

A new university prototype for a thriving world

ASU's Julie Ann Wrigley Global Futures Laboratory tackles some of the most important, complex problems of our time

By Lisa Robbins, ASU News
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The challenges for our world's health and the future of humanity and other life-forms command urgency — and the university is accelerating its wide-reaching collaborative work to help keep the planet and its infinite network of complex systems not only habitable but healthy.

In 2019, ASU established the [Julie Ann Wrigley Global Futures Laboratory](#) as a first-of-its-kind initiative designed to find actionable solutions to the most challenging issues facing global society and our planet.

The laboratory is ASU's response to the growing awareness that conventional approaches to sustainability, responsible innovation, conservation and planetary wellness are not adequate. Instead, designing a thriving future requires a holistic approach defined by uncompromising transdisciplinary research and open collaboration among universities, businesses, policymakers and the wider public.

In many ways, the laboratory can be conceived as a university within a university, says ASU President Michael M. Crow. Its mission consists of diagnosing social and environmental maladies, developing new ways of acquiring data from all components of the Earth's systems, understanding problems to ensure they are properly prioritized, and ultimately prescribing both treatment and ongoing proactive regimens that minimize harm while maximizing planetary and societal wellness.

"The Global Futures Laboratory is an entity that focuses on how the world might look in the future and imagines pathways that will keep it a place worth living in," says [Peter Schlosser](#), the laboratory's vice president and vice provost. "That means a world that is habitable and leaves options for the next generation to shape their lives according to their desires."

The laboratory also adds numerous dedicated resources to solving Earth's greatest challenges, attracts new partner organizations, acts as a single voice with policymakers and functions as a robust center of knowledge and learning about Earth's health.

Hundreds of the best and brightest minds

Students work side by side with 754 Global Futures scientists and scholars, a pan-university network of faculty and researchers from programs that include the Global Institute of Sustainability and Innovation, the Water Institute, Energy Forward, the Southwest Sustainability Innovation Engine, the Humanities Lab, the Center for Negative Carbon Emissions, the Swette Center for Sustainable Food Systems and more than 70 other centers, initiatives and programs. Together, they explore a staggering range of issues such as water scarcity, biosystems, food security, health systems, Indigenous knowledge, future cities and more.

The heart of the Global Futures Laboratory is the [Walton Center for Planetary Health](#) on the Tempe campus, a \$200 million facility hosting more than 500 faculty and 1,200 students. The Walton Center is the largest research building on ASU's campuses with 70,000 square feet dedicated for both wet and dry labs outfitted for disciplines that include sustainability, engineering, biology and robotics. While the building serves as the laboratory's headquarters, ASU's Global Futures work extends far beyond those walls and engages partners across ASU's campuses, out in the field and around the world.

"When people walk into that building, I want them to see that they're moving into a space dedicated to the Anthropocene, this new era shaped by human activities," Schlosser says. "I want them to recognize the urgency of the moment and see hope in the people at work across collaborative spaces. This building is a physical center for those who work on how to get us back onto a trajectory of global wellness."

Transdisciplinary solutions

[Sally Kitch](#), founding director of the Humanities Lab, was one of the earliest adopters of a holistic approach to integrated humanities, social science and bench science and finding ways to help solve complex challenges through a multidisciplinary approach.

Collaboration among natural scientists, social scientists and humanists is part of what makes the laboratory unique. And for many of the researchers, it's also the reason they think ASU will succeed in creating solutions to humanity's and Earth's problems where others have failed.

"Getting to the root of these problems is not just about finding technological fixes, it's about changing human beings' relationship to the planet and to one another," Kitch says. "All these problems — social justice, environmental and health problems — are all very interconnected. You need the humanities in there so we can act quickly and with wisdom."

Data and knowledge for improving outcomes

A major part of the concept of the [Global Futures Laboratory](#) is hundreds of dedicated scholars and scientists across multiple disciplines gathering knowledge and data about how the planet functions across various systems. This is essential for creating wellness solutions and interventions that create positive outcomes.

One of the laboratory's early innovations was the [Allen Coral Atlas](#), a first-of-its-kind web-based coral reef resource tool that allows scientists and policymakers access to essential data. Delivered by an international team of researchers including [Greg Asner](#), the director of the [Center for Global Discovery and Conservation Science](#) at ASU, in partnership with Vulcan Inc., Planet Labs and The University of Queensland, it leverages satellite data and field research to track coral reef health around the world. Prior to the Allen Coral Atlas, data had never been available at this scale.

In the Atlantic Ocean, the [ASU Bermuda Institute of Ocean Sciences](#), a premier research institute studying ocean processes, is building on more than a century of work. ASU BIOS is ideally situated to study the highly interlinked, complex problems related to the future of the planet and will put students on the cutting edge of ocean science.

"When you couple the science-based efforts at ASU BIOS to our efforts led by Greg Asner in the Pacific, a clearer picture of the overall ocean dynamics and health come into full view," Crow says. "We expect that this new partnership will be a huge benefit to all Earth scientists seeking a clearer and more concise view of the 'state of the planet.'"

With these types of knowledge and data, researchers also can help prioritize actions. One of the many examples of the work of [ASU Knowledge Exchange for Resilience](#) is led by Director [Patricia Solís](#). The team focuses on how to reduce heat-related illnesses and deaths, starting in Arizona with solutions that can translate elsewhere. In early 2025, the team learned that for the first time, heat deaths went down in the Phoenix metro area, and the center was credited with helping with this outcome, including the passage of Arizona state legislation protecting mobilehome owners.

Honoring Native knowledge and youths' wisdom

Researchers affiliated with Global Futures also are having an impact around the world through the inclusion of Indigenous knowledge systems. The university has hired Indigenous scientists, and directly listens to and works with Indigenous groups and other stakeholders.

An example of this are projects such as a podcast hosted by [School of Sustainability](#) Professor [Melissa Nelson](#) and [Biomimicry Center](#) Director [Sara El-Sayed](#), where they celebrate and explore the diversity and beauty of Native seeds, soils and Indigenous foods. The commitment to learning from Indigenous people is also central to the ['Ōko'ako'a Reef Restoration Program](#). It is fusing cultural leadership, multimodal education, advanced science and government service to communities of corals and people on Hawai'i Island.

Another key focus is creating opportunities for students to make an impact. The laboratory's approach supports students in pursuing research that has real-world outcomes now and far into the future — their own and their future grandchildren's and beyond.

"If you put a team of students together and give them the freedom and support to design something that is a step toward changing policy, that's a whole different learning experience," Kitch says.

Plotting a course to a thriving future

The Global Futures Laboratory embraces students from across the university and partners and stakeholders from around the world. [Miki Kittilson](#), dean of the [College of Global Futures](#), says the curriculum focuses on cultivating skills students need to work on challenges that require a holistic understanding of complex systems.

"Learners have the opportunity to be on the front lines of addressing the greatest challenges of our time," Kittilson says. "To address the grand challenges, ASU programs provide new approaches to learning, drawing on a variety of different fields to see systems. We empower and equip students to be agents for change — for building vibrant futures for people and the planet."

Many of ASU's efforts on providing the next generation with knowledge and skills to solve complex problems around conservation are led by the College of Global Futures, which now encompasses five schools, including the nation's first School of Sustainability, joined by the School for the Future of Innovation in Society, School of Complex Adaptive Systems, School of Ocean Futures and now the School of Conservation Futures.

There are still many unknowns, but this comes with the territory of creating an entirely new model for how universities engage with the era's most pressing problems. What is certain, however, is that this ambitious institution would never have been possible without the university's commitment to fostering academic work with real-world impacts and its decades-long support of sustainability and transdisciplinary research.

"The increasing number of global climate and societal events we are witnessing proves that urgency is one of the major messages that we have to convey to ourselves, to our partners and to the world," Schlosser says. "But the next 10 years also present an opportunity unlike we have ever seen before. We are leading the way by pursuing what we think is necessary, but the world needs to decide to act. The world needs more global futures laboratories. We cannot do it alone. Together, we create hope."

Join us

We partner with leading institutions around the world to achieve a critical mass of intellectual resources to address these challenges. Learn more at globalfutures.asu.edu.

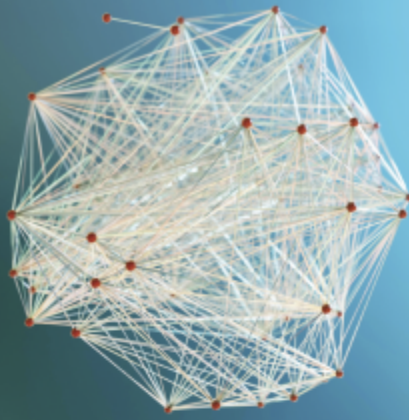
This story originally appeared on [ASU News](#).

Main image



Photo courtesy ASU Knowledge Enterprise

Text image(s)



A global force

In the Global Futures Laboratory

ASU named the most impactful U.S. university in addressing the U.N.'s 17 sustainable development goals

754

dedicated scientists and scholars



university in the U.S. for sustainable practices

1,200+

students working toward undergraduate and graduate degrees at the College of Global Futures

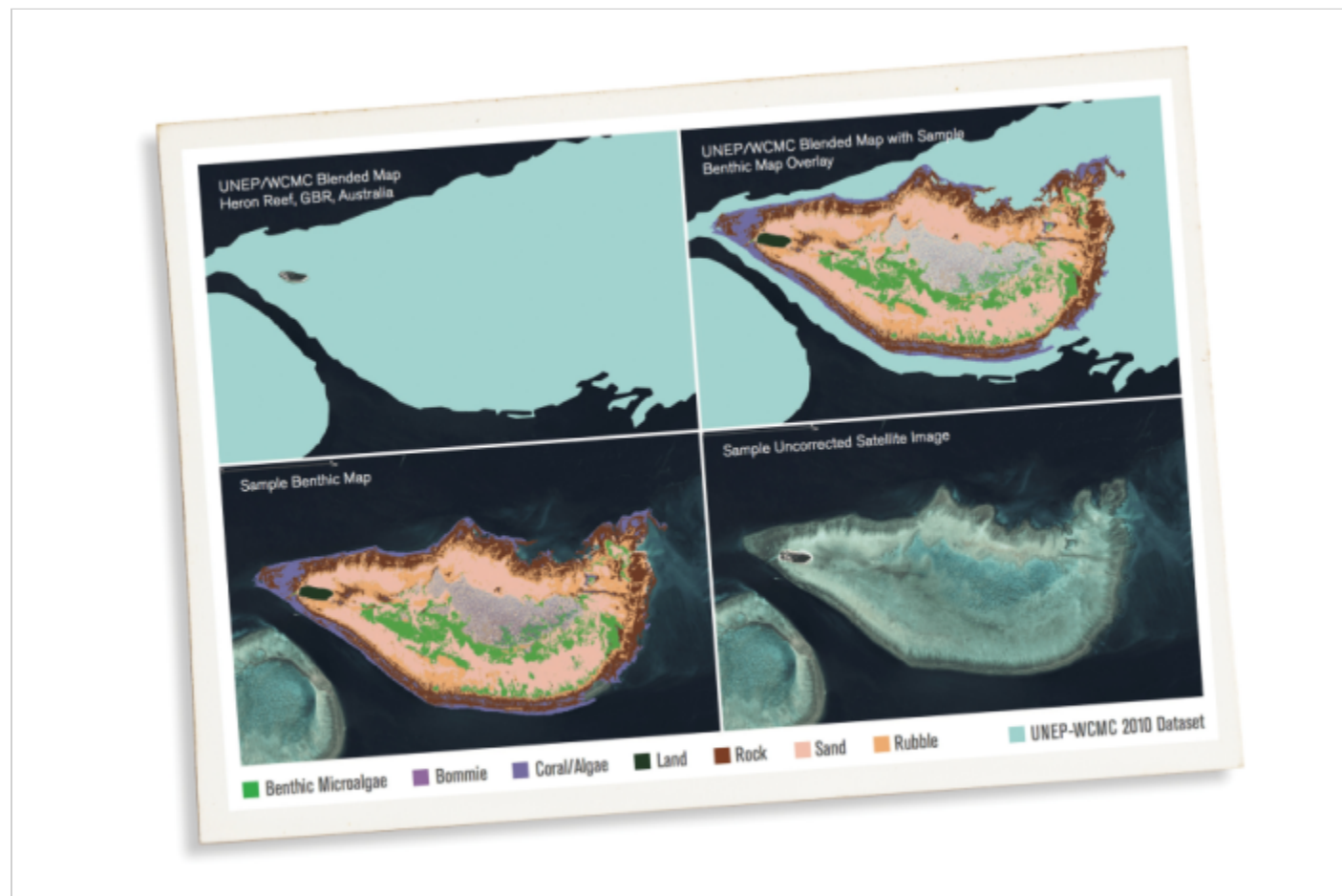
4,000

students across ASU taking Global Futures courses

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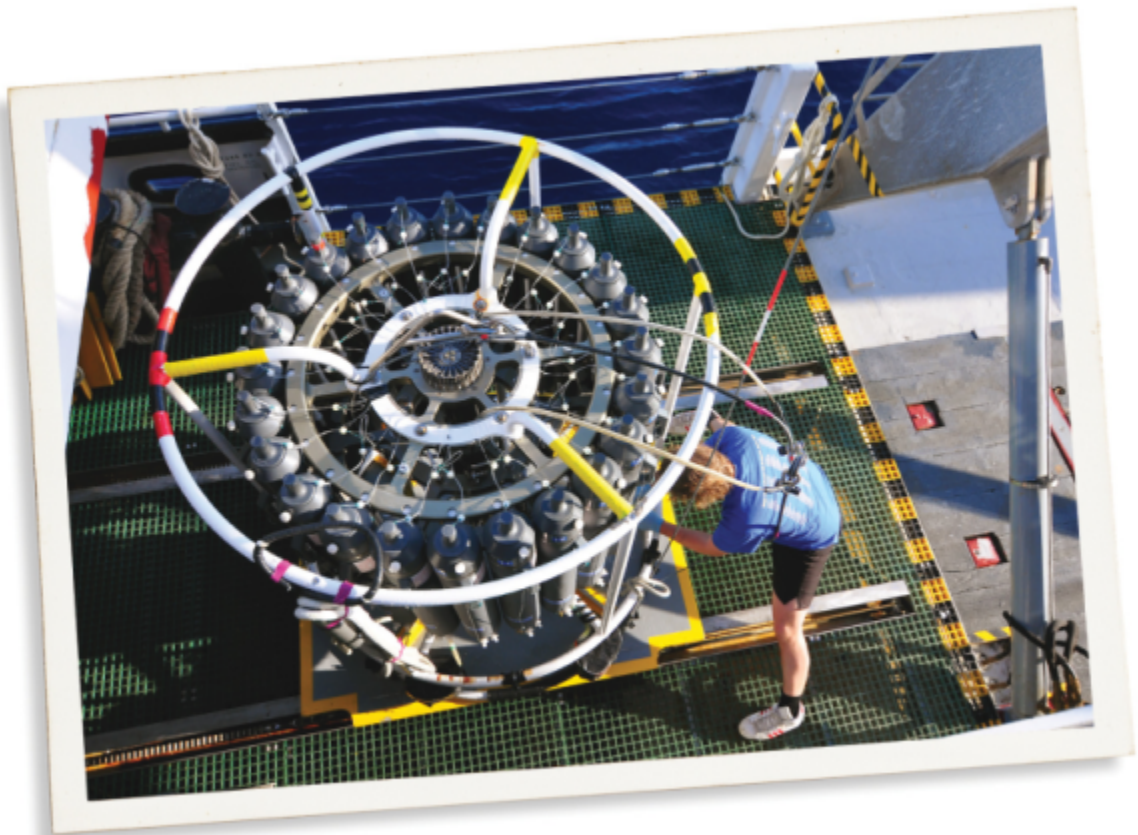
Gallery



The Allen Coral Atlas shows detailed coral reef health in a way never before available at scale.



Leah Gerber (right), professor and director for the Center for Biodiversity Outcomes, conducting research on humpback whales with graduate students and collaborators in Hawai'i.



The Bermuda Atlantic Time-series Study has collected data on the physical, biological and chemical properties of the ocean every month since 1988.