Dear Friends of the Sustainability Studies Program:

Happy New Year and Happy Spring 2016 semester.

It’s been a very academic busy year so far. Fall 2015 was chock full of events, speakers, successes, and activities.

Our most important and exciting news: Sustainability Studies Program has joined forces with the School of Marine and Atmospheric Sciences (SoMAS). We are now part of this eminent and internationally recognized research unit. The merger will give our students access to more faculty and research opportunities, unite us with a terrific new group of undergraduate and graduate students, as well as give us numerous opportunities for new research and growth.

As part of this merger, our graduate program in Environmental Humanities and Social Change is still in development, but we hope to see the program go live within a year. It will be an M.A. and Advanced Graduate Certificate. Continued on next page
Letter from the Director (continued)

Dr. Heidi Hutner, Director
Sustainability Studies Program at Stony Brook University

Updates on travel abroad: this past summer, I traveled and taught with our affiliate faculty member, the esteemed conservationist and primatologist Dr. Patricia Wright, at her research site in Madagascar. There, with Dr. Wright and Stony Brook Students, we hiked in the beautiful Ranomafana National Park and other forests across the country. We observed a wide variety of lemurs and other endemic biotic life, met with researchers from all over the world, and learned about food, water, and land security. I highly recommend that all of our students take at least one Sustainability Studies travel abroad trip—whether it be to Madagascar, Costa Rica, Turkana Basin, or Cuba. Sustainability Studies’s first Cuba travel abroad will be led by Dr. David Taylor, in Winter Session, 2017. These study opportunities enrich and enhance our students' understanding of global sustainability issues through direct and experiential learning.

This fall, 2015, we hosted several speaker series events and lectures that were highly successful. Several of our Sustainability faculty spoke about their research at the SUNY-wide Sustainability Conference at the Stony Brook Campus, including Dr. David Taylor, Dr. Karina Yager and Dr. Heidi Hutner—in a roundtable on “Gender & Environmental Justice”; and, Dr. Sharon Pochron, Dr. Sung Gheel Jang, Dr. Harold James Quigley, and Dr. Donovan Finn spoke in a roundtable titled, “Campus Learning Library”. Sustainability Studies also hosted An Educational Forum: Today’s Fossil Fuels and the Future of Our Children’s Health, including speakers Dr. Robert Oswald—a professor Cornell University; Dr. Perry Sheffield—a pediatrician and Assistant Professor at the Icahn School of Medicine at Mount Sinai; Ms. Pramilla Mallick—community organizer, journalist, and anthropologist; Ms. Theresa Dardar—a tribal council member of the Pointe aux-Chien Indian Tribe; Dr. Michelle Bamberger (MS, DVM)—veterinarian and researcher; Dr. Sandra Steingraber—biologist and writer; and, Ms. Samara Swanston—legislative attorney in New York City. We also hosted a very timely event titled On Climate and Faith, in response to the Pope’s recent call for action on climate change. The event featured three faith leaders and environmentalists: Rabbi Lawrence Troster—a Jewish eco-theologian; Sister Jeanne Clark; and Ms. Sunita Viswanath.

Also this fall, I had the incredible opportunity to give a TEDx talk—my very first. I gave my talk, titled “Eco-Grief and Ecofeminism,” at this year’s TEDxSBU event, held on November 7 in the Wang Center.

Coming up this spring semester, we are proud to host two speakers: Dr. John Warner, a “green chemist” who will be the keynote on Friday evening of Earthstock, April 22, 2016; and, Dr. Eleanor Sterling, from the American Museum of Natural History, who will speak on February 3, 2016, at 1:00-2:00 p.m. in Humanities 1008.

During Earthstock week, on Wednesday April 20th, at 7 p.m., we will host our annual Alumni event in the Wang Center. We welcome all alumni to attend this lovely panel and gathering—food and refreshments will be served. There will be ample time for mingling, mentoring, and sharing stories. This is an excellent opportunity for students to learn from their predecessors, and for all to network and learn more about how to navigate the professional and graduate academic worlds of Sustainability Studies. All faculty and students are encouraged to attend.

In the meantime, as our semester starts, we welcome back the Winter Session 2016 Costa Rica Study Abroad group, led by Dr. Marc Fasanella. In Costa Rica, students studied permaculture and renewable energy.

I’m sure they will have many exciting stories to tell.

Sincerely,

Dr. Heidi Hutner
Japanese atomic bombing survivors share their testimony at Stony Brook University

More than 50 Stony Brook University students, faculty, staff and visitors packed the university's Film Studio A on the afternoon of Thursday, May 7, 2015 to attend a Hibakusha Stories presentation, hosted by the Stony Brook University Sustainability Studies Program.

The program, led by Hibakusha Stories Director Dr. Kathleen Sullivan, featured Japanese atomic bombing survivors (known as Hibakusha) Nobuko Sugino and Reiko Yamada, who gave their testimony on what it was like to live through the atomic bombing of Hiroshima on August 6, 1945. Also featured in the presentation was author and anti-nuclear activist Dr. Kristen Iversen, who discussed her investigation of, and experience living near and working at, the Rocky Flats Plant, a secret U.S. plutonium trigger factory located near Denver, Colorado.

"The Hibakusha come to you today not asking for you to feel sad for them, or for what they've been through," said Sullivan. "Instead, they ask that you listen to their testimony and become inspired by their words to work toward a better future."

While listening to the Hibakushas' words, which were translated into English by two interpreters, the audience watched on, wide-eyed and open-jawed. Sugino and Yamada described their lives, marked by death, darkness and disease, as extremely challenging and, at times, even hopeless. Yet, the women also expressed that they felt it was their responsibility to warn others, particularly young people, of the dangers of nuclear weapons.

"The Hibakusha are getting older," said Yamada, "and we may not be around to tell our stories for much longer. The next generations must learn about what we have experienced so that they can stop these weapons."

Dr. Heidi Hutner, director of the Stony Brook University Sustainability Studies Program agreed with Yamada. Hutner said she felt it was important to bring Hibakusha Stories to the university and to film the group's presentation so that the Hibakushas' messages could be preserved "before they leave us forever."

"There is an old adage: 'We must never forget',” said Hutner. “History tends to repeat itself when we do not remember and learn from the past. Hearing stories firsthand from survivors brings history alive and forces us to think in an up-close-and-personal way about nuclear weapons and war and whether this is something we want to engage in and support, or not.”

Iversen added to the conversation on nuclear weapons, discussing her experience "growing up in the nuclear shadow of Rocky Flats," where nuclear waste stored in rusting metal barrels subsequently leached into the area's soil and water table, a story she detailed in her book, Full Body Burden. Iversen showed a visual presentation that included contamination and cancer cluster maps, and photos of deformed farm animals, which were presumably impacted by the presence of plutonium in their environment. Some members of the audience said that they were shocked to realize such a place existed, especially in the United States.

"I can’t believe I did not know about Rocky Flats," said one student in the audience after hearing Iversen give her testimony.

Hutner said she felt it was important to incorporate the oral histories of the Japanese Hibakusha with Iversen's story in the U.S.

"It’s all part of our world history,” said Hutner. “Japan and the U.S. have deep historical ties.”

According to Hibakusha Stories, there are an estimated 19,000 nuclear weapons still in existence on Earth, and nuclear proliferation has spread from five to nine countries in a matter of decades. Since 2008, the group has given hundreds of presentations and workshops all over the world, mostly to students. For their presentation at Stony Brook University, Sugino and Yamada had traveled to New York all the way from Japan.

"I’m honored they could make the journey," said Hutner. "The speakers were elderly and traveled for thousands of miles to come to us. I am grateful to Kathleen Sullivan and all of her speakers."

The filmed event will be available for viewing on the Stony Brook University Sustainability Studies Program website, the SBComm YouTube channel and Dr. Hutner's and Dr. Christopher Seller's coming website on environmental disasters.
Helping high school students

Dr. Kate Aubrecht developed and piloted a series of hands—on workshops for high school chemistry and environmental science students that connect chemistry content to issues of sustainability, specifically environmental degradation, energy production, and green chemistry. These workshops are conducted as daylong field trips to Stony Brook University, during which students spend several hours working in the laboratory. These workshops were developed with support from the Camille and Henry Dreyfus Foundation and in collaboration with the Institute for STEM Education (I-STEM) faculty member Linda Padwa and several undergraduate chemistry students. A paper describing these workshops was recently published in the Journal of Chemical education (Aubrecht et al. J. Chem. Educ. 2015, 92 631–637). Interested high school chemistry or environmental science teachers are encouraged to visit our website to learn more (http://istem.stonybrook.edu/content/sustainable-chemistry-teaching-center).

Emily Nocito and Jacky Taylor describe their work on the effect of cadmium on soil microbial activity and earthworm health.
CREDIT: S. POCHRON

Winning awards

Dr. Kate Aubrecht has been selected as one of the 2016 recipients of the ACS-CEI Award for Incorporating Sustainability into Chemistry Education, sponsored by the American Chemical Society’s Committee on Environmental Improvement (CEI). The award program seeks to recognize those individuals and organizations that have made exemplary contributions to the incorporation of sustainability into chemical education. She will give a presentation on her work at the ACS National Meeting in San Diego in March of 2016.

Working in the lab

Dr. Sharon Pochron’s Earthworm Ecotoxicology Lab was asked by the Miller Place High School Science Club for help in kicking off their first year. Sustainability studies Program students Emily Nocito, Yaseen Khan, Jacky Taylor, Mariah Donahue, Mai Fahmy and Shamin Sahebzada were very eager to help. They visited the Miller Place High School Science Club and described their research projects to the high school students. They also answered questions about what it was like to study science and be a student in the Stony Brook University Sustainability Studies Program. The team of students working in the Sustainability Studies Earthworm Ecotoxicology Lab spent tow semesters conducting their own student-driven research. They take great pride in their work, presenting it at the Earthstock keynote address, the URECA Celebration and local high schools.

Dr. Pochron’s Earthworm Ecotoxicology lab has shown that glyphosate-based products, such as Monsanto’s Roundup, kill about 20% of an earthworm population but that population sizes recover over time. Pochron’s group noticed, however, that the earthworms who survived tended to be frailer than non-exposed earthworms. Students Shamin Sahebzada and Brian Fiorenza received Summer Research funding from the Sustainability Studies Program to study this issue. Under Pochron’s direction, they’re leading a team of students to measure how fragile earthworms become when exposed to Roundup. They hypothesize that the earthworms exposed to the highest doses of Roundup will be the most fragile and therefore die the fastest. The group expects to complete the project in September. Students will present this project and its results at next spring’s URECA conference. If we successfully complete the project, the results will be published next summer.

Students working in the lab place worm-filled Petri dishes into the controlled and hot environment. Will Roundup-exposed worms die faster than control worms? Stay tuned. CREDIT: S.POCHEON
Student Spotlight:
Sustainability Studies Program students shine - both in and outside of the classroom!

Emily Nocito (second from right) is a Coastal Environmental Studies major and Ecosystems and Human Impact minor. Emily’s concern for the environment, commitment to making positive changes on campus, getting involved in activities and volunteering for many outreach initiatives are unwavering. She has served as the Hillel Women’s Wellness Coordinator creating monthly events promoting physical, mental, and emotional wellness, a welcome group for many women on campus. She is the President of Friends of Fire Island National Seashore, Stony Brook Chapter, a civic engagement group that organizes volunteer trips to Fire Island National Seashore, where they garden, clean up the beaches, and engage in other forms of volunteerism.

Evan Hogyeum Joo (center) is a Ecosystems and Human Impact major and Geospatial Science minor. He had the opportunity to present his research on “The Management Practices and Status of the Village Ponds in Chilika Lagoon Area, Odisha, India” at the centennial meeting of the Ecological Society of America (ESA). Evan’s research involved conducting surveys of both the people and ponds of Odisha, India, to determine the ponds’ cultural significance and utility, as well as their geographic pattern of distribution.
2015-2016 Highlights

Nicholas Cowan and Emily Faughnan, two Sayville High School students who were enrolled in the GIS Design & Application I course through the Stony Brook University ACE Program were named Intel STS 2015 semifinalists in January. Only three hundred of the 1,400 national submissions were selected. Professor Maria Brown, lecturer in Sustainability Studies and Dr. Michael Sperazza, assistant professor in Geosciences and former director of the Geospatial Center on campus developed this program last year. It made its debut with seven students from Sayville High School last fall. Maria Brown is also the Science Research Teacher at Sayville.

Nicholas and Emily completed their projects early and entered them into the Intel Science Talent Search in late November. While Maria teaches the GIS Design & Application I course at the high school, Janet Kaczmarek who studied GIS under Maria at Stony Brook University, serves as a research mentor to the ACE students in both GIS and Geology 121.

Nicholas’ project was titled “Geospatial Modeling to Predict Potential Natural Range Expansion of the Eastern Coyote, Canis latrans, in Suffolk County, New York,” and used geospatial modeling tools to create maps illustrating the core preferred habitats of coyote as to determine which communities in Suffolk County would be most likely to encounter the creatures if coyotes were to come to Long Island. Emily’s project, titled “Trends Analysis of Missing and Exploited Children in the New England and New York Metropolitan Region, USA Using Geospatial Tools,” explored the potential use of geospatial analytical mapping tools for the analysis of missing children cases in the

Students in Dr. Marc Fasanella’s Eco-Aesthetics in Art class created new plans to reinvent Long Island’s Route 25A so that it is more ecologically friendly and aesthetically pleasing. Fasanella and his students presented their ideas at a Setauket community meeting in May. Separately from the May presentation, Fasanella presented similar ideas to the Hampton Bays Civic Association as part of a monthly lecture series, titled “Downtown Good Ground: Future, Present, and Past.” In his lectures, Fasanella, a Hampton Bays resident, outlined a list of ecological design and maintenance plans for the hamlet to solve existing environmental issues, such as excessive storm-water runoff, to help the area achieve a greater level of sustainability.

Ecosystems and Human Impact major Alexandra Van Loo and Biology major and Ecosystems and Human Impact minor Andrew Fiorenza were each awarded a 2015 Ashley Schiff Park Preserve Scholarship (ASPPS). The annual ASPPS awards are meant to recognize Stony Brook University undergraduate and graduate students with outstanding academic ability who demonstrate a commitment to environmental preservation through academic studies or research projects using the Ashley Schiff Park Preserve. With the help of Dr. Sharon Pochron, Alexandra and Andrew wrote a proposal to quantify human-use patterns in the Ashley Schiff Park Preserve, and, with funding from the Friends of Ashley Schiff Park Preserve, have begun to execute those plans. This involved hanging camera traps on trees in the preserve so that they can count the number of heads that appear in the photos. They will collect data for a full year to get an idea of how people use the preserve in all seasons. They’ve studied other natural parks’ methods of human-use patterns, around which they are shaping their research and analysis. Andrew and Alexandra hope to present their findings at this spring’s URECA Conference.
The **Costa Rica Study Abroad 2016** students spent twenty days visiting fruit farms along the diverse Caribbean coast of Costa Rica, receiving their permaculture design certificates and learning about cooperative living. The group visited two Ecovillages: green communities that focus on integrating natural building and sustenance farming. Permaculture unites the values of sustainable landscape design with the intention to preserve native ecosystems to create an environment that provides food, energy, and shelter to a village in a noninvasive way. The course, ENV 310, focused on renewable, off-the-grid infrastructure solutions such as rainwater catchment, solar panels and using natural building materials.

Permaculture students spent two weeks at Punta Mona, an educational farming community in the Talamanca region where they tackled design problems by applying a set of permaculture principles. The students also visited the Jaguar Rescue Center and the iguana sanctuary at the indigenous Bri Bri Reservation near Puerto Viejo, where they hiked through primary growth forests and saw jungle wildlife such as monkeys, sloths, snakes, frogs, toucans, and anteaters. The students walked among the trees that provide bananas, jackfruits, avocados, mangosteens, guavas, pineapples, star fruits, breadfruits and passion fruits throughout the year.

**Finding sustainable solutions**

[Dr. James Hoffmann](http://bit.ly/1HfVPSu) is leading a group of students who are interested in finding out how feasible and sustainable a backyard constructed wetland might be in removing nitrogen from Suffolk County's residential wastewater before it is discharged into our groundwater. Hoffman's group meets weekly to discuss potential designs, models, economics and more. In addition to the dozen students involved, [Shawn Nuzzo](http://bit.ly/1MCyjpL), a graduate of our program and founder of [Ecological Engineering of Long Island](http://bit.ly/1MCyjpL), and [Dr. Arlene Cassidy](http://bit.ly/1MCyjpL) also participate.

**Summers spent in nature**

[Dr. David Taylor](http://bit.ly/1MCyjpL), one of our newest faculty members, spent the summer traveling, writing and reflecting on nature in the American West. You can read some of his writing on our program blog ([http://bit.ly/1HfVPSu](http://bit.ly/1HfVPSu)). Before leaving on his trip, Sushi in Cortez was published, a book Taylor co-edited and contributed to. A description of this book also appears on our blog ([http://bit.ly/1MCyjpL](http://bit.ly/1MCyjpL)).

* A jackrabbit spotted on the Canyon Rim Trail in Seminole Canyon State Park and Historic Site, near Comstock, TX.
* CREDIT: D. TAYLOR

**On the airwaves**

[Dr. H. James Quigley, Jr.](http://bit.ly/1HfVPSu), has continued his series "Sustain It: Conversations in Sustainability." The 20 to 30-minute interviews are audio recordings of colleagues and guests that have been broadcast on the Stony Brook University radio station, WUSB 90.1 FM. The interviews are also available online as podcasts. ([http://bit.ly/1NzP33i](http://bit.ly/1NzP33i)). Have an idea for someone to interview? Wish to do one yourself (faculty or student) and add it to the program? Please let Jim know: Harold.QuigleyJr@stonybrook.edu.

**Making maps, making a difference, the GIS Center**

[Dr. Sung Gheel (Gil) Jang](http://bit.ly/1HfVPSu) received a teaching grant from [Amazon Web Services](http://bit.ly/1HfVPSu) (AWS) for his class, GSS 323/523 GIS Databases and Design in Spring 2015. With this teaching grant, each student used Amazon cloud computing resources for free to learn design and implementation of ArcGIS enterprise geo-databases. In his class, each student was able to manage his/her own ArcGIS for Server (12 servers total). Without this help, they could not have managed the server software by themselves. The Geospatial Center is participating in a three-year research project called, Cultural and Social Map of Latino Long Island (PI: Adrián Pérez-Melgosa, Department of Hispanic Languages and Literature) funded by the Hagedorn Foundation. Jang, with [Dr. Michael Sperazza](http://bit.ly/1HfVPSu) of the SBU Department of Geosciences, will provide theoretical and technical support in order to implement an interactive web-mapping platform that can document geospatial narratives of the Latino community in Long Island.
More Highlights

Staff achievements: We are pleased to announce Dr. Sung-Gheel (Gil) Jang as the new director of our Geospatial Center and faculty director of the Advanced Graduate Certificate of Geospatial Science and minor in Geospatial Science (GSS) and Dr. Kate Aubrecht as the new faculty director of our Coastal Environmental Studies major and minor programs. Lastly, congratulations to Dr. Elizabeth Newman on her recent tenure!

Alumni profile: Erica Cirino
After graduating in May 2014, Environmental Studies major and Environmental Humanities minor Erica Cirino had continued her work as assistant to the Sustainability Studies Program through summer 2015; in December 2015 she finished her graduate education in the Stony Brook University School of Journalism’s MS program. The degree requires students to specialize in one or more specific areas of journalism: environment, science, health and technology. She chose to focus mainly in environmental and science writing. Today Erica works as a freelance writer, covering myriad topics, with her specialty being in science and the environment, but she also writes about education and running/athletics. When she’s not writing, she can be found running, making art, bird watching or hiking with her dog. Check out her website: http://www.ericacirino.com.

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