In the spring of 2021, the MIT Environmental Solutions Initiative (ESI) launched its inaugural Environmental Solutions Journalism Fellowship. The four-month fellowship supported five journalists associated with local and regional newsrooms with professional development, a stipend, and specialized resources to support their projects: high-impact news stories run through their outlets that connect local priorities with climate impacts and solutions. By engaging Americans who are unsure, disengaged, or doubtful about the need to act on climate change, we advanced our larger goal of building stronger public support for urgent, equitable and science-based climate action.

"This approach made readers who are skeptical of climate change and renewable energy let their guard down and consider these topics with a more open mind."

- Tristan Baurick, 2021 ESI Journalism Fellow

Please see the end of this report for all image credits.
BACKGROUND

It is critical to engage Americans across the political spectrum on climate change. Surveys find that around 43% of American adults think that global warming is not caused by human activities, and only 52% say global warming should be a high priority for the President and Congress. When you separate audiences by political affiliation, it paints a telling picture: 85% of Democrats say they are worried about global warming, whereas only 40% of Republicans say the same. Given the scientific consensus on the causes and impacts of climate change — and the need for bipartisan support of ambitious climate policies — these are alarming figures.

We need to make climate change local
Studies show that localizing climate change impacts and solutions are effective ways to convince individuals that climate change is happening and engage diverse audiences in climate solutions.

Yet climate journalism is often limited to national news outlets
In recent years, national news outlets like The Washington Post and The New York Times have increased climate change reporting, employing dedicated journalists and sometimes running front-page climate stories. Yet this treatment is still mostly reserved for national and specialty publications. In local papers, climate issues receive far less coverage, and are usually reported by journalists covering other beats such as politics or economics.

And local journalism in general is on the decline
Local news outlets generally do not have the resources or expertise to take on climate change reporting. In fact, over the past 15 years, about 2,100 newspapers — more than 25% of the country’s total newspapers — have permanently closed, leaving over 65 million Americans without a local paper.

But there are local reporters and outlets who want to cover climate stories
MIT Environmental Solutions Initiative (ESI) saw an opportunity to locate these journalists and bolster their ability to tell meaningful and impactful local stories on climate change. In doing so, they would be engaging Americans through the outlets that they rely on and trust the most: local news.

Please see the end of this report for sources.
Call for applications included outreach to dozens of journalists, editors, news associations, journalism networks, focusing on parts of the country where climate change is not a salient political issue.

Fellow applications required a project proposal and publication commitment from a newsroom.

Fellowship activities ran from June through September.
Fellowship included eight workshop sessions and biweekly cohort calls.
Stipend of $15,000 was designed to cover 75% of their time during this period.
Also offered an expense budget for travel, materials, and media development.

Stories were published by Fellows' news outlets October 2020 - January 2021 (ESI holds republishing rights for all stories and media).

ESI hosted a public virtual event featuring journalists in November 2021.
MIT News story about the fellowship published January 2022.
PROJECT ADVISORY

- **Deborah Blum**, Director of the MIT Knight Science Journalism Program (listed project advisor)
- **Prof. Jim Paradis**, Robert M. Metcalfe Professor of MIT Writing and Comparative Media Studies (listed project advisor)
- **Steve Sapienza**, Senior Strategist, Pulitzer Center
- **Christina Couch**, Assistant Director of Professional Development, MIT Graduate Program in Science Writing

RESOURCES FOR FELLOWS

- **MIT Libraries**: Christine Sherratt, MIT Earth, Energy & Environmental Science Librarian & Madeline R Wrable, GIS Specialist
- **Science Writing**: Joshua Hatch, editor, KSJ Science Editing Handbook & Brooke Borel, project lead of the KSJ Fact-Checking Project and author of the Chicago Guide to Fact-Checking
- **Climate Modeling**: Dr. Adam Schlosser, Senior Research Scientist and Deputy Director for Science Research at the MIT Joint Program on the Science and Policy of Global Change
- **Energy & Environmental Policy**: Joshua Hodge, Executive Director of the MIT Center for Energy and Environmental Policy Research
- **Climate communications**: Fen Montaigne, Senior Editor @Yale 360 and editor of the Knight Science Journalism’s handbook chapter on covering climate and the environment
- **Listening tools**: Jess Weaver, Local Voices Network (LVN) & Cortico (affiliated with MIT Media Lab)
- **Listening approaches**: Prof. Arlie Hochschild, professor emerita of sociology at the University of California, Berkeley and bestselling author
FELLOWSHIP RESULTS

PRODUCTS

- 21 published stories
- 6 podcast episodes
- 194 photographs
- 18 graphics & charts
- 22 maps
- 5 videos
- 1 interactive website
- 3 radio interviews
- 4 public events
- 3,300+ attendees at these events
- 2 journalism awards won by Fellows

READ ALL STORIES

HTTPS://ESI.MIT.EDU/ESI-JOURNALISM-FELLOWSHIPS/

Fellow locations
Fellowship project:

- Six reported pieces (link to the first story), digital and print
- Six-episode podcast series, “Future-Facing Farms”
- A short explanatory video on climate and photosynthesis
- Minnesota Public Radio radio interview
- Public event

In late 2021, selected as an Minnesota Initiator Fellow
Won a 2022 Best of Gannett award for her project

EXCERPTS FROM NORA’S PROJECT

Farmers are getting paid to fight climate change by cultivating a new cash crop: carbon

LITTLE FALLS — MinnesotaInitiator Fellow Amy Rhah describes helping carbon markets as the wild west.

And she's not the only one who sees it that way.

"There’s a regulatory bubble around it," Rhah said.

There’s still debate about just how much carbon farmers can intentionally draw from the air and deposit into the soil, a process called carbon sequestration.

Rhah is working that frontier. She helps farmers change some practices and measure the impact on their soils as they join a new carbon marketplace backed by corporate partners including Land O’Lakes and General Mills.

How do carbon markets work?

Agribusiness carbon markets pay farmers to draw greenhouse gases, namely carbon dioxide, from the air and keep it locked in the soil to fight climate change. Plants do this naturally through photosynthesis.

Glossary of carbon farming terminology

- **Agroforestry**: An approach to land management and crop production.
- **Carbon markets**: An exchange in which businesses or other entities buy credits to counterbalance their carbon pollution. The money goes to land managers, such as farmers or land owners, earning them carbon credits to sell.
- **Carbon sequestration**: The capture and storage of carbon dioxide from the atmosphere. It’s a natural process, but a human one, among a few isolated solutions.
- **Carbon footprint**: The total greenhouse gas emissions associated with an activity, product, or service, over its entire lifecycle.
- **Climate change**: Long-term shifts in weather patterns. Climate change is human-caused, including the widespread burning of fossil fuels and deforestation.

Continued on the next page.
Adapting to a changing world

Plants can help reduce the effects of climate change through photosynthesis.

How plants can help combat climate change through photosynthesis (146)

Future-Facing Farms

A St. Cloud Times podcast series on six Minnesota farms at the forefront of conservation and climate change stewardship, made possible with support from the MIT Environmental Solutions Initiative.

Episodes

Future-Facing Farms-Ep. 9 - How curiosity and joy led two cousins on a journey into regenerative agriculture

Episode 6 - Jared and Tyler)

Future-Facing Farms-Ep. 8 - Two farmers turn to cover crops for their fields' health

Future-Facing Farms-Ep. 4 - Little Falls farmer uses cover crops to leave soil better than he found it
TRISTAN BAURICK

The Times Picayune | New Orleans Advocate - New Orleans, Louisiana
Environment reporter

Fellowship project:
- Five-part investigative series, digital and print
- Public event
Read the series on NOLA.com

EXCERPTS FROM TRISTAN'S PROJECT

- Front page, above the fold features of the Thanksgiving print edition
- The Times-Picayune is Louisiana's largest paper

Continued on the next page.
"All of us that have been in oil and gas, we all need to look at switching to wind, because the question of 'if' or 'when' wind will happen has long since passed and gone."

- State Rep. Joe Orgeron, Louisiana businessman

With our experience in offshore oil, Louisiana is well positioned to build another successful offshore energy industry. Great investment.

"What we'd love to see is Louisiana do the same as New Orleans." Absolutely! I was proud to lead and enact New Orleans clean energy regs and goals. We have one of the top policies in country, but for major industries to move in, LA needs to do same!

Louisiana oil workers built first U.S. offshore wind farm on East Coast. Can the... Turbines could start sprouting in waters off Louisiana and Texas within the decade.

Louisiana sent a 'strong signal' to offshore wind developers, but is it enough? New Orleans' commitment to renewable energy caught eye of growing industry.
MELBA NEWSOME

North Carolina Health News - Charlotte, North Carolina
Independent journalist

Fellowship project:
- Two-part series (Oct 20 story, Oct 29 story), digital
- Two public radio interviews
- An interactive map project forthcoming in 2022
In 2022, selected as a Logan Science Journalism fellowship.

EXCERPTS FROM MELBA’S PROJECT

Reporting included fly-over and drone footage of hog waste piling up in floodplain zones.

Continued on the next page.
"When Hurricane Floyd brought life-threatening and catastrophic flooding ashore in September 1999, floodwaters breached the lagoons and transformed coastal rural communities like the McKivers’ into seas of dead hogs, chickens, turkeys and their toxic waste."

- Excerpt from Mebla’s Oct 29 story
DUSTIN BLEIZEFFER

WyoFile - Casper, Wyoming
Education Reporter

Fellowship Project:
- Three-part series (story one, story two, story three), digital
- Four videos
- Public event, “Beginning the Climate Conversation in Wyoming”

EXCERPTS FROM DUSTIN’S PROJECT

Wyo residents observe a changing climate and quality of life

Extreme conditions feel like the continuation of a shift in climate patterns residents have observed over their lifetimes, they say.

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“Let’s have a conversation about what we can do and how we can start preparing ourselves.”

-JOSEF PEREL, PRESIDENT, WYOMING WATER ASSOCIATION

This annual mean springtime temperature in the Upper North Platte Valley, for example, has increased by 2.4 degrees Fahrenheit since 1925, according to National Oceanic and Atmospheric Administration data. That’s double the global average increase of about 1.3 degrees Fahrenheit. That rate of warming has major implications for a watershed.
Wyoming climate data holds ominous clues about life, economy

Emanuel temperature levels recorded in June, setting the stage for an unusually wet and chilly summer. Conditions were severe enough to prompt warnings from the state.

Wyoming residents take stock of what appears to be changing climate patterns.

Gillette, Campbell County plan for post-coal economy

Energy-related issues in the region are complex and interwoven. Coal mining communities are facing the transition to a post-coal economy.

Wyoming is Wyoming because, like it does in any place, talking about a changing climate is none easy task, especially when politics and policy are involved.

Dustin Bleizeffer
Excerpts from fellow's project
EXCERPTS FROM ALEX’S PROJECT

PROJECT KLAMATH

Saving a watershed in the climate change era

Fellowship Project:
- Five-part series, including climate fiction narrative, released on an interactive website and weekly print publications
- NPR On Point radio interview

Work won an Eric and Wendy Schmidt Award for Excellence in Science Communication, given by the National Academies.

Continued on the next page.
"It did more than tell stories. It also suggested ways out of the area’s bitter water and environmental conflicts while painting a specific picture of what a climate-changed future actually may look like. The report showed that how people respond to the coming changes could make a vast difference."

- Oregon Capital Chronicle, on Alex’s project
FELLOWSHIP RESULTS

REACH OF HOST OUTLET

Each story was published by the journalist’s host outlet. Some of these outlets have only a digital presence; some have both a digital and a print presence. The collective print circulation of the host outlets is over 113,000. For stories published online, the Fellows sent us click metrics for each story. Collectively, the stories had 77,838 direct visits as of December 2021. (Note that one fellow's stories were still being published as late as January 2022, so we expect this number to increase.)

ADDITIONAL LOCAL + NATIONAL REACH

The Fellows’ stories were republished by dozens of local, state, and national media outlets, including USA TODAY, U.S. News & World Report, Associated Press (AP), Yahoo News, Apple News, and public radio programs. These are listed in full on the next page.

The numbers listed above do not include the circulation figures or page views for the news outlets that republished the original stories.

However, we expect the additional local and national reach to be in the hundreds of thousands; for example, USA TODAY alone reportedly has a weekly print circulation of over 720,000, a digital-only subscriber base of over 500,000, and a daily readership of over 2.5 million.

"What local journalism should be."
- Gillian Flaccus, reporter for AP, on Alex’s project

"This project is a model for really deep, engaged environmental reporting."
- Emma Marris, reporter for The Atlantic, NatGeo Mag, WIRED, etc., on Alex’s project
FELLOWSHIP RESULTS

OUTLETS THAT REPUBLISHED FELLOWS’ STORIES

Nora Hertel
St. Cloud Times*
USA TODAY*
USA TODAY’s Climate Point Newsletter
U.S. News & World Report
Associated Press (AP)
Yahoo News
Apple News
El Paso Times (TX)
The Star Tribune (MN)
Winona Daily News (MN)
La Crosse Tribune (WI)
Titusville Herald (PA)
Herald Standard (PA)
Minnesota Public Radio **

Alex Schwartz
Herald & News*
Oregon Capital Chronicle
NPR On Point **
Datawrapper

Tristan Baurick
The Times-Picayune | New Orleans Advocate*
The Catch Basin
The Advocate of Baton Rouge
Acadiana Advocate of Lafayette, LA

Melba Newsome
North Carolina Health News*
Indy Weekly
North Carolina Public Radio (WUNC) **
Charlotte, NC Public Radio (WFAE) **
Environmental Health News
The Daily Yonder

Dustin Bleizeffer
WyoFile*
Energy News Network
Wyoming Tribune-Eagle*
Laramie Daily Boomerang*
Casper Star-Tribune
Sheridan Press
Uinta County Herald
Pinedale Roundup
Rawlins Times
County17
Oil City News

* front page feature
** interview with fellow
FELLOWSHIP RESULTS

GOVERNMENT OFFICIALS

Known attendance at an event hosted by the Fellow:
- Dave Kleis, Mayor of St. Cloud, MN (R)
- Minnesota State Sen. Aric Putnam (D)
- Minnesota Rep. Lisa Demuth (R)

Personally contacted the Fellow:
- Minnesota State Rep. Lisa Demuth (R)
- Minnesota House Assistant Majority Leader Dan Wolgamott (D)

Publicly referenced a Fellow’s project:
- U.S. Senator Bill Cassidy (R-LA)
- Helena Morena, New Orleans City Council member
- Thom Petersen, Minnesota Commissioner of Agriculture

Subject in a project:
- Louisiana State Rep. Joe Orgeron (R)
- Wyoming State Rep. and Speaker of the House of Representatives Eric Barlow (R)

“I have [used] this reporting to advocate against the media lockdowns that have plagued local agencies due to the political tension associated with drought in the Klamath Basin.

The ... two [government] agencies that have some of the biggest impacts on water management in the basin finally began to ... provide me more information after we published Project Klamath.”
- Alex Schwartz
FELLOWSHIP RESULTS

AWARDS WON

Nora Hertel - Best of Gannett 2021

The competition -- which is run by the company that owns USA TODAY -- received over 1,950 entries for 20 categories this year.

"Judges praised [Hertel's] strong focus on solutions and the innovative digital presentation."

Alex Schwartz - Eric and Wendy Schmidt Award for Excellence in Science Communication 2022

The award was given by the National Academies of Science, Engineering, and Medicine in partnership with Schmidt Futures.

"Schwartz provides insightful and comprehensive reporting in this outstanding body of work. Environmentalism, indigenous rights, bureaucracy, and climate change all come to a head in this extremely thorough collection of pieces about the Klamath Project."
"I received more emails on the series than probably any other story or project I’ve worked on."

"Resource development director for the Modoc Nation said a comprehensive look at the Klamath has been something many people have tried to do in the past, but that this was the one attempt that succeeded. He called me a “hero” for writing it!"

"Some of the companies and experts I featured have been getting many questions from other offshore oil and gas industry-focused companies about how to diversify into the offshore wind industry."

"The project has prompted us to cover the topic of offshore wind energy more closely. I’ve already written one follow up..."

"I heard feedback from [Wyoming Water Development Association, the Wyoming Outdoor Council, and the Powder River Basin Resource Council] that my reporting project was a boost and has helped to encourage them to continue the efforts.”

"[The number of climate stories put out by my colleagues] is definitely more than I’ve seen since I’ve worked here (within the last four years)."

"The fellowship and my project was integral to convincing my employer ... to agree to my request to shift from education reporter to energy & climate reporter."

"A tribal advocate from downriver said Project Klamath is something people will cite in the future during discussions about water in the Klamath."

"The former news director of the Klamath Tribes told me she cried after reading the final section of Part 5, the ‘hopeful’ vision of the future Klamath Basin."
FELLOWSHIP RESULTS

Q: HOW DID THE SUPPORT OR INVOLVEMENT OF ESI MAKE A DIFFERENCE FOR YOUR PROJECT?

"It allowed me to stop hedging around the term 'climate change.'"

"The ESI convinced my newsroom to give me a ton of time to investigate and report on a very complicated and nuanced topic. That would not have happened otherwise."

"The ESI fellowship connected me with a handful of excellent and friendly journalists across the country for support — the minimum requirement of a fellowship."

"It made it possible. ... I had been hoping to write about [this topic] for about two years before I pitched my project to ESI — I hadn't been able to take the time and resources with all my other responsibilities. ... If I only had a day or two to report this I wouldn't have been able to grasp and communicate the complexity."

"It allowed travel that might not be approved by my publication. It also connected me to experts that were helpful in my reporting."

"ESI support allowed an important reporting trip that likely wouldn't have happened otherwise. The trip really helped with the storytelling and audience engagement. It allowed us to 'show' readers a concept ... that doesn't yet exist in our area."
FELLOWSHIP RESULTS

Q: IN YOUR PERSONAL ASSESSMENT, HOW SUCCESSFUL WAS YOUR PROJECT IN ENGAGING READERS WHO ARE UNSURE, DISENGAGED OR DOUBTFUL ABOUT THE NEED TO ACT ON CLIMATE CHANGE?

“A local conservationist called it a ‘masterpiece’ and said: ‘You’re not dividing people. You’re not pushing buttons.’”

“The project relied on experts from the oil and gas industry to introduce the idea of offshore wind energy and the opportunities it could offer the region. This approach made readers who are skeptical of climate change and renewable energy let their guard down and consider these topics with a more open mind.”

“...my project definitely made strides. The first and most obvious were the people I interviewed and featured in my reporting. All but one are climate skeptics, but they spoke in detail about climate changes they’ve observed, and very eloquently described their concerns. ... I’m still receiving comments about enthusiasm to keep the conversation going.”

“...I reached [several dozen to a few hundred] people in agriculture and a few state lawmakers doubtful or unsure about climate change. I interviewed a number of people who don’t worry about climate change but are involved with natural climate solutions for other reasons like soil benefits and carbon payments. A Republican lawmaker attended the event and told me she appreciated the ‘helpful information’ and meeting the other people there — she has not been involved in climate policy up to this point. I also know the stories really resonated with people who feel there’s not enough local coverage on climate issues. Readers told me so, and the engaged time on [the digital webpages of] these fellowship stories was longer than most.”
IMAGE CREDITS

All included images were provided by the Fellows or were produced through the fellowship, and are used with permission.

Pg 1.
• Dustin Bleizeffer, WyoFile. *Campbell County rancher Eric Barlow surveys the family ranch Sept. 23, 2021.*
• Dave Schwarz, St. Cloud Times. *Farmer Jason Lorenz holds a handful of soil from a field he farms Aug. 31 near Little Falls.*
• Chris Granger, NOLA.com / Times Picayune. *Joseph Orgeron, left, stands in front of the lift boats that were used to install wind turbines in Rhode Island and talks to some of the south Louisiana crews who worked on that project: right to left, Jed Lorraine, Keith Randazzo and Kenneth Miers, all based in the Houma area.*
• Cape Fear River Watch. *An aerial view of an industrial poultry farm with piles of litter next to it in eastern North Carolina.*

Pg 2.
• Arden Barnes, Herald and News. *A sign reads “Endangered farmer can’t survive without water” near Tulelake, Calif. on June 14, 2021.*

Pg. 3
• Chris Granger, NOLA.com / Times Picayune. *The platforms for these wind turbines in the Atlantic Ocean near Block Island, Rhode Island, were made in south Louisiana.*

Pg. 7
• Dave Schwarz, St. Cloud Times. *Assistant Extension Professor Anna Cates speaks during a Soil Stewardship and Nutrient Management Field Day on Sept. 1 near Albany.*
• Dave Schwarz, St. Cloud Times. *Jon and Dewayne Lesemoe hoe weeds from rows of trees growing on a plot Wednesday October 6, 2021 at the Badura State Forest Nursery near Akeley.*
• CRS. *Many agricultural activities release carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O) to the atmosphere. Some store carbon in plants and soil.*
• Photo by Caroline Yang, St. Cloud Times. *Tyler Carlson rests on a tube protecting an oak seedling at Early Boots Farm in Sauk Centre on Monday, July 19, 2021. Carlson is working to restore the oak woodland landscape on the farm where he raises grass-fed beef, pastured lamb, sour cherries and honey berries.*

Pg. 9
• Dan Swenson, Bureau of Ocean Energy Management.
• Dan Swenson, National Renewable Energy Laboratory.
• Chris Granger, NOLA.com / Times Picayune. *Louisiana state Rep. Joseph Orgeron stands in front of the lift boats that were used to install wind turbines in Rhode Island. The boats are based in Houma.*
IMAGE CREDITS (CONTINUED)

All included images were provided by the Fellows or were produced through the fellowship, and are used with permission.

Pg. 10
• Cape Fear River Watch. An aerial view of an industrial poultry farm with piles of litter next to it in eastern North Carolina.
• Bladen County Tax Assessor website. Screenshot from the Bladen County Tax Assessor website shows two parcels of land: One 261 acre parcel was purchased by Kinlaw Farms LLC in 1998, the other 34 acre plot (outlined in blue) was purchased by Billy Kinlaw in 1994.

Pg. 11
• Melba Newsome, NC Health News. Mt. Zion AME Church in Duplin County.
• Photo credit: Cape Fear River Watch, An aerial view of an industrial hog farm and lagoons filled with waste in eastern North Carolina.

Pg. 13
• PRISM Climate Group, Oregon State University. Wyoming’s highest elevations persistently experience warmer temperatures compared to a 30-year average.

Pg. 14
• Arden Barnes, Herald and News. The town of Klamath, California, is located near the mouth of the Klamath River.
• Illustrations by Jenna Gibson.

Pg. 15
• Arden Barnes, Herald and News. Amy Cordalis cleans a salmon caught by her and her father, Bill Bowers, via gill net on July 21, 2021.
• Maps from the U.S. Drought Monitor.
• Arden Barnes, Herald and News. Taylor Thompson (left), the Yurok Tribe’s food sovereignty division manager, and Louisa McCovey (right), the Tribe’s Environmental Director, pose for a portrait on Sept. 23, 2021, on the 48-acres of land soon to become a “food village”.
• Illustrations by Jenna Gibson.
Sources from Background section:

- Sands, J. (2019, October 29). Local news is more trusted than national news—But that could change. Knight Foundation. https://knightfoundation.org/articles/local-news-is-more-trusted-than-national-news-but-that-could-change/

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