

# March 2023



## Global Futures: **Now**



**“What’s past is prologue.” – William Shakespeare**

Prior to 2020, I never got the annual flu vaccine. I do not recall ever contracting influenza, leading me to subconsciously conclude that I did not need to worry about the illness. But in 2020, my physician recommended I receive a shot to decrease the likelihood of a compound infection of flu and the novel coronavirus. Now, I get my flu vaccine every year.

Our pasts shape our decisions. Experiencing the COVID-19 pandemic changed many of my behaviors. We must utilize our collective experiences from the past three years—successes, setbacks and traumas—to make our communities more resilient to future disruptions. We cannot precisely predict the next virus, but we know it is coming. We must be prepared for surprises.

When COVID-19 brought global societies to a standstill in 2020, it was a shock for our interconnected systems. COVID-19 represented a [stress test](#) to see how well our systems—including health, government, commerce and community—could respond to such a massive disruption. The [official death toll is roughly 7 million people and climbing](#)—some estimates suggest the [real death toll](#) to be between 17 and 29 million based on excess death mortality—indicating the measures we took to respond to the crisis were insufficient to avoid massive loss of life. Almost everyone has lost someone they know to this pandemic.

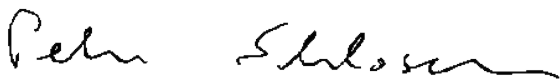
But it could have been worse. We moved relatively quickly to implement countermeasures in a highly uncertain environment. We took steps to lessen infection and “flatten the curve” through shutdowns, physical distancing and masking. We mobilized resources at a pace rivaled only by wartime efforts. And within one year, we had an effective vaccine that helped slow the speed of transmission, easing the pressure on healthcare and economic systems. Present-day endeavors, such as the [100 Days Mission](#), which seeks to develop effective diagnostics and preventative vaccines within the first 100 days of a pandemic, can build upon these successes.

COVID-19 also revealed challenges for policy, global supply chains and human decision making. There was no consensus on how governments should respond to the pandemic. Many experimented with short shutdowns, which helped to reduce the burden on hospitals while in effect, but once lifted, the virus took hold. China, on the other hand, conducted an experiment on how long a government can control citizens’ behaviors. Only fully transparent data from China will reveal whether its long-term lockdown prevented deaths when compared to other nations. Its “Zero-COVID” policy certainly squeezed global commerce, showing a present-day need to diversify supply chains to better prepare for emergencies.

Perhaps the biggest revelation of the past three years, although it should not have been a surprise, is the impact of individual human decisions on pandemic outcomes. We ignore the human element at humanity’s peril. People made choices that risked their own lives and the lives of others, including those they love, but this is not

simply because they did not care. The stress caused by the pandemic continues to ripple through societies. Violence against women during COVID-19 has been labeled the “[shadow pandemic](#).” [Drug- and alcohol-induced deaths in the United States increased by 30 percent and 27 percent](#), respectively, in 2020 compared to 2019. And people with children were placed in exhausting positions of supporting schoolwork while coping with new work realities, be it remote work, unemployment or “essential worker” status with no childcare available. Great uncertainty and undesirable options make misinformation highly influential. Bad actors filled those voids, and will continue to in the future. Responses to the next deadly virus must account for mental, as well as physical, health.

In our interconnected world, viruses know no bounds, like many other threats to global futures. We must make our approach to solutions limitless as well. Our experiences shape our values and our decisions. Events such as the COVID-19 pandemic and disruptions from climate change are predicted to become [more frequent and bring greater devastation](#). We must carry forward the lessons from the past three years to better anticipate such events, construct redundancies and design systems with enhanced resilience and response mechanisms. Our institutions and governments must make decisions now to invest in that level of preparedness as insurance against predictable and unforeseen disruptions.



Peter Schlosser  
Vice President and Vice Provost of Global Futures

## News



## Mapping project helps humanitarian efforts in the wake of the Türkiye, Syria earthquake

In the weeks following the recent earthquake, buildings were flattened and roads were in ruins. Without maps, it was impossible for charitable groups like Doctors Without Borders and the Red Cross to find people and provide them with food, shelter and medical supplies. From a conference room at ASU, students in the ASU YouthMappers chapter are using geospatial data to help organizations respond to emergencies.

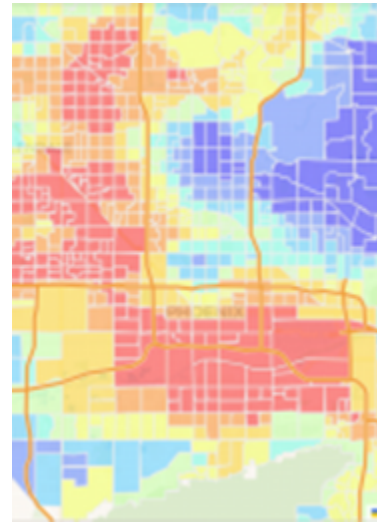
[Read more](#)

**New web tool maps regional heat vulnerability, health data**



To measure heat vulnerability and health data, a group of students and faculty from the Global Futures Laboratory created the Cool Region Webtool. In addition to mapping heat vulnerability data, it provides insights into potential solution strategies. One of the purposes of the online tool is to provide heat vulnerability information to urban planners and other decision-making community members.

[Learn more](#)



## New UN treaty aims to protect ocean biodiversity — what's next?

For the first time since negotiations began more than 15 years ago, more than 100 countries have agreed on a United Nations treaty to protect the world's oceans. The landmark deal aims to conserve marine life and biodiversity in the “high seas,” or international waters beyond individual national jurisdiction.

[Learn more](#)

## Deciphering the mysterious relationship between coral and algae

Coral and algae have a mutually beneficial relationship, but rising seawater temperatures have disrupted the pairing. [Liza Roger](#), assistant professor in the School of Molecular Sciences and an affiliate

faculty in the School of Ocean Futures, is leading research to better understand coral bleaching and the phenomenon's effect on the symbiotic relationship between coral and algae.

[Learn more](#)



## IPCC report warns global emissions reductions needed now

A new report details consequences of global warming and urges government and corporate leaders to mainstream technology that reduces CO2 emissions. "The way I like to think about it is this is the decisive decade to make changes to mitigate the effects of climate change and adapt to the effects that are already occurring," said [Dave White](#), director of ASU's Global Institute of Sustainability and Innovation.

[Learn more](#)

## How free-market reforms can help secure Arizona's water future

As Arizona officials continue to manage the ongoing water crisis, policymakers are considering multiple strategies to make a lasting impact. According to a

new report from [Bryan Leonard](#), assistant professor at the School of Sustainability, and Tate Watkins, research fellow at The Property and Environment Research Center (PERC), delivering better water conservation does not require a dramatic expansion of the role of government.

[Learn more](#)



## Here's why Arizona says it can keep growing despite historic megadrought

In a desert state with booming population growth, water's presence — or lack thereof — can shape the future for all Arizona residents. Does Arizona need to halt development before it can address the water shortage? The answer is complicated. [Sarah Porter](#), director of the Kyl Center for Water Policy, said urban growth has largely been decoupled from an increase in water demand.

[Learn more](#)



## How ASU is raising awareness of the water crisis for World Water Day — and beyond

World Water Day on March 22 serves as an opportunity for water experts and leaders to advocate for sustainable management of water resources and



the importance of freshwater. Arizona State University is no stranger to the importance of water solutions, being located in a landlocked state surrounded by desert where crucial conversations about Colorado River shortages and drought are especially prominent.

[Learn more](#)

## The UN finds the world has an 'uncertainty complex,' but one social scientist says not all is lost

A U.N. report notes the uncertainty of the present: from the pandemic to climate change to a rising cost of living, the present can feel as undefined as the future. [Craig Calhoun](#), professor and renowned social scientist, discusses what it's like to be human in times of uncertainty.



[Learn more](#)



## Implications of US agricultural data practices for sustainable food systems research

Using the tenets of data feminism, a research team analyzed the National Agricultural Statistics Service Quick Stats database. The team, including [Andrea Rissing](#), an assistant professor in Sustainability, identified unstated assumptions built into the database's scaffolding. They offer recommendations



for data providers and users to combat practices that entrench an inequitable and unsustainable food systems status quo.

[Learn more](#)

## ASU startup is 1st to become available for crowdfunded investment

GELF Energy, an ASU faculty startup venture, has redesigned the anaerobic digestion process with the development of a system called the Microbial Energy Device, which produces higher quality methane in one-tenth the time, at doubled efficiency, with nature-based carbon capture technology. Now, thanks to ASU InvestU, GELF Energy is the first ASU startup available for crowdfunding investment.



[Learn more](#)

## People



## Blending Native knowledge and science to protect the oceans

Cliff Kapono uses his Hawaiian roots, the ancestral gifts of surfing and the wisdom of Indigenous storytelling to help protect the oceans and teach others. A Native of Hilo, Hawai'i, he free dives without scuba equipment to collect coral samples he brings back to the lab for analysis. Kapono teaches in ASU's School of Social Transformation and School of Life Sciences while conducting research in the ASU Center for Global Discovery and Conservation Science.

[Read more](#)

## Kathleen Merrigan: the woman changing sustainable food systems

[Kathleen Merrigan](#), professor and director of the



Swette Center Sustainable Food Systems, is shaping agricultural policy. During her career, she has spent roughly an equal number of years in academia and government service. Her current work focuses on expanding sustainable food access, and she welcomes students to get involved.

[Learn more](#)

## Bridging the world through weather

ASU News spoke to [Randy Cervený](#), the keeper of the world's records of weather for the World Meteorological Organization (WMO) for nearly two decades and a President's Professor in the School of Geographical Sciences and Urban Planning, to talk about the history of the WMO, his involvement with the agency and how weather has changed in the last 150 years.



[Learn more](#)



## ASU professor named AAAS Fellow for nanoelectronics research

[Stephen Goodnick](#) has built his career around the study of nanoelectronics. In recognition of his nanoelectronics research career, which spans more than 40 years, the American Association for the Advancement of Science, named Goodnick one of 505

fellows of 2022.

[Learn more](#)

## Events



### Global (Dis)Order? The Future of Governance and Geopolitics

Join us for a panel discussion of the ways geopolitical change shapes global futures.

**Monday, April 10, 11 a.m.-12 p.m.**  
**Walton Center for Planetary Health Auditorium**

[Register](#)



### Earth Day: Celebrating Our Relationship with the Planet

Check our [Earth Week online hub](#) with programming and events hosted across ASU's campuses.

**April 20-21**  
**Various locations**

[Learn more](#)