Welcome to the fall edition of PEI CURRENTS – an online newsletter providing highlights of PEI’s research, teaching, and outreach activities. The current edition includes the announcement of a newly funded research partnership studying the Southern Ocean and summaries of two research projects that attracted a lot of media attention over the past summer. We also showcase innovations in our environmental humanities program; the independent work of two graduating seniors; reflections of PEI-STEP alumni; and other news from our research centers and academic programs.

On the research front, Jorge Sarmiento is leading the Southern Ocean Carbon and Climate Observations and Modeling program (SOCCOM) – a $21 million research partnership involving 11 institutions. Over the next 6 years, SOCCOM will create a biogeochemical and physical portrait of the Southern Ocean using hundreds of robotic floats deployed in the deep ocean gyre that surrounds Antarctica. Robert Socolow and a colleague from UC Irvine have revealed that the methods being used to calculate global carbon emissions fail to account for emissions of coal fired power plants currently under construction and coming on line. Also, several PEI associated faculty and colleagues recently published statistical evidence of the alarming rate at which antibiotic consumption is growing worldwide.

In a new undergraduate course — The Environment Can Be Funny —
Visiting Barron Professor Jenny Price asked students to use humor to persuade, communicate, and critique the environmental movement. A three-part panel series — *What Arts & Humanities Are Good For* — is planned for later in the fall.

In two spotlight articles, 2013 Becky Colvin Memorial Award winners [Elizabeth McKenna ’14](mailto:elizabeth.mckenna@princeton.edu) and [Lauren Wyman ’14](mailto:lauren.wyman@princeton.edu) describe their senior thesis experiences studying coral reefs in Bermuda and spider populations on Bahamian Islands, respectively. And, alumni of the PEI-STEP program Ning Lin *10 and Bryan Mignon *06 reflect upon the two years they spent developing the [environmental policy dimensions](http://www.princeton.edu/envpolicy) of their graduate dissertations.

We hope you enjoy reading about these and other initiatives described in this newsletter and encourage you to visit the [PEI website](http://www.princeton.edu/envpolicy) for the latest news from our center and for details and information on [upcoming events](http://www.princeton.edu/envpolicy). Things are shaping up to be another exciting academic year.

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**SOCCOM is launched!**

*by Morgan Kelly, Office of Communications*

The Southern Ocean Carbon and Climate Observations and Modeling program, or SOCCOM, is a six-year initiative headquartered at Princeton and funded by the National Science Foundation with additional support from the National Oceanic and Atmospheric Administration (NOAA) and the National Aeronautics and Space Administration (NASA). The program is being administered by the Princeton Environmental Institute.

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**Committed Emissions**

*by Holly Welles, the Princeton Environmental Institute*
The world's accounting system for carbon emissions, administered by the United Nations, disregards capital investments in future coal-fired and natural-gas power plants that commit the world to several decades and billions of tons of greenhouse gas emissions, according to a new study conducted by Robert Socolow, PEI associated faculty member and co-director of the Carbon Mitigation Initiative, and co-author Steven Davis, a professor of earth system science at the UC-Irvine.

Increase in Global Use of Antibiotics
by Wendy Plump for the Princeton Environmental Institute

Global use of antibiotics is surging according to several PEI Associated Faculty members and colleagues who conducted a broad assessment of antibiotic consumption around the world. The study, "Global Trends in Antibiotic Consumption, 2000-2010," found that worldwide antibiotic use has risen a staggering 36 percent over those 10 years with five countries -- Brazil, Russia, India, China and South Africa (BRICS)- responsible for more than three-quarters of that surge.

The Environment Can Be Funny
by Alicia Brooks for the Princeton Environmental Institute

During the spring, PEI's 2014-2015 Barron Visiting Professor in the Environment and the Humanities, Jenny Price, taught an interdisciplinary course The Environment Can Be Funny that explored the intersection of the environment and comedy. Price tasked her students with analyzing and demonstrating how
satire, sarcasm, and comedy of all stripes can be used to explore, and poke fun at, environmental issues.

Senior Thesis Research

by Nick DiUlio for the Princeton Environmental Institute

Elizabeth McKenna’s senior thesis examined the delicate environmental balance of coral reefs. The Princeton ecology and evolutionary major travelled to Bermuda to investigate the ideal conditions for coral growth as fieldwork for her senior independent project.

For a long time, Lauren Wyman has been fascinated by the function of ecological systems. So when it came to her senior thesis, the Princeton University EEB major posed a question: What happens to these systems when they are disrupted by invasive species?

PEI-STEP: Crucial Link to the Policy World

by Wendy Plump for the Princeton Environmental Institute

Ning Lin ’10 and Bryan Mignon ’06 reflect upon the two years they spent as Fellows in PEI-STEP — an interdisciplinary fellowship program offered jointly with the Woodrow Wilson School of Public and International Affairs’ program in Science, Technology, and Environmental Policy — that allows PhD candidates in science and technical fields to investigate and forge critical links with the policy world.

Discovery Day 2014

by Holly Welles, Princeton Environmental Institute
On Friday, May 9th, PEI hosted its 3rd annual Discovery Day — a multidisciplinary poster session celebrating undergraduate senior thesis research on environmental topics. Over 70 students from 16 academic departments showcased their work which was mentored by 60 faculty advisers.

Class Day at PEI

by Holly Welles, Princeton Environmental Institute

On June 2nd, students gathered with family, friends, faculty, and staff in Guyot Hall to celebrate Class Day at the Princeton Environmental Institute (PEI). Fifty-four graduating seniors in the Class of 2014 were awarded Environmental Certificates. This year’s certificate recipients hailed from 16 academic majors, reflecting the wide-ranging interest in environmental issues across the Princeton campus.

Research Center News

- Center for BioComplexity
- Cooperative Institute for Climate Science
- Carbon Mitigation Initiative
- Grand Challenges

Lecture Series

What Arts & Humanities Are Good For:

- Oct. 08, 2014 - Keynote Address, William Cronon
- Oct. 09, 2014 - What History Is Good For
- Oct. 16, 2014 - What Literature Is Good For