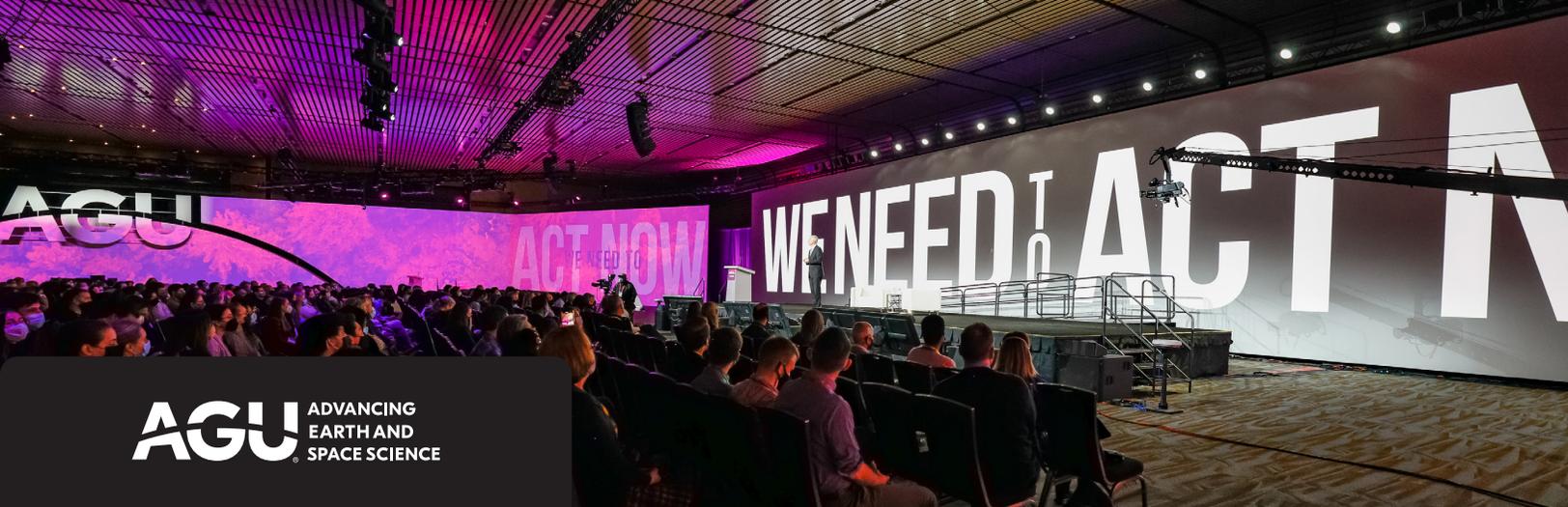




AGU'S ETHICS, DIVERSITY, EQUITY
AND INCLUSION

2021 ANNUAL REPORT



Contents

1	Executive Summary
2	2021 DEI Dashboard
3	Updating AGU publications to help authors and expand open access
5	Expanding access at AGU Fall Meeting 2021
6	Welcoming the first cohort of AGU LANDInG Academy and PRFP Fellows
7	Partnering with societies to launch the Community Science Exchange
8	Addressing the deficiency of research in the Congo Basin
9	DEI in AGU Honors
10	Updating AGU investment strategy to align with strategic goals
11	Introducing an Indigenous Action Committee
12	Building career pathways in the geosciences
13	Advocating for DEI in the U.S. Congress
13	AGU awarded for DEI efforts
14	Amplifying DEI in the news
15	Summary of DEI ethics complaints
16	Looking Ahead

Executive Summary

At AGU, we know that a diverse and inclusive scientific culture is critical to address the scientific and societal challenges that face our planet and humanity. We highlight and reflect that understanding in our AGU values and in the goals underpinning the AGU Strategic Plan. Equitability and inclusivity are moral imperatives *and* necessary for a thriving Earth and space sciences community.

During the past year AGU has taken steps toward systemic change in the ESS community. Our intention to model and exemplify an equitable and inclusive science culture has been integrated across all AGU programs. We highlight in this report several 2021 initiatives, including providing new career opportunities for scientists historically excluded from ESS and tailoring DEI educational programming to DEI champions at different career levels.

Through diligent work internally and with external partners, AGU is setting new standards in the Earth and space sciences and across STEM. These efforts include welcoming the first cohort of the AGU LANDInG Academy, expanding the Mentorship365 program, and many more.



While you are reading about our programs, progress, and the remaining challenges ahead, I encourage you to consider getting involved in some way, big or small. To live up to the goals laid out in our strategic plan, we need support from everyone in the AGU community.

A handwritten signature in black ink that reads "Randy W. Fiser". The signature is fluid and cursive, with a large, stylized 'R' and 'F'.

Best,
Randy W. Fiser,
Executive Director and CEO

2021 DEI Dashboard

AGU's DEI Dashboard establishes a

baseline to measure our efforts to increase diversity, equity and inclusion (DEI) within the AGU community. By taking a critical look at where we stand now—across AGU membership, staff and programs—we can develop strategic goals to help create a scientific community where everyone can thrive.

Data collected in 2021 revealed that AGU needs to offer better support and engagement to women, underrepresented racial and ethnic minorities, members of the LGBTQ+ community, people with disabilities, and those who live and work outside the U.S.

The dashboard looks across gender, age, race and ethnicity, and geographic regions. Membership information is self-reported. We highlight in this report information on data limitations, collection methodology and future collection plans.

Detailed 2021 AGU DEI baseline demographic data are [published here](#), including takeaways regarding where future emphasis and progress are most needed. Metrics regarding [AGU's eight deliberate steps to address systemic racism](#) were still being established in 2021 and will be included in future reports.

AGU MEMBERSHIP

Among individuals who submitted data on gender, 33% identified as women, 66.7% identified as men and 0.3% identified as nonbinary.

Just over half (55%) of AGU membership is between the ages of 30 and 59; 23% are under 30 years old.

AGU membership is from 147 countries with the majority living in the U.S., Asia and Europe.

While AGU's membership remains global, the portion of U.S.-based members increased from 60.7% in 2020 to 63.8% in 2021.

Overall membership shrank, a decrease that was more acute in regions outside the U.S.

6% of AGU's members are based in Africa and Central and South America.

In the U.S., 54% of AGU members are white, 6% are Asian American, 4% Hispanic/Latino and about 1% Black.

Among individuals who identified a gender, women increased from 31.5% in 2020 to 33% in 2021 while men decreased from 68.4% to 66.7%.

Median age of members went from 42 to 40. This was driven by an increase in members under 30, with their proportion going from 20.5% in 2020 to 22.8% in 2021.

The majority of AGU membership were white, declining only slightly to 70% in 2021 from 71% in 2020. The percentages for other races and ethnicities increased slightly: 8% to 8.2% for Asian or Asian American; 1.6% to 1.8% for Black; 5.4% to 5.7% for Hispanic/Latino.

Updating AGU publications to help authors and expand open access

A critical part of AGU's mission is making science available to the widest possible audience and exemplifying an inclusive scientific culture. For AGU publications, our strategic plan guides us in balancing the long-term sustainability of the journals with equity of access and inclusion for all in our community.

In 2021, AGU announced that members now have access to the full text of all AGU subscription journals, amounting to thousands of cutting-edge papers each year spanning the Earth and space sciences. This is a significant value for AGU members, and another step in our commitment to expand access to content, with the support of our publishing partner, Wiley.

Along with this new benefit for members, AGU made several other efforts to expand access and promote inclusivity, including:

- **Name change policy**

AGU [updated the name corrections policy](#) to support anyone who wishes to [change their name](#) on a previously published AGU publication, for any reason. This includes but is not limited to marriage or divorce, religious conversion and alignment of gender identity.

- **Special issue on DEI**

AGU *Advances* introduced a [special issue](#) to feature editorials and commentaries on the nature and impact of racism, and more broadly on DEI in the Earth and space sciences.

- **Impacts of COVID-19 on research**

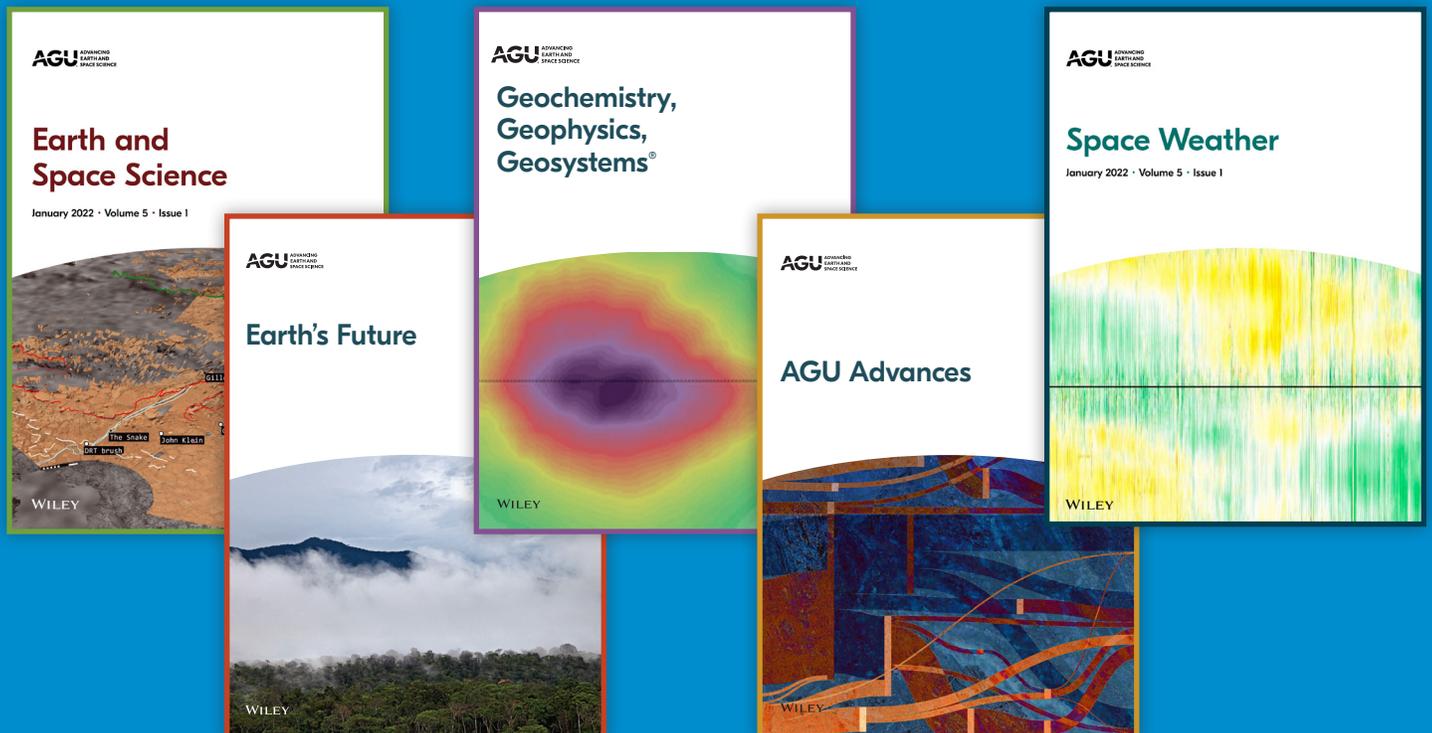
Earth and Space Science published a research article on the impact of COVID-19 on publications, which specifically highlighted the impact on women as authors and reviewers.

- **Plain language summaries**

AGU created [guidance](#) on how to write effective plain language summaries that ensure the impact of each researcher's work can be easily understood by a wider community.

- **No more excess page fees for open access (OA) articles**

AGU [eliminated excess page fees](#) for our fully OA journals and for anyone who purchases an OA license in our other journals.



- **OA for G-Cubed**

AGU's journal *Geochemistry, Geophysics, Geosystems*, which publishes research on the chemistry, physics, geology and biology of Earth and planetary processes, transitioned to OA, joining AGU's seven other OA journals: *AGU Advances, Earth's Future, Earth and Space Science, GeoHealth, Journal of Advances in Modeling Earth Systems, Perspectives of Earth and Space Scientists* and *Space Weather*.

- **Discounts for OA**

Many funders and institutions now completely cover or take advantage of discounts for OA author publishing charges in AGU journals through accounts with Wiley.

- **Research4Life discounts and waivers**

AGU, through a partnership with Research4Life, now offers discounts or waivers on OA fees for authors without funding or from certain countries.

- **Continued development of ESSOAr**

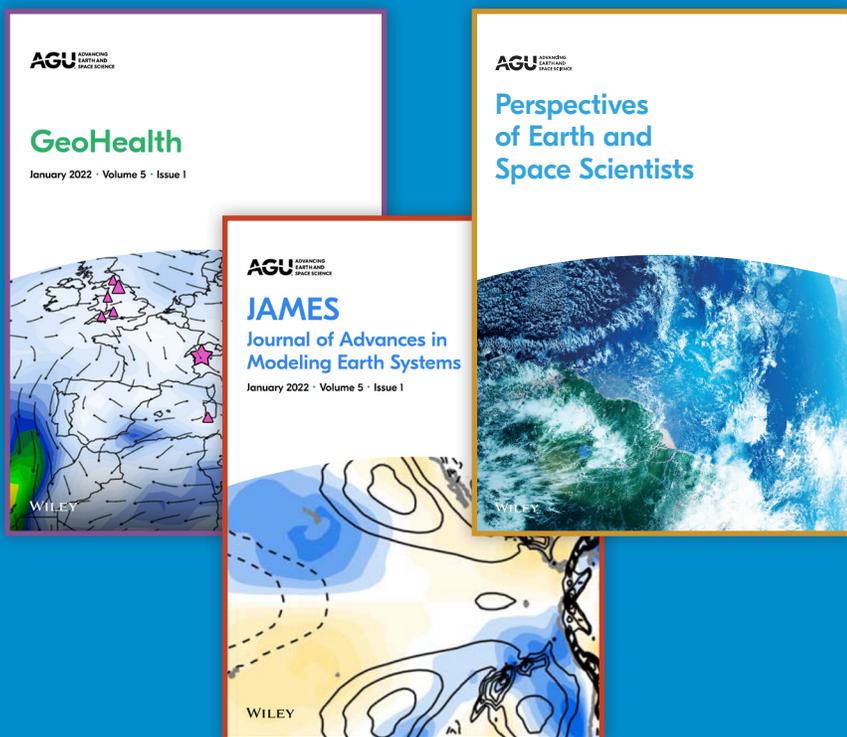
Seven societies, including AGU, are working together on the governance and development of the Earth and Space Science Open Archive (ESSOAr). The archive, which launched in 2017 to support open science via sharing preprints and posters, now supports all rich meeting presentations.

AGU PUBLICATIONS DEMOGRAPHICS

Men represented 73.7% of AGU publications contributors in 2021, slightly down from 74% in 2020. Individuals who identify as nonbinary increased slightly from 0% to 0.2% as new gender categories were introduced.

More submissions were received from first authors in China than from any other country in 2021, moving up from second in 2020.

For the half of papers for which we had data, papers from student and early career scientist first authors decreased from 43.4% in 2020 to 42.6% in 2021. Mid-career and experienced scientists represented 56% of first authors in 2020 and 56.7% in 2021.



Expanding access at AGU Fall Meeting 2021

At AGU Fall Meeting 2021 (#AGU21), we welcomed members to a hybrid meeting format that combined in-person and online participation. Long before the pandemic, AGU had been developing a hybrid model because it allows for easier global participation and supports a diverse, accessible meeting environment. This model also provides opportunities for those in adjacent or related disciplines to co-create and participate in the meeting.

To further expand access, AGU provided no-cost registration to #AGU21 for students from low and low-middle income countries. AGU also offered no-cost registration to members who are part of Indigenous communities anywhere in the world, as well as members who attend or teach at Tribal and Territorial Colleges and Universities in the U.S. and Canada. Finally, AGU also offered a reduced rate for students and teachers, and travel grants, including the Student Travel Grant Program and Berkner Travel Fellowship.



AGU MEETING DEMOGRAPHICS

There was a slight increase in the percentage of women attendees from 38.5% in 2020 to 38.9% in 2021, and in individuals who identify as nonbinary increased from 0.1% in 2020 to 0.5% in 2021.

For presenters where career stage was known, students and early career scientists remain the majority of presenters, increasing from 70.3% in 2020 to 72.3% in 2021.

The U.S. remained the country with the most presenters, rising from 64.2% in 2020 to 64.5% in 2021. The next three highest countries for attendees remained Canada, the United Kingdom and Japan. India went from tenth in 2019 to seventh in 2021.

Among attendees who identified with at least one of the listed race/ethnicity categories, there was a pronounced increase in attendees who are Asian or Asian American (6.7% to 10.0%) or Black (1.3% to 1.7%).

There was a small decrease in attendees who are Hispanic/Latino (6.3% to 6.0%) as a result of being able to select more than one category. In 2021, 0.9% respondents selected more than one category



Welcoming the first cohort of AGU LANDInG Academy and PRFP Fellows

AGU LANDInG HAS THREE MAIN ELEMENTS:

- [AGU LANDInG Community of Practice \(CoP\)](#) is an open-access, virtual platform that offers resources and networking opportunities for a broad community of DEI champions in the Earth and space sciences.
- [AGU LANDInG Academy](#) is a two-year, cohort-based program that provides formal training and hands-on support to help fellows develop and implement DEI solutions at their own institutions and across STEM.
- [AGU LANDInG-PRFP](#) is a two-year program that prepares postdoctoral fellows to implement DEI practices throughout their careers and cultivates a commitment to broaden participation in STEM.



Led by AGU and funded by a [grant from the National Science Foundation](#) (NSF), AGU LANDInG (Leadership Academy and Network for Diversity and Inclusion in the Geosciences) seeks to build a sustainable network of DEI champions through formal and informal professional development initiatives.

In August 2021, AGU introduced the [first cohort of Academy Fellows](#) to the AGU LANDInG Academy, a two-year professional development program for current and aspiring DEI leaders in the Earth and space sciences. Out of more than 80 applicants, 12 fellows were accepted through a selection process that focused on mid-career professionals in positions to effect change at U.S.-based academic, academic-adjacent and research institutions. Future cohorts will be open to geoscientists at different career stages from other sectors and from around the world.

In October 2021, AGU also announced the launch of AGU LANDInG-PRFP (Postdoctoral Research Fellowship Program), which will provide DEI-training tailored for NSF's Postdoctoral Research Fellows in the Office of Polar Programs and Division of Ocean Sciences. Recipients of NSF Postdoctoral Research Fellowships will be eligible to participate in this program beginning in 2022.

Together, these initiatives offer paths for scientists at any career stage to learn about DEI, build useful relationships with peers and develop the skills they need to drive change in the Earth and space sciences and across STEM.

Partnering with societies to launch the Community Science Exchange

Community science will continue to play a key role in the future of scientific discovery. Scientific work done in close partnership with community leaders is essential to meeting sustainability goals and helping communities adapt to the disastrous effects of climate change. In turn, productive collaborations between scientists and communities improves science by building public understanding of its value.

To support this emerging area of study, six leading scientific societies—AGU, American Anthropological Association (AAA), American Meteorological Society (AMS), American Public Health Association (APHA), Citizen Science Association (CSA) and Unión Geofísica Mexicana (UGM) —with the support of AGU's publishing partner Wiley, joined forces to form the [Community Science Exchange \(CSE\)](#).

CSE is a new, multidisciplinary platform aimed at advancing the practice of community science by sharing results and encouraging collaboration among people of different academic, professional and personal backgrounds. The platform includes a journal, *Community Science*, as well as a knowledge exchange portal for sharing diverse materials connected to community science.

In December 2021, AGU [announced the inaugural editorial team](#) for CSE. The team, which represents a broad range of scientific and community experience, is committed to building a platform that prioritizes the needs of communities, advances scientific excellence and demonstrates that science is a community.

COMMUNITY SCIENCE EXCHANGE FEATURES:

- A peer-reviewed journal that includes scientific articles, as well as regional and local case studies
- Multi-media learning materials on best practices for community science collaboration
- Reports, papers, interviews and feature stories that detail the outcomes of community science projects
- Tools to easily find and access data sets, models and other resources that support community science
- Networking opportunities to help connect people of different backgrounds who are interested in community science



Community Science Exchange



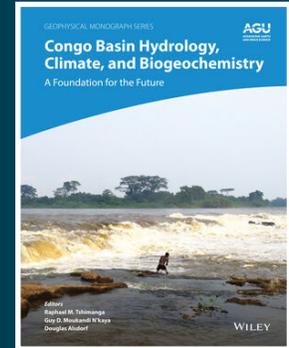
Addressing the deficiency of research in the Congo Basin

The Congo is the world's largest tropical rainforest, with the second-largest river basin after the Amazon; its water, climate, and river passages are crucial for millions of people. Despite its size and importance, the Congo Basin has received far less scientific attention than the Amazon.

To address this dangerous deficiency in research, AGU and Wiley published a pair of volumes in February 2022: [Congo Basin Hydrology, Climate and Biogeochemistry: A foundation for the Future](#) in English, and [Hydrologie, climat et biogéochimie du bassin du Congo: une base pour l'avenir](#), AGU's first book in French.

The inspiration for these books grew out of a 2016 article, "[Opportunities for hydrologic research in the Congo Basin](#)," published in *Reviews of Geophysics*. In response, AGU hosted a Chapman Conference in 2018, where meeting attendees discussed six scientific hypotheses concerning the Congo Basin. To overcome economic and language barriers, funding groups provided full and partial support to more than 70% of the 85 attendees, including 26 researchers from areas surrounding the Congo Basin.

Then, AGU invited the 2018 Chapman conference conveners to collate all the latest research into this set of books, which will serve as a crucial resource for the scientific community, policymakers and others in the Congo Basin region involved in a natural resource management.



The successful collaboration that led to the publication of AGU's first book in English and French continues in May 2023 as researchers meet for the [Chapman on Climate and Health for Africa](#).

Credit: Axel Fassio/CIFOR CC BY-NC-ND 2.0



DEI in AGU Honors

The AGU Honors and Recognition Committee made a pledge, after announcing the 2021 class of Fellows, to improve the diversity of nominations for all AGU honors.

The AGU Honors program is committed to diversifying and has vowed to expand the pool of nominations, address implicit bias in the process, improve the overall process, and develop data-informed objectives.

AGU leaders have also proposed a new award for excellence and impact towards cultivating and exemplifying a diverse and inclusive scientific culture, as stated in the new AGU strategic plan.

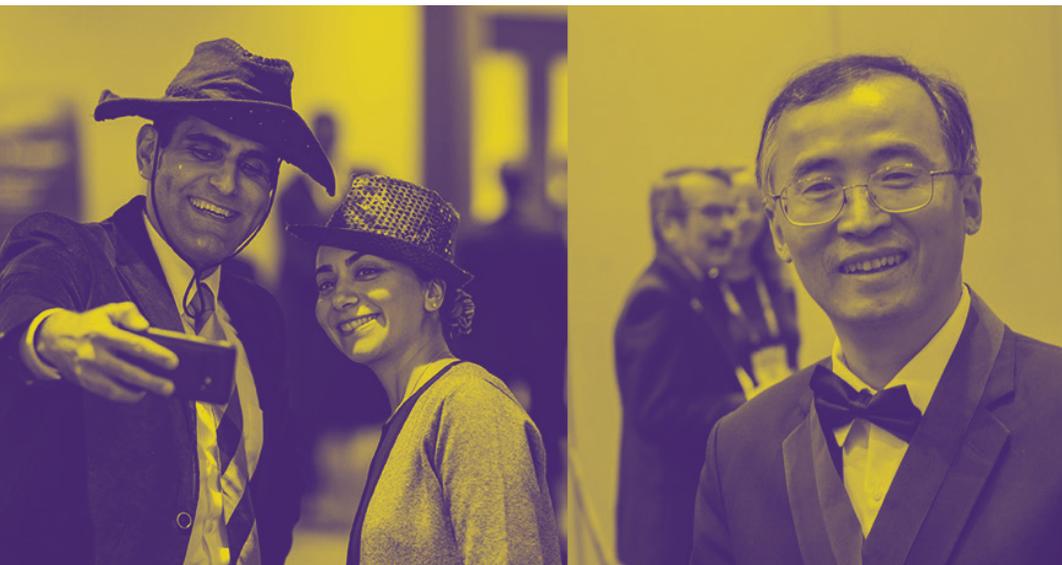
HONORS, AWARDS AND GRANTS

Among individuals who identified a gender, the percentage of Union Medals Awards and Prize (MAP) recipients who are women decreased from 51.5% in 2020 to 41.9% in 2021.

Among individuals where age was known, Union MAP recipients who are 50 or older went from 45.5% in 2020 to 51.7% in 2021.

While the majority of scientists receiving Union MAP in 2021 remained based in the U.S., their proportion decreased from 75% in 2020 to 63.6% in 2021.

Among Union MAP recipients who had identified with at least one race/ethnicity, diversity decreased in 2021 with only two race/ethnicities represented (compared to 4 in 2020) and the percentage of non-white individuals decreased from 19% in 2020 to 4.5% in 2021.



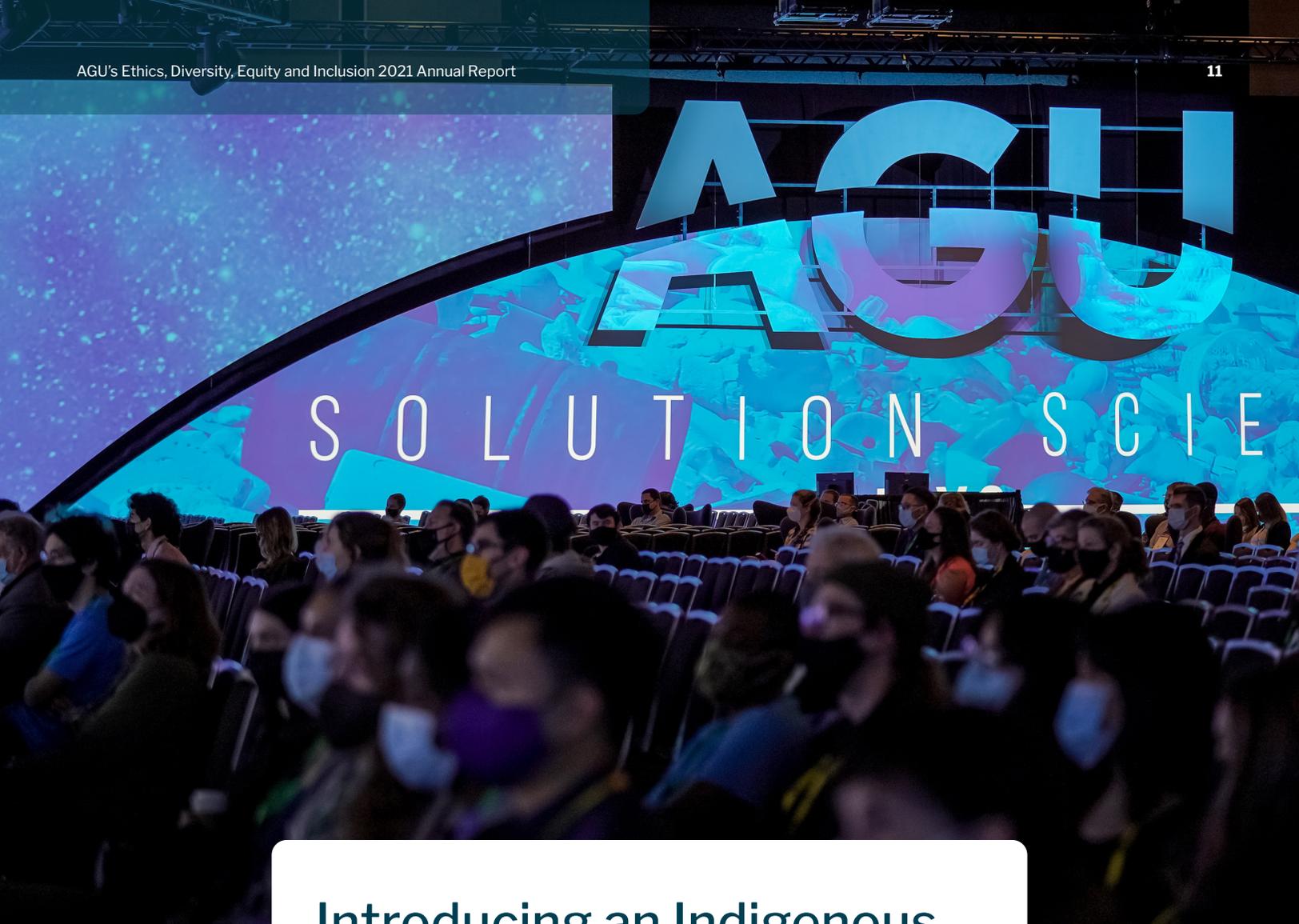
Updating AGU investment strategy to align with strategic goals

The [AGU Board of Directors voted in 2021 to change AGU's investment strategy](#) to align our long-term investments with the mission, vision and values expressed in our strategic plan. The new [AGU Investment Policy](#) emphasizes mission-related investments (MRI) that integrate Environmental, Social and Governance (ESG) criteria and provide transparency. The policy also commits to prioritizing women and minority-owned or managed investments.

As a result, AGU has 14% of its assets invested in women and minority-owned firms, which is high relative to the available market. We will continue to work with our financial partners to expand our investments in this area.

In October 2021, the Board also voted to fully divest from fossil fuels, a process that will take up to 18 months to complete. While AGU had no direct investment in fossil fuels at the time, an audit found that 5% of our holdings were indirectly invested through mutual fund accounts.

Furthering AGU's strategic goals through investment is a complex undertaking but one that the Board believes is vital, which is why they asked AGU's [Finance and Investment Committee](#) to chart a path towards carbon neutrality for all of AGU's investments in 2022.



AGU

SOLUTION SCIENCE

Introducing an Indigenous Action Committee

Reciprocity is the ethical practice of exchange for mutual benefit.

It is also an important foundation for the new AGU Indigenous Action Committee, which will be launched in 2022.

At AGU Fall Meeting 2021, AGU held a townhall with the working group that has been designing the new AGU Indigenous Action Committee. Their proposed goals include:

- Welcoming Indigenous scientists and their work into AGU
- Supporting and elevating Indigenous research related to the Earth system
- Building alliances with organizations that focus on Indigenous Peoples and priorities
- Welcoming, without appropriating, Indigenous Knowledges and Knowledge Systems into AGU
- Broadening Indigenous inclusion and leadership in AGU

Building career pathways in the geosciences

Mentoring365 expanded in 2021 as American Astronomical Society (AAS), American Society for Gravitational and Space Research (ASGSR) and National Aeronautics and Space Administration (NASA) joined AGU and seven other organizations as partners. [Mentoring365](#) connects early-career scientists with mentors in the global Earth and space science community. The ultimate goal is to foster a robust, diverse, equitable and inclusive workforce equipped with the skills needed to address the challenges our planet is facing.

In 2021, AGU also welcomed 15 collegiate departments as AGU Bridge partners, making for a total of 46 partners since the start of this program. The [AGU Bridge Program](#), part of the [Inclusive Graduate Education Network](#), seeks to recruit and retain students from historically marginalized backgrounds into geoscience graduate programs around the country.



Advocating for DEI in the U.S. Congress

To create systemic change, AGU's efforts to educate and empower our community of scientists must be coupled with smart policy. For this reason, justice, diversity, equity, inclusion (JEDI) remained a top priority for AGU's Science Policy and Government Relations team in 2021.

In May, the U.S. House of Representatives passed a package of bills, which included four endorsed by AGU: the Rural STEM Education Research Act; Supporting Early-Career Researchers Act; STEM Opportunities Act; and Combating Sexual Harassment in Science Act.

In June, AGU endorsed the Reconciliation in Place Names Act — a bill to streamline the process of identifying and revising offensive names on federal lands — on a Dear Colleague Letter that was coordinated by Rep. Al Green (TX-09) and Sen. Elizabeth Warren (MA). AGU continued to advocate for this bill by hosting a Congressional Visit Day, where members coordinated 69 meetings and sent 223 emails to their legislators, and an online engagement where members sent an additional 283 emails.



AGU awarded for DEI efforts

AGU was honored with the inaugural Equity Award from SIIA's AM&P Network in 2021. This award recognizes an individual or team demonstrating significant progress and identifiable achievement toward efforts related to advancing DEI, including being committed to anti-racism.

AGU was recognized for the work being done by leadership, members, volunteers and staff to create a diverse, equitable and inclusive Earth and space sciences community that represents and works for everyone.

In addition, the AGU Ethics and Equity Center, which was established in 2019 to address intersecting issues of gender and racial equity in the geosciences, received the **2021 American Society of Association Executives (ASAE) Power of A Award**.

Since its inception, AGU and the Ethics and Equity Center has sponsored workshops at scientific conferences across the U.S.; created unique training videos around harassment, implicit bias and ethical decision making; developed DEI guides for organizational work-climate assessment; and promoted resources, policies and practices for adoption by others. The quality and success of this work has been recognized and amplified across STEM organizations through grants from leading foundations, such as the Alfred P. Sloan Foundation, the National Science Foundation and Rockefeller Family Fund.

Amplifying DEI in the news

Eos publishes high-impact DEI articles and reports on scientific research through an equity lens. As a result, *Eos* won the inaugural 2021 EXCEL Award for Best Feature Article in DEI initiatives. *“Creating Spaces for Geoscientists with Disabilities to Thrive”* was written by scientist-members Anita M. Marshall and Sean Thatcher, and was part of an exceptional article series produced in collaboration with AGU’s Diversity and Inclusion Advisory Committee.



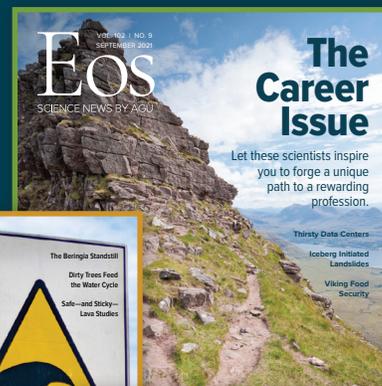
EOS'S GLOBAL REACH

Eos has published 70+ articles in Spanish, leading to a 182% rise in its Spanish-speaking audience, according to primary web browser language.

Reporting by Latin American journalists in Eos has led to audience growth in those regions, including a 20% rise in Brazil, 58% rise in Mexico, and over 200% growth in Colombia.

Eos began publishing translations in simplified Chinese in 2021, supporting a 63% growth of audience in China.

Eos is growing a cadre of writers from around the globe to report on science and environmental news in their regions, including around Africa (Nigeria, South Africa, Uganda), Asia (India, Japan), Latin America (Brazil, Colombia, Mexico) and more.



Summary of DEI ethics complaints

2021 Ethics Summary

AGU staff continues its work to proactively educate and advise on [AGU's Scientific Integrity and Professional Ethics](#) policy and practices, including leading the resolution of professional misconduct allegations. Professional misconduct concerns are addressed in partnership with the AGU Ethics Chair.

During 2021, 14 allegations of misconduct were made to ethics@agu.org. Twelve of the 14 complaints were resolved, and two remain under investigation. Nine complaints were research related, while five complaints were related to personal conduct. Personal misconduct includes issues of harassment, bullying and discrimination and other AGU Ethics Policy violations. Three of the five misconduct complaints resulted in AGU sanctions: one was referred to the home institution and one remains open.

Additionally, five Safe AGU complaints were made during the 2021 AGU Fall Meeting. Safe AGU is a program to address any safety or professional conduct concerns that may arise at AGU meetings. These complaints are handled separately from formal professional misconduct complaints.

	2021	2020	2019	2018
Publications Related Misconduct Allegations (Fabrication, Falsification, Plagiarism)	9	13	21	11
Personal Misconduct Allegations (Harassment, Bullying, Discrimination, etc.)	5	5	3	2
Safe AGU Complaints at Fall Meeting	5	4	11	11
TOTAL	19	22	35	24

Looking Ahead

AGU's [strategic plan](#) charges our community to support and exemplify a scientific culture where individuals from all backgrounds are equitably included. While we celebrate our community's efforts in 2021, there is still work to be undertaken together. We look forward to working with our partners and the scientific community to achieve these goals.