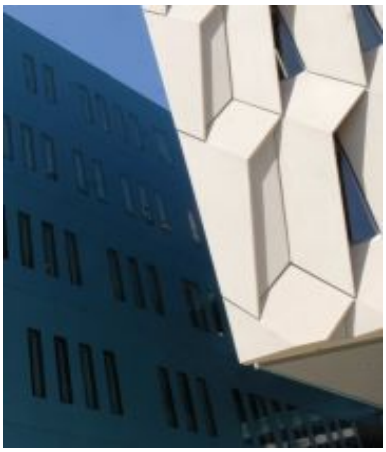
Urban forestry accelerator aims



to boost green infrastructure, economic growth in Phoenix

A new three-year project at ASU will work directly with Valley residents to co-create actionable neighborhood urban forestry plans while supporting economic growth. The Greater Phoenix Urban Forestry Accelerator, led by the Walton Sustainability Solutions Service, will kickstart the creation of customized community forestry plans through a series of neighborhood-based workshops that put residents at the forefront of the planning process.

Read more



Listen: Ongoing podcast series highlights Global Futures researchers

“Cool ideas for a long, hot summer” is a miniseries from Issues in Science and Technology that highlights strategies to mitigate and adapt to climate change. The series features insights from a variety of experts from the Global Futures Laboratory. Episodes are published to streaming platforms weekly, and a transcription of these episodes can be found online.

More

Global Futures Scientists in The Arizona Republic: Campaign aims to bring clean energy to Latino communities

A $1.7 million campaign, launched by the national non-profit organization Poder Latinx, aims to support the Latino community as the United States transitions to clean energy. Jennifer Vanos and Danae Hernandez-Cortes are both featured in the story, offering insights on community engagement opportunities and the impact of urban planning on mitigating heat.

Read more

Interview with Nathan Johnson: Arizona part of federal plan to modernize the U.S. power grid

In a KJZZ interview with Nathan Johnson, director of the Laboratory for Energy and Power Solutions, Johnson says the nation's energy grid is in need of modernization. Arizona joined the Federal-State Modern Grid Deployment Initiative plan to modernize the country's energy grid — Johnson discusses some of the considerations, strategies and challenges of powering the future.

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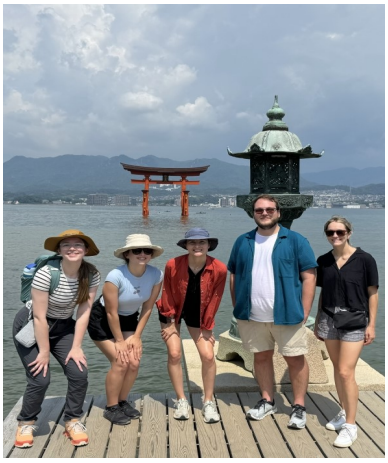
The Sustainability Consortium receives 2024 President's Award for Sustainability

The President's Award for Sustainability, part of ASU's commitment to celebrating innovative solutions that yield real-world change, officially acknowledged The Sustainability Consortium's (TSC) significant impact in driving sustainable practices across industries. TSC, which recently headquartered at the Global Futures Laboratory, will be formally recognized at the President's Recognition Ceremony on Dec. 6 alongside other recipients in categories including global engagement, innovation, social embeddedness and transdisciplinary collaboration.

Read more



College of Global Futures, Thunderbird School of Global Management students join U.S. and Japan leadership program

Twelve undergraduate and graduate students from the College of Global Futures and the Thunderbird School of Global Management participated in the inaugural “Japan–U.S. Global Leadership Program in the Age of Artificial Intelligence” cohort in Japan. Eusebio Scornavacca , director of the School for the Future of Innovation in Society, said the

program showcases ASU's continued commitment to innovation, global leadership and equipping graduates with the knowledge and skills to succeed in a world where artificial intelligence is more present.

Read more

School for the Future of Innovation in Society student awarded Fulbright Award

Fourteen ASU students were awarded Fulbright scholarships for 2024–25 academic year, with Rebecca Stuch among them. Stuch, a doctoral student in the Innovation in Global Development program within the School for the Future of Innovation in Society, was granted a research award. This award will support her doctoral dissertation research on national identity and digital storytelling in the Republic of Moldova.

Read more

ASU, US Trade and Development Agency event highlights importance of innovation, global partnerships

On Aug. 8, policymakers and technical and

business leaders in the energy sector gathered at the Rob and Melani Walton Center for Planetary Health to demonstrate the strength of collaboration in supporting positive outcomes for green economies. The public event, “Accelerating Energy Sector Transformation through Global Partnerships and US Innovation,” was hosted by the Julie Ann Wrigley Global Futures Laboratory and the U.S. Trade and Development Agency.

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Events

Falling Walls Lab Arizona

Falling Walls Lab is a world-class pitch competition and networking forum that brings together a diverse and interdisciplinary pool of students and early-career professionals by providing

Cultivating Careers: Professional Opportunities with the US Department of Agriculture

Did you know there are nearly 60,000

a stage for breakthrough ideas both globally and locally.

Friday, September 13, 2024
12 p.m. - 4:30 p.m. (MST)
Walton Center for Planetary Health

More

job openings in food, agriculture, natural resources and health sciences each year? Join us to learn more about the variety of careers at the U.S. Department of Agriculture.

Wednesday, September 18, 2024
4:30 p.m. - 5:30 p.m. (MST)
ISTBX 481 and Zoom

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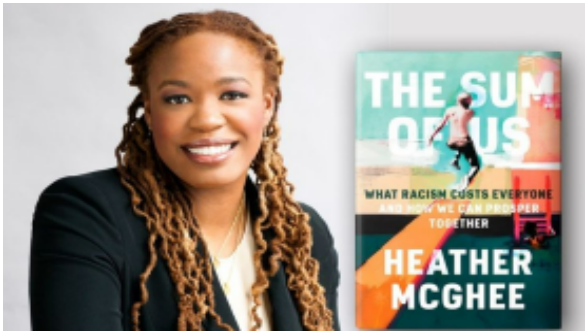
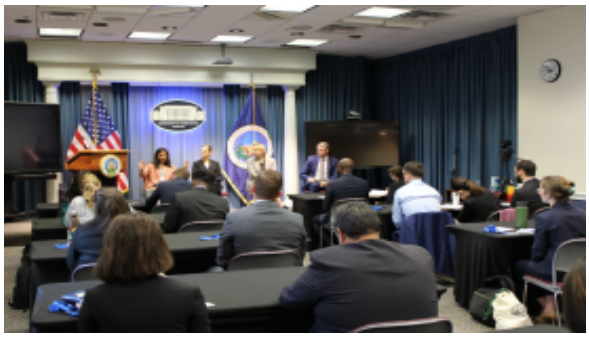


Celebration for Resilience 2024 Symposium and Gala

Knowledge Exchange for Resilience's symposium will feature an exhibit hall and talks from an array of scientists, interdisciplinary researchers and thought leaders. The following gala will feature an award ceremony and keynote address by Heather McGhee. A New York Times



How to Land a Federal Job: USAJOBS Information Session

Join us for a workshop where we dive into the world of federal jobs and unveil the keys to successfully securing employment through the USAJOBS.gov website.

Tuesday, October 29, 2024
4:30 p.m. - 6 p.m. (MST)

bestselling author and policy advocate, McGhee will discuss themes from her book "The Sum of Us."

ISTBX 481 and Zoom

More

Thursday, September 19, 2024
1:00 pm - 5:00 p.m. (Symposium, MST)
5:30 pm - 7:30 p.m. (Gala, MST)
Omni Hotel ASU Tempe

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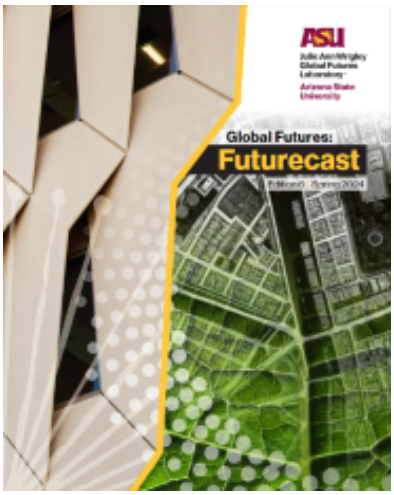

Futurecast

Edition 6 | Spring 2024

Global Futures: Futurecast offers a look into our prospective futures through the eyes of the extensive Global Futures Scientists and Scholars Network. Explore what might come in the seconds, days, and years ahead. Our latest issue talks about how we can draw inspiration from the patterns in nature to implement strategic decisions in our built world.

Read now

Global Futures Viewbook

We must rediscover our planet and our relationship with it.

What does this mean, exactly? For the faculty, students, researchers and global partners of the Julie Ann Wrigley Global Futures Laboratory, it means a commitment to urgently exploring pathways to impactful solutions and decisions that address the challenges we have caused through resource extraction and thoughtless consumption as part of a relentless pursuit of “progress.”

We believe better is possible.

Learn more

ASU Julie Ann Wrigley Global Futures Laboratory
Arizona State University

#1 in the U.S. and top 10 in the world for global impact in research, outreach and stewardship

ASU ahead of Michigan State, Penn State and MIT
– Times Higher Education, 2024

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