March 2024

Julie Ann Wrigley Global Futures Laboratory™
Arizona State University

Global Futures: Now

In Mexico City's metropolitan area, extreme drought has created a water scarcity crisis that has impacted the everyday lives of 21 million people. A drier-than-usual rainy season coupled with over-extraction of the city's reservoirs and underground aquifers has created a severe water shortage, with some experts believing Mexico City could run out of water by this summer.

On the other side of the world, a similar crisis is occurring in Bengaluru, India.

Residents wait in hours-long lines for their turn to collect water from a truck that delivers 1,000 liters of water every two weeks. To help curb the scarcity, residents are advised to limit their water intake by bathing on alternate days and using disposable cutlery. Experts expect that the situation will only become more dire as mercury levels rise in the lead-up to summer.

Here in the Southwestern United States, we are experiencing our own unique water challenges. The megadrought that has plagued the region for more than two decades and record-high heat compound the existing pressure on an already precarious desert environment. In Phoenix, a surge in population growth and land development intensified the water demand and further drained Lake Powell, the massive reservoir on the Colorado River.

Awareness of these and other climate-related issues exists, as does continued discourse among scholars and scientists. But how are these conversations leading to solutions at the local, national and global levels? How can education, collaboration and advancements in technology address the vast and complex water issues occurring simultaneously around the world?

On Friday, March 22, 2024, the Julie Ann Wrigley Global Futures Laboratory celebrated World Water Day and the launch of the ASU Water Institute, a new center for scholarship and action to solve the emerging water and related climate challenges happening worldwide. Under the directorship of Upmanu Lall, Global Futures Professor in the School of Complex Adaptive Systems , the Water Institute will collaborate with universities, NGOs, corporations and government organizations to develop new educational programs that address planetary, national and regional climate and water challenges in urban, industrial, agricultural, environmental and energy sectors. It builds on existing strengths such as the Arizona Water Innovation Initiative, and adds new dimensions to obtain a global, holistic view of the future of water on our planet.

One of the Institute's primary goals is to establish a Global Water Collaboratory to bring together a global community through videos, social media and discussions focused on the identification, selection, financing and implementation of applied research projects that benefit Arizona, the larger Southwest region, the nation and the global community.

The event included a video address by President Michael M. Crow and Executive Vice President of the Knowledge Enterprise (KE), Sally C. Morton, delivered remarks about the role of the Water Institute in KE's research portfolio. Panelists and presenters traveled from California, Colorado, New York and Texas to speak on a range of topics that addressed the vastness and complexity of the global water crisis, including emergent challenges in India and the Colorado Basin, global human migration, trade impacts of water, and climate disruptions.

The water challenges occurring in Mexico City, Bengaluru, India and other parts of the world paint a stark portrait of a planet struggling to meet the growing demands of its inhabitants. From drought-stricken or flooded regions to contaminated water sources, the global water crisis is just one of many interconnected pressure points humankind is placing on the life-supporting systems of our planet. This is the impetus for launching the Water Institute in the Julie Ann Wrigley Global Futures Laboratory. After all, we live on the so-called water planet. From the vast oceans that cover our planet to the drinking water we access daily, water is the foundation of all life on Earth, making its conservation a global responsibility we must all uphold.

Peter Schlosser
Vice President and Vice Provost of Global Futures

World Water Day marks official launch of the ASU Water Institute

Global Futures Laboratory celebrated World Water Day with a series of panel conversations, presentations and the formal launch of the ASU Water Institute. Lall said the Water Institute will channel ASU's existing water expertise and efforts into educational, research and communication projects for communities around the world.

Read more

Q&A with Upmanu Lall

Prior to the official launch of the ASU Water Institute, Lall engaged with ASU News for a Q&A in which he discussed the importance of the Water Institute,

ASU's leadership in the water solutions space and the future of humanity's relationship with water.

Read more

Establishing a water collaboratory

A wide range of experts in the water space joined ASU experts at the "Global Water Futures: Anticipation and Innovation" event at the Walton Center for Planetary Health. These experts contribute their expertise towards a "water collaboratory," part of the Water Institute. Watch some of the presentations from the event on YouTube.

Watch

Senior Global Futures Scientist explores options to increase "life cycle" of solar panels

Meng Tao , a professor of electrical engineering in the Ira A. Fulton Schools of Engineering and Senior

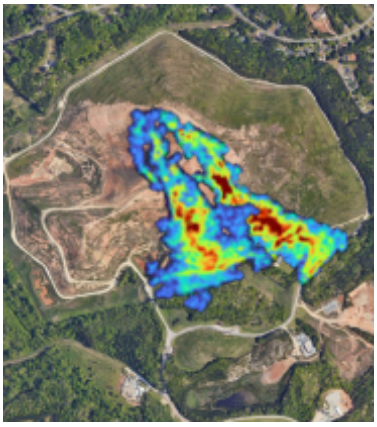
Global Futures Scientist, aims to improve solar panel design to increase material recovery during recycling. Solar panels, while an important contributor of green energy, can be expensive and difficult to recycle. This is why Tao, in collaboration with other partners, has set out to enhance the economical circularity of solar planets. He and his collaborators offered five recommended changes to panel designs to make them more cost-effective to recycle, which were published in the One Earth scientific journal.

Read more

Flooding and frogs: new study published in Ecology journal

Senior Global Futures Scientist Heather Bateman co-authored a study in Ecology on the mating habits of a common kind of spring frog. Bateman, a professor in Arizona State University's College of Integrative Sciences and Arts, worked with ASU alumni Maggie Huck to discover that the canyon tree frog's mating habits coincide with spring flooding along the Verde River system, which contributes to Arizona's water supply. In a Q&A with ASU News, Bateman said the study was an important exploration of the interwoven systems within Arizona. "I hope (people) understand that this is such an amazing system that we have in our backyard," she said.

Read more



New study finds previously unreported and persistent super-emitting methane plumes from US landfills

Greg Asner, director of the ASU Center for Global Discovery and Conservation Science contributed to a study published in Science that shows there are significant gaps in landfill leak detection and protocols for quantification. The research team used advanced aircraft to conduct the largest direct measurement-based survey of active municipal solid waste landfills to date, from 2018 through 2022. The team used partner aircraft, including ASU's Global Airborne Observatory with the Center for Global Discovery and Conservation Science and NASA JPL's AVIRIS-NG, to conduct the surveys. Read more about the study on ASU News.

Read more

Research from Jennifer Vanos featured in PNAS article

The PNAS Front Matter team created a series of interactive maps and charts using projections compiled by Probable Futures, a nonprofit that aims to help governments, organizations, and people plan for the extremes they are likely to experience in the coming decades. One section of the map is dedicated to deadly heat and humidity: this section includes insights from School of Sustainability

professor and Senior Global Futures Scientist Jennifer Vanos.

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ASU and University of Nevada, Reno, awarded $870,000 from NIH-funded project

Kathleen Vogel, professor in the School for the Future of Innovation in Society and David Gillum , associate vice president of compliance and research administration at the University of Nevada, Reno were awarded a nearly $867,331 grant from the National Institutes of Health to study the future of biosafety and biosecurity in the United States. Vogel spoke with Nevada Today, in which she said the project will help guide future biosafety and biosecurity policies in the United States. “We aim to help inform the design and development of innovative and adaptive biosafety and biosecurity policies and procedures at the national, institutional and laboratory levels to maximize beneficial medical and health applications while minimizing the potential harms,” Vogel said in the article by Nevada Today.

Read more

Kathleen Merrigan explains “true cost” of food in Conversation article

Kathleen Merrigan, executive director of the Swette Center for Sustainable Food Systems, says there is more to food pricing than the number you see at checkout: understanding lesser-known costs is crucial to reducing overall costs. The Swette Center for Sustainable Food Systems recently conducted a true cost accounting study of cow-calf operations in the Western U.S., in partnership with Colorado State University. “[The study] found that the climate costs of these operations are very high – but that solving for climate change alone could threaten the livelihoods of 70,000 ranchers and the rural communities in which they live,” writes Merrigan. “A true cost accounting approach can illuminate the need for multidimensional solutions.”

Read more

From Steven Beschloss And Manfred Laubichler: Attitude toward democracy is fragile, many favor autocracy

Steven Beschloss and Manfred Laubichler wrote an opinion piece for the Arizona Capitol Times about the state of American democracy. They used technology from Decision Theater and surveyed over 1,000 adult Arizonans as part of a larger comparative study with various institutions in Europe and the U.S. According to the authors, this survey demonstrates that "the narrative of democracy is failing, while mistrust in democratic government is increasing."

Read more

NSF announces new partners in ASU-led climate, economy initiative

NSF Engines: Southwest Sustainability Innovation Engine announced three new partners in the initiative, led by Vice President and Vice Provost of Global Futures at ASU, Peter Schlosser . The three new partners will contribute to the initiative's goal of establishing the Southwest as a leader in sustainability-based innovation, technology and policy. The new partnership with Ecolab, Hydrosat and the U.S. Green Building Council was announced at an event held at Intel in Chandler that included representatives from the National Science Foundation and the White House Office of Science and Technology Policy.

Read more

Apply for funding with Impact Water - Arizona

ASU faculty and staff are encouraged to apply for funding for projects relating to Arizona's water challenges. These projects must support the implementation of activities and development of use-inspired research and tools aimed at water solutions. Interested applicants can find more information here.

The funding is not available to businesses or municipalities, although there are other collaborative opportunities for these entities.

Read more

College of Global Futures launches Impact Scholars program

The recently-announced Global Futures Impact Scholars program will provide $5,000 to work on a project or experience that aims to make a global impact with leading ASU researchers and experts. Students who enroll in the College of Global Futures for fall 2024 as either a new first-year or transfer on-campus student are eligible to participate in a 100-student scholar cohort. The final deadline for applicants is April 15; find information to apply here.

Read more

From ASU Thrive

Don’t flee the Southwest just yet

When Arizona’s summer heat climbs to over 110 degrees, it may seem like the Southwest is unlivable. But, as a New York Times reporter discovered, there’s reason to hope that Arizona living will continue to be viable, thanks to water conservation efforts and climate adaptation.

Read more

Humanities for the Environment marks a decade of environmental humanities networking

In March, the North American Observatory of the Humanities for the Environment (HFE) Global

Network celebrated 10 years of uniting worldwide humanities-led efforts to tackle environmental challenges. The network, previously known as the Environmental Humanities Initiative honored its decennial anniversary with a new name and a poetry reading from poet and environmentalist Juan Carlos Galeano.

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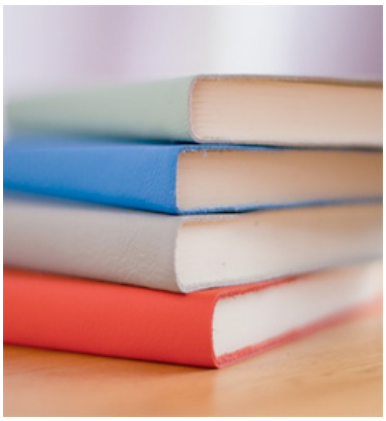


Humanities Labs at ASU Library connect librarians with faculty, staff and students

Miki Kittilson, professor and vice dean in the College of Global Futures, was the co-lead for the Gendering Peace and Security Lab, a Humanities Lab at ASU Library. The lab's final project produced an "ecofeminism in media" book list, which has since grown to a book and film collection that is currently located on the second floor of Hayden Library. See the original book list here.

Read more

Peter Schlosser to serve on UNESCO BRIDGES Coalition Governing Council

BRIDGES' Terms of Reference, signed into effect in Paris in January, now enters the coalition into a new

phase: co-producing knowledge and actions that support the United Nations' 17 Sustainable Development Goals (SDGs), the Paris Agreement on Climate Change and the Convention on Biodiversity, among other international initiatives. This includes the establishment of a Coalition Governing Council, with its 12 members to include Peter Schlosser.

Read more

Global Futures Laboratory welcomes first Chief Operations Officer

Heidi Gracie is joining the Global Futures Laboratory's leadership team as the inaugural Chief Operations Officer. Gracie will play a key role in advancing the laboratory's non-academic initiatives and programs through leadership, management, strategic planning and operational oversight for complex projects, including continued integration of the ASU Bermuda Institute of Ocean Sciences across ASU, representing ASU on The Sustainability Consortium Board and providing senior-level management to successfully commercialize new technologies in carbon capture. Gracie is deeply familiar with Global Futures as she transitions from her position as Executive Director of Strategic Marketing and Communications for ASU's Knowledge Enterprise.

Bill Nye offers wisdom in talk

about climate change

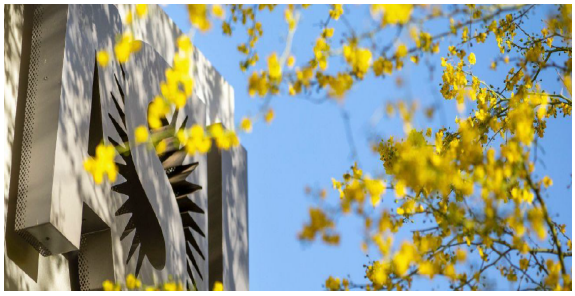
Bill Nye, commonly known as “Bill Nye the Science Guy” for his popular children’s science series, presented the Rhodes Lecture as the 2024 John J. Rhodes Chair at the Tempe Center for the Arts. He also participated on a panel discussion that included Amber Wutich, a President’s Professor and director of ASU’s Center for Global Health. Wutich is also a Senior Global Futures Scientist. Nye encouraged people to have more serious discourse around climate change solutions and to vote in accordance with their desired future outcomes.

Read more

Upcoming Events

SOS Seminar Series Presents: Leah Shaffer and Brian Gran

Brian Grant and Leah Shaffer present seminars on frozen commons



Climate Chats with Chu: Federal Action to Address Climate Impacts in Communities and Environmental Justice

stewardship and relational sustainability research.

Wednesday, April 3
12 p.m. - 1:15 p.m. (MST)
Walton Center for Planetary Health
Auditorium 107

More information

Climate Chats with Chu: Leveraging Public Financing to Increase Private Capital Investments in Climate Solutions

In the third event of this series, discover how green banks can increase private

In the second event in this series, engage in a pivotal dialogue led by Edward Chu, Special Advisor to President Michael M. Crow on Climate and Environmental Solutions, with distinguished guests Lisa Garcia, Martha Guzman and Meg McCollister from the U.S. Environmental Protection Agency.

Monday, April 8
3 p.m. – 4:30 p.m. (MST)
Walton Center for Planetary Health
107

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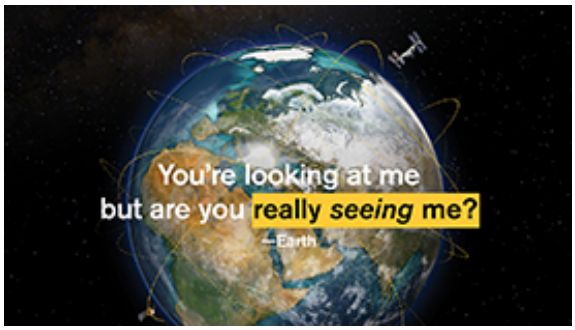

Earth Day

Each April, the world comes together to celebrate our home planet, Earth. First recognized on April 22, 1970, the Julie Ann Wrigley Global Futures Laboratory now serves as the hub of activities at Arizona State University that honor Earth Day each April 22.

investments in climate solutions in the Southwest. Join Chu and distinguished group of green financing experts as they explore ways to foster inclusive climate solutions through innovative financing models and mobilizing public financing to spur private capital investments for sustainable development projects in the Southwest.

Wednesday, April 17
10 a.m. – 11:30 a.m. (MST)
Walton Center for Planetary Health
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Learn more

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Futurecast

Edition 5 | Fall 2023

In this issue of Futurecast, we explore a number of topics including electrification, a conversation with Arizona's State Climatologist Erinanne Saffell, the deployment of humanitarian aid in the face of global challenges and a museum exhibition that explores what Arizona may look like for the next generation.

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. for global impact
–Times Higher Education, 2021

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Be sure to receive this newsletter as well as other journals and updates including our biannual journal, Futurecast.

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