



GEORGE MASON UNIVERSITY
CENTER *for*
CLIMATE CHANGE
COMMUNICATION

2016 Annual Report





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CENTER *for* CLIMATE CHANGE
COMMUNICATION

The mission of Mason's Center for Climate Change Communication is to 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.

Message from the Director

Dr. Edward Maibach

As a public health professional, I first came to understand climate change as a profound threat to human health and well-being in 2006 after listening to several lectures by John Schellnhuber, Director of the Potsdam Institute for Climate Impact Research. The current health impacts of climate change were then, and are still now, just beginning to be understood and documented, but the potentially devastating impacts of climate change on population health throughout the 21st century and beyond were already abundantly clear. Compelled to act, I partnered with George Mason University in 2007 to create a climate change communication research center rooted in the philosophy of public health.

Solutions to serious public health problems—like climate change—typically require an informed citizenry, and informed decision-making and bold leadership by policy makers in the public, private and civic sectors. Effective communication, and the audience insights that shape it, are critically important. “Simple clear messages, repeated often, by a variety of trusted voices” is a formula for effective communication that has proven its worth countless times over the past half century.

Our faculty, staff and students have been working hard to identify promising new approaches to enhance public understanding of climate change, and to build public and political will for climate solutions. Early on, we forged a defining partnership with the Yale Program on Climate Change Communication to create the Climate Change in the American Mind audience research project. This partnership continues to serve as a remarkable engine of

innovation, revealing important insights about public understanding of climate change, and identifying new opportunities to enhance public engagement.

We have identified three particularly important sets of voices that we are helping to speak up about climate change: those of broadcast meteorologists, physicians, and Republicans. Our Climate Matters program provides broadcast meteorologists, who are experts particularly trusted by the public, with the tools they need to educate their viewers about the harmful local effects of global warming. By creating and supporting the Medical Society Consortium on Climate Change & Health, we are enabling physicians to educate the public about the ways that climate change is already harming the health of Americans, especially our children, the elderly, the sick and the poor, and to explain the profound health benefits of climate solutions, now and in the future. RepublicEN, our initiative to engage conservative Americans, catalyzes important new climate conversations focused on solving the problem through free-market approaches.



Through these and other programs - including our climate change communication internship program in national parks, and our collaborations with science museums - we accomplished much. Of course, much more remains to be done.

These are unsettling times. The new administration in Washington has denied climate change and pulled the United States from the landmark Paris Climate Agreement. My colleagues and I are under no illusions about the magnitude of the societal changes necessary to both limit climate change and avert the harms it is causing - but we are proud of the contributions we are making. Indeed, we are redoubling our efforts.

On a happier note, I am particularly pleased to report that the International Society for Environmental Ethics recently awarded its inaugural Public Philosophy Award to our Mason 4C colleague Professor Andrew Light, and announced that the award will henceforth be named the Andrew Light Award for Public Philosophy.

In naming the award for Andrew, the Society noted his important contributions inside and outside of government to the creation of the 2016 Paris Agreement on Climate Change. While on leave from Mason between 2013 and 2016, Andrew worked at the U.S. Department of State as one of the senior members of the delegation that negotiated the landmark agreement. We are delighted that Andrew received this honor, and appreciative of his extraordinary contributions that earned it.

In August of this year, we celebrated our Center's 10th anniversary. I'm proud of that milestone, and I'm confident that our most important contributions are yet to come. Through this annual report, it is a privilege to highlight for you the progress made in the past year. ■



TV weathercasters and the Climate Matters team at workshop hosted at NASA



Ed Maibach conducting a briefing on Capitol Hill

Tracking Public Understanding of Climate Change

Climate Change in the American Mind

Americans' views of climate change are evolving. In 2008, we teamed with the Yale Program on Climate Change Communication to develop the Climate Change in the American Mind audience research project - a series of nationally representative public polls conducted twice annually. Our survey reports and articles explore and track public understanding of climate change and public

support for climate policies, and have provided many organizations in the climate community, the media, and the public policy arena with critical strategic insights. Our research was cited in the charter statement of the U.S. Congressional Bicameral Task Force on Climate Change, and played a role in convincing the Obama White House that the American public is ready for federal action on climate change.

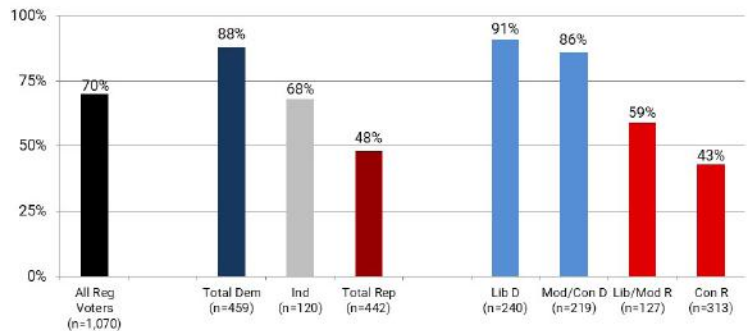
It's hard to imagine a more politically contentious period in America - or a more dangerous time for our climate - than the one we are currently experiencing. While nearly every nation in the world has committed to doing its part to limit the world's warming to no more than two degrees (Celsius), our president has begun to withdraw America from the Paris Climate Agreement, his cabinet is aggressively dismantling our federal responses to climate change, and Congress remains on the sidelines, seemingly hopelessly divided on the issue.

Yet, this year, and in each of the past several years, our surveys demonstrated that Americans are increasingly certain that climate change is happening, and that a large majority of American voters support a range of climate actions by our federal government. For example, seven in ten voters - including a majority of Democrats (86%), Independents (61%) and Republicans (51%) - say the United States should participate in the international agreement to limit global warming (i.e., the Paris Climate Agreement); two-thirds say the United States should reduce its greenhouse gas emissions regardless of what other countries do; nearly eight in ten (78%) support taxing and/or regulating the pollution that causes climate change; and a solid majority want President Trump (62%) and Congress (63%) to do more to address global warming. Moreover, our recent surveys have consistently shown that voters say they are more likely to vote for candidates who support climate action, and less likely to vote for candidates who oppose climate action.

Even conservative Republicans are changing their minds about climate change in record numbers. Over the past three years, among conservative Republicans, we have seen a nearly 20 percentage point increase in belief that climate change is happening.

In short, our research shows that, despite a contentious U.S. election and a president who has publicly described global warming as a hoax, Americans are increasingly sure global warming is happening and they are increasingly worried about it. We have also learned, however, that the average American continues to see climate change as a distant threat: distant in space (i.e., not here), distant in time (i.e., not yet), and distant in species (i.e., not us). Much of our work this year at the Center has sought to remedy these important misconceptions. We are working to activate a range of trusted voices across America who can emphasize that climate change is happening here (in every community in America), now (in 2017), and to us (by affecting our weather, and our health). ■

Registered Voters, Except Conservative Republicans, Support Requiring Fossil Fuel Companies to Pay a Carbon Tax - % who "strongly" or "somewhat support" -



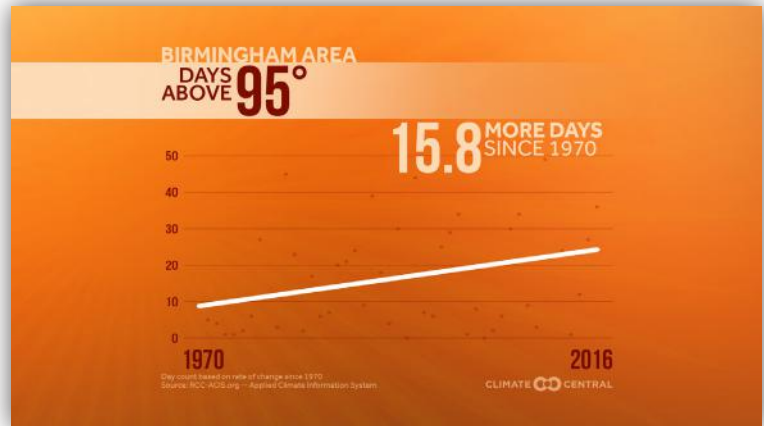
How much do you support or oppose the following policy? Require fossil fuel companies to pay a carbon tax and use the money to reduce other taxes (such as income tax) by an equal amount.

May 2017. Base: Registered American Voters.

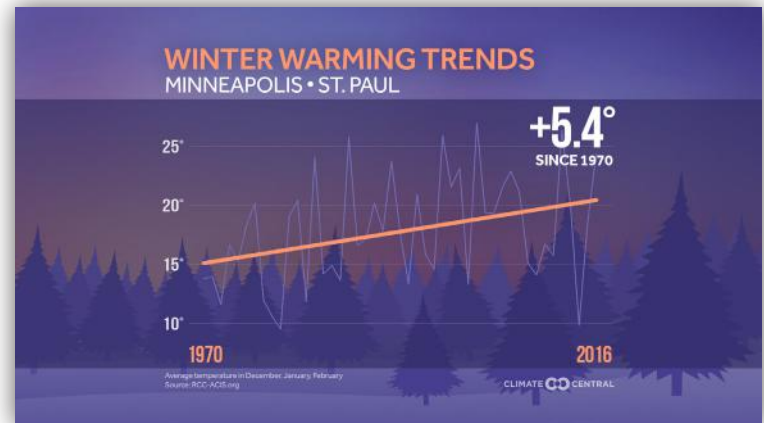
Today's Forecast is...

TV Weathercasters as Climate Educators

Climate Matters - our National Science Foundation supported climate reporting resource program for TV weathercasters - started in 2009 as a one-year pilot test. We developed it in partnership with Climate Central (a climate impacts research and reporting organization) and WLTX-TV, the CBS affiliate in Columbia, South Carolina. At that time, thanks to our public surveys, we knew that most members of the public saw TV weathercasters as a trusted 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 did not have the time or reporting resources necessary to do it well. Other research had convinced us that, unlike climate scientists, weathercasters have unparalleled access to the public as well as superior science communication skills. We intuited that if TV weathercasters could be helped to report on the changing weather patterns in their community, viewers would come to better understand that climate change is happening here, now, to people in their community, thereby helping to remedy the important misperceptions identified in our previous research. In response, we created Climate Matters, a reporting resource program intended to help TV weathercasters report on the local impacts of climate change by providing them with data, broadcast quality graphics, and access to climate scientists.



Days about 95 degrees
Birmingham, AL



Winter Warming
Minneapolis, MN



TV Weathercasters and the Climate Matters team at a workshop in Austin, TX.

Our Climate Matters pilot test was highly successful: over the course of one year, WLTX's viewers came to understand climate change better than viewers of competing stations in Columbia. Working in partnership with Climate Central and with additional new partners including the American Meteorological Society, NOAA, NASA and Yale, we have since expanded Climate Matters into a comprehensive climate reporting resource for weathercasters nationwide. We currently support more than 420 participating weathercasters with localized reporting information, putting us more than one-third ahead of our Summer 2017 participation goal. Participating Climate Matters weathercasters broadcast in more than half the nation's media markets, and several dozen of them broadcast in Spanish (as Climate Matters materials are available in Spanish). Perhaps more importantly, on-air reporting about climate change by weathercasters increased more than 1,200% between 2013 and 2016. In short, the Climate Matters program is thriving.

This year we decided to leverage our success with Climate Matters by encouraging and enabling other local journalists to report on climate change. Research conducted by other

scholars has shown a startling dearth of climate reporting in the American press, especially local coverage, and our surveys have shown that most Americans say they rarely see climate stories in the news. In partnership with Climate Central and a range of journalism associations (including Society of Environmental Journalists, Radio Television Digital News Association, National Association of Black Journalists, National Association of Hispanic Journalists, and The Kneeland Project), we will soon begin offering Climate Matters reporting resources to a large number of local journalists around the nation. We have high hopes that extending Climate Matters deeper into the newsroom (i.e., beyond TV weathercasters) will help end the dearth of local climate reporting, and thereby help Americans better understand the local relevance of the problem, and local solutions.

We are currently using our Climate Change in the American Mind data to evaluate the impact of Climate Matters on public understanding of climate change as a “here, now, us” problem in their communities. ■

The Health Risks

Program on Climate and Health

Record-breaking heat and our rapidly changing climate are creating a constellation of harms to people's health, in America and around the world. These harms come from more extreme heatwaves, increasingly dangerous storms, flooding and drought (and the dislocations that can result from them), reduced air quality (due to increases in smog, wildfire smoke, pollen, and mold), contaminated food and water, and increases in diseases spread by mosquitos, ticks, and animals such as rodents. These harms are not limited to physical health; people's mental health can be affected too as a result of anxiety, depression, and even PTSD.

Our Program on Climate & Health, directed by Mona Sarfaty, MD, was created to achieve several aims: to illuminate clinical practitioners' understanding of the health harms associated with climate change and the health benefits created by climate solutions; to increase public and health professional awareness of the climate change and health connections; and to encourage life-saving preventive and protective action. Three important findings from our research thus far include: (1) Most Americans are unaware of the health harms associated with climate change (and who is mostly likely to be harmed); (2) Conversely, most physicians are aware of the health harms, and many are convinced climate change is already harming some of their patients; and (3) People trust their physicians to provide them with information about climate and health. These findings strongly demonstrate that America's physicians have an important role to play by educating citizens and policymakers about the human health aspects of climate change.



JR Denson and Ed Maibach at the Medical Society Consortium on Climate & Health launch event.

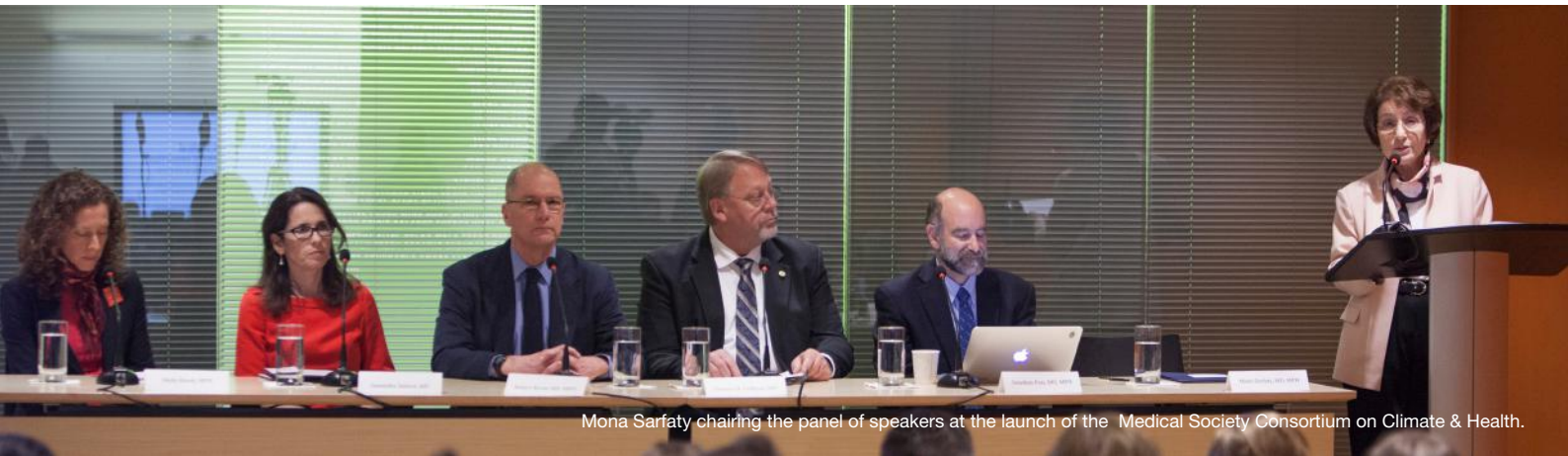
This was a banner year for our Program on Climate & Health, because it culminated in the creation of an important new initiative: The Medical Society Consortium on Climate & Health. On March 15, Dr. Sarfaty and leaders of nine major medical societies (which collectively represent half of America's doctors) launched the consortium with the release of its first report entitled: Medical Alert! Climate Change is Harming our Health. The mission of the consortium is to inform the public and policymakers about the harmful effects of climate change on Americans, and about the immediate and long-term health benefits associated with decreasing greenhouse gas emissions (i.e., heat-trapping pollution) and other preventive and protective measures.

In just a few months, membership in the consortium has grown to 16 medical societies, and 19 other health and climate science organizations have joined as “affiliates.” In addition, several hundred physicians have already volunteered to help the consortium by serving as climate and health champions in their communities, and by speaking with community groups, the media, and local policymakers.

The trusted voices of these 16 medical societies, along with hundreds of volunteer physicians, are seeking to convey five simple messages:

- (1) There is a scientific consensus about human-caused climate change, therefore doctors have a responsibility to take action so that people are not needlessly hurt;
- (2) In communities across America, climate change is already harming people's health;
- (3) The health of any American can be harmed by climate change, but some people face greater risks than others (e.g., children, pregnant women, the elderly, people with chronic illness and allergies, the poor);
- (4) Unless we take concerted action, the harms to our health are going to get much worse; and
- (5) The most important action we can take to protect our health is to reduce heat-trapping pollution by using energy more efficiently and accelerating the inevitable transition to clean renewable energy.

We are optimistic that the consortium will help members of the public and policymakers better understand that our health is one of the most precious things that is at risk as a result of climate change. ■



Mona Sarfaty chairing the panel of speakers at the launch of the Medical Society Consortium on Climate & Health.

Engaging Conservatives

RepublicEn

Climate change is not political—it is a matter of physics, chemistry, and biology, forces that do not have any political ideology—but protecting people from climate change does require policy solutions. Our Climate Change in the American Mind surveys have repeatedly shown that a large majority of Americans support climate solutions. Regrettably—with the exception of some states and many American cities—the same cannot be said for political will, which is sadly lacking.

Through our RepublicEN initiative, we are seeking to catalyze a new narrative and important new conversations among America's thought-leading conservatives. That narrative—based in free-market thinking—aims to generate political will for climate solutions. Led by Bob Inglis, a former six-term Republican member of Congress from South Carolina, our RepublicEN team uses media interviews, community events, polling data, climate science, and a rapidly growing online community to educate fellow Republicans about tax reforms that can benefit our climate, our economy, and our health.

In 2015, Bob was awarded the John F. Kennedy Profile in Courage Award for political courage by the John F. Kennedy Library Foundation. On September 12, 2016, Bob and RepublicEN advisor Katharine Hayhoe, a climate scientist at Texas Tech University, were named on the Politico 50 list for their work on what Politico called articulating “the conservative case for fighting climate change.” The site's top 50 ranking is described as a “guide to the thinkers, doers and visionaries transforming American politics in 2016.”



JFK's grandson John Schlossberg presenting Bob Inglis with the Profile in Courage Award.

Ironically, given the inexplicable anti-climate science views being expressed by President Trump and his administration, the past year may prove to be a watershed moment for Republican embrace of climate solutions. A growing list of prominent Republicans have come out in support of a revenue-neutral carbon tax to address climate change and strengthen our economy, 26 Republican members of Congress have joined the Climate Solutions Caucus, and our RepublicEN team is more energized than ever. Bob recently summarized his feelings about the opportunity at hand: “We are making progress. Conservatives are going to come around on climate. We are going to realize that we are all in this together, and the world is going to celebrate American leadership. This is our generation’s moon shot.” ■

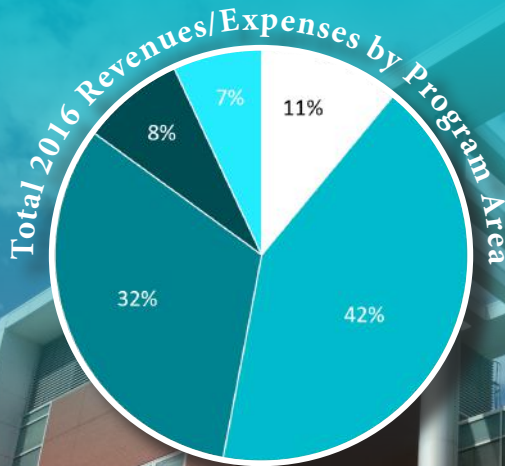


Importing Help and New Skills from Down Under

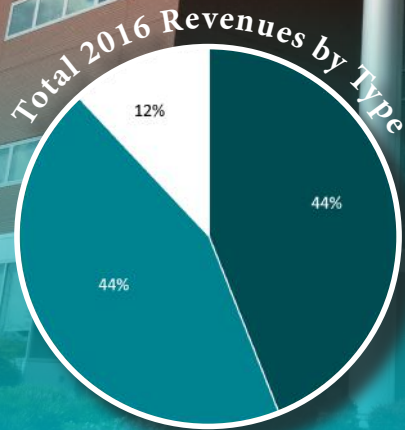
In January 2017, John Cook, PhD, joined 4C as a Research Assistant Professor. Dr. Cook hails from Australia and recently completed his PhD in psychology at the University of Western Australia. His research focuses on the negative influences of misinformation on public engagement in climate change, and how to neutralize those influences. A physicist turned climate change communicator, John has become one of the most influential members of the climate change communication community, worldwide, over the past decade. In 2007, he created the Skeptical Science website (skepticalscience.com) to explain climate science in simple clear terms and debunk global warming

misinformation. Skeptical Science is widely seen by climate scientists and other climate educators as an invaluable educational resource. John has also published five books and dozens of articles on climate change and misinformation. For his efforts, John has received numerous prestigious awards including a 2012 Eureka Prize for Advancement of Climate Change Knowledge (Australian Museum), a 2013 Peter Rawlinson Conservation Award (Australian Conservation Foundation) and a 2016 Friend of the Planet Award (National Center for Science Education). We are fortunate to welcome him to the United States, and the 4C team. ■

2016 Financial Review



Program Area	Total 2016 Expenses	Total 2016 Program Revenues
RepublicEN	\$1,132,439	\$1,132,439 ¹
TV Weathercasters as Climate Educators	\$869,102	\$869,102 ²
Climate Change in the American Mind	\$220,547	\$220,547 ³
Program on Climate and Health	\$212,176	\$212,176 ⁴
Improving Place - Based Public Engagement	\$292,651	\$292,651 ⁵
Total	\$2,726,915	\$2,726,915



Revenue Type	Amount
Grants/Contracts	\$1,211,629
Contributions	\$1,189,439
College / University Support	\$325,847
Total	\$2,726,915

1. \$745,354 was received in 2016; the remainder was received in 2015.
2. \$38 was received in 2016; the remainder was received in 2015.

3. \$100,000 was received in 2016; the remainder was received in 2015.
4. \$408,200 was received in 2016; the surplus will be used for subsequent years.
5. \$89,679 was received in 2016; the remainder was received in 2015.



Thank
YOU

FOR YOUR SUPPORT

In addition to our grant funders, which include National Science Foundation, NASA, National Park Service, Grantham Foundation for the Protection of the Environment, Energy Foundation, Rockefeller Family Fund, Robert Wood Johnson Foundation, and Town Creek Foundation, we would also like to thank Mason's College of Humanities and Social Sciences. We are especially grateful to Dean Deborah Boehm-Davis—and her predecessor Dean Jack Censer—for 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 2016-2017 fiscal year. Our work would not be possible without their generous support. We look forward to involving them more in our work over the coming months and years.

\$100,000 - \$999,999

Anonymous

The Kresge Foundation

Linden Trust for Conservation

Skoll Foundation

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The Energy Foundation

Johnson and Johnson Companies

\$5,000 - \$49,999

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Center for Climate Change Communication
George Mason University
4400 University Drive
Fairfax, Virginia 22030