

June/July 2024

ASU Julie Ann Wrigley
Global Futures Laboratory™
Arizona State University

Global Futures: **Now**



June 7, World Ocean Day, provided the world a time to reflect on the importance of the services our oceans provide to life on Earth. The oceans play critical roles in Earth's climate, carbon budget and food supply. For example, they store roughly one-third of human-generated carbon dioxide

emissions and about 90 percent of the excess heat generated by the increasing concentrations of greenhouse gasses in the atmosphere. Without the ocean as a thermostat, the temperature rise on land due to global warming would be significantly higher.

The oceans are also heavily used for the transportation of goods on local to global scales, energy production and recreation, among other services. Their coverage of about 70 percent of Earth's surface reminds us that we are living on the "water planet."

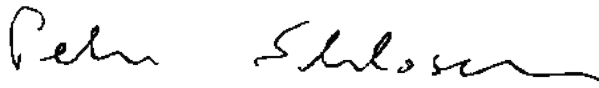
On the weekend of World Ocean Day, the ASU Bermuda Institute of Ocean Sciences celebrated the past 120 years of research that has been conducted at its campus. The festivities were grouped around a symposium that highlighted the emerging trends in ocean science.

The open house at the BIOS campus on the day following the symposium saw a large crowd of Bermudians familiarizing themselves with the wide array of research and teaching activities. They also had the opportunity to tour BIOS's research vessel, the Atlantic Explore which lay at the pier of the campus. Overall the celebration was well attended and received and demonstrated the important work BIOS is carrying out in the pursuit of a better understanding of the present and future states of the oceans.

The celebration of the 120th anniversary of BIOS highlighted the mission of the Julie Ann Wrigley Global Futures Laboratory: to keep Earth's complex systems in balance so that all life on Earth may thrive on a healthy planet. We cannot achieve this alone. Our partnerships in Bermuda are invaluable examples of how we navigate, understand and develop solutions for a rapidly changing world.

Exploring possible futures for our world requires a holistic approach. This is why the inclusion of ocean sciences is such an integral part of the Global Futures Laboratory and the basis for the School of Ocean Futures, the newest school in the College of Global Futures. We must develop and implement solutions such as those being worked on in Bermuda and here in Arizona to keep our oceans and the Earth system as a whole healthy so that

they can serve the coming generations in the same way they have supported us in the past.



Peter Schlosser

Vice President and Vice Provost of Global Futures



Global Futures Laboratory joins DOE initiative to empower women in clean energy

A Department of Energy-led initiative since 2011, Clean Energy Education and Empowerment, or C3E, works to highlight, recognize and empower women in clean energy. The DOE recently announced that the Global Futures Laboratory now joins the initiative as a partnering university. Global Futures now joins the Massachusetts Institute of Technology Energy Initiative and the Stanford Precourt Institute for Energy in the C3E initiative.

[Read more](#)

ASU retains No. 1 in US, top 10 globally in UN Sustainable Development Goals ranking



With significant developments in ocean health, biodiversity, water security, food systems and sustainable economic development in the last year alone, ASU has further established itself as a global leader in how a university can address the United Nations' Sustainable Development Goals (SDGs). Through its Impact Rankings, Times Higher Education once again has recognized ASU for its commitment to assuming fundamental responsibility for the communities it serves. For the fifth consecutive year, ASU retains its No. 1 spot in the United States and top-10 ranking globally for its work through education, research and practice in alignment with the SDGs. ASU also ranks No. 1 in the U.S. for 11 out of the 17 SDGs.

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ASU BIOS celebrates 120 years of marine research

The ASU Bermuda Institute of Ocean Sciences (ASU BIOS), one of the world's longest-running research and educational institutions, held a symposium and community reception in Bermuda using World Ocean Day to celebrate its more than 120 years of marine research. The event showcased innovations and discoveries in marine science that aim to improve planetary health, economic growth and the lives of people around the world. ASU BIOS also announced a new scholarship program that will award five full-

tuition undergraduate scholarships annually for Bermudian students interested in studying in person in Arizona under any available ASU program.

[Read more](#)



Research: Ultra-fast green hydrogen production from municipal wastewater by an integrated forward osmosis-alkaline water electrolysis system

Distinguished Global Futures Scientist [Paul Westerhoff](#) was an author of a study recently published in Nature Communications. From the abstract: Recent advancements in membrane-assisted seawater electrolysis powered by renewable energy offer a sustainable path to green hydrogen production. However, its large-scale implementation faces challenges.

[Read more](#)

Transforming Systems: Global Futures experts reveal how food production contributes to



climate change

The U.S. food system accounts for around 30% of greenhouse gas emissions. Creating new and sustainable food systems that can support the world's growing population is going to mean rethinking the fundamentals of farming.

Researchers at ASU and within the Global Futures Laboratory are working with farmers, government agencies, schools and other partners to transform food systems to promote environmental and individual health, including stamping out hunger. This is the third story in a series exploring how ASU tackles complex problems to help transform entire systems for the better.

[Read more](#)



Photo by India Schneider-Crease

ASU teams up with local entities to reduce plastic pollution that affects rare gelada monkeys

This summer, Senior Global Futures Scientist [India Schneider-Crease](#), Rob and Melani Walton Sustainability Solutions Project Manager [Tyler Eglén](#) and the ASU chapter of Engineers Without Borders went to Ethiopia for a two-week journey to tackle the plastic problem, which threatens the lives of not only monkeys but other rare species, including Ethiopian wolves and walia ibex (wild goats).

[Read more](#)



New research studies vegetation emissions to develop programs aimed at curbing Phoenix ozone pollution

New field research this summer, led by Senior Global Futures Scientists [Pierre Herckes](#) and [Matthew Fraser](#), is studying natural emission levels in Phoenix to better understand and address the city's ozone pollution problem. By measuring naturally occurring emissions and the weather conditions that may be influencing them, ASU researchers aim to improve air quality models and develop more effective strategies for reducing ozone levels. The project is currently being conducted in collaboration with Maricopa County and the ASU Central Arizona Phoenix Long-Term Ecological Research Center.

[Read more](#)

Why do astronomers look for signs of life on other planets based on what life is like on Earth?

[Cole Mathis](#), an assistant professor in the School



of Complex Adaptive Systems, writes about the nuances of identifying alien life in *The Conversation*. “Looking for life on exoplanets (a planet orbiting a star that is not our Sun) is kind of like trying to play hide-and-seek in your neighbor’s house, but you only get to look through the windows and can’t go inside,” he writes. “You might get lucky and get just the right angle to spot someone hiding, but you can’t know all the spots you’re not able to see.”

[Read more](#)



New CommodityMap tool predicts environmental, social priorities in agricultural supply chains

While more and more businesses are beginning to recognize the benefits of sustainable practices, putting them into action can be confusing and time consuming. The Sustainability Consortium, a global organization headquartered at the Global Futures Laboratory focused on increasing sustainability in the consumer goods industry, hopes to change that with a cloud-based tool designed to predict environmental and social priorities in agricultural supply chains.

[Read more](#)



Ocean scientists push for solutions beyond National Ocean Month

As National Ocean Month closes, School of Ocean Futures assistant professors [Jesse Senko](#) and [Amy Maas](#) reflect on their goals, barriers and solutions to ocean health, and the oceans' impact on waterfront communities and desert metro areas alike.

[Read more](#)



ABC15: Are there water-related benefits to thinning the forest?

ASU Center for Hydrologic Innovations and Salt River Project have joined forces for a new research project on forest thinning and the water supply. ABC15 featured the project, and its long-term benefits to the Arizona community, in a segment on June 5. Watch the video here.

[Watch](#)

Ask an expert: How to hike safely in the heat

[Floris Wardenaar](#), an assistant professor of



nutrition and a Senior Global Futures Scientist, was featured in a CNN story on how to safely hike this summer season. Wardenaar, who studies the physiological aspect of hiking, said that weighing yourself can be a tool to measure if you are drinking enough water. “Body mass loss is a good proxy marker of sweat loss,” Wardenaar said. “You shouldn’t lose more than 2% of your body weight on a hike.” If you’re losing more weight than that, he said, you should be drinking more fluids.

[Read more](#)



ABC News: Is air conditioning enough? Why extreme heat can still put you at risk

Senior Global Futures Scientist [Ariane Middel](#) told ABC News that one of her biggest concerns for this summer and beyond is that lawmakers and citizens alike are not taking the threat seriously enough. “Heat is a silent killer,” she says in the article. “It’s the deadliest weather-related killer in the U.S., but it doesn’t leave a visible trace of destruction like a hurricane or tornado. All heat-related deaths are preventable in theory, but it becomes more difficult in practice.”

[Read more](#)



The Sustainability Consortium launches annual report

The Sustainability Consortium envisions a world where all consumers can experience the benefits of products without causing harm to people nor going beyond the limits of our planet. "It's evident that through our concerted efforts, this network has been instrumental in shaping industry practices and driving meaningful, measurable progress," says CEO [Christy Slay](#) in the opening letter of the report.

[Read more](#)



Latest impact report from Leonardo published

Leonardo's "State of the Leosphere" publication showcases the international society for arts, scientists and technology's work across the past two years. Read the full report below.

[Read more](#)

Senior Global Futures Scholar Bea Rodriguez-Fransen featured on Ted Talk



[Bea Rodriguez-Fransen](#), a Senior Global Futures Scholar and the director of ASU Next Lab, was chosen as 1 of 10 educators across the nation to become a TED Speaker in February 2024. A decolonial futurist, Rodriguez-Fransen shares three practical strategies to undo colonial mindsets and design a more collective future.

Watch



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](#)

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Arizona State University



**#1 in the U.S.
for global impact**

-Times Higher Education, 2021

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