



# FINAL REPORT OF THE ENVIRONMENTAL CHANGE TASK FORCE

---

*Submitted to the BUCC, President Christina Paxson, and Provost Mark Schlissel*

*April 23, 2014*

## INTRODUCTION

---

The Environmental Change Task Force took on the charge from the Provost of developing a campus response to global environmental change, especially climate change, to position Brown as a leader in this domain. See Annex A for full charge and roster. The more specific elements of our charge were:

- contextualizing the existing efforts of the standing committee on campus sustainability;
- identifying additional ways to integrate education on environment and sustainability all across the curriculum and beyond;
- examining engagement opportunities that exist for students through the Swearer Center and suggesting new ones;
- suggesting types of activities members of the Brown community might wish to engage in to contribute to the societal response to Climate Change;
- suggesting ways that campus leadership might help members of our community to engage in such activities.

To address the broad and more specific aspects of the charge, the Task Force proposes one overarching goal for the campus and a series of more detailed goals and procedures for working toward those goals.

## OVERARCHING GOAL

---

We propose that Brown University infuse an ethic of environmental sustainability into the culture and curriculum of Brown University through integrated teaching, research, service, and campus life initiatives that promote knowledge and action on climate change mitigation and adaptation. In much the same way that the last half century saw the infusion of concerns about diversity both domestically and globally throughout the curriculum and campus life, current global concerns require us to integrate environmental sustainability into all that we do.

The activities of the university and its staff are often divided into those furthering the teaching, research, and service missions of the university. We divided our discussion similarly into these three domains, and focused our discussion of service on how we might individually and as a university community serve our local and global communities. There are areas of overlap between teaching, research, and service activities, and between recommendations of this Task Force and other bodies on campus. In this document, we highlight these areas of overlap and areas that we did not explicitly consider because they are adequately represented by other groups on campus.

To highlight the importance and cross-cutting nature of environmental issues, we recommend that the university promote two campus-wide focal activities. We recommend a Presidential lecture series to bring in high profile speakers from a variety of disciplines, professions, or perspectives. Potential speakers could range from former poet laureate Robert Hass to current Secretary of Energy Ernest Moniz. The goal would be to bring in speakers who could generate a crowd, and, at the very least, encourage more discussion on campus of environmental issues. This series could be coordinated by the new Institute for the Study of Environment and Society. In addition, we recommend a rotating art show or installation with an environmental theme, coordinated by the Brown Creative Arts Council. These art projects on the one hand may be products of the existing arts-focused community at Brown, but there may be mechanisms by which multi-disciplinary, collaborative projects could also be encouraged.

# TEACHING

---

## GOALS:

- The open curriculum and liberal learning focus of Brown University make it ideal to prepare students to think broadly and creatively about environmental problems. Drawing on these strengths, we should build educational programs and our national profile so that Brown is the leading source from which to recruit current students and recent graduates in the fields of sustainability and environmental change.
- Environmental issues should be integrated throughout the undergraduate curriculum, giving all students, regardless of concentration, the opportunity to learn about environmental challenges and their interconnections with other core social problems. Global climate change is a critical, urgent issue facing humanity, and is closely tied to problems of social inequality, development, and labor; thus, climate change should be the near-term emphasis for curricular integration.
- Integration of environmental concerns into graduate education is primarily achieved through support for environmental research among Brown faculty and graduate students. We expect and encourage the Institute for the Study of Environment and Society to provide a bridge between graduate programs, to publicize our strengths to recruit graduate students, and to support interdisciplinary environmental research by graduate students. We believe, however, that course development and revision to include environmental issues within graduate programs is also valuable and we include it in our recommended programs.

## PRINCIPLES:

- Recommended changes should support student choice, faculty initiative, and the flexibility of the Brown undergraduate curriculum.
- By providing support for the inclusion of new material in existing courses or the development of new courses, faculty and concentrations will be able to introduce environmental issues into courses without undue financial or time burden.
- An easily accessible source of information about environmental content in courses will facilitate student access to environmental topics.

## WORKING TOWARD THE GOALS:

1. To make Brown the leading source for recruiting, we recommend focusing on investment in strengthening the concentrations in Environmental Studies and Sciences, Environmental Engineering, and the Environmental Health programs in the School of Public Health. The university is currently hiring faculty to teach in all of these areas, and we recommend revisiting the status of these concentrations with the dean of the college in several years.
2. So that students can more easily identify courses broadly or specifically relevant to issues of environmental change, we recommend a voluntary designation of “environmental content” that instructors can add to their courses in some online listing, to be housed either in existing databases or in a database to be compiled and maintained for this purpose.
3. In order to expand the number of courses with environmental content, we recommend funding a program of course development grants, using the model of the framework for global health course development grants, to support faculty adding environmental content to existing courses or developing new environmentally-focused courses at the undergraduate or graduate level. This program would also encourage the development of team-taught courses, especially those taught by colleagues in different fields.

4. In order to capitalize on the work already being done by students, we recommend encouraging the continued development of environmentally-oriented Group Independent Study Projects (GISPs) by archiving the syllabi in a central online location (possibly with the lists of environmental courses) and encouraging students to build on each other's work in developing new GISPs. This archiving would also allow faculty applying for course development grants to build on the work started by students in GISPs.
5. Environmentally-focused internships or research currently are managed under the auspices of three units on campus. The Swearer Center currently integrates support for environmental engaged scholarship or independent research into existing programs (see Annex B: Swearer Center – Opportunities for Environmental Work). Similarly, the Career Lab includes work in the fields of environment & sustainability as part of their LINK program for low-paid or unpaid internships, and through their focal area Careers for the Common Good (<http://brown.edu/campus-life/support/careerlab/jobs-internships>). In addition, unpaid internships, in any field, paired with academic study are managed through the Academic Internships program in the Curricular Resource Center (under the dean of the college: <http://brown.edu/academics/college/advising/curricular-resource-center/independent-studies/academic-internships-ais/academic-internships-ais>). These programs are functioning well and are widely-known among students. We recommend two enhancements to programs.
  - a. To increase visibility and to more effectively build on the experiences of students, we recommend compiling a record of recent environmentally-focused projects or internships supported from all of these sources, to be made available online to promote peer-to-peer connections and information sharing among students.
  - b. Develop a standing program of 20 environmental internship opportunities per year. These would build on the iProv model, clustering the students in two communities and providing enhanced support for vetting internships, matching students to placements, and ensuring positive experiences for all involved. We recommend targeted fundraising for staff and student expenses for this program.
6. Finally, we recommend developing an engaged research interdisciplinary capstone focused on developing team-based research skills for students studying environmental issues. This would serve as a capstone experience for students across concentrations, at the discretion of departments, centers, or institutes in which concentrations are housed. We describe this in the following section on research.

## RESEARCH

---

The Brown University Board of Fellows recently voted to approve the founding of an Institute for the Study of Environment and Society (ISES). The Institute will support environmental research across campus, and we endorse the founding and support of this Institute.

We focus here on two complementary activities designed to provide support for research that serves a larger community and is applied in its goals.

### GOAL(S):

- Make Brown the go-to place for partnerships in research on environmental issues. Work at Brown should engage faculty and graduates with non-academic partners to develop holistic, solutions-oriented research on environmental challenges.

## *WORKING TOWARD THE GOAL(S):*

1. We propose a capstone research experience that would respond to real-world research needs, promote the integration of multiple intellectual traditions, and develop team-based research skills among our seniors as they move into a workforce that will ask them to work in such teams. We have such integrative and problem-oriented teaching and research in the next TRI-lab to be undertaken on climate change and through projects like the Solar Decathlon, and we believe expanding on these experiences is warranted. The program we propose would develop capstone projects that responded to applications or proposals from the larger community, including NGOs, government, and industry. The projects would involve researching and proposing solutions to real-world environmental challenges presented by clients. This proposal is described in more detail in Annex C: Proposed Applied Research Program. We expect that completing such a capstone project could qualify students for the Engaged Scholar designation on their degree that is currently being debated on campus.
2. Provide salary support (on a competitive and limited basis) for faculty and students, particularly in fields with a practical mission such as engineering and public health, responding to requests for help from community groups. Groups in RI and New England often come to us with small-scale consulting needs but little resources. We see value in supporting faculty and students to spend a limited amount of time on these activities.

## **SERVICE, COMMUNITY ENGAGEMENT, AND VISIBILITY**

---

The Task Force discussed over several meetings the ways in which existing groups, particularly the Sustainability Strategic Planning Advisory Committee (SSPAC), are working on sustainability initiatives on the Brown campus. We also discussed the individual work that many students, staff, and faculty are pursuing in their own volunteer work, and the projects involving students and faculty funded in part by the President. Finally, we consider the existing structure of student groups at Brown doing environmental organizing and projects. In our recommendations, we seek to ensure continued support for the activities already in place, and to provide opportunities for those who might not yet be involved. In addition, we recommend publicizing existing activities and coordinating information on these activities.

## *GOAL(S):*

- Support staff, students, and faculty in their volunteer work and organizing to promote environmental sustainability.
- Support sustainability initiatives on campus that serve as a model for other campuses.
- Publicize innovative environmental initiatives and research to broader publics.

## *WORKING TOWARD THE GOAL(S):*

1. The Staff Advisory Council organizes volunteer activities to support a small number of ongoing programs (e.g. Girls on the Run). We recommend they organize to support an environmental stewardship activity. Many staff already participate in such activities, and we hope that they will step forward to lead this organizing.

2. Student volunteer activities on environmental topics occur across campus, under the auspices of many organizations (e.g. Brown Democrats). These activities are, we believe, adequately supported through these organizations. Organizing specifically around environmental issues is coordinated for undergraduates through the group emPOWER, which serves as an umbrella and includes multiple subgroups. The structure of emPOWER is flexible in allowing groups to form and die as specific activities gain and lose salience. We recommend that emPOWER be supported through an office in the Urban Environmental Lab building, and administrative support and a small budget for their activities from the Institute for the Study of Environment and Society.
3. We similarly recommend that the Environmental Change and Health interest group in the Alpert Medical School receive a standing small budget and staff support to coordinate activities.
4. Campus work that serves the RI and larger community is currently supported financially through ad hoc funds from the President of the university (e.g. the funding for the group working on the Resilient RI bill, the CCURB program). We propose a standing fund to support environmental work by Brown community members in the larger community, to which student, staff and faculty groups may apply.
5. In addition to supporting the work of Brown community members, we recommend that Brown pursue a partnership with community organizations, such as the RI Foundation and other higher education institutions, to develop a larger grant or loan fund that will provide support for projects to improve environmental stewardship in RI. For example, the fund could invest in energy efficiency improvements in historic buildings, or support educational activities around Rhode Island. This will enhance Brown's ongoing partnerships with RI communities and, by partnering with a respected community grant-making organization, will ensure funds are effectively spent.
6. Sustainability initiatives on campus are well-developed and described in the ongoing work of the SSPAC (see <http://www.brown.edu/initiatives/brown-is-green/sites/brown.edu/about.brown-is-green/files/uploads/Interim-Report-Sustainability%200411%202013.pdf> for the 2013 interim report). We enthusiastically recommend that the university support the work that they are doing on campus operations and facilities, including their phased development of a larger staff and infrastructure to support concrete activities to make the campus and university activities align with the overarching goal we identify at the beginning of this report. We believe that the full set of recommendations that we have articulated in this report expand upon their considerations of academic goals and activities, and we recommend they continue to focus on operations and facilities in parallel with the implementation of our academic recommendations.

## FINAL COMMENTS

---

The Environmental Change Task Force was convened for a specific and short period of time, to develop these recommendations. Many of the programs suggested could be managed by existing programs or by the Institute for the Study of Environment and Society, either with existing staff and funds or with incremental staff/funds. The Task Force agreed, however, that it is desirable to convene a smaller steering committee to provide strategic planning and decision-making for many of the proposed programs. This would have the benefits of drawing on a wide range of expertise and facilitating the spread of information about the programs. We felt strongly that having a group that engaged students, staff, and faculty has been very productive and we hope that a future steering committee could similarly engage these groups.

## ANNEX A: CHARGE TO THE TASK FORCE

---

Mark S. Schlissel, Provost

October 10, 2013

### Environmental Change Task Force

There is no more pressing and important issue facing mankind than environmental change. Encompassing more than the widely discussed and clearly documented issue of global warming, mankind's interactions with the environment pose an array of threats to life on earth on a variety of timescales. The Brown community has taken a number of actions in this arena including successful and ongoing campus sustainability efforts (a 29.4% decrease in Brown's carbon footprint since 2007) and consideration of a proposal that our endowment eliminate its investments in the largest coal producing or using companies (as proposed by "Brown Divest Coal" and considered by the Advisory Committee on Corporate Responsibility in Investment Policies, ACCRIP, and the Brown Corporation). As an outstanding research and educational institution with a large and passionate community of students, faculty, and staff, Brown should be doing more to address issues surrounding environmental change.

The President's proposed strategic plan, released to the community on September 18, names "Sustaining Life on Earth" as one of seven integrative themes that will focus academic efforts at Brown in the decade ahead. The university is also expanding its work on campus sustainability following the recommendations of the Sustainability Strategic Planning Committee issued last spring. In addition, last May, the Brown Corporation called upon the University to "identify ways to work with students, faculty, staff, peer institutions and other strategic partners to develop a robust response to climate change, and to assume a greater leadership role on the issue of carbon dioxide emissions."

The Environmental Change Task Force, comprised of faculty, students and staff is charged with:

- contextualizing the existing efforts of the standing committee on campus sustainability;
- identifying additional ways to integrate education on environment and sustainability all across the curriculum and beyond;
- examining engagement opportunities that exist for students through the Swearer Center and suggesting new ones;
- suggesting types of activities members of the Brown community might wish to engage in to contribute to the societal response to Climate Change;
- suggesting ways that campus leadership might help members of our community to engage in such activities.

The Task Force will issue a report to the community on their recommendations by the end of the academic year. The committee will discuss its report with the President and Provost and then present it to the Brown University Community Council.

### Roster:

Leah VanWey (chair, Sociology and Environmental Change Initiative)

Amy Carroll (PAUR)

Forrest Gander (Literary Arts)

Catherine Gao (undergraduate representative)

Solomon Goldstein-Rose (undergraduate representative)

Sherine Hamdy (Anthropology)  
Patrick Heller (Sociology and Watson Institute)  
Isabella Levy (undergrad rep)  
Matt Margetta (staff, Environmental Change Initiative)  
Roger Nozaki (Swearer Center and Dean of the College)  
Chris Powell (Facilities)  
Sophie Purdom (undergraduate representative)  
Kelsey Ripp (MD '16)  
Keith Spangler (Geological Sciences, PhD '18)  
Derek Stein (Physics)  
Ed Steinfeld (Political Science)  
Amy Teller (Sociology, PhD '19)  
Haily Tran (undergrad representative)  
Peter Voss (Corporation)  
Greg Wellenius (Epidemiology)



## ANNEX B: SWEARER CENTER – OPPORTUNITIES FOR ENVIRONMENTAL WORK

---

12/2013

The Swearer Center for Public Service provides an array of resources and opportunities to support community work and partnerships among students, faculty, and community partners. The list below is not all-inclusive, but tailored toward opportunities for environmental work. More information on all of the Center's programs can be found at [www.brown.edu/swearercenter](http://www.brown.edu/swearercenter).

### INFORMATIONAL OPPORTUNITIES & RESOURCES – *all have typically included environmental work*

- Walking Tours of Providence, held during the first week of classes.
- Community Service Opportunities Fair each semester, featuring dozens of community agencies and campus programs seeking student volunteers.
- Careers in the Common Good, programs and opportunities in nonprofit and social justice careers, in partnership with the Career Development Center and Curricular Resource Center.
- Swearer Bulletin, a weekly email newsletter of campus and community events and opportunities
- RICommunityJobs.org, a free and comprehensive e-mail list of local non-profit and community jobs.

### STUDENT LEARNING AND ENGAGEMENT OPPORTUNITIES

- University-Community Academic Advising Program (UCAAP), an academic advising option for first- and second-year students. *Includes a two-day pre-orientation institute and monthly gatherings; environmental work and organizations are usually featured.*
- Community Programs led by undergraduates, through which hundreds of Brown students work in areas such as K-12 and adult education, health, and housing and homelessness. *No programs currently focused on environment – but Swearer is looking at ways we might expand into new issue areas.*
- Winter Break Projects, a week of exploration of social issues in Providence in January. *Groups of students are organized around themes, with environment as an occasional issue.*
- Impact Providence, a set of Providence-based summer internships with funding from Swearer. *In 2013, students worked with the City of Providence sustainability office, Farm Fresh RI, and RI Land Trust Institute.*
- Off-Campus Work-Study, allowing students to work at community-based organizations to meet their work-study obligations. *Could include placements at environmental organizations.*

### FELLOWSHIPS AND STUDENT PROJECT SUPPORT

- Fellowships, providing financial support for undergraduate students' research and public service projects in the U.S. and abroad, with academic year seminars and workshops for fellowship cohorts. Swearer supports roughly 80 projects per year. *Projects are student-designed; students have often focused on environmental themes.*

- The Social Innovation Initiative, advising and resources to foster and support community among students and alumni engaged in social entrepreneurship. *Projects are student-driven and have included environmental focuses.*

#### FACULTY ENGAGEMENT, COURSES, RESEARCH, AND PARTNERSHIPS

- TRI-Lab, a new initiative bringing students, faculty and community practitioners together to engage with a complex social issue and collaboratively develop, refine and test solutions to the issue. *The first TRI-Lab, in 2013-14, is focused on healthy early childhood development; climate change is a likely future topic.*
- Support and advising to faculty on community-based courses and research. *Environmental and food policy courses have been developed with Swearer support.*

## ANNEX C: PROPOSED APPLIED RESEARCH PROGRAM

---

We draw on Brown's rich tradition of engaged scholarship projects in Environmental Studies, in the Solar Decathlon, and across campus to propose a better-supported and more-structured program of applied interdisciplinary research projects that will serve as capstone experiences for students from many concentrations. We model this program on a group-based masters project program at the Bren School of the environment at the University of California, Santa Barbara. The Bren School program is purely client-driven, but we allow for projects motivated by external clients and by groups within Brown.

We propose a small number of capstone research projects each year that are developed based on faculty and student evaluation of proposals solicited from outside of Brown University. Proposals would be solicited widely from NGOs, various levels of government, and private corporations. These proposers would develop a request for research on a specific question or issue on which they need advice. They would work jointly with faculty and students at Brown to develop these, to ensure that the proposal is feasible in light of expertise on campus. Proposals would be due in January each year, to be evaluated by a faculty committee within a month. Early in the spring semester, the students and faculty involved with the initial proposal would then invite other students (perhaps those who had worked on unsuccessful proposals) to join their project. Students would then work in teams, usually including 8-10 students but of a flexible size depending on project, over the summer between their junior and senior year in a sort of group UTRA, and then complete the project as a capstone in the senior year.

These projects would involve data collection, background research, potentially learning new discrete analysis skills, and finally producing a report with recommendations for the client. A single faculty member would supervise the project, taking ultimate responsibility for the students' timely progress, and would call on additional faculty around campus for specific expertise relevant to the project. During the initial stages of the summer work, the students and faculty would also be given short, intensive training in team-building and collaboration skills to set the stage for a successful team experience.

This program would be complementary to but not duplicative of the TRI-lab program. It would involve proposals from outside, but would not work as closely with community partners (or fit as neatly in the research programs of Brown faculty). It would also be explicitly limited to seniors completing the capstone requirement. The program would also build on our experience with the Voss Environmental Fellows, but would be a group project rather than individual projects and would have a wider range of potential clients. The model followed by the Bren School does not charge anything other than travel or data analysis (lab) expenses for these projects. This makes the expertise accessible to a wide range of clients who might not be able to afford traditional environmental consulting. One example of this type of project is the current effort at Brown, led by Timmons Roberts in CES, to write legislation for resilience to climate change in RI.

To effectively pursue this, we would need to develop the areas of expertise, a procedure for soliciting proposals, a way of allocating faculty time to this activity, and a source of funds to support student and faculty time and a small amount of staff time for coordination.