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Fighting Climate Change Is a Capital Idea

Graham Macmillan sees market incentives as powerful tools

By Gerry Boyle '78

In coming years, action on climate may come from what some would consider the least likely direction—capital markets.

Where some people might consider the demands of capital markets to be at the root of social and environmental problems, Graham Macmillan '97 sees market incentive as wielding powerful leverage to help bring about solutions to the world's most vexing challenges.

Macmillan is chief executive officer at the Visa Foundation, a position he assumed recently after an eight-year stint at the Ford Foundation. Prior to that he helped manage impact investing at Citibank, where clients that include pension and sovereign funds take a long view of risk—including the calamitous effects of climate change.

"It's not a black-swan event anymore," said Macmillan, referring to the theory regarding the rare and unpredictable. "It's more like a Canada geese event. You know [climate-related events] are going to come every year, and it's more and more predictable. The cost of capital increases for an investor or a firm that doesn't mitigate the effects of climate change is evident."

In other words, thinking short term will cost investors money.

A history and international studies major at Colby, Macmillan speaks in sweeping terms (think TED talks) about systemic change and the forces that bring it about. He was profoundly affected, he said, by Professor of History James Webb, whose course Ecological Change in Human History caused Macmillan to understand the complex relationships between global forces—economic, social, environmental—that shape our world. "Holy Cow! I get it now," he recalled saying.

He's been "getting it" ever since, and helping others in a variety of communities to do the same. "I'm a translator," Macmillan said. "My entire career is about translation among tribes. Tribes of social impact and environmental impact and caring about community, the tribe of business and capital markets and, increasingly, the tribe of technology. … I can't code. I'm not a CPA. I've chosen not to become a CFA, and I'm not even a policy wonk. But I know about all that, and I know I have an ability to see the pattern."

One pattern Macmillan has discerned is that the effectiveness of impact investing—for the environment, social justice, healthcare—would be exponentially greater if the same principles were applied to capital markets in general. "One has to be willing to let go of deeply held beliefs that impact investing is the only way. Learn from that, but take those lessons and embed yourself in the largest market systems that are out there. And work with the pension funds, work with governments, the largest companies."

For the rest of Graham Macmillan's story go to the Colby Climate Project online.

Reduce that Footprint

It can be done, and David Farnsworth will show you how

By Bill Donahue ’86

David Farnsworth ’78 travels the world, advising utility regulators and private citizens how to reduce their carbon footprints. But he is less an evangelist than a keen connoisseur of eco-friendly energy options. I learned this the hard way recently when I caught up with Farnsworth before he gave a talk in Wellesley, Mass.

To reach Wellesley from my home in New Hampshire, I woke at 4; caught a bus from the state capital, Concord, into Boston’s South Station; and then pedaled my bicycle 15 miles west through the city’s affluent suburbs. When I arrived, perspiring, my trouser cuffs speckled with grease, Farnsworth regarded me with an appreciative grin.

“Multimodal,” he said, sizing up my carbon-reduction tactics. “You took the Jimmy Carter approach. You know, turn the heat down a little, wear a sweater. Suffer.”

Soon, at the podium, Farnsworth began extolling the wonders of other, more evolved methods of slashing carbon emissions. “Electrification!” he reveled. “Unless your car gets more than 45 miles a gallon, an electric vehicle will be less carbon-intensive than a gas-powered one, even if the electricity comes from a coal plant.”

Farnsworth had graphs for the 40 assembled affiliates of the Wellesley Green Collaborative. He had a colorful PowerPoint, and throughout he struck a surprisingly hopeful note, stressing the promise that electrification can bring to a warming world that is ever more inclined to consume energy. In 2016, he said, American power plants emitted just as much carbon as in 1990. “But they produced 30 percent more energy. They’ve just become more efficient!”

Appreciative oohs and ahs rippled through the room, as though Farnsworth had just uncorked a rare vintage of pinot noir. But this was an easy audience for Farnsworth, who since 2008 has been with Regulatory Assistance Project (for a decade as senior associate, and since earlier this year, as principal), a Montpelier, Vermont-based nonprofit whose energy advice is funded not by client, but by foundations. Mostly, he meets with regulators, including the Department of Energy and Environmental Protection Agency, even the energy regulatory commissioners of Mongolia, officed in Ulaanbaatar, one of the world’s smoggiest cities. These people are, he says, “very conservative. They’re spending millions of dollars of public money, and they’re exceedingly careful.”

Farnsworth speaks to these folks in the language of pragmatism—his slideshows dwell on cost savings and “better grid management.” He never tells anyone what they should do. Rather, he avails them of options, discussing, say, the pros and cons of having utility companies, rather than vehicle owners, pay for electrical vehicle charging stations. He helps guide clients toward decisions that are at once sensible, green, and so rooted in such nuanced discussions that Farnsworth is professionally enjoined from discussing results. “We’re not advocates,” he stresses, alluding to his RAP cohorts. “We’re advisors.”

For the rest of David Farnsworth’s story go to the Colby Climate Project online.

Climate Conversations—in our Galleries

At Colby Museum, art focuses concern for the future of the planet

By Sharon Corwin

One day last spring, a group of students came to the Colby Museum of Art to study and discuss Maya Lin's sculpture *Disappearing Bodies of Water, Arctic Ice* (2013). It was exciting and instructive to watch this group, a class of environmental science students, as they engaged with Lin's work. Their questions emerged out of a distinct disciplinary perspective—an orientation that one might not readily encounter outside of a college or university museum.

Fashioned out of Vermont Danby marble, Lin's piece, which is part of the museum's Lunder Collection, is a representation of the Arctic ice shelf. It shows, through a series of topographic renderings, the severe reduction in its mass from 1980 to 2013 (a period when more than a million square miles of sea ice extent disappeared from the Arctic Ocean). The professor leading the class, Assistant Professor of Environmental Studies Benjamin P. Neal, drew attention to the Siberian side of the sculpture, which contained fewer topographic layers than the North American side and indicated the accelerating reduction of the ice mass. A discussion ensued that considered the effects of warming oceans and rising sea levels on the marine ecosystem. The students then began to think about how the sculpture expressed themes of disappearance and loss and how its materials and form—a table of thinly carved marble balanced atop a granite base—might serve as a cautionary metaphor for the increasingly precarious condition of the natural world. Even as they brought their own ways of seeing to Lin's work, the sculpture in turn offered students new vocabularies with which to explore the environmental topics that they were learning about in class.

The museum regularly fosters these sorts of interdisciplinary encounters with works of art connecting with the scholarly expertise of faculty and students' wide-ranging pursuits. Our mission as a college art museum is rooted in a commitment to dialogues between art and the sciences as well as between art and the humanities, so we are well positioned to take up some of the most pressing issues facing the world today. One such issue, the ecological threat posed by global climate change, is precisely what the Lin sculpture asks us to grapple with.

In 2017 the Colby Museum and the Lunder Institute for American Art launched at the Colby Museum a new collaborative initiative, dedicating a series of exhibitions and programs to climate change. These efforts are taking place alongside Colby-wide initiatives in the environmental sciences and humanities, including a new Summer Institute in Environmental Humanities, the Environmental Humanities Faculty Seminar, the work of Colby's Buck Lab for Climate and Environment, and the College's partnership with the Bigelow Laboratory for Ocean Sciences.

This past summer, for instance, the Colby Museum and the Lunder Institute collaborated with Phong Bui, the founder and artistic director of the *Brooklyn Rail*, a journal devoted to the visual arts, culture, and politics. As a 2019 Lunder Institute Fellow, Bui organized an exhibition at the Colby Museum titled *Occupy Colby: Artists Need to Create on the Same Scale that Society Has the Capacity to Destroy, Year 2*, part of an ongoing *Brooklyn Rail* project that began in 2017 at Mana Contemporary in Jersey City. The exhibition and its associated publication examine environmental issues through the work of contemporary artists such as Lauren Bon, Mel Chin, Mark Dion, and Meg Webster; related programs provide an opportunity for scientists, artists, policy experts, and historians to engage in public conversation with one another.

Our summer schedule also included *Wíwənikan… the beauty we carry*, an exhibition of and by First Nations artists in what is now Maine and Maritime Canada. Curated by Jennifer Neptune, a Penobscot basketmaker and beadworker, and Kathleen Mundell, the director of Cultural Resources, Inc., the show was organized in collaboration with artistic and cultural leaders from the Maliseet, Micmac, Passamaquoddy, Penobscot, and Abenaki peoples, who are collectively known as the Wabanaki. The exhibition, catalog, and programming featured contemporary artists working in some of the oldest artistic traditions of North America, many of which are now endangered by climate change. Because there are fewer days of extreme cold, for example, the emerald ash borer, an invasive beetle, is preying upon the ash trees that serve as the primary material used by Wabanaki basketmakers. *Wíwənikan* thus gives space and voice to a broader range of perspectives, within the sphere of contemporary art-making, on the global and local impacts of potentially catastrophic alterations in the Earth's climate.

A third summer 2019 exhibition, *River Works: Whistler and the Industrial Thames*, revisited a more familiar art-historical milieu but, in line with the museum's commitment to foregrounding global climate change, offers a fresh and timely assessment of one of the museum's most admired paintings, James McNeill Whistler's *Chelsea in Ice* (1864). The exhibition reflects on how the work of Whistler and other artists responded to environmental changes—such as the miasma and pollution directly related to industrialization—wrought on Victorian London and its primary waterway. *Chelsea in Ice*, part of the Lunder Collection, has become a touchstone for Colby faculty seeking to understand historical evidence of anthropogenic changes to the climate. For instance, a recent course on biodiversity and global change visited the museum to study the painting as a marker of the early Anthropocene (a geological epoch characterized by human influence on the planet), centering on Whistler's thickly painted depiction of the smoke that blackens the London sky above the Thames.

Other acquisitions in recent years also address the impact of climate change. Another work by Maya Lin from the Lunder Collection, the wall sculpture *Pin River—Kissimmee* (2008), has been a constant stimulus for dialogue. Here the artist uses thousands of straight pins to create a topographic view of the Kissimmee River, an environmentally imperiled waterway in the Florida Everglades. On a recent visit, students from an aquatic ecology class considered how the work represents floodplains and the impact of human alteration on these complex ecological systems. In a similar vein, Philip Taaffe's painting *Garden of Extinct Leaves* (2006), a gift from the Alex Katz Foundation, points to the sorts of opportunities for interdisciplinary discovery afforded by a college art museum. Working with Robert A. Gastaldo, the Whipple-Coddington Professor Geology and an expert in paleontology and taphonomy, we identified the extinct fossil flora from the Late Cretaceous and Early Tertiary ages (70 to 35 million years ago) represented in the painting.

In partnership with the Lunder Institute, the museum is committed to bringing together artists and scholars to delve into the urgent issues related to the Earth's changing climate. Through collaborative exhibitions, collections, and programs, we can offer new perspectives on humanity's relationship to the planet and our impact on the natural world. College art museums enable disciplines to intersect to pose new and important questions and seek innovative solutions to global problems. And scientists, historians, and philosophers help us look at works of art anew, comprehend them in unanticipated, revelatory ways, and share knowledge that inspires new interpretive strategies and expands narratives of American art in local and global contexts. We have so much to gain from these shared explorations—including how we address climate change—with the museum embracing its role not only to teach its visitors but also to learn from them.

Sharon Corwin is Carolyn Muzzy Director and chief curator of the Colby College Museum of Art. Reprinted with permission of Art New England. All rights reserved. Copyright 2019.

Maya Lin, Disappearing Bodies of Water: Arctic Ice, *2013 (detail). Vermont Danby marble on granite base (AP 1/1), 48 x 46 x 52 in. (121.92 x 116.84 x 132.08 cm). The Lunder Collection. © Maya Lin, courtesy Pace Gallery. Accession Number: 2013.537.*

On Climate, Think Globally and Act Locally

Farmers and others see the reality in Allison Chatrchyan's data

By Christina Nunez

For the past decade, Allison Morrill Chatrchyan '92 has attended Empire Farm Days, an annual agriculture show in upstate New York, to talk about climate change with farmers and others in the region. She doesn't always encounter a receptive audience.

Some of them, she said, "start talking about how this is a hoax, and they give me all the standard climate-skeptic arguments."

Chatrchyan comes prepared. The director of the Cornell Institute for Climate Smart Solutions at Cornell University in Ithaca, N.Y., she tells people she isn't there to argue about climate science, but to talk about facts. Chatrchyan pulls up an online toolkit from Cornell's Climate Smart Farming program, which she helps coordinate. The tools show historical variations in the local rainfall, the growing season, and other indicators that are important to growers.

"When you show them the actual data, it makes sense to them, because they are seeing more extreme rainfall events. They are seeing a longer growing season," she said. "It clicks for them that, yes, things are changing."

The farming program is just one part of Chatrchyan's role at Cornell, where she conducts her own studies on climate change, teaches, and builds partnerships for research and outreach across disciplines at the university. The work takes her from local communities to the highest level of climate action: the United Nations Conference of the Parties talks on climate change. She took several students to the June session in Bonn, where they helped Armenia's small delegation cover the many meetings that took place.

The intersection between policy and environmental issues is a first love for Chatrchyan, who worked for the UN Environment Programme not long after earning her B.A. in government and environmental studies at Colby. But going back to school for her Ph.D. in environmental and comparative politics at the University of Maryland brought her back to the university environment and ultimately to Cornell.

Ithaca was familiar territory for Chatrchyan, who grew up in the New York college town of Hamilton, about 70 miles away. Her first seven years at Cornell, however, weren't confined to the world of academia—they were spent on the ground working with communities as part of the university's extension program. "There are a hundred and eighty researchers working on some aspect of climate change at Cornell, so there's a lot of research going on," she said. "But still, that work wasn't getting out to communities or to farmers."

The institute and her current position were created in 2013 to address the gap. Recently her team held focus groups throughout the Northeast to find out whether people felt their communities were prepared for climate change. "Overwhelmingly, the response was no," she said.

Chatrchyan's group is developing a climate stewards volunteer program that would empower people to work on adaptation and mitigation plans with their local governments. That could mean identifying sources of greenhouse gas emissions and ways to reduce them as well as options for

safeguarding resources against strong storms, for example, or extreme heat.

When students ask Chatrchyan what they can do about climate change, she often suggests that they check whether their hometown has a climate action plan in place, and if not, to approach local officials and offer to help make one.

"The way that we can make climate change real for people is talking about the local impacts they're experiencing," she said.

These types of local efforts are important in any area, but especially in areas that produce food. Farmers, of course, need climate-smart strategies too: best practices for managing water, boosting soil health, and coping with extreme weather. That's where the Climate Smart Farming outreach comes in. But Chatrchyan also complements that with broader policy work. She recently coauthored a paper, "Transforming Food Systems Under a Changing Climate," that argues for food policy changes at every level—from local to regional to global—aimed at reducing emissions, tackling food waste, and switching diets for nutrition and sustainability.

Chatrchyan has always loved international policy work and will continue to do it. But she points to the lack of adequate federal action in the United States as an example of why we can't just hope that national governments and big climate conferences will unlock all the answers.

"I think it's incredibly important to work at the local level," she said. "That's where the action has to happen, because we can't wait around anymore."

Visit the Colby Climate Project online for more on Allison Chatrchyan's work in upstate New York.

For Children's Sake

Steve Nicholas '83 says don't face climate change for your own sake. Vice president for U.S. programs for the Institute for Sustainable Communities, Nicholas says we must take action on climate change for the next generation. In a Colby Climate Project interview, he tells videographer Reggie Huang '19, "It's as much as a human health issue as it is an environmental issue." Nicholas advises cities on how they can move toward sustainability.

For the rest of Steve Nicholas's story go to the Colby Climate Project online.