Atkinson Center for a Sustainable Future

2015

ANNUAL REPORT

IVF Puppies: New Hope for Conservation

IN MEMORIAM

Elizabeth Garrett

Cornell President

1963 – 2016

The day our 2015 annual report was delivered, the Cornell community learned of the death of President Garrett. We are deeply saddened by the loss of a leader whose top priorities included sustainability.

Gary Braasch

1946 – 2016

We also mourn the loss of photojournalist Gary Braasch. His stunning photographic evidence of climate change is featured in this report, and one of his last public exhibits was at Cornell.

OUR VISION

To create a world in which people can meet their needs and pursue their dreams without compromising the ability of future generations to do the same.

Front cover: Photo by Jeffrey MacMillan. Story on page 4.
This page and inside back cover: Photos by Gary Braasch/World View of Global Warming © 2014. In 2015, the Atkinson Center, Mann Library, and Cornell Plantations sponsored a lecture by Braasch and two exhibits of his award-winning photojournalism on climate change.

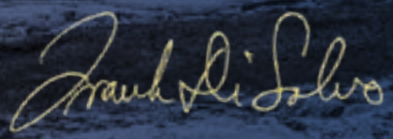
Making a Difference

It has been an enormous pleasure to direct the Atkinson Center. As the Center's founding director, I knew that a time would come to pass the reins to a new director. We have an outstanding director-elect in David Lodge of Notre Dame University. David will become ACSF's second director in May 2016. His integrity, wisdom, passion, and experience are ideal for the job.

Looking back over the past eight years, I am especially proud of the faculty and staff who helped to build the Atkinson Center. With the collective vision of creating a sustainable future, many faculty took formal leadership roles as faculty directors or faculty advisory board members, or led or collaborated with interdisciplinary research teams. David and Pat Atkinson, the Center's benefactors, enabled our efforts and achievements. Their good humor, unassuming personalities, generosity, and wisdom have motivated us all.

Given the global sweep of many sustainability challenges, it will take more than universities to make a real difference. We are expanding our engagement with external organizations that have similar objectives and complementary skills and talents, to turn discoveries to impact. In 2015, we made significant strides, including a breakthrough in the conservation arena—the first test-tube puppies (page 4)—that was the result of a four-year collaboration with the Smithsonian. You can read about some of our other exciting partnerships on pages 10–11.

Join us in creating a world in which people can meet their needs and pursue their dreams without compromising the ability of future generations to do the same. What a noble quest—one filled with the idealism and optimism that characterize Cornell!



Frank DiSalvo
Director

ENERGY • ENVIRONMENT • ECONOMIC DEVELOPMENT

2015 AT A GLANCE

"ACSF is a wonderful mechanism for the university to keep its focus on sustainability. Cornell 20 years from now will be a much different place than it would have been without ACSF."

Lance Collins, Dean of Engineering

COLLABORATIONS

15
Joint Research Projects

NEW

AVANGRID

EDF ENVIRONMENTAL DEFENSE FUND

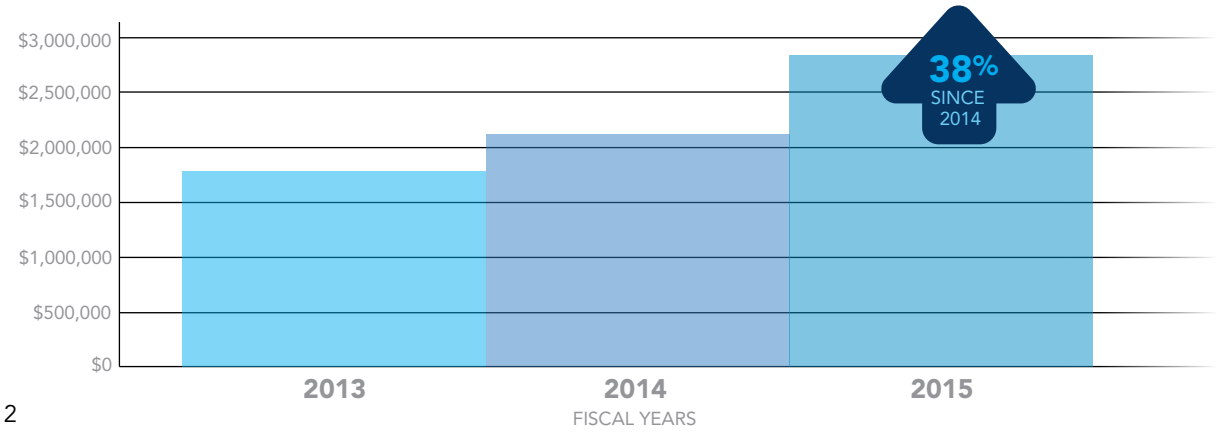
care

The Nature Conservancy

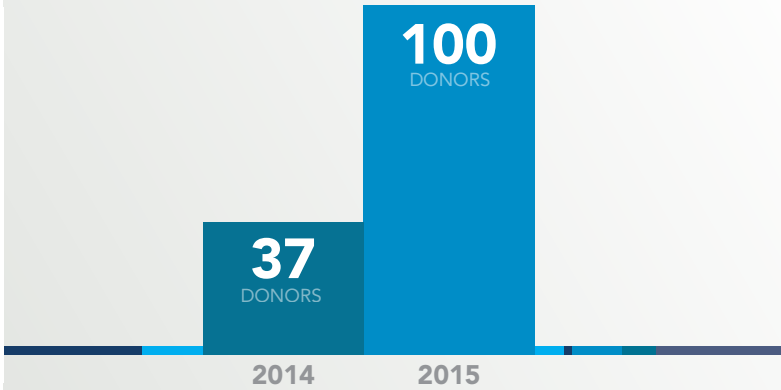
Smithsonian

EXPANDING

Rising Investment in Research



Growing Donor Base



Broad Thinking

49

New Faculty Fellows

24%

from Social Sciences, Humanities, and Arts

Global Reach

Research in 41 Countries since 2010

Two Awards

Fragile Legacy took Best Short Film at Monaco's Blue Ocean Festival.

ACSF's 2014 annual report won an International Business Award.

Hollywood Meets Ivy

Acclaimed actor and ocean conservationist Ted Danson visited Cornell in April as 2015's Iscol Distinguished Environmental Lecturer.

Local Impact

Saving Adirondack Trout

Researchers are identifying DNA markers that let Adirondack trout thrive in warmer water for climate-smart conservation.

One Health research links human health, animal health, and ecosystem health to promote and defend the well-being of all species. ACSF project teams bring together natural scientists, social scientists, and clinicians to work with peers at conservation and environmental organizations—for a thriving, healthy planet.

New Era for Canine Conservation

When seven puppies born at Cornell enjoyed their first romp on a grassy lawn, the cute pups were accompanied by more than the usual oohs and aahs. The first litter ever produced by in vitro fertilization, these test-tube puppies made headlines around the world in 2015.

IVF in dogs is tricky business. For decades, researchers have been trying to produce litters using IVF, a process that routinely works for human reproduction. This breakthrough heralds a new era for conserving endangered canid species. The potential to store semen and eggs holds great promise for increasing the genetic diversity of wild canines, including several threatened species of wolves and foxes.

It's also good news for domestic pets. Researchers may one day be able to remove genetic diseases and traits in an embryo, eliminating heritable diseases in popular dog breeds, such as lymphoma in golden retrievers.

"With a combination of gene editing techniques and IVF, we can potentially prevent genetic disease before it starts," said wildlife biologist Alex Travis, the Atkinson Center's faculty director of environment. The advance also offers a powerful tool for understanding the genetic basis of diseases in canids and humans, Travis said. Dogs share more than 350 heritable disorders and traits with humans, almost twice the number of any other species.

Graduate student Jennifer Nagashima perfected the new technique, working with Travis and researchers at the Smithsonian Conservation Biology Institute in Front Royal, Virginia. Nagashima was the first graduate of a joint training program supported by the Atkinson Center and SCBI. Her hard work—combined with Travis's knowledge of sperm physiology and egg biology expertise from the Smithsonian's Nucharin Songsasen—helped these historic dogs have their day.

Pocket Doc: NutriPhone Tests for Micronutrients

Inadequate nutrition is responsible for a number of health and social problems, especially in the developing world. Many micronutrient deficiencies are reversible, but most sufferers don't know they aren't getting the nutrients they need.

Mechanical engineer David Erickson and Saurabh Mehta, a physician and nutrition researcher, invented a smartphone device that can diagnose vitamin and mineral deficiencies. Their NutriPhone combines nanofabricated "lab-on-a-chip" technology with new smartphone apps to give instant readouts on key nutrients and cholesterol, among other things.
In recent years, the digital health revolution has produced handheld devices that test blood glucose and diagnose some diseases, such as hepatitis. The NutriPhone is the first to diagnose micronutrient deficiencies, which are harder to measure. NutriPhone's unique test strip measures deficiencies, software quantifies them, and hardware makes the device platform-independent.

"Around the time mobile devices were becoming big we thought, What if someone could have the power of a medical testing laboratory in their pocket?" said Erickson. With ACSF seed funding, Erickson and Mehta developed a prototype. A $3 million National Science Foundation grant soon followed.

"In most global settings," Mehta said, "NutriPhone could allow health care facilities to upgrade their capacity to detect a range of nutritional problems without expensive laboratory equipment, so that they can offer care based on reliable, real-time data."

Research organizations, NGOs, and private multinational corporations have all expressed interest in the device, Erickson reported. "It's in high demand because it fulfills a very clear, very immediate need."

Clean Water from a Chemical Genius

Chemist William Dichtel received a 2015 MacArthur "genius" grant for his innovative work in synthetic and supramolecular chemistry. He is currently leading ACSF-funded research on a new reusable polymer that removes trace water contaminants, including pesticides and pharmaceuticals, more quickly than activated carbon.

ACADEMIC VENTURE FUND

The Atkinson Center's flagship funding program supports approaches with the potential for game-changing impact. The the second year in a row in 2015.

Real Savings from Home Retrofits

Three-quarters of U.S. homes could save substantial energy with a retrofit—but with high up-front costs, homeowners want to know how much they will save on energy bills. Policymakers and retrofit installers claim annual savings of $700, but this impressive estimate is based on simulations. The researchers are deploying data loggers in hundreds of pre- and post-retrofitted homes to measure actual building performance and energy savings. The team will share the data with policy-makers, utilities, installers, and customers, revealing the data details that shape environmental decisions and the practical roadblocks to stakeholder acceptance.

Reassessing Roundup

Annual agricultural and commercial use of the herbicide glyphosate, the active ingredient in Roundup, exceeds 1.25 million pounds in New York alone. Conventionally considered safe—rapidly immobilized in soil and easily degraded—glyphosate has recently been detected at low levels in agricultural runoff, surface waters, and even rain. This team is measuring glyphosate's movement in northeastern fields and surface waters and testing the impacts of trace levels on beneficial microbes, such as those in soil and human digestive tracts. Partners include the U.S. Geological Survey, New York State Department of Environmental Conservation, and Natural Resources Conservation Service.

cross-disciplinary research in novel technologies and Academic Venture Fund topped the $1 million mark for

Rapid Test for Waterborne Diseases

In the developing world, people's impressions about water quality drive personal consumption and community infrastructure. Water sources are rarely tested, and traditional tests do not assess the pathogens that cause diarrhea, a health threat that greatly influences consumption decisions. The researchers are developing and piloting a test kit for quick detection of multiple common waterborne pathogens—bacteria, viruses, and protozoa—that cause diarrhea, a leading childhood killer. They are working with communities in Kenya and Honduras to compare actual and perceived water quality for informed decision making and a safer water supply.

Tracking Seismic Activity

Earthquakes usually occur along well-known faults like the San Andreas, but the Earth's crust shows some background seismicity almost everywhere. Researchers are deploying seismometers on campus to search for ultra low-level seismic activity, including any previously unrecognized faults, as a guide to understanding seismic risk in the eastern United States. The tracking will provide a benchmark to assess potential changes in seismic risk due to activities such as groundwater injection, hydraulic fracturing, geothermal development, and lake level changes, locally and in geologically similar areas. Researchers are also investigating public attitudes and perceptions related to seismic risk in an area unfamiliar with such events.

Reviving Oysters

A keystone species that clarifies water and builds critical reef habitats, eastern oysters are central to coastal restoration plans in New England. Restoring oyster beds near urban areas has been slow, in part because public health regulations protecting consumers and the harvest industry are at odds with conservation goals. Oyster health is another issue, as hatchery-raised oysters are needed to supplement populations, but using them potentially limits success by reducing genetic diversity. This blended project will improve chances for successful oyster restoration by investigating risk perception on the human side and minimizing hatchery impacts on the mollusk side.

Ecological Calendars for Climate Change

A time-tested tool for climate adaptation—ecological calendars that rely on natural cues, such as the arrival of birds—helped generations of indigenous and rural people anticipate seasonal patterns for farming, herding, hunting, and fishing. Working with Great Plains Native Americans and rural communities near Oneida Lake, this team is identifying key climate vulnerabilities, documenting existing ecological calendars, and developing new calendars to guide communities as they adapt to climate change.

Wind Energy, More Efficiently

The northeastern United States has high electricity prices, large demand centers, and good wind resources, yet wind energy makes only a modest contribution to the region's electricity production. This team will reduce risks posed by three sources of uncertainty in wind turbine operation in the Northeast, removing important bottlenecks that are impeding the growth of wind-generated electricity in the region. The researchers are developing and deploying a cost-efficient new measurement technology that uses data from seismographs to better quantify wind loading on turbines, optimize wind farm design, and monitor the condition of turbine components.

Geoengineering on a Regional Scale

The National Academy of Science recently called for more research on geoengineering, including controversial climate interventions like reflecting sunlight away from the Earth. With significant impacts projected from global warming and melting ice, the Arctic is a critical region for evaluating potential global cooling techniques. Combining social science, engineering, and communication, this team is engaging Arctic communities in a participatory discussion about these emerging technologies, identifying public concerns, and evaluating regionally specific geoengineering strategies that address them.

Cornell Climate Plan Reflections

Establishing forests on campus lands and transitioning to biofuels are options for cutting Cornell's carbon emissions, but these strategies could reduce the land's surface reflectivity, or "albedo"—and the warming effect may counterbalance the biofuels' benefits. This team is developing a much-needed accounting tool to assess the net climate benefits of land management plans with more accurate climate projections, revealing the trade-offs in land-use decisions.

Solar Power's Shadow Costs

Concentrating solar power (CSP) systems use massive mirrors to amplify the sun's rays for renewable energy—but potential ecosystem costs, including bird deaths and heavy water use, are raising public concern. Another unknown is how CSP affects insect biodiversity. The researchers are measuring impacts on plant-pollinating bees at the world's largest CSP facility in California's Mojave Desert—a global bee hotspot—to inform their broader economic and environmental cost-benefit analysis of CSP.

Quick Clean-up of Contaminated Water

With population growth, industrialization, and climate change, communities are turning to drinking water resources tainted by agricultural runoff and wastewater. The researchers have invented a promising new polymer that removes trace water contaminants, including pesticides and pharmaceuticals, more quickly than widely used sorbents like activated carbon. The new material saves both energy and money by being easy to reuse. The team is analyzing the polymer's performance on dozens of common and emerging contaminants, demonstrating scalability, and launching a pilot test—the next steps toward real-world application in the developed and developing worlds.

Pollination Can Be Honeybee Free

Every autumn, the crisp apples and fresh cider produced by Cornell Orchards attract crowds of customers looking for the latest tasty apple products. This fall's crop brought an extra bonus for New York apple growers: proof that pollination can succeed without commercial honeybees.

Using native bees for pollination has taken on added urgency in recent years as colonies of European honeybees, used for centuries in American orchards, have been decimated by pathogens, pesticides, and the hazards of long-distance transportation.

Apple growers in New York—the nation's number-two apple-producing state—face rising hive rental costs and reduced availability. "This is a food security issue," said entomologist Bryan Danforth. "We need to know if growers can continue to produce food in the absence of honeybees."

Danforth is working with orchard managers in New York State and beyond to survey the abundance of native bees. Wild pollinators promise a sustainable apple harvest and an economic edge for many orchards.

With AVF support, Danforth's research team launched the Northeast Pollinator Partnership, a citizen science website that reaches out to growers and promotes wild bees as apple pollinators. The funding also allowed an in-depth look at the effect of pesticides on wild bee populations. The research is critical to understanding if wild bees can be a long-term sustainable pollination alternative to domestic bees. Additional funding is expanding the initiative to include data collection on wild bee populations and the environmental threats they face.

A walk in Cornell Orchards in May 2014 brought home the real potential of these native species. Danforth and farm manager Eric Shatt were checking bee activity, when in addition to the honeybees from six rented hives, they noticed countless wild bees elbowing in for a meal. Since 2008, Danforth's team has detected more than 100 species of native bees at upstate orchards, including Cornell's Lansing and Ithaca research sites—26 species, from social bumblebees to solitary, ground-nesting "digger" bees, at Cornell Orchards alone. With those numbers, Shatt convinced the Orchards to fly through the next apple blossom season on the wings of wild bees alone.

The gamble paid off. 2015 saw a bumper crop, pollinated entirely by Cornell's own wild bees.

"Making the apple industry more profitable and at the same time demonstrating the economic benefits of conserving wild pollinator diversity is a win-win situation for New York agriculture," Danforth said.

Our priority is forming alliances with leading organizations that are making a difference. By combining our strengths—world-class research capacity joined with global policy and program leadership—we increase our collective power for meaningful, measurable change. Our partners include CARE, Smithsonian Conservation Biology Institute, Environmental Defense Fund, and The Nature Conservancy.

New Partnership

Our new partnership with Environmental Defense Fund is the first of its kind. Although EDF works on a project basis with other universities, this is EDF's first broad institutional collaboration that includes both a research program and an internship program. Together, we are catalyzing new research into effective policy and addressing urgent environmental and public health challenges.

EDF ENVIRONMENTAL DEFENSE FUND™
Finding the ways that work

Measuring Methane

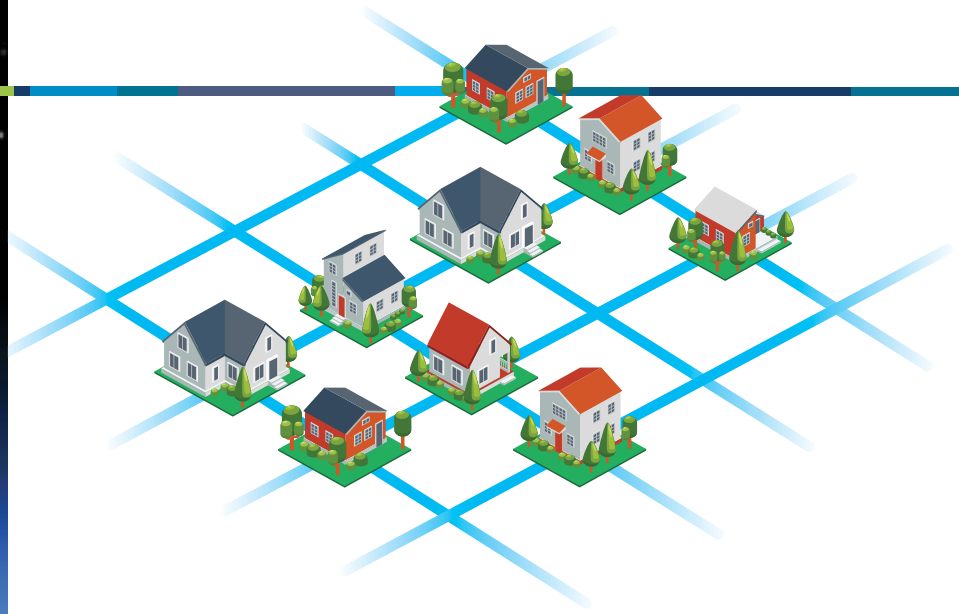
To track hard-to-measure methane emissions from power plants, Environmental Defense Fund and Google Earth Outreach are testing a specially equipped car for drive-by monitoring. With stepped-up Cornell engagement, researchers are increasing field measuring and complex modeling to analyze data on the powerful greenhouse gas—and ultimately find and stop big leaks that contribute to climate change.

Engaged Students

Following in the footsteps of EDF president Fred Krupp, who rose through the ranks from an internship, we are nurturing a new generation of leaders. Our summer internship program places students in EDF offices around the nation so they can contribute to practical solutions to environmental challenges. The EDF-ACSF collaboration is made possible by a dedicated gift from David '60 and Patricia Atkinson.

Big-Tent Environmental Policy

Many racial and ethnic groups, including people identifying as Latino or Hispanic, express high levels of concern about environmental problems. Unfortunately, these communities remain underrepresented in the environmental sector, including among environmental scientists and the membership of environmental organizations. A national survey sponsored by EDF and the Atkinson Center will help identify factors that bolster environmental engagement across diverse communities—for green approaches that include everyone.



Our Backyard Laboratory

Ithaca may soon be home to one of New York State's Reforming the Energy Vision projects. Dubbed the Energy Smart Community, the initiative includes a test bed with 12,000 smart meters and its own data transmission network. Cornell is collaborating with NYSEG's parent company, Avangrid (formerly Iberdrola USA), to support bringing this project to the Ithaca area. Todd Cowen, ACSF's faculty director of energy, mobilized Cornell faculty and staff to attract the project. The Atkinson Center is leading the development of applied research, with the aim of transforming the electric grid with distributed generation and storage. With a memorandum of understanding signed, Cornell and Avangrid are developing research proposals and adding new partners as they wait for state approval, expected in 2016.

AVANGRID

The Nature Conservancy
Protecting nature. Preserving life.

More Food, Thriving Planet

The Nature Conservancy estimates that the world needs to produce 70 percent more food by the year 2050 to support current trends in population growth and economic development. TNC and ACSF are working together to explore ways to coax higher yields from existing agricultural lands, both at home and abroad, while simultaneously reducing impact on the environment. In 2015, a $1 million gift from Class of 1960 alumni James and Rebecca Morgan provided resources to jump-start the collaboration. More than 30 TNC and Cornell researchers met in September for a two-day brainstorming session to illuminate new ideas in the ag landscape. Now the collaboration is seeding jointly defined projects with a clear pathway to impact.

At home and abroad, the challenges farmers face are growing. With climate change, this is the first generation of farmers that can't rely on past weather patterns as a predictor of the future. When to plant, what to plant, and how to plant is further complicated by social factors, including unequal access to technology and capital.

Farms and Families in Malawi

Farmers in Malawi have the know-how to help fellow farmers adapt to climate change—and thrive. "Farmer-led experimentation—having farmers learn on the ground what works in their fields—has been an important part of our success," said food systems expert Rachel Bezner Kerr. "Farmer-to-farmer teaching is another key ingredient."

In 2015, Bezner Kerr and a diverse group of social scientists, agriculture specialists, nutritionists, and climate change researchers teamed up with a Malawi farming network. Together, they created a comprehensive curriculum to teach ecological farming practices that increase livelihoods, improve nutrition and gender relations, and strengthen household resilience to climate change—and identified platforms and people to disseminate the information to thousands of rural farmers.

Featuring a suite of easily adopted, low-cost, sustainable farming practices, the training curriculum is now being field-tested on 800 farms in Malawi and neighboring Tanzania. Project leaders in rural Malawi include theater professionals and youth workers. A communication PhD student is assessing communication strategies, including using theater to engage hard-to-reach communities and encourage positive farming practices.

Playing Safe: Better Nutrition for Babies in Zambia

Almost one-third of babies born in sub-Saharan Africa suffer from malnutrition with lasting cognitive and developmental impacts. One definite reason is not enough nutrient-rich food. Another likely reason is the proximity of families to their livestock. When crawling babies encounter family chickens, for example, bacteria in the animals' manure can cause intestinal damage that exacerbates childhood malnutrition.

Creating clean, uncontaminated play areas is easier said than done for mothers tending to chores and children. A team of Atkinson Center and CARE researchers worked with families in Zambia to build inexpensive, clean play spaces made from readily available local materials. The team also tested educational approaches to raise parents' awareness.

The results were so promising that the CARE-Cornell Baby WASH education module is now in active use in a four-country CARE nutrition program. The researchers are currently assessing women's labor patterns to understand how to promote the healthy play spaces for babies without placing new burdens on busy moms' time.

New York Farms Decrease Inputs, Increase Output

Aaron Iverson is the newest NatureNet postdoctoral fellow to join the Cornell–Nature Conservancy team. Bringing his experience on Mexican and Puerto Rican coffee farms to central New York, Iverson is helping local farmers increase biocontrol and pollination services from natural sources, like native bees, while reducing the use of agrochemicals. This approach is good for farmers' bottom line—and biodiversity.

Iverson is working with 40 mid-sized farms in the Finger Lakes region that produce fruit and economically important field crops. "Working with farmers grounds me in reality," he says, "and motivates me to continue applied research with a practical benefit."

Multidisciplinary engagement early in a scholar's career helps set a pattern for life. More than 80 postdocs and students are part of our community. Some work on the building blocks of sustainability science in labs, while others transform new knowledge into measurable impact. In 2015, our research fellows worked with Environmental Defense Fund, Oceana, The Nature Conservancy, a New England utility, the World Resources Institute, and others. We also provide communication training, so that the next generation of thought leaders can explain to the world what they do.

Supporting Birdlife and People—Together

Tropical rainforests support abundant biodiversity, but in some countries the people who live there are malnourished and poor. Graduate student Gemara Gifford led an expedition in 2015 to the highlands of Guatemala to identify agricultural practices that improve human nutrition while conserving habitat for the region's rich birdlife.

A Gates Millennium Scholar and first-generation college student, Gifford was backed by the Sustainable Biodiversity Fund, now in its fifth year. With help from undergraduates and in-country partners, Gifford worked with Q'eqchi' Mayan villages in Guatemala's cloud forests. This year, the Towards Sustainability Foundation, which supports the SBF, expanded funding to cover a new mentoring program that pairs graduate students like Gifford with undergrads on cross-disciplinary biodiversity projects.

"In a place like Guatemala, there is incredible potential to improve the lives of people and conserve biodiversity at the same time," Gifford said. "I am humbled by the kilometers we hiked searching for rare birds, the hundreds of schoolchildren we reached through environmental education, and most of all, the personal growth and responsibility that comes with being an international researcher."

Optimizing the Grid for Renewable Energy

We can't control when the wind blows or when the sun shines, which makes renewable resources like wind and solar a challenge to integrate into the power grid. When the supply side is highly variable, how do we reliably source and pay for power?

Atkinson postdoctoral fellow Subhonmesh Bose answered this fundamental question with a new mathematical framework and simulation platform. Working with ISO New England, a six-state regional power company, Bose created software to balance demand and supply in the grid throughout the transition to renewable power and design fair payments for electricity market participants. The project will help ISO New England integrate renewable energy and serve as a model for system operations with renewable supply for the power industry at large.

Bose was one of four early-career scholars in our new postdoc program's inaugural class. Now he is headed to a faculty position at University of Illinois, a top energy program.

RESEARCH FELLOWS

88

- 18 Postdocs
- 54 PhDs
- 6 MS/MPAs
- 10 Undergrads

STUDENTS

The Atkinson Center plays a leading role in Cornell campus sustainability. With multiple layers of engagement, we support and strengthen the university's sustainability mission.

Getting to Carbon Neutral

Our flagship Academic Venture Fund supported two campus-focused projects in 2015 to help Cornell reduce its carbon footprint and meet Climate Action Plan goals. Establishing forests on campus lands and transitioning to biofuels could reduce carbon emissions, but the carbon calculation is not straightforward. One AVF team is developing a new accounting tool—for Cornell and beyond—to assess the net climate benefits of land management plans.

Education

Our campuswide sustainability course listings give students a central place to search for courses that teach sustainability concepts and practices across all disciplines, from performing arts to architecture. Through our faculty-in-residence program, we provide support for faculty in the social sciences, arts, and humanities to develop sustainability-related courses.

FUNDING
70
CORNELL STUDENTS

Supporting Students

Our grant programs support 70 graduates and undergraduates in lab and field.

"We must focus upon the disciplines in which we excel and use our own campus and region as a living laboratory."

Cornell President Elizabeth Garrett
Annual Summit, President's Sustainable Campus Committee

Renewable Energy

Our faculty director of energy, Todd Cowen, serves on a high-level Cornell committee formed by President Garrett and charged with advancing public policy and research on climate change. ACSF supported a Cornell delegation that traveled to Iceland to learn more about the application of geothermal energy and its potential use for direct heating on Cornell's campus.

Research Leaders

Our portal to 450 Cornell faculty engaged in sustainability provides access to some of the world's leading thinkers and projects.

Data and Rankings

The Atkinson Center compiles data and fosters activities that contribute to the university's "gold" sustainability rating with the Association for the Advancement of Sustainability in Higher Education. AASHE data is used by the Sierra Club, Princeton Review, and others to establish national benchmarks. Cornell consistently ranks among the top "green colleges."

Climate Action

Cornell's resources in climate change are growing, with more than 140 faculty engaged in research. ACSF's Climate Change Consortium includes historians, engineers, and ecologists, bringing diverse perspectives to the challenge. The consortium helped launch Cornell's popular minor in climate change, a first in the Ivy League. Cornell also has a newly established Cornell Institute for Climate Change and Agriculture and a website devoted to climate change.

www.climatechange.cornell.edu

EXTERNAL ADVISORY BOARD

The Atkinson Center's External Advisory Board is a group of nationally recognized thought leaders, with members representing a wide range of expertise, from leading environmentalists to accomplished entrepreneurs.

Daniel Goldman '87
Chair
President and CFO
GreatPoint Energy

Sheryl WuDunn '81
Incoming Chair
Senior Managing Director
Mid-Market Securities

David Atkinson '60
Founder
Atkinson and Company

David Croll '70
Founder and Managing Partner
M/C Partners

Yossie Hollander
Director
Our Energy Policy Foundation

Fred Krupp
President
Environmental Defense Fund

Jill Lerner '76
Architect and Principal
Kohn Pedersen Fox Associates

Ray Offenheiser '76
President
Oxfam America

Armando Olivera '72
Past President and CEO
Florida Power and Light

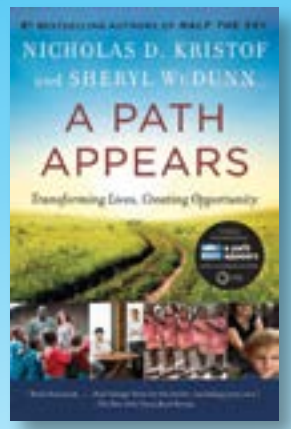
Paul Sellew '80
CEO
Harvest Power

Sheryl WuDunn: Economic and Social Justice

One of *Newsweek*'s "150 Women Who Shake the World," bestselling author and China watcher Sheryl WuDunn is a tireless advocate for sustainable development, social justice, and human rights.

Her *New York Times* coverage of the 1989 Tiananmen Square protests earned WuDunn and her husband, Nicholas Kristof, a Pulitzer Prize. A third-generation Chinese American, WuDunn was the first Asian American Pulitzer Prize winner—and the *New York Times's* first Asian American reporter. She covered international business, energy, and technology, simultaneously working on the paper's news and business sides. Today, WuDunn raises capital for entrepreneurs in alternative energy, social enterprise, and new media as senior managing director at a boutique investment banking firm in New York.

WuDunn and Kristof have coauthored bestsellers on Asian economics and politics, empowering women and girls, and creating global opportunity. Their most recent book, *A Path Appears: Transforming Lives, Creating Opportunity* (2014)—also a popular PBS documentary—describes people who are making the world a better place and how we can help them build solutions. WuDunn will bring her insights to the Cornell campus as ACSF's 2016 Iscol lecturer.



A European history graduate and active Cornellian, WuDunn served for more than a decade on the Cornell Board of Trustees. She will take the lead as chair of the Atkinson Center's External Advisory Board in 2016. "The Atkinson Center has the potential to help promote real change in society," WuDunn said. "By bringing together varied disciplines, it is in a great position to help foster invention. I am delighted to be a part of that."

Financial Report

The Atkinson Center completed fiscal year 2015 in a strong financial position. We continue to benefit from the generosity of our founders, David and Pat Atkinson, Cornell University, and many other supporters.

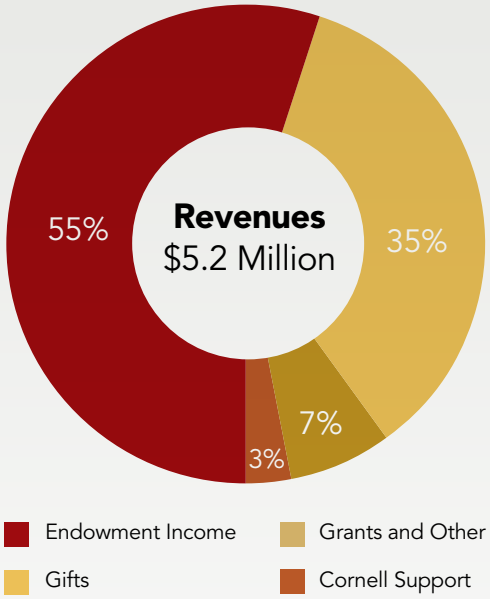
FY15 expenses totaled $4.5 million. We increased research program spending on our Academic Venture Fund and Rapid Response Fund and launched a new postdoc fellowship program. Research programs totaled $2.8 million (63 percent) of expenses, through direct funding of competitively selected research proposals or other programs designed to enhance Cornell's collaborative research and competitiveness in sustainability.

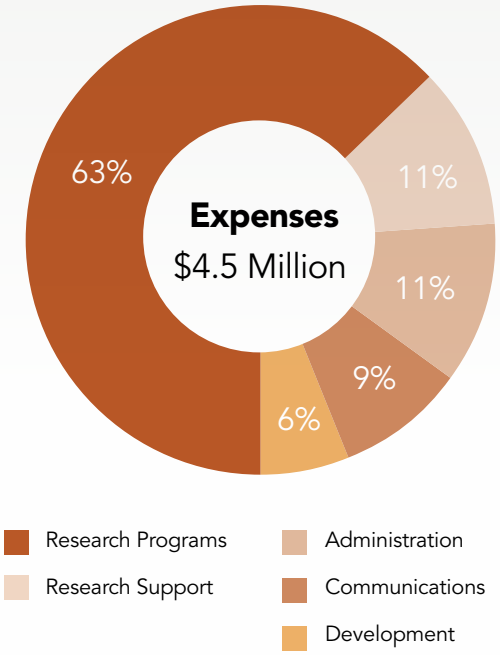
FY15 revenues totaled $5.2 million. After covering FY15 expenses, this strong revenue position will allow us over the next few years to implement new initiatives, such as our faculty-in-residence program, and support new collaborative research projects with external partners including Environmental Defense Fund, The Nature Conservancy, and the Smithsonian.

Graham Kerslick
Executive Director

FISCAL YEAR 2015

JULY 1, 2014–JUNE 30, 2015





Giving

In FY15, the Atkinson Center raised $3.1 million from more than 100 donors. Fifty of these gifts came in on Cornell Giving Day alone! Some key gifts included $1.12 million from the Atkinsons to catalyze ACSF's collaboration with Environmental Defense Fund; a $1 million gift from James and Rebecca Morgan, '60, to launch our collaboration with The Nature Conservancy; an anonymous $400,000 gift; and Sesqui-centennial support of $150,000 from David Drinkwater '94.

The first months of FY16 are off to an equally great start, as we jump-start the vital project of endowing the Center's three faculty directorships at the half-time level. A Boston-area donor has stepped up to endow the faculty director of energy position with a gift of $2 million, leveraging the Atkinsons' $1 million challenge match.

Endowing the other two directorships—in environment and economic development—is our highest fundraising priority for 2016. We are grateful for the vibrant support of all our friends and donors as we meet this challenge.

Chris Miller
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ACSF thanks our 2015 interns Kate Beddings, MPA '17, Jenny Ferreiras '17, Zoe Forster '17, Larry Ge, MEng '15, Sarah Orwig '16, and Claire Siegrist '15 and research fellows coordinator Carrie Young, MPA '12, PhD '17.

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OUR MISSION

To discover and implement sustainable solutions to world needs for reliable energy, a resilient environment, and responsible economic development.

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