

What's Next for Science?... All of Us.

A Report from Janice R. Lachance, Interim Executive Director/CEO



Like superheroes in a multiverse come to life, Earth and space scientists operate on simultaneous fronts - studying the past, engaging our present, and shaping the future.

When more than 30,000 attendees gathered this past December in Washington, D.C., for AGU's annual meeting - AGU24 - we met under the theme of What's Next for Science.

There are multiple ways to unpack that sentence. It can be a bold statement, an optimistic question, an anxiousness of things to come, a hope for the future.

So, which is it?

Of course, it's all the above.

Throughout 2024, with powerful purpose and in meaningful partnership AGU created what's next for science - sharing science through our 24 high-impact journals and award-winning *Eos* magazine; deepening science with global partnerships and convenings; highlighting science by educating and engaging policymakers; widening science with open science and data leadership initiatives; and enhancing science through critical outreach, mentoring, and opportunity programs.

And what drives this and makes it all possible? It's you and all our members around the world that power the possible. And AGU stands ready in 2025 and beyond to be your trusted partner in the shaping of what's next.

So how, with your support, did we shape the "next" at AGU this past year?

Let's take a look at our Publications. We began the year with the launch of AGU Publications' newest title: *The Journal of Geophysical Research: Machine Learning and Computation*, an open access journal dedicated to the publication of research that develops and explores innovative data-driven and computational methodologies based on statistical analysis, machine learning, artificial intelligence, and mathematical models, with the aim of advancing knowledge in the domain of Earth and space



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sciences. *Machine Learning* has already passed its first-year goal with 81 articles submitted.

2024 also saw the first full year of open access for our flagship *Water Resources Research* (WRR) journal. In fact, over 78% of AGU Publications' content is now open access, and overall output grew by over 10% this year.

AGU also continues its leadership and advocacy for open data and open access. We partnered to further develop the CARE (Collective benefit, Authority to control, Responsibility, and Ethics) Principles for Indigenous Data Governance. These principles help drive a people and purpose-oriented role for data in advancing Indigenous innovation and research.

Meetings are AGU's not-so-secret sauce. AGU always has been a worldwide leader in convening scientists. But meetings are so much more than tables and talks. As I mentioned earlier, we broke our annual meeting attendance record with more than 30,000 Earth and space scientists from around the globe gathering at AGU24. The annual meeting was buzzing on all fronts: 121 countries were represented with 22 of those being new to attending AGU, and 6,465 presentations were accepted into Outstanding Student Presentation Awards, a 137% increase over 2023.

Clearly, AGU meetings provide an essential setting for sharing research, probing issues, and exploring new frontiers. But way before AGU24 in December, we were covering a lot of ground, convening in a variety of places across a wide spectrum of disciplines.

AGU, in partnership with The Association for the Sciences of Limnology and Oceanography (ASLO) and The Oceanography Society (TOS), oversaw a successful Ocean Sciences Meeting in February in New Orleans.

In April, and in the path of totality for the solar eclipse, we gathered in Dallas, Texas, for the Triennial Earth-Sun Summit (TESS). TESS welcomed the participation of the entire Heliophysics community while valuably connecting to astrophysics and planetary physics.

Things stayed out-of-this-world later with the Astrobiology Science Conference (AbSciCon) in Providence, Rhode Island, in May. AbSciCon brings the astrobiology community together with a diverse community of scientists, students, journalists, policymakers, educators, and organizations every two years to share research and collaborate for the future.

And finally, we made a real splash in St. Paul, Minnesota, in June as WaterSciCon convened hydrologists from around the world to share the latest in water sciences' research, discoveries, and solutions.

These dynamic convenings deepen connections and understandings, and they fuel the drive for members to make significant impacts in the policy arena.

AGU is committed to amplifying science not just in the lab, field, classroom, or boardroom but in the corridors of power where policy is introduced, debated, and shaped. This past year, AGU's Science Policy and Government Relations team continued their bipartisan work highlighting and advocating for climate action and research funding. Once again, our team engaged with elected representatives and worked with trained AGU members on how



Congressional Science Visits

to do the same through our highly successful Voices for Science program.

Taking that spirit of action and impact from the halls of lawmakers and transforming it into hands-on grassroots results is where AGU's Community Science programming comes in. Our internationally recognized Thriving Earth Exchange program supports community science by helping communities find resources, project managers, and experts to address their pressing concerns. Together they work to help communities be more empowered, resilient, and responsive.

From the hyperlocal to the super macro, AGU had another banner year of growth with our Global Engagement activities.

AGU's global leadership had a busy and impactful year from our geoscience partnerships at annual meetings including EGU, JpGU, and AOGS, to UN convenings with COP16 in Cali, Colombia, and COP29 in Baku, Azerbaijan, to two trips to China meeting with students and leaders and growing our bonds among universities and research centers in Shanghai, Beijing, and Shenzhen.

On the global front, AGU entered an important new phase with its multiyear project building an *Ethical Framework Principles for Climate Intervention Research*. As we always do, this work was borne out of partnership and collaboration with a global advisory board of researchers, ethicists, policy experts, business, and Indigenous leaders.

The framework was formally launched in October with a full global media blitz. Our coverage reached over 250 million consumers with news outlets across the Americas, Europe, Africa, and Asia following the story and highlighting the urgency.

As detailed in the report, AGU and our global advisory board recognize the growing interest in geoengineering as a strategy for tackling global warming, but we must ensure that research is done in ways that are transparent, representative, and just, carefully considering risks and benefits.

The framework especially recognizes that global communities have unique challenges and vulnerabilities. When we contemplate how to address the existential threat of climate change, it is imperative that we do so by centering ethics. We are proud to have laid the foundation for effective collaboration and partnership, and we are excited to continue our campaign and socialization of the report and principles.

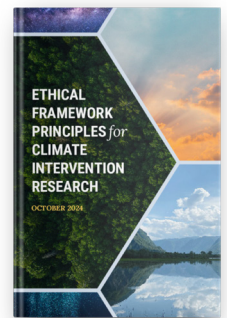
As we look toward a new and challenging year ahead, AGU stands with you. Science connects us in fundamental ways, and we are committed to building and strengthening those bonds.

Thank you for your leadership, dedication, diligence, and partnership.



Janice R. Lachance, JD, FASAE

AGU President, Lisa Graumlich at COP29 in Baku, Azerbaijan



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