

November 2022

ASU® Julie Ann Wrigley
Global Futures Laboratory™
Arizona State University

Global Futures: **Now**



“You must live life with the full knowledge that your actions will remain. We are creatures of consequence.”— Zadie Smith

We talk about climate change as an existential threat to humankind, and it is. Unchecked, it may place at risk life as we know it, and at minimum will lead to life-and-death tradeoffs in a resource-scarce world. But, global warming is an outcome—it is not a root cause of the dire situation we have created for our world. Rather, it is part of a long and worrisome cause-and-effect chain that begins with human activities, particularly in the Global North. Earth is a complex system, with highly interactive subsystems. The environmental hazards that counteract a thriving global future—climate change, loss of nature and biodiversity, soil

degradation, and so on—are all related and are the consequences of people’s decisions.

But this is also how we know change is possible. People and societies can make different choices, ones that slow emissions of carbon dioxide, methane and other greenhouse gasses. We knew heading into the COP27 global climate summit that change isn’t happening fast enough to prevent the transition from crisis to catastrophe. Countries are not meeting the nationally determined commitments. Roughly, we are on track for warming of 2.7°C—failing the 2015 Paris Agreement of “well below” 2°C and the Intergovernmental Panel on Climate Change target of 1.5°C by 2050 by a wide margin. When international negotiators met in Sharm el-Sheikh, Egypt for the COP27 global climate summit, they knew this context.

Organizers billed COP27 as the “[implementation COP](#)” when policies are clearly defined that will meet the 2015 Paris Agreement, an event that will move the world from pledges to actions. Definitive success is lacking on that front. Globally, the war in Ukraine is pushing for more, rather than less, use of fossil fuels, the primary contributor to our excess greenhouse gas dilemma. No agreement was reached to phase out fossil fuels. Leading up to the conference, there was also a great deal of focus on [loss and damage](#). Over the past weekend, negotiators reached an agreement, referred to as historic by some, to establish a [loss and damage fund](#) to support developing nations vulnerable to climate disasters. The fund is essential, but it is worrisome that how much money and who will manage the distribution of that money remain unclear.

Despite underwhelming success at the negotiation level, a sense of optimism resonated within the periphery of the event, where groups dedicated to equity, justice and youth voices dominated pavilions.

GFL was at COP27, participating in negotiations, U.N.-sponsored events, and hosting pavilion discussions regarding what humankind can and must do now on climate change and interrelated crises that threaten future societies. Despite some challenges, the annual conference is one of the most important platforms to discuss and negotiate climate. By participating, we have the opportunity to get international, expert input on our efforts, including the 10 New Insights in Climate Science led by the Earth League, Future Earth and the World Climate Research Programme, and the 10 Must Haves Initiative, which launched at the Global Futures Conference in conjunction with the Earth League. And, our presence gives us first-hand knowledge of the negotiations and the politics behind change—providing a picture of the policies and politics that will set the boundaries within which we can develop and deploy solutions.

Join us on Nov. 29 at 2 p.m. in the Rob and Melani Walton Center for Planetary Health auditorium to hear from those who attended COP27 and learn how this year’s negotiations advanced global society toward the 2050 targets. [RSVP online](#). Our decisions and actions have clear consequences—it is up to us whether those impacts are positive or not.

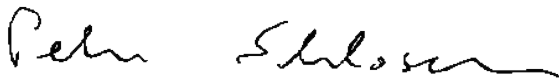
What is “normal” is dependent on many things: culture, geography, values, income, access to technology, and so on. Moreover, what is normal is dynamic. One hundred years ago, most families did not have access to an automobile. Less than 70 years ago, the FIFA World Cup was televised for the first time. Less than twenty years ago, it was unheard of to share your vacation photos with people around the world. And life changed completely with the advent of the mobile phone.

In broad terms, normalization is the process of an action, idea, tool or behavior becoming routine or everyday. While some cultures, including the U.S., promote the idea of individuality, people are highly likely to conform to the social forces and perceptions we experience and witness daily. Humans have an amazing capacity to adapt and to rewrite what is normal, often aided by new technologies, such as in the aforementioned examples. The speed at which change has happened during my lifetime is astounding.

Yet, it can be hard to calculate and sometimes even comprehend human capacity to normalize, with or without technology, or to anticipate the speed at which change happens. During the past 12 months, we've witnessed the extent to which humankind has normalized disruption, even to the point of mass death. We see that normalization of death with [COVID-19](#), and we see it with violence. Consider, roughly a week after the Robb Elementary massacre, 44% of Republican respondents to a [CBS News poll](#) answered that mass shootings are something people must accept in a free society. COVID-19, gun violence, war and even inflation—all of these disruptions place our focus on individual safety and well-being, rather than seeking ways to make substantive, systemic changes that will transform the future.

Humans have normalized disruption. We have normalized global warming. And we have even normalized low expectations from international negotiations. I wonder, what will it take for humankind to do things differently?

Our ability to normalize, whether related to tragedies or global change, is a key mechanism to human survival. It can also be a tool for promoting behaviors that will benefit planetary health. As we look ahead to the new year, the Julie Ann Wrigley Global Futures Laboratory is a place to normalize positive change. Our interdisciplinary research, which brings together scientific discovery with the human experience, can explore the consequences of injunctions and policies that will lead to behavior change and the internalization of the values that will enhance the common good. What is normal is dynamic, opening endless possibilities to do things differently. To do things better.



Peter Schlosser

Vice President and Vice Provost of Global Futures

News



ASU at COP27

At COP27 in Sharm el-Sheikh, Egypt, members of Arizona State University have joined leaders and policymakers from across the globe on the front lines of climate negotiations and solutions. ASU's increased presence this year demonstrates the university's commitment and contributions to the global climate crisis.

[Learn more](#)

More on COP27

10 New Insights in Climate Science

[The Earth League](#), co-led by the Global Futures Laboratory and Potsdam Institute for Climate Impact Research, joined with Future Earth and the World Climate Research Programme to share the latest version of the 10 New Insights in Climate Science report at COP27. [Read the report.](#)

10 Must Haves Initiative

[Peter Schlosser](#), vice president and vice provost of the Julie Ann Wrigley Global Futures Laboratory, debuted the preliminary 10 Must Haves Initiative, which aims to define ambitious yet actionable pathways to a thriving future for society, at COP27. [Read a Q&A about the effort.](#)

'The Letter: A Message for Our Earth'

ASU scientists [Greg Asner](#), director of the Center for Global Discovery and Conservation Science, and [Robin Martin](#), associate professor in the School of Geographical Sciences and Urban Planning, are featured in the documentary about the Laudato Si', an encyclical letter from Pope Francis in 2015 calling on the world to find solutions to environmental crises. The film was presented at COP27. [Learn more.](#)

Opinion: Combination of money, policy required

Consider: Humans have been warned for more than a century about the dangers of a warming climate and its adverse impact on human health and planetary systems. Schlosser and [Michael Dorsey](#), chair of the Rob and Melani Walton Sustainability Solutions Service, identify the laggards: money and societal will. [Read the essay.](#)

National Science Foundation awards nearly \$8 million to Central Arizona-Phoenix Long Term Ecological Research (CAP LTER)

ASU's [CAP LTER](#), started in 1997, will receive nearly \$8 million in funding over the next 6 years. LTER sites advance understanding of ecosystems and provide knowledge to scientists, policymakers and the public to enhance conservation. There are 28 active LTER sites around the country, but only two are located in



cities.

[Learn more](#)



ASU study shows full decarbonization of US aviation sector within grasp

New research published today in the journal *Nature Sustainability* shows a pathway toward full decarbonization of U.S. aviation fuel use by substituting conventional jet fuel with sustainably produced biofuels. The study, led by a team of Arizona State University researchers, found that planting the grass miscanthus on 23.2 million hectares of existing marginal agricultural lands — land that often lies fallow or is poor in soil quality — across the United States would provide enough biomass feedstock to meet the liquid fuel demands of the U.S. aviation sector fully from biofuels.

[Learn more](#)

Researchers evaluate Hawai'i droughts using newly-developed 100-year index

[Victoria Keener](#) and [Laura Brewington](#), principal investigators and directors of the Pacific RISA program, are among the authors of "A Century of Drought in Hawai'i: Geospatial Analysis and Synthesis across Hydrological, Ecological, and Socioeconomic



Scales," which explores drought duration and magnitude across the Hawai'i archipelago . The analysis, published in the journal Sustainability, will support future drought projections to better develop policies and management strategies to enhance resilience.

[Learn more](#)



ASU's Allen Coral Atlas launches improved tool to uncover reef threats, support conservation measures

In October, the Allen Coral Atlas, an online, open-source coral reef conservation monitoring map, launched a novel turbidity monitoring tool, which is part of a new toolkit called "Reef Threats." The Reef Threats system provides global, real-time, integrated data on bleaching, ocean temperature and turbidity. Turbidity is the "muck," mostly from neighboring land use, that can harm coastal coral habitats. The tool will bring new insight to changing reef conditions.

[Learn more](#)

White paper spotlights value of plural knowledge systems in climate response

[Melissa Nelson](#), professor in the School of Sustainability and senior global futures scientist, is a

contributing author to the white paper, "Intangible Cultural Heritage, Diverse Knowledge Systems and Climate Change," commissioned for the International Co-Sponsored Meeting on Culture, Heritage and Climate Change. The paper evaluates the complexity of knowledge systems, with an emphasis on Indigenous and local knowledge systems, and the applicability to climate change. It outlines why collaborations between plural knowledge systems will be fundamental to just and effective climate governance.



[Read the white paper](#)



Is drought in Arizona and the Southwest the new normal?

[Dave White](#), director of the Global Institute of Sustainability and Innovation and associate vice president for research advancement in Knowledge Enterprise, [Enrique Vivoni](#), professor in the School of Sustainable Engineering and the Built Environment and senior global futures scientist, and [Kathryn Sorensen](#), director of research at the Kyl Center for Water Policy and senior global futures scientist, discuss water futures and the impact of systems change on Arizona's natural and built environments for the KJZZ series "Every Last Drop."

[Read more](#)

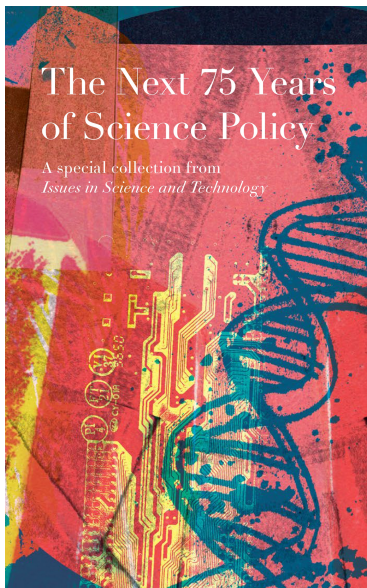
Comments welcomed on draft of

U.S. Fifth National Climate Assessment

Public review and comments are open for the Fifth National Climate Assessment, which evaluates findings of the program and analyzes the effects and trends of global climate change. Dave White, director of the Global Institute of Sustainability and Innovation and associate vice president for research advancement in Knowledge Enterprise, is the lead author on the Southwest Region chapter. Share feedback through Jan. 27, 2023.



[Learn more](#)



Writers envision the next 75 years of science policy

A new book outlines inspiring science and technology ideas that can transform society. “The Next 75 Years of Science Policy” presents a wide range of visions for how science might serve society in the coming years. Among the 50 featured essays is a piece by [Lindy Elkins-Tanton](#), vice president of the Arizona State University Interplanetary Initiative and distinguished global futures scientist, titled "Time to Say Goodbye to Our Heroes?" It makes the case for replacing the principal investigator research model with a more interdisciplinary approach. The book's forward is co-written by ASU President Michael Crow.

[Learn more](#)

ASU launches humanities-driven sustainability hub

Last month, the UNESCO BRIDGES Sustainability Science Coalition Flagship Hub held its inaugural event at the Rob and Melani Walton Center for Planetary Health. The coalition is a humanities-led sustainability science network that promotes collaborations across academic domains of humanities, arts, social sciences and natural sciences, as well as partnerships outside of academia. The Flagship Hub is based in the Julie Ann Wrigley Global Futures Laboratory.

[Read more](#)



People

Global Futures faculty member receives Fulbright Scholar Award to snapshot Australian fisheries

[Lekelia "Kiki" Jenkins](#), associate professor in the School for the Future of Innovation in Society and a senior global futures scientist, will combine photography, safety and sustainability in a new initiative looking at Australia's commercial fishing industry. The project, funded by the [Fulbright Scholar Award](#), will explore the effectiveness of photography in increasing fishers' safety and implementing sustainable fishing practices.



[Learn more](#)



ASU professor chosen to lead global urban climate research organization

[Ariane Middel](#), an Arizona State University assistant professor in the School of Arts, Media and Engineering and senior global futures scientist, among other appointments, was elected the seventh president of the International Association for Urban Climate (IAUC). IAUC's interdisciplinary network advances research across key areas of urban climate, including: urban heat islands, air quality, remote sensing of surface characteristics to heat mitigation, human-biometeorology, thermal comfort, and climate modeling and observations at various scales.

[Learn more](#)

In The Conversation

[Environmental justice has the White House's attention, building on 40 years of struggle – but California suggests new funding won't immediately solve deeply entrenched problems](#)

Tracy Perkins, assistant professor in the School of Social Transformation and senior global futures scholar



8 billion humans: How population growth and climate change are connected as the 'Anthropocene engine' transforms the planet

Manfred Laubichler, Global Futures Professor and President's Professor of Theoretical Biology and History of Biology; director of the School of Complex Adaptive Systems

Using the ocean to fight climate change raises serious environmental justice and technical questions

Sonja Klinsky, associate professor in the School of Sustainability and senior global futures scientist

Upcoming events



Global Futures: Roundtable

How did COP27 advance the 2050 climate targets? Join a special discussion with Peter Schlosser, Daniel Bodansky, Michael Dorsey and Ann Nielson, who were on the ground at COP27 and directly involved in the proceedings. They will be joined by School of Sustainability student and sustainability education



College of Global Futures Convocation

Celebrate the accomplishments of graduates in the Schools of Sustainability, Future of Innovation in Society and Complex Adaptive Systems. Doors open at 1 p.m.