



GEORGE MASON UNIVERSITY
CENTER *for* CLIMATE CHANGE
COMMUNICATION



2020

ANNUAL REPORT

MESSAGE FROM THE DIRECTOR

EDWARD MAIBACH, MPH, PHD

This was a year none of us will soon forget. The world continued to get dangerously warmer. Clean energy production and storage continued to exceed everyone's expectations. The carbon bubble continued to deflate—with Exxon Mobile stock, for example, losing more than 1/3 of its value. The COVID-19 pandemic inflicted great pain and changed our lives. And America woke up to the shameful reality of the racist policies that shape our nation—and our lives.

Despite the turmoil—or perhaps because of it—our team at Mason 4C did its best work ever. I am grateful for what our team accomplished this year.

Our **Climate Change in the American Mind (CCAM)** polling team—which includes our partners at the Yale Program on Climate Change Communication—continued to do groundbreaking work that charted the ascendance of climate change as a voting issue. In addition, in response to the pandemic, the team quickly retooled our polling operation to help America's health professionals better understand the public's knowledge, attitudes and COVID-19 protective behaviors.

Our **Climate Matters** team—that, in partnership with Climate Central, produces localized climate reporting resources program for TV weathercasters—reached new highs this year. We added our 900th weathercaster into the program, 42 of whom use our materials in Spanish, and we now support at least one weathercaster in 94% of America's TV media markets.



The program has driven a 50-fold increase in on-air climate reporting by weathercasters, and our evaluations prove that it is helping the public understand climate change as a concrete “*here, now, us*” problem.

In partnership with Climate Central and Climate Communication, we also made major strides this year in supporting a broader set of journalists in climate reporting. Completing its second year of operation, the **Climate Matters in the Newsroom** program now supports 615 journalists with compelling, science-based, localize climate change reporting resources.

Our **Medical Society Consortium on Climate and Health** team—whose mission is to “*organize, empower and amplify the voice of America's doctors to convey how climate change is harming our health and how climate solutions will improve it*”—also had a banner year. The Consortium's membership grew to 29 national medical societies, and is now closely affiliated with 50 additional health organizations—including the American Lung Association, American Heart Association, and American Cancer Society. We also fostered the development of ten state-based Clinician for Climate Action groups—three of which were formed this year.

Our grassroots conservative community-building effort, republicEn.org, led by former GOP Congressman Bob Inglis, also had its best year yet. Having recruited 10,000 conservatives who care about solving climate change, our team is now focused on helping these conservative climate leaders become more effective advocates for conservative climate solutions.

Our newest project—the [4D Project](#) which seeks to identify and counter misinformation—sprang to life earlier this year in the midst of the misinformation-fueled COVID-19 pandemic. With the aim of detecting, deconstructing and debunking climate change misinformation, as well as deploying debunking methods that have proven to be effective, John Cook launched the project with the publication of his book *Cranky Uncle vs. Climate Change*, and immediately began to develop the *Cranky Uncle* smartphone game. These whimsical tools have already been shown to help people spot logical fallacies in climate misinformation, skills that generalize to spotting other forms of misinformation—including COVID-19 misinformation.

Lastly, our summer internship project with [National Park Service](#) continues to thrive. This year’s cohort of interns are working together virtually to produce innovative educational programming in two DC-area national parks.

My sincere thanks to all members of the 4C team, and to our many friends, partners and sponsors, who made this work possible. May they all remain safe and resolute in their efforts to stabilize the earth’s life-sustaining climate and prevent further harm from climate change.

Onward and upward!

Ed Maibach
@MaibachEd

OUR MISSION

We develop and apply social science insights to help society make informed decisions that will stabilize the earth’s life-sustaining climate, and prevent further harm from climate change.



GEORGE MASON UNIVERSITY
CENTER *for* CLIMATE CHANGE
COMMUNICATION



The Medical
Society Consortium
ON CLIMATE & HEALTH



CLIMATE CHANGE IN THE AMERICAN MIND

TRACKING PUBLIC UNDERSTANDING OF CLIMATE CHANGE

Our **Climate Change in the American Mind (CCAM)** program—conducted in partnership with the Yale Program on Climate Change Communication—tracks and investigates public understanding of climate change and support for climate policies through a series of nationally representative public polls conducted twice annually.

Our findings have provided critical strategic communication insights to myriad organizations, and have been published in hundreds of journal articles, reports, and news articles.

We make our data publicly available to other researchers, and we provide an interactive data visualization tool that enables anyone to explore the diversity of American opinions about climate change.

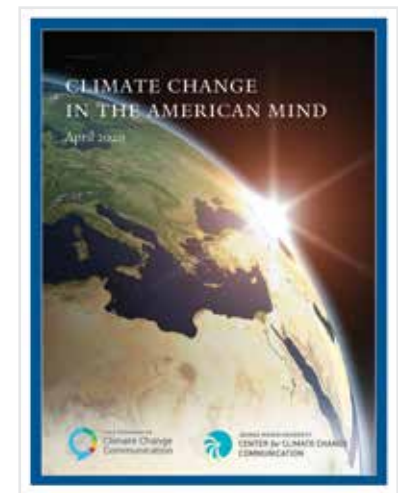
While elected officials in Washington, D.C. remain divided over the issue of global warming, our research shows that a growing number of voters across the country are worried about global warming, and support a variety of actions to address it. For example, our April 2020 poll showed that—even in the midst of the COVID-19 pandemic—solid majorities of American voters were worried about global warming (66%), and said that President Trump (62%) and Congress (63%) should do more to address it. Furthermore, large majorities of voters across the political spectrum supported a variety of approaches to reducing heat-trapping pollution, including through funding research into renewable energy sources (87%), regulating carbon dioxide pollution (76%), and/



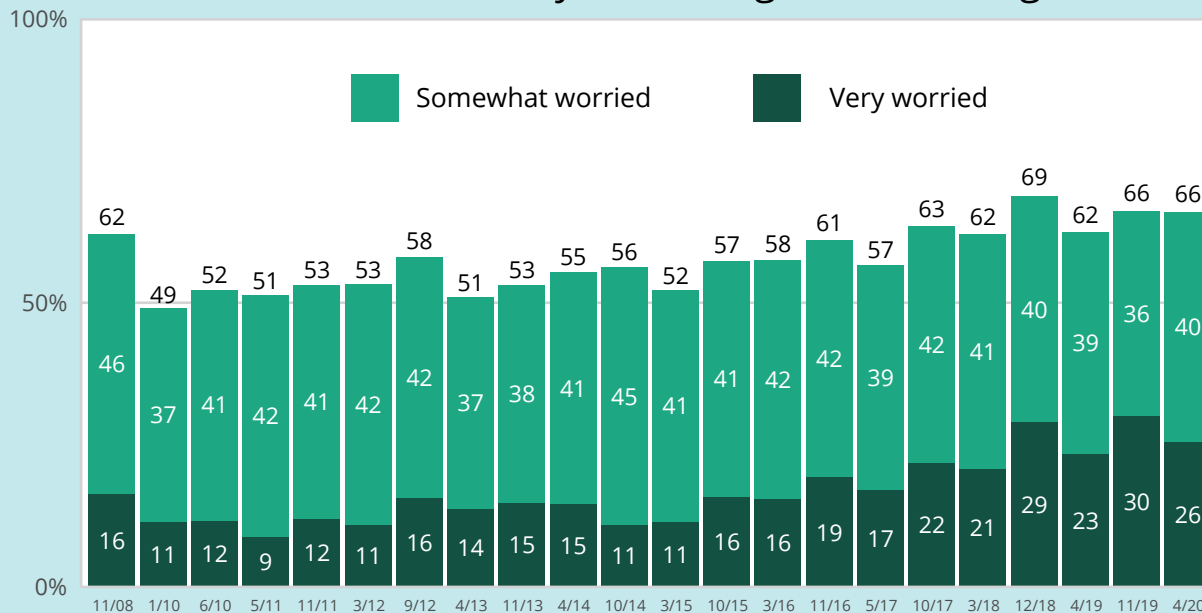
or a revenue-neutral tax on carbon pollution (68%). We also found that more than seven in ten voters (72%) supported the proposal by some members of Congress for a Green New Deal to help accelerate the transition from fossil fuels to clean, renewable energy.

Despite these promising findings, we find that many Americans continue to hold important misperceptions about climate change—often as a result of misinformation campaigns. For example, only 1 out of 5 Americans (21%) understand that, based on the evidence, 97% or more of climate scientists are convinced that human-caused climate change is happening. This misperception is consequential because it undermines people’s own certainty and concern about climate change. Much of our work at the Center seeks to remedy important

misperceptions such as this. We are working to activate a variety of trusted voices to highlight the fact that climate change is happening here, now, and that a growing majority of Americans support a range of actions to address it.



“How worried are you about global warming?”



60% of voters

say a candidate’s views on global warming will influence their vote in the 2020 Presidential election.

68% of voters

support requiring fossil fuel companies to pay a carbon tax where the funds are used to reduce other taxes by an equal amount.

83% of voters

support providing tax rebates to people who purchase energy-efficient vehicles or solar panels.



Source: Politics and Global Warming, April 2020.

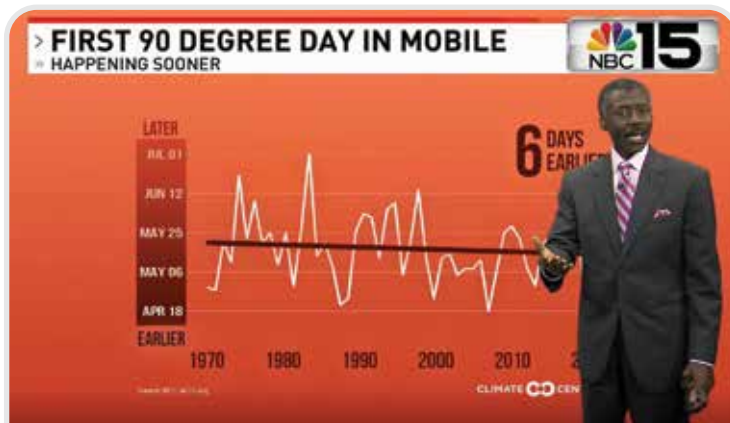
In 2010, thanks to our [Climate Change in the American Mind](#) surveys, we knew that two out of three members of the public trusted TV weathercasters as a source of information about global warming. Yet, we also knew that few weathercasters were actually reporting about climate change on air, in many cases because they didn't have the time or reporting resources to do it well. We hypothesized that if TV weathercasters could be helped to report on the changing weather patterns in their community, viewers would come to better understand climate change as a "here, now us" problem.

That year, in partnership with Climate Central and WLTX-TV (the CBS affiliate in Columbia, South Carolina), we launched a one-year pilot test to test the hypothesis. The test was highly successful. Over the course of the year, as compared to viewers of other local stations in Columbia, WLTX viewers developed a better understanding of the local relevance of climate change.



Funded by the National Science Foundation, Climate Matters has grown into a climate reporting resources program designed to help TV weathercasters across America report on local climate impacts and solutions in science-based yet engaging ways. TV weathercasters are ideally positioned to help people in their community understand the local relevance of climate change: they are highly trusted; they have unparalleled access to the public; and they are superb communicators.

With resource materials offered in both English and Spanish, more than 900 TV meteorologists currently participate in the Climate Matters program; they broadcast from 94% of all U.S. media markets. Nationwide, on-air reporting about climate change by TV weathercasters has increased more than 50-fold since we launched the program. Most importantly, our research shows that viewers across America are benefiting from this reporting—it helps them better understand climate change as a "here, now, us" problem that is directly relevant to their lives.



OUR CLIMATE MATTERS PARTNERS

CLIMATE  CENTRAL



AMS 
American Meteorological Society



Jim Gandy, TV weathercaster (now retired) from South Carolina and pioneer of the Climate Matters program.

CLIMATE MATTERS IN THE NEWSROOM

In 2018, **Climate Matters** expanded beyond the weathercast to support any journalist interested in reporting local climate stories. Called **Climate Matters in the Newsroom**, this program extension is conducted in partnership with Climate Central, Climate Communication and several journalism societies including Radio Television Digital News Association, Society of Environmental Journalists, National Association of Hispanic Journalists, National Association of Black Journalists, Associated Collegiate Press, National Scholastic Press Association, and the Carol Kneeland Project for Responsible Journalism.



The program has grown rapidly, with 636 journalists currently participating. In addition to providing journalists with localized climate reporting resources—in English and Spanish—we conduct workshops to increase journalists' confidence and competence in reporting on local climate change impacts and solutions stories. Thus far, 475 journalists have participated in the workshops.



Climate Matters in the Newsroom workshop held at the Society of Environmental Journalists Fall 2019 annual meeting in Ft. Collins, CO.



Climate Matters in the Newsroom workshop held at the Net Zero Kendeda Building at Georgian Tech University.

OUR CLIMATE MATTERS IN THE NEWSROOM PARTNERS



Climate Matters in the Newsroom workshop held at the Science Museum of Virginia in Richmond in Fall 2019.

PROGRAM ON CLIMATE AND HEALTH

UNDERSTANDING AND ADDRESSING THE HEALTH HARMS OF CLIMATE CHANGE

Although the current impacts and future threats of climate change to public health are well documented, we've learned that these threats are not well-known or understood by the public. Our research has also shown that members of the public across the political spectrum respond well to information about the health implications of climate change and climate solutions.

Moreover, we've learned that many health professionals are already seeing health harms from climate change among their patients, or in the case of public health professionals, among members of their community. Our **Program on Climate and Health** seeks to help health professionals promote public understanding of the health implications of climate change and the health benefits of climate solutions.



MEDICAL SOCIETY CONSORTIUM **FAST FACTS**

The Consortium includes **29** medical societies, which represents more than **600,000** practitioners, along with **47** affiliated health and science-based organizations with a membership of over **1.5 million**.

Consortium advocates have engaged in more than **1,400** activities—presentations, policy actions, media interviews and publications—over the last **3** years.

MEDICAL SOCIETY CONSORTIUM ON CLIMATE & HEALTH

Climate change is truly a health emergency. The next ten years provides a critical window of opportunity to avoid the worst consequences of the climate crisis. To meet this challenge, major national medical societies—in partnership with state medical societies, public health, nursing and other allied health professional societies, and leading health organizations—have come together to form the **Medical Society Consortium on Climate & Health**. Our shared conviction is that climate change is a health emergency that must be overcome. Our shared goal is to create a future where all people have clean air, clean water and nutritious food, and where the climate has returned to a stable state.

Launched in 2016 under the direction of Mason 4C professor **Mona Sarfaty**, the Consortium organizes, empowers, and amplifies the voice of doctors and other health professionals to advocate for equitable and effective health-focused climate solutions. Consortium membership has grown rapidly to 29 national medical societies representing well over 600,000 physicians—more than 60% of U.S. doctors. The Consortium also has 47 partner organizations representing millions of health professionals across the spectrum of health care and public health, including the American Lung Association, American Heart Association and American Cancer Society—each with a strong grass roots membership.



The Consortium supported the formation of and/or helped strengthen ten state “clinicians for climate action” groups—with three formed this year. This is vital because policy change is happening more rapidly at the state level. Currently, there are groups in California, Florida, Georgia, Michigan, Montana, Ohio, Vermont, Virginia, Wisconsin, and a new group is currently developing in South Carolina.

The Consortium’s “Medical Advocates for Climate and Health” have engaged in over 1,400 important actions—including presentations, policy actions, media interviews, and publications—over the last three years.

Last year, in partnership with several partner organizations, we developed and released a U.S. Policy Action Agenda on Climate, Health and Equity to establish principles for equitable and effective health-focused climate solutions (see climatehealthaction.org). Currently endorsed by more than 150 physician, nursing and public health professional societies and academic institutions, and 500 hospitals, the Policy Action Agenda provides ten key policy priorities to address climate change and promote the health of all Americans.

ENGAGING CONSERVATIVES



Bob Inglis speaks to a political science class and The Citadel's Republican Society during an EnCourage Tour stop in Charleston last fall.

Our [Climate Change in the American Mind](#) surveys have repeatedly shown that a large majority of Americans support climate solutions. Seven in ten registered voters think global warming is happening. This include nearly all liberal Democrats, a large majority of moderate/conservative Democrats, and most liberal/moderate Republicans. Climate change is not political—it is a matter of physics, chemistry, and biology—forces that don't have a political ideology.

[republicEn.org](#) is a grassroots community-building effort founded by Mason 4C professor [Bob Inglis](#), who served six terms in Congress representing the state of South Carolina. Once a critic of climate change, Bob changed his views and began advocating for a carbon tax to stoke innovation and reduce carbon emissions and dependence on fossil fuels.

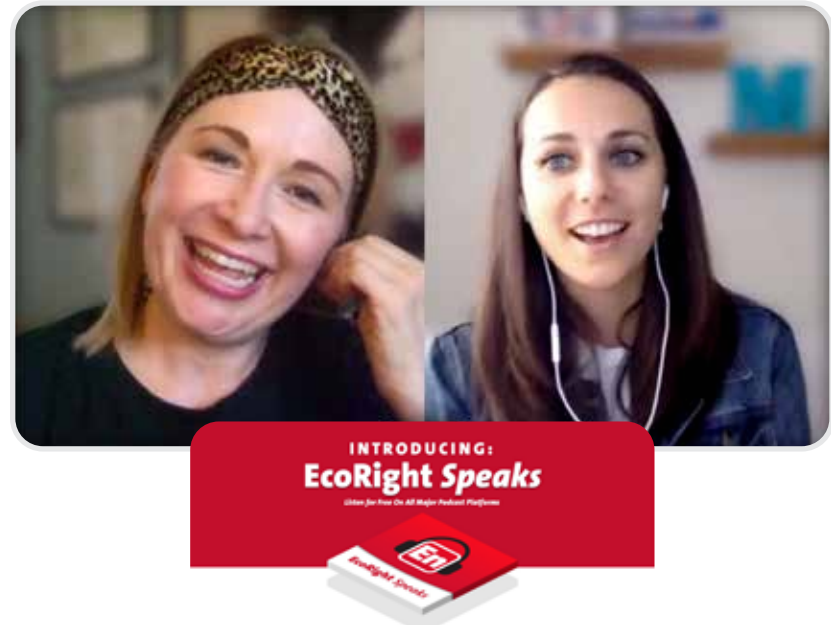


Bob started [republicEn.org](#) to provide educational and community support for conservatives committed to building public understanding of free enterprise and its promise to solve energy and climate challenges. Members of [republicEn](#) are conservatives, libertarians, and pragmatists of diverse political opinion.

[republicEn.org](#) is a home and launching pad for conservatives who care about solving climate change—currently more than 10,000 and rising. [republicEn](#) engages these “Ecoright” conservatives with events, media, field trips, and opportunities to educate lawmakers and take action in their communities. They're enfranchising more and more of conservative America in pursuit of climate solutions, often by partnering with national and local conservative leaders and organizations. [republicEn](#) also finds and equips rising-star conservatives to act as powerful spokespeople for the Ecoright movement where they live and in the media.

republicEN ENGAGEMENT & OUTREACH

Since launching the [republicEn.org](https://republicen.org) brand in late 2014, Bob and the team have programmed over 500 events in America's heartland. The most typical event is a community climate townhall co-sponsored by republicEn and one or a few local conservative, business, faith, or civic organizations. Today, thirty-three volunteer spokespeople represent the community in cities across the country. Over 10,000 members are delivered weekly "EcoRight News" briefings called the "Week En Review" and are invited to take part in educational action campaigns 2-3 times per month. In practice, that means thousands of climate touchpoints between conservatives and their networks and conservative constituents and their lawmakers...every quarter. This year, republicEn launched the "EcoRight Speaks" podcast, which you can subscribe to on Apple Podcasts or Spotify.



CLIMATE COMMUNICATION INTERNSHIP PROGRAM

For the past decade, we have partnered with the **National Park Service's (NPS)** Urban Ecology Research Learning Alliance on a “research-to-practice” summer internship program. Student interns with backgrounds in science, writing, film making, and design produce science-based climate communication content for use in parks in the National Capital Region (NCR). Materials created through this program are rooted in social science insights (e.g. trusted sources, social norms, place-based learning), climate science, and the communication needs of participating regional parks. As a result, the products (e.g., websites, videos, ranger toolkits) produced by the interns fulfill many functions: increasing public awareness of climate impacts on park resources; nurturing the connection between people and places; meeting evolving interpretation demands by developing material for a variety of channels, effectively engaging visitors in climate dialogue; and helping parks lead by example by addressing how a changing climate can alter cultural, natural, historical, and recreational resources. Since its inception, the success, adaptability, and longevity of this program have provided NCR parks with a wealth of innovative products that support the NPS stewardship mission.



The summer program lasts ten weeks, and allows interns to gain experience in their fields, gain professional experience working with a federal agency, and learn from mentorship opportunities provided by faculty at our Center.



Antietam National Battlefield Park.



Mason 4C/NPS intern, Morgan Zabow.

“ Being a **Mason 4C intern** has been an eye-opening experience into the world of science communication. My undergrad and graduate educations did not have science communication courses; therefore, this internship has allowed me to learn for the first time about the different ways to effectively communicate complex science ideas. My main takeaway from this internship that I will carry with me into my professional future is that while it is crucial to have the research to understand how climate change works and manifests, unless we can take that knowledge and share it with the public in an effective way, change will not happen.”

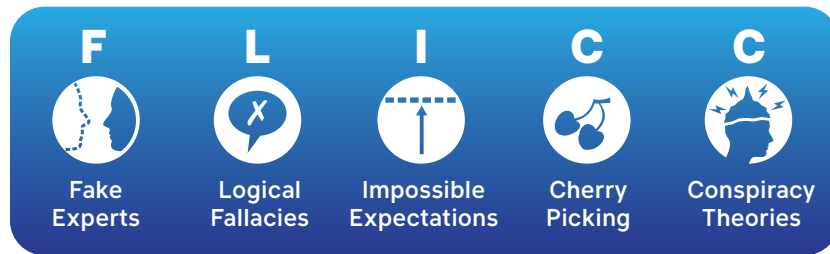
UNDERSTANDING AND COUNTERING CLIMATE MISINFORMATION

A multi-faced problem like climate misinformation requires a multi-disciplinary approach. The **4D Project**, led by Dr. John Cook, synthesizes four research themes, developing tools to *detect*, *deconstruct*, and *debunk* misinformation, then applying this research by *deploying* real-world applications.



Detection. We've used machine learning to detect and categorize climate misinformation. While this research is eventually intended for real-time detection of online misinformation, it has already provided insights by building a decades-long history of climate misinformation efforts.

Deconstruction. Critical thinking is a crucial tool for identifying misleading techniques and fallacies in misinformation. We developed the FLICC framework, which is being adopted by educators across the country.

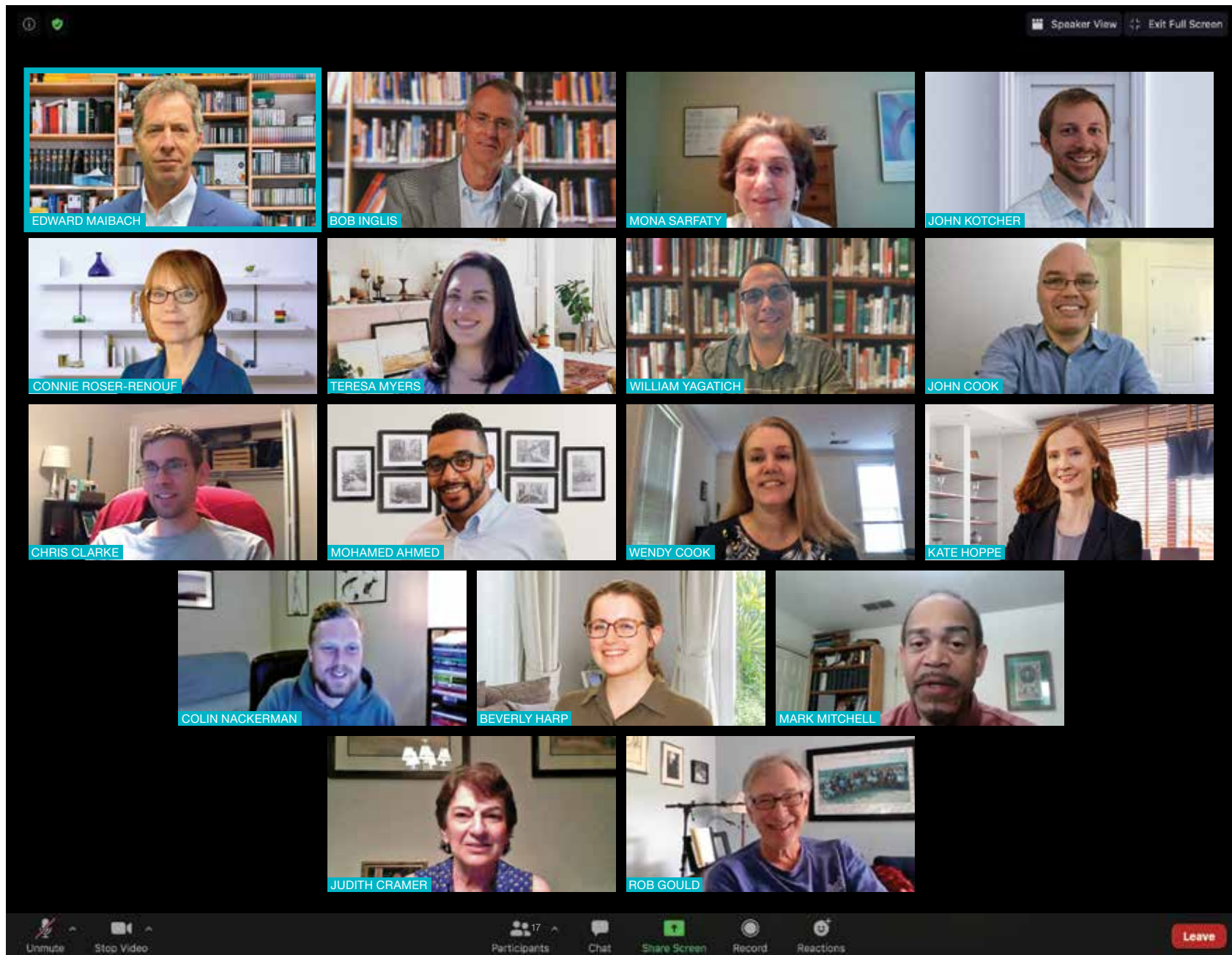


Debunking. We have experimentally tested a diverse range of debunking techniques such as logic-based vs. fact-based corrections, humorous vs. non-humorous debunkings, and passive vs. active inoculation.

Deployment. The 4D Project applies its research in a number of real-world projects. We've collaborated with the National Center for Science Education to develop climate change curriculum that is being used by high school teachers across the country. John Cook published the *Cranky Uncle vs. Climate Change* book, using critical thinking and cartoon humor to counter climate misinformation. In early 2020, we ran a successful crowd-funding campaign to develop the *Cranky Uncle* game, a smartphone app that builds resilience against misinformation, due for release in summer 2020.



OUR 4C TEAM



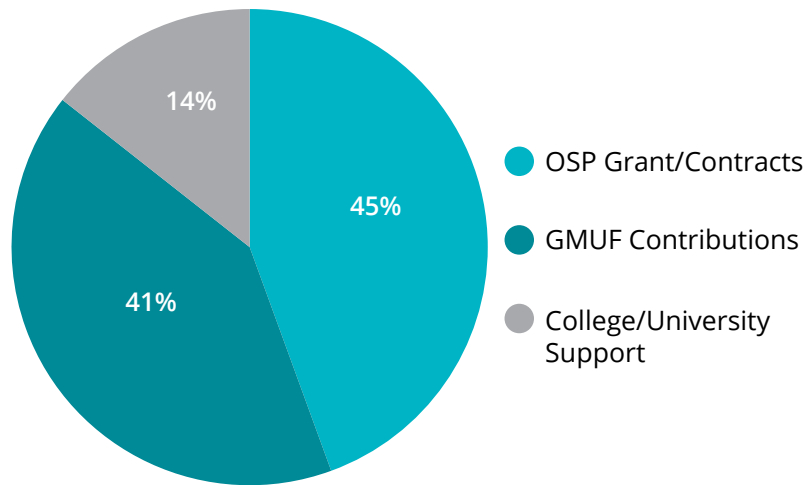
2019-2020 FINANCIAL SUMMARY

JULY 1, 2019 - JUNE 30, 2020

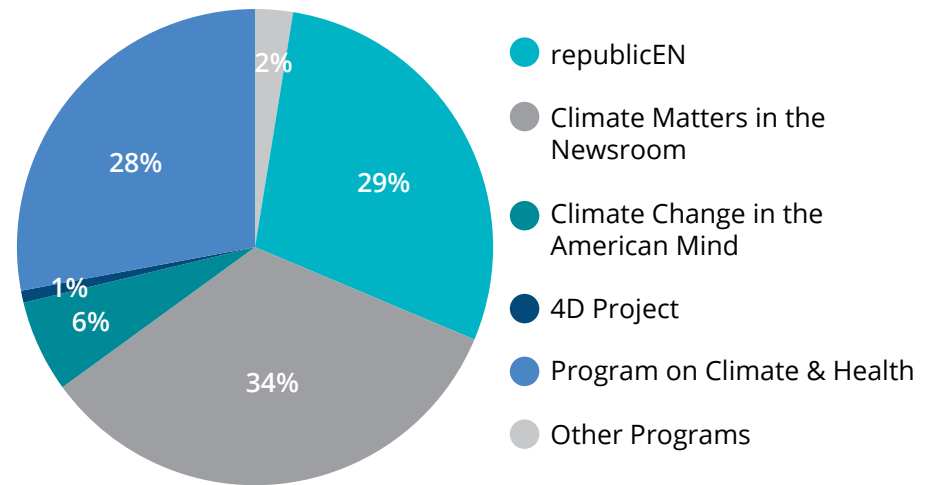
PROGRAM AREA	TOTAL 2020 EXPENSES	TOTAL PROGRAM REVENUES	CONTRACTS/GRANTS	CONTRIBUTIONS
republicEN	\$883,819	\$644,690	\$0	\$644,690
Climate Matters in the Newsroom	\$1,033,305	\$635,055	\$419,108	\$215,947
Climate Change in the American Mind	\$192,112	\$350,000	\$350,000	\$0
4D Project	\$25,246	\$41,645	\$0	\$41,645
Program on Climate and Health	\$857,956	\$635,055	\$419,108	\$215,947
Other Programs	\$78,946	\$172,325	\$98,437	\$73,888

REVENUE TYPE	AMOUNT
OSP Grants/Contracts	\$1,286,653
GMUF Contributions	\$1,192,117
College/University Support	\$416,712

REVENUES BY TYPE



TOTAL EXPENSES BY PROGRAM AREA



THANK YOU FOR YOUR SUPPORT

In addition to our major grant funders, which include National Sciences Foundation, NASA, National Park Service, Grantham Foundation for the Protection of the Environment, Energy Foundation, Rockefeller Family Fund, Robert Wood Johnson Foundation, Johnson & Johnson Services, Inc., High Tide Foundation, Merck, and The Skoll Fund, we would also like to thank Mason's College of Humanities and Social Sciences. We are especially grateful for the College generously supporting our work with vital resources including office space, utility costs, and salary support.

Furthermore, we are grateful for the generosity of all our philanthropic donors throughout the 2019-2020 fiscal year. Our work would not be possible without the generous support of many.

\$100,000 – \$999,999

Anonymous

\$50,000 – \$99,999

Anonymous

\$5,000 – \$49,000

American Lung Association
Bessemer Trust Company
Ms. Deirdre Coyne
Health Care Without Harm
Koret Foundation
Hilda and Edward Maibach
Siesel Maibach
Fran and Bill Novelli

\$1,000 – \$4,999

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Samantha Ahdoot
Jerry and Linda Atkins
Douglas K. Bostrom
Preston Chiaro
Wendy and John Cook
Amy Feldman
Griffith University
Ravindra Gupta
Jeff Masters
Sally Perini
Kathleen and Lee Price
Justin Rolfe-Redding
Jagadish and Anastasia Shukla
Nick Snow and Cathleen McCoy
Baerbel Winkler
Charles and Sylvia Zeller

\$100 – \$999


Anonymous
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Keith Anderson
Steve Blume
Stephanie Boldeman
Mark B. Boslough
Natalie J. Burls
Christina Callahan
John and Tina Callahan
William Chamberlin
Citizen's Climate Lobby
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Suzette Dewey
Michael and Sherri Donlon
Martin English
Carrie Finn
Michael Flammer
John Forslin
Elizabeth Garnsey
Andrew Gelbart
Claire Gervais
Sarah Green
Anita J. Hall
Joshua Halpern
Susan J. Hassol

Leila N. Hawkins
Molly Herr
Gabriel Hesch
Melaine L. Hoffman
Genevieve Hunt
Inovaware
Heather O. Jelks
Peter Klafka
Robert and Mary Kitchen
Bruce Krawisz
Ross Lamont
Melinda Landry
Torsten Landschoff
Timo and Anne Lubitz
John L. Macedo
Ed Madara
Jane Marcus
Next Level SMG LLC
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Nick Palmer
Ian Pavelko
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Lawrence Torcello
Mark Trexler
Neelima Tummala
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Weisman Foundation
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The Center is located on the campus of
George Mason University in Fairfax, Virginia.

