IARU 2015 Global University Climate Forum: Final Report
February 2017
Introduction

While commitment to climate action at the global scale is arguably imperative, it is also important to recognize that climate change is caused by activities and choices at the local level. In light of this, during the 2015 UN Climate Negotiations in Paris, the International Alliance of Research Universities hosted an event for teams of students from around the world to share their ideas for local-scale initiatives that would yield measurable impacts within one year. Forty-five teams, each with three or more students, applied to participate in the workshop, each application was reviewed by a panel of experts for viability and 32 teams were invited to attend the December 2015 workshop.

http://goo.gl/Y0OyI8K
Hosts and Sponsors
This program was conceived, developed, and managed by members of the IARU, which is composed of 11 members – with Yale University as the lead organizer. The planning and execution of the event, however, was made possible through collaboration and teamwork with the International Sustainable Campus Network and Sorbonne Universités. The ISCN offered outreach channels, technical support, and expert insights on projects. Sorbonne Universités provided extensive in-kind support to host and manage the event, as well as excellent documentation throughout the event.

2015 Workshop
The December event was structured to offer the students both a series of top-level keynotes and ample opportunity to talk through their projects with peers and expert reviewers. A total of 27 student teams participated, and the event was attended by just over 130 students, faculty, and professionals. To ensure balance in the program, each team was assigned one session where they stayed with their poster to explain their ideas and field questions. All other participants moved around.

Highlights of the day included:

- Keynotes from Prof. Hervé Le Treut (Sorbonne Universités - climate scientist), Dean David Cash (UMass Boston - economist and former policymaker) and President Jobert Barthélémy (The Paris Sorbonne - art historian)
- Expert Commentary from Prof. Maria Ivanova (Yale alum and UMass Boston faculty – global environmental policy), Ms. Zena Harris (ISCN – campus sustainability expert), Prof. Dan Kammen (UC Berkeley – physicist)
- Activities with the group #climatesign, a grassroots effort to make climate action cool – the Eiffel tower will actually be lit with the sign this week
- A visit from the GroundTruth Project, an initiative that offers experience to young journalists learning to report on social justice
- These two groups connected with each other during our reception, and a news story came out of it. Our team was interviewed as well – we are hoping to see a news item from that soon.
- During his remarks, Dan Kammen mentioned that he is the editor in chief of the Environmental Research Letters, and offered to publish the results of any of the Forum projects should the students be willing to write a 5-6 page summary in the correct format
Schedule

10:00    Plenary
         Opening remarks from Prof. Hervé Le Treut
         Instructions for the day from Melissa Goodall

10:30    Poster Session 1 (group A stays with posters, other groups walk around)

11:30    Break
11:45  Plenary  
*Remarks from Dean David Cash*

12:00  Poster Session 2 (group B stays with posters, other groups walk around)

1:00  Lunch  
Activity with #ClimateSign

2:30  Poster Session 3 (group C stays with posters, other groups walk around)

3:30  Break

3:45  Plenary  
Remarks from commentators  
*Prof. Maria Ivanova commenting on Session 1*  
*Ms. Zena Harris commenting on Session 2*  
*Prof. Dan Kammen commenting on Session 3*  
Q&A with students

5:00  Closing remarks from President Jobert Barthélémy

6:00  Informal networking reception on barge du CROUS

**List of speakers**  
(in order of the agenda)

**Prof. Hervé Le Treut** is the Director de l’Institut Pierre Simon Laplace at l’université Pierre et Marie Curie, which is a member of Sorbonne Universités.

**Dr. Melissa Goodall** is the Associate Director of the Yale University Office of Sustainability.

**Dr. David Cash** is the Dean of the McCormack Graduate School of Policy and Global Studies at the University of Massachusetts Boston.

**Ms. Zena Harris** is the Director of Operations and Communications for the International Sustainable Campus Network.

**Prof. Maria Ivanova** is the Director of the Center for Governance and Sustainability, which is housed in the McCormack Graduate School of Policy and Global Studies at the University of Massachusetts Boston.

**Prof. Daniel Kammen** holds a dual appointment with the Energy and Resources Group and the Goldman School of Public Policy at the University of California Berkeley.

**Prof. Barthélémy Jobert** is the President of Paris-Sorbonne University, which is a member of Sorbonne Universités.

**Session Assignments**

<table>
<thead>
<tr>
<th>University</th>
<th>Project Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aalto University</td>
<td>Energy Revolution</td>
</tr>
<tr>
<td>Australian National University</td>
<td>Organic Waste Recycling at ANU</td>
</tr>
<tr>
<td>Cambridge University and ETH Zurich</td>
<td>One World Challenge</td>
</tr>
<tr>
<td>INSEAD</td>
<td>Sustainability Governance Design at INSEAD</td>
</tr>
<tr>
<td>Tecnológico de Monterrey</td>
<td>Campus Monterrey: Mitigation actions to reduce the environmental footprint</td>
</tr>
<tr>
<td>Tongji University</td>
<td>Design of eco-tourism riding route Eastern Chongming Island - based</td>
</tr>
<tr>
<td>Yale-NUS College</td>
<td>Singapore Sustainable Solutions Network</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>-----------------------------------------</td>
</tr>
<tr>
<td>University of East Anglia (UEA)</td>
<td>UEA Food Rescue Initiative</td>
</tr>
<tr>
<td>Yale University</td>
<td>C2U - Museum</td>
</tr>
</tbody>
</table>

**SESSION 2**

<table>
<thead>
<tr>
<th>Australian National University</th>
<th>Youth Ecopreneurship Canberra</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. Augustine University of Tanzania</td>
<td>Planting Fruit Tree on Campus and Surrounding Community</td>
</tr>
<tr>
<td>Young Global Sustainabassadors</td>
<td>Global Environmental Video Series</td>
</tr>
<tr>
<td>Université Pierre et Marie Curie</td>
<td>UpGreen</td>
</tr>
<tr>
<td>Lomonosov Moscow State University, Russia</td>
<td>Sustainable Development Institutionalisation Within Universities</td>
</tr>
<tr>
<td>National University of Singapore</td>
<td>NUS Green Guide to Event Management</td>
</tr>
<tr>
<td>University of Cambridge</td>
<td>Pooled Funds for Cambridge Bursars / Green Revolving Funds</td>
</tr>
<tr>
<td>Yale - Global University project</td>
<td>Global University</td>
</tr>
<tr>
<td>University of Edinburgh, Scotland</td>
<td>Carbon Railcard</td>
</tr>
</tbody>
</table>

**SESSION 3**

<table>
<thead>
<tr>
<th>University of Copenhagen, Denmark</th>
<th>SMART Canteens at University of Copenhagen</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Applied Science (HFT) in Stuttgart, Germany</td>
<td>HFT Greening</td>
</tr>
<tr>
<td>UC Berkeley, USA</td>
<td>THIMBY - Tiny House In My Backyard</td>
</tr>
<tr>
<td>Paris-Sorbonne</td>
<td>Urban Green Fabric</td>
</tr>
<tr>
<td>Webster University</td>
<td>Webster Environmental Initiatives</td>
</tr>
<tr>
<td>University of Cambridge</td>
<td>Positive Investment Blog</td>
</tr>
<tr>
<td>University of East Anglia (UEA)</td>
<td>UEA Food Rescue Initiative</td>
</tr>
<tr>
<td>Université Officielle de Bukavu</td>
<td>Tree biodiversity and carbon stock assessment in mountain forests in the Congolese Albertine Rift, the Kahuzi Biega National Park case and its surroundings in the DR Congo</td>
</tr>
<tr>
<td>National University of Singapore</td>
<td>Goody bags</td>
</tr>
</tbody>
</table>
Student Projects

Proposed projects were required to demonstrate that they offered both social and environmental benefits, and that they were financially viable or beneficial. They were implemented on local, regional or global scales, but were required to be actionable, with measurable results. The projects had to reflect three priorities of sustainability – people, prosperity, and planet. Sponsored by the International Alliance of Research Universities (IARU), the Global University Climate Forum was led by Yale University and was hosted by Sorbonne University in Paris with additional support from the International Sustainable Campus Network (ISCN).

Energy Revolution

Aalto University, Finland

Aalto University intends to be Finland’s leading sustainable university campus in 2020. Our aim is to highlight instruments, equipment, materials and social services, long-term perspectives, and cost-effectiveness, and to follow the principles of sustainable development. Our focus is on ecological sustainable development, with social, cultural and economic aspects also taken into account. Aalto is not going to reach the goal unless something drastic happens. It’s a big task and we will feel hopeless at some point, that’s why it’s important and a major resource that we need to update every month and get a feedback and response from the other teams who might have a original idea and a new twist to our concept.

Our mission is to assist Aalto and to push them for a energy revolution, we are all Creative Sustainability Master students from various fields to make sure our teamwork has a multidisciplinary approach. Our team consists of: Ekaterina Perfillyeva, a business student from Russia, Caroline Mellberg, an architect from Sweden, and Anna Svartstrom textile designer from Finland.

The main topics for the Energy Revolution will be:
- Recycling, Renewable energy production testing solar, wind and geothermal, bio-waste.
- Electricity management by ex. isolating windows, reducing A/C, reducing heating, censor lighting at night.
- Food, local food, waste management. Urban landscape, enhance the bike community, bike share, plant a garden.

We joined the Greener Aalto which is an electoral alliance in the fall 2015, a representative council election of AYY (the school board) of Aalto University. This is where the big decisions of the school are being made. We are all currently candidates for the board, which we believe will make it easier for our project to succeed, as it has a real effect on the future of Aalto University.

Updates: This team has not reported any updates yet.

Final outcome: A final report has yet to be delivered.
WATER SCARCITY

Aalto University, Helsinki Finland
Anna Svarström, Caroline Meilberg and Ekaterina Perfilieva

IDEA

- A mobile app about food on campus
- Educate in sustainable food consumption
- Improve restaurants' communication

INTEGRATED INTO A BIGGER CAMPUS APP IN THE FUTURE

“HOW CAN WE MEASURE THIS?”

- Quantitative - E.g. liters of water spent on each plate
- Qualitative - General awareness
- Waste disposal habits
- Increased consumption of certain types of food, e.g. vegetarian or salad

© Aalto University

Organic Waste Recycling at ANU
Australian National University, Australia

While living on campus, it has come to our attention that excessive amounts of food scraps, estimated at 80L a day, from our dining hall are being sent to landfill. This is a substantial environmental issue as organic matter releases methane – a greenhouse gas 21 times more potent than carbon dioxide – when decomposing in landfill. We have devised a plan to make use of this organic waste through a mechanical composting system. The transformation of organic waste can be turned into nutrient-rich soil, which then can be used to nourish the gardens on campus and support a student community garden. This project will be piloted at our home, John XXIII College, monitored, evaluated, and then implemented as a campus-wide initiative.

Project goals:

1. Lower greenhouse gas emissions by reducing organic waste to landfill by 80%, and in turn, decrease the costs of waste disposal.
2. Decrease reliance on fertilisers which pollute campus waterways, while reducing expenditure.
3. Engage the community in recycling and develop interest in organic gardening. A waste audit will be conducted prior and throughout the integration of the compost system, and thus project goals will be examined through these collected figures.

The success of the project will be measured by the following variables:

1. Volume of organic waste diverted from landfill. From this figure we can estimate the reduction in greenhouse gas emissions and waste disposal costs.
2. Volume and quality of compost provided for gardening. This will indicate the cost savings on external fertilisers and the ecological impact.
3. Number of students volunteering in the Green Group and community garden. A Green Group will be established to facilitate student involvement in the project. The engagement of the community can then be gauged based on participation and outreach of awareness campaigns.

Updates: This team has not reported any updates yet.

Final outcome: A final report has yet to be delivered.
ORGANIC WASTE RECYCLING
The Australian National University
Ella McAlister, Hannah Wright, May Oboodi

Overview
While living on campus, we came to notice large amounts of food scraps being sent to landfill from
our student dining halls.

Our groups aim is to recycle this waste through a composting system to be later used on campus
grounds and in a community vegetable garden.

Goals
1. Lower greenhouse gas emissions
2. Reduce waste to landfill
3. Decrease reliance on synthetic fertilisers which pollute campus waterways
4. Engage the community in recycling and organic gardening

---

CH4
20x more harmful

CO2

---

DEVELOPMENT & FUNDING
- identify the need to recycle organic waste on campus
- plan project and identify aims
- seek advice from our residential college and ANU
- begin fundraising
- attend forum and refine plan

WASTE-AUDIT
- implement a separate composting bin in the dining hall
- record the volume of organic waste and inorganic waste daily
- set goals for reduction in waste to landfill

PREPARATION
- educate staff and students
- establish Green Group for project volunteers
- finalise project funding
- lease composting machinery

REPORTING & REVIEW
- compile report on the results and impacts of the system
- assess the extent to which project goals have been met
- estimate environmental impact

IMPLEMENTATION & MONITORING
- begin recycling!
- monitor the volume and quality of inputs and outputs of the machine
- utilise compost on college grounds
- design and build community vegetable garden

有机废物回收
澳大利亚国立大学
艾拉·麦凯斯、汉娜·赖特、马伊·奥布迪

概览
在校园生活期间，我们注意到大量的食物残渣被送往垃圾填埋场。

我们的目标是通过一个堆肥系统将这些废物回收利用，今后将在校园内使用
并建立社区蔬菜园。

目标
1. 减少温室气体排放
2. 减少废物填埋
3. 减少对合成肥料的依赖，这些肥料污染校园水道
4. 邀请社区参与回收和有机园艺

---

CH4
20倍更危险

CO2

---

发展与资金
- 确定回收有机废物的必要性
- 制定项目并确定目标
- 向我们学院寻求建议
- 开始筹款
- 与论坛合作并细化计划

废物审计
- 实施单独的堆肥箱
- 记录有机废物和无机废物的体积
- 设定减少垃圾填埋的目标

准备
- 教育员工和学生
- 建立绿色小组参与项目
- 完成项目资金
- 租用堆肥设备

报告与审核
- 编制报告，概述结果和系统的影响
- 评估项目目标是否已达到
- 估算环境影响

实施与监控
- 开始回收!
- 监测输入和输出的质量
- 利用堆肥在校园内使用
- 设计并建立社区蔬菜园
Youth Ecopreneurship Canberra
The Australian National University, Australia

The Youth Ecopreneurship (YEP) Camp aims to empower students at the Australian National University (ANU) who have sustainable business ideas and aspirations to gain insights from successful youth ECOpreneurs on green business that are both environmentally sustainable and economically feasible. Providing incentives for the creation of local green businesses from grassroots reduces CO2 emission levels in the university and the community, which, in turn, contribute to climate change mitigation in ways that are eminently replicable in other local contexts around the world. This project aims to encourage potential youth Ecopreneurs to direct their talents towards helping Australia’s transition to reduce emissions. The YEP camp project will consist of a two day long intensive camp at the ANU Kioloa Coastal Campus, where 15 ANU students from different education and professional backgrounds will learn how to improve and put into practice their sustainable business ideas. The YEP camp offers an opportunity to learn about ecopreneurship and participate in a mentorship program with trainers and practitioners. After the camp, students will have the option to participate in an internship program for 3 months where they will learn about the real practice of green business in exchange for providing recommendations on sustainable practices.

Phase 1: This project will build a partnership with local stakeholders (ACT government departments, NGOs and businesses) whose work is closely related to green business, green inventory and carbon reduction. On the 1st of February 2016, we will start contacting the professional trainers to work as trainers during the camp.

Phase 2: In the 2nd week of April 2016 we will call for applications centered to select 15 students based on their preliminary sustainable business plans. The local partners will also assist in this one-month selection process. The main camp will be conducted on the 3rd week of June 2016 with trainings in areas such as product-making, eco-friendly business principles; financial management and sustainable marketing strategies presented by a number of successful young ECOpreneurs and the three organizers. The participants will have a chance to refine their business plan and to present them to their peers. This will create peer-to-peer communication and enhance learning opportunities and enable future collaboration. Criteria for best ideas include products/services with good revenue streams, those that will stimulate environmental consciousness in the community, and ideas with clear and measurable, positive green impacts such a reduced energy consumption in constructing, selling, and using the product.

Phase 3: The best three participants will start their internships with partners for 3 months (Mid July- Mid October 2015). This internship program will be designed in accordance with previous ANU Green Internship program. The interns will receive $1500 each for stipend for the whole duration of internship. During this time, each participant will need to submit monthly reports to ANU Green as well as a final recommendation report to the placement.

Phase 4: The project will conclude with a public seminar by the three winners on their business ideas, plans and the internship experiences. This will be held at the middle of December 2016 at ANU campus.

Key Indicators on the successful outcome of the project:

1. 15 students will receive training from experts on conducting business that could
contribute to climate change mitigation.
2. More than 100 students will learn about ecopreneurship and climate change mitigation from the final seminars.
3. Partner green businesses will receive recommendations from the interns on reducing the business footprints and sustainability practices.

Updates: This team has not reported any updates yet.

Final outcome: A final report has yet to be delivered.
Every day you can read, see and hear about the global climate change and the depletion of resources in the news. What are our emotions reading hearing all this? Unfortunately, it is very unlikely that it will make us empowered to change something in our own life and we remain feeling helpless and disappointed. However, there is really good news: Just by shaping our life differently it is possible to save over 50% of emissions compared to the average person. This means if many of us join we can have an impact, and even more important we don’t have to carry around these negative feelings anymore because we can make a change, it’s simple and fun! The One World Challenge is all about coming together to make a difference in our lives, and the world around us. Not through our words but through our positive actions. We want to create ONE WORLD, where well-being and a sustainable lifestyle go hand in hand.

How does the One World Challenge Work? The One World Challenge is an international university competition where students from around the World can join and experience during three weeks what it means to live a sustainable lifestyle. An engaging online platform is used to suggest actions to the participants, track their progress whilst estimating CO2 savings and allowing teams to share their experiences with the rest of the community by enabling to invite their friends to e.g. a vegetarian team lunch, shopping at the local market or a bicycle repair session.

Organized by the WeAct Students teams from ETH Zurich and Cambridge University, a first trial One World Challenge in autumn 2014 attracted more than 600 participants from more than 40 Universities on 4 continents. All engaging, living, sharing a new more positive and happy lifestyle at the same time, performing more than 50'000 positive actions in just three weeks! What’s next? We think, knowledge, opportunity, creativity and team play are four essential ingredients in making behaviour change happen and are required for a successful campaign.

During the IARU workshop we hope to refine our marketing strategies by the help and knowledge of the other participants as well as explore new ways of organizing and coordinating a large number of university teams at several universities at the same time. The next One World Challenge is scheduled for March 2016. Key milestone for the One World Challenge 2016 will be, having established a network of collaborating Universities by the end of December 2015, establishing a collective marketing strategy by the end of January 2016, promotion and marketing events in February 2016, launch of the Challenge in March 2016 and finally after the challenge evaluate on the environmental impact of the Challenge as well as evaluate areas of improvement for the next One World Challenge.

Updates: One World Challenge Impact Reports frequently being posted on www.oneworldchallenge.me, including lots of data an insight.

559 Participants from 24 Countries, all continents and 56 different Universities acting together with positive actions to make this One World a better place!
In total during 3 weeks an incredible 71,222 actions were performed. Simple actions everyone can do have a huge impact if many people unite and collectively do them. Examples are taking the stairs, showering faster or printing less were performed approximately 3000 times each. This equates to several 100,000 litters of water, an immense amount of energy (e.g. to heat the water for showering etc.) and therefore a substantial amount of prevented carbon emission.

Final outcome: A final report has yet to be delivered.
ONE WORLD CHALLENGE
Where People and Planet connect
Philipp Braeuninger-Weimer, Ben-Elias Brandt, Maximilian Stammnitz, Michelle Cooper, Saeeda Gouhari
www.oneworldchallenge.me

"SMALL ACTS, WHEN MULTIPLIED BY MILLIONS OF PEOPLE, CAN TRANSFORM THE WORLD."

The One World Challenge is all about coming together to make a difference in our lives, and the world around us. Not through our words but through our positive actions.

Join our community of selected Universities around the World and make sustainability happen!
INSEAD, France

As an institution committed to developing responsible and thoughtful leaders and entrepreneurs, we believe that INSEAD can demonstrate a clear commitment to tackling climate change, an imperative issue that is affecting the lives of people and the future of the ecosystem. Currently, the various sustainability initiatives taking place at INSEAD are decentralized. Sustainability goals have not yet been defined, performance is not tracked, and information on key metrics is not complete across campuses. A sustainability report for 2013 was developed by the Social Innovation Center at INSEAD; however, this was for internal use only, and is not disseminated to the student body and wider public. The next version of the sustainability report will be made public in early 2016.

When compared to its American peers such as Harvard and Stanford, INSEAD lags in terms of articulation of its position on sustainability and visibility of sustainability-related goals.

Updates: Met with campus directors at Fontainebleau, Singapore and Abu Dhabi campus to understand ongoing initiatives and brainstorm further ideas to be more sustainable on campus
  • In the process of review of core curriculum to identify opportunities for sustainability-related discussions
  • Established Environment in Business as a subset of INDEVOR club
  • Worked on paper reduction initiative and presented proposals to Dean

Final outcome: A final report has yet to be delivered.
Building Momentum for Sustainability Governance
INSEAD, France

Chloe Byruck | Genna Lee | Jonathan Martel-Gagnon | Omeed Sadder
Advocates: Miranda Holmes | Dr. Michael Renne

A clearer commitment to climate change is required.

As an institution committed to developing responsible and thoughtful leaders and entrepreneurs, we believe that INSEAD can demonstrate a clear commitment to tackling climate change, an imperative issue that is affecting the lives of people and the future of the ecosystem.

Currently, the various sustainability initiatives taking place at INSEAD are decentralized. Sustainability goals have not yet been defined, performance is not tracked, and information on key metrics is not complete across campuses. As students, we believe INSEAD can improve from clearer articulation of its position on sustainability and greater visibility of sustainability-related goals.

The value proposition is as follows:

1- Mission Reinforcement:
   INSEAD’s mission is to develop responsible leaders of the future

2- Stakeholder Feedback:
   Student, Alumni and employees are demanding more sustainability focus on campus and in the classroom

3- Competitive Alignment:
   Top tier MBA programs are emphasizing the importance of sustainability and incorporating it into their organizations

4- Cost Reduction:
   Sustainability initiatives regularly reduce costs and can even increase productivity

#EarthtoParis
Held during INSEAD social impact week, the goal of this event was to raise awareness about the climate talks to the INSEAD student body, as well as offer students a chance to participate in the #EarthtoParis campaign (see filmstrip below for some messages). An estimated 200 students interacted with the campaign and 48 messages were written.

Additionally, the campaign was used to tell the participants about our current project for the Global University Climate Forum.

Awareness
Increase awareness of climate change and associated issues

Governance
Support the development of a comprehensive sustainability governance framework

Stakeholders
Where possible support the INSEAD Social Innovation Center in engaging faculty and campus administration in discussions on sustainability at INSEAD.

Momentum
Build momentum towards a clear commitment to sustainability

Curriculum
Review the course outlines to identify areas where sustainability issues can or should be incorporated into the syllabus.

Reporting
Develop key metrics that we believe we should be included in the next sustainability report. For example, we think these should include:
- Water Consumption
- Electricity Consumption (tons of CO2)
- Organic waste (tonnes) and target
- Urban waste (tonnes)

Additional ideas for communication channels to update students and the general public on current and proposed sustainability initiatives at INSEAD.

Continuity
For this project to succeed, sustained momentum is critical. This is a challenge for us due to the 10-month format of the INSEAD MBA. We are exploring the potential of reviving the Environment in Business Club as a way of involving the next intake of students in the project.

Sustainable Development Institutionalization within Universities

Page 17 of 67
Lomonosov Moscow State University, Russa

This April the group of students from Lomonosov Moscow State University have decided to start the event "VusEcoFest", that was aimed to promote the values of sustainable development and to create the concept of "green universities" for the "green economy" in 10 Moscow Institutions.

This initiative was supported by three Departments of the Moscow Government (http://www.vuzecofest.ru/), by WWF and other respected organizations.

In different universities there were interesting workshops, popular science lectures and round tables, exhibitions, tours, performances, actions of collecting and recycling waste, games, film screenings, discussions and other activities on sustainability.

The result of this event was the initiative of students from Lomonosov Moscow State University to create the Association of Green Universities in Russia and to develop the strategy of Sustainable Development of Lomonosov Moscow State University. There is no any network of sustainable universities in Russia as well as institutions which touch upon the sustainability on a high level.

So we are aiming to be the first ones in Russia who will help different students from different universities to become sustainable and responsible for the future of the world.

Updates: In August the Lomonosov State University team reported that in the spring the team participated in the organization of Moscow State University’s “VuzEcoFest” (www.vuzecofest.ru). The Russian Minister of Natural Resources attended the event, and their presentation was a success.

Final outcome: A final report has yet to be delivered.
VuzEcoFest
Lomonosov Moscow State University
Russia

WORLD
- To ensure that the leading universities in terms of sustainable development
- To increase the number of sustainable development projects
- To develop partnerships with other universities that promote sustainable development
- To promote the idea of sustainable development among students
- To raise awareness of sustainable development among the general public

RUSSIA
- To become a leading university in terms of sustainable development
- To develop partnerships with other universities that promote sustainable development
- To promote the idea of sustainable development among students
- To raise awareness of sustainable development among the general public

MOSCOW
- To become a leading university in terms of sustainable development
- To develop partnerships with other universities that promote sustainable development
- To promote the idea of sustainable development among students
- To raise awareness of sustainable development among the general public

VuzEcoFest
VuzEcoFest is a university event held annually in Moscow in celebration of the Earth Day. Last year, 10 Moscow universities participated in this festival and several departments of the Moscow Government supported it. The topic of last year was waste collection.

OBJECTIVES
- To raise awareness about the importance of sustainable development
- To encourage students and teachers to participate in sustainable development projects
- To promote the idea of sustainable development among the general public
- To raise awareness of sustainable development among the general public

ORGANISATION
- The Organizing Committee of the event is composed of representatives from all participating universities
- The event is coordinated by the University's Office of Sustainability
- The event is supported by the Moscow Government

WHAT WE HAVE DONE:
- Clean-up events
- Education workshops
- Public awareness campaigns
- Town meetings
- Student debates
- Public lectures

RESULTS:
- Increased awareness of sustainable development among students and teachers
- Increased participation in sustainable development projects
- Increased support from the Moscow Government

WHO SUPPORTED US:
- Moscow City Government
- Moscow University
- Moscow State University

PLANS FOR 2018:
- More workshops and lectures
- Expanded public awareness campaigns
- Increased participation from students and teachers
- Support from the Moscow City Government

www.moscowfest.ru
NUS Green Guide to Event Management  
National University of Singapore

Every year, the National University of Singapore and its Student Union (NUSSU) host numerous freshmen orientation events such as camps, fairs and sporting competitions. Large amounts of logistical and post-event waste are often generated at these events. In line with the Office of Environmental Sustainability’s (OES) goal to integrate sustainability into operations in NUS, NUS Students Against Violation of the Earth (NUS SAVE) proposes to pursue green event management by constructing a ‘Green Guide’ for organizing committees. This guide will focus on three aspects: introducing greener logistical alternatives, reducing wastage and encouraging stronger recycling efforts through greater incentivization and convenience. From these, we aim to make green actions an integral of daily campus life, and for sustainability to become a core concern of event management.

To target green logistics, eco-friendly alternatives (e.g. recycled paper, biodegradable plastics, shirts from reused materials) of commonly used logistics will be collated and relevant product suppliers given to event committees for their consideration. A sharing economy will also be created through a common logistics point for committees to donate extra or reusable logistics for others who require similar materials for subsequent events.

For waste reduction, event proposals will be vetted and alternative ways suggested to cut waste generation for activities. Regarding camps, reusable utensils for all meals will be advocated.

Lastly, to bolster recycling rates, organizers will be encouraged to get participants to clean and dispose of recyclables in the appropriate bins. We would also be looking into making recycling infrastructure more convenient and accessible, such as by placing them in higher-traffic areas, near water taps and enhancing the portability of bins.

The guide will be complemented with a point system, in which event organizers will be conferred ‘Greenmarks’ of differing grades. NUS SAVE hopes to enforce a minimum standard of the ‘Greenmark’ to reduce excessive usage at any event but concurrently, reward organizers that have gone beyond the bare minimum through additional incentives. To achieve this, NUS SAVE will be working in close collaboration with our supporting offices, in particular OES and the Office of Student Affairs (OSA) to garner expert opinions on the subject as well as to reach out to NUSSU and its constituent groups.

Successful effectuation of initiatives proposed will be judged by comparing differences in the quantity and nature of logistics used and the amount of waste generated from events past and present. Logistics employed will also be quantified into ecological footprints, allowing committees to visualize their environmental impacts and improve. Surveys will be handed to participants to inquire on green efforts undertaken during events and how they can be improved.

The project will commence with the creation of the ‘Green Guide’ in January and February, after which NUS SAVE will propose the guide to NUSSU in late February. The ‘Green Guide’ and will then be used by event organizers until late May across the planning process for freshmen
programs. Lastly, ecological footprints of the various events will be calculated and the respective ‘Greenmarks’ awarded to organizers post-event in August.

**Updates:** This team has not reported any updates yet.

**Final outcome:** A final report has yet to be delivered.
To be the leading youth group in Singapore that advocates for NUS to be an exemplary model for environmental sustainability.

Our Campaigns:
- Waste Reduction
- Green Logistics
- Recycling

Waste Reduction
Common logistics point for organizers to donate extra or reusable materials for others to use in future events.

Suggestions on using fewer or substituting materials:

<table>
<thead>
<tr>
<th>Examples</th>
<th>Waste generated</th>
<th>How to reduce it</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of garbage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water bottles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Materials used during wet games</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paper</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Green Logistics
Suggestion of greener suppliers to reduce waste and promote sustainable practices.

NUS Green Guide
Recycling
Promotion of necessary infrastructure/logistics for participants to recycle.

Generate awareness among recycling in NUS.

Build a recycling culture by targeting students who are utilizing resources at NUS.

TARGETS & MEASURING SUCCESS
Waste reduction of 30% at events in NUS.

50% of logistic materials to be derived from environmentally-friendly certified suppliers.

Encouraging recycling
Awareness about recycling

Enforcing recycling

Infrastructure

To instil in students positive environmental behaviour through the notion of NUS being a green campus.

140 school events each year which generate lots of waste.

More than 20 orientation camps

NUS SAVE Special Projects Team
Chee Ning (SAVE Vice-President, Special Projects)
Alif (Special Projects Officer)
Phoebe (Special Projects Officer)
Clare (Special Projects Officer)
Zhi Sheng (Special Projects Officer)

BEHAVIOURAL CHANGE THROUGH SUSTAINABLE EVENT MANAGEMENT
Every year, the National University of Singapore’s Student Union (NUSU) and its constituent clubs hold

Point System & Green Mark

Follow领袖, encourage others to take green actions.

Green Mark awarded to the best of green action.
Ditch the Bag: Load the App
National University of Singapore

Incentivizing participation in public events, especially student activities on campus, is most commonly achieved these days through the distribution of freebies and ‘goody bags’. This unsustainable practice is extensively prevalent in Singapore, and we have found in our first two months as freshmen that the National University of Singapore (NUS) is no exception to this. What makes this practice particularly wasteful is that most ‘goody bags’ distributed on campus are simply short-lived branding vehicles, of little or no use to students beyond the events. In our experience, the initial childish excitement of receiving a brightly colored and well-branded bag filled with unbeknownst ‘goodies’ as a reward for attending an event, is quickly replaced by student crowding near dustbins where the bag contents are typically sorted through and trashed. It is seldom that the contents make it to the recycle bins where they belong, much less be used for their intended purpose. The ‘sustainable’ bag designed for multiple uses often survives this imminent fate, though it’s a short-lived victory as it is relegated to student cupboards - simply to be trashed at a later date.

As busy NUS freshmen, we have thus far attended only a few student events but are already the proud owners of ‘4-5’ goody bags each that currently reside at the bottom of our closets. We had trashed their contents immediately upon receipt to make room to carry useful items like water and snacks for the duration of the event. Since then the bags have found no use – they are not designed to carry the realistic load of our daily student life that inevitably includes a laptop, a few books and a reusable water bottle. And the bags hardly satisfy our youthful fashion sensibilities, denying the opportunity for use as a fashion accessory. With a total undergraduate population of 26,000 attending a conservative estimate of 6 ‘goody bag’ incentivized NUS student events in an academic year, this is a big waste-creation exercise that carries a significant and completely avoidable ecological footprint.

The goal of our project is to scale down this mindless trash generation using two parallel efforts. The first is to design and create a digital branding platform for student bodies and event organizers – a digital ‘application’ as an alternative to the physical ‘goody bag’. NUS is a great test-bed for such a project due to a high student smartphone-ownership rate and high-speed internet availability. The second is to create awareness among the NUS student body about the environmental impact of the ‘goody bag’ through partnering with the Office of Environmental Sustainability (OES).

The benefits of this project extend far beyond the immediate reduction in waste generation at student events and its resulting environmental impact. Sensitizing students about such often ignored unsustainable aspects our actions carries the added long-term advantage of expanding our introspection regarding our consumption footprint in daily life. Our project carries the immense potential for replication and adoption across all tertiary educational institutions in Singapore that currently adopt the ‘goody bag’ strategy.

**Updates:** Presented at the NUS College Sustainability Symposium.
There were a total of 37 project teams addressing sustainability issues such as (1) waste management, (2) food, (3) Societal Trends & Life Style Trends, (4) The Built Environment,
Energy, and Water and (5) Transport & Mobility. We discussed the proposals in semester 1 and shared the results in semester 2 during two end-of-semester symposia and networking events with Industry Advisors, Invited Guests, Academic Advisors, Student Fellows and peers. More information can be found at: https://blog.nus.edu.sg/gem1917/about/

Final outcome: A final report has yet to be delivered.
Can we replace the goody bag culture in NUS with sustainable alternatives?

The Goody Bag Culture
- Incentivise participation
- Extensively prevalent in NUS events
- Short lived branding vehicles
- Wasteful and unsustainable practice
- Items seldom make it to recycle bins

Objective
- To scale down this mindless trash generation because this is a big waste-creation exercise that carries a completely avoidable ecological footprint.

Goody Bags' Ecological Footprint – Cradle to Grave

- 1 Goody Bag = 5900 litres of water
- Power a 5-room flat for almost a day
- 1000 Goody Bags = Daily water usage of 3100 flats
- CO2 emissions from driving 150km

Preliminary Study

<table>
<thead>
<tr>
<th>How many goody bags have you received from NUS campus activities so far?</th>
<th>What percentage of goody bag items have you used?</th>
</tr>
</thead>
<tbody>
<tr>
<td>100% used</td>
<td>66%</td>
</tr>
<tr>
<td>75% used</td>
<td>23%</td>
</tr>
<tr>
<td>50% used</td>
<td>13%</td>
</tr>
<tr>
<td>25% used</td>
<td>8%</td>
</tr>
</tbody>
</table>
| None | 0%

<table>
<thead>
<tr>
<th>How important is a goody bag in determining your attendance at an event?</th>
<th>Do you prefer to access the event’s information through print or electronic form?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>20%</td>
</tr>
<tr>
<td>Somewhat</td>
<td>55%</td>
</tr>
<tr>
<td>Quite Important</td>
<td>16%</td>
</tr>
<tr>
<td>Very Important</td>
<td>8%</td>
</tr>
</tbody>
</table>

Approach & Strategy

- Design a digital branding platform for students & event organisers
- A digital application as an alternative to the physical goody bag
- NUS is a great test bed: high smartphone ownership rate
- Select a valid campus event for trial and soft launch
- Conduct student satisfaction survey on digital goody
- Strategies app development platform for wider and bigger campus events in future

Special thanks to NUS Office of Environmental Sustainability and RVRC Academic Instructors (Mdm Safa Ansari and Associate Prof Safi Khan)
Paris-Sorbonne, France

For this group project we decided to work on the democratization of sustainable habitat. This single ideal will guide us through our work. When we speak of sustainability we refer to the idea of being able to adapt to our environment. This implies a more ecological use of our resources and the ability to be more suited to every possible environment. We must take in account multiple factors such as the existing housing, the neighborhood, the slope of the land and its rural or urban nature.

We work towards a real sustainable urban design, through the recycling of existing buildings, our waste and the creation of a circular economy... These actions can actually optimize our use of energy and consolidate communities. When we choose to speak of efficient housing, we actually have a logic of eco territory and therefore we can see the habitat in its global scale.

Our choices reflect the environmental context, but we also take in account a social and economic approach. We will work on the existing buildings. First of all these constructions represent the vast majority of the real estate and second of all these houses actually consume large amounts of energy. It represents 46% of the overall energy consumption. These operations will also improve the living conditions of every person. This project that we are developing, will respond to the issue of sustainability through one main task, the recycling of existing housing. We will also offer a wide range of alternative practices while targeting other ecological constructions such as renovations, extensions and expansions.

We are aware of the importance of a local and civil dimension. Without this scale it isn't possible to develop a movement of awareness. It represents one of the core elements of our work and can help create “the local democracy of sustainable habitat for all” that we are striving for.

The schedule of our project consists essentially of weekly group meetings. During the first week we will work on a diagnostic to have a better understanding of the situation and then choose a study zone. Once these steps are concluded we will start working on the project itself, and having weekly routine checks with our professors until the work is finished.

Updates: This team has not reported any updates yet.

Final outcome: A final report has yet to be delivered.
Planting Fruit Trees on Campus and Surrounding Community  
St. Augustine University of Tanzania

This project intends to plant 10,000 fruits trees on campus, community, five secondary schools and eight primary schools for TWO years. The seeds will be planted and saplings over two years on 1 acre of land, located in the University Farm near the water source for project implementation. The arable land is provided in-kind by the University for this Proposed Trees Nursery of different fruits plants that do not require artificial pesticides, fertilizers and other chemicals. This project is for the benefit of the surrounding rural communities and schools that are environmentally, socially and economically disadvantaged.

At the beginning of the project’s first year (January -March 2016), 10,000 mango, orange, avocado and passion seeds/saplings will be planted on the contributed community land, and after nine (9) the fruits trees will be distributed for free to approximately fourteen educational institutions and three community of the surrounding villages of the Nyegezi Mwanza every year. People will plant the trees in their own orchards/ gardens; then, they will also maintain them and (PROJECT GOAL) to be the sole beneficiaries of the new income generated from fruit yields, generation of employment, and absorption of carbon dioxide gas (CO2) from atmosphere, erosion control, and provision of healthy diet (food).

PROJECT AUDIENCE AND INVOLVEMENT   The project will serve primary schools and secondary schools, colleges and universities, local government leaders, religions believers, youth-led community organizations and other youth clubs. They will involve from the project plans formulation, implantations and monitoring and evaluation phases since this project is people centered participation for sustainable development goals. Also they will get involved in seminars, workshops for capacity building, education for environmental practices as well as knowing reasons of reducing climate change impacts.

MONITORING AND EVALUATIONS   In keeping with its focus on inclusive participation all people youth and women, ST. AUGUSTINE UNIVERSITY OF TANZANIA TOURISM ORGANIZATION AND TOURISM DEPARMENT include participatory monitoring and evaluation as a key project phase to ensure target are attained. Through the monitoring and evaluation process TOURISM DEPARTMENT field officers and community members and their leaders meet together on a regular basis to discuss project successes and challenges, and to identify new opportunities.

Updates: Apart from established Nursery at Maisha Ecological resort, our team gonna have to establish another nursery at the Abraham House of Hospitality (AHH) which is going to be used to plant fruit trees for Nyamalango Primary school, Nsumba Secondary and Nganza Girls Secondary school. The task should be completed up to the end of our final exam (19th March).

Visiting the students at Nsumba secondary School particularly the members of Malihai Club, Roots and Shoots and YUNA club. The students will be visited so as to motivate them to plant fruit trees around their school environment and make some preparation for moving the trees from the nurseries to their school.
Since coming back from France for COP21 conference, we have dedicated our lives and time to support struggles of our community to the hit. It has become our lifetime commitment to combat climate crisis through fruit trees and other species of trees planting in my country. Our aim is to plant One million trees (1,000,000 trees) in 2016 to 2025. If everything goes well and if we are supported by international community and other stakeholders we will be able to achieve this goal.

Final outcome: A final report has yet to be delivered.
The project consists on a series of proposals created by Tecnológico de Monterrey’s students with the main objective of reducing the institution’s environmental footprint throughout carbon capture and energy efficiency measures, as part of a civic commitment. The scope of the proposed project is based on five major activities:

- Determination of a consumption baseline of fuels and electrical energy in order to estimate the amount of CO2 emission derived from Campus’ operation.
- Quantification of CO2 emissions generated by consumption of fuels and electrical energy during the year designated for implementation of the mitigation measures.
- Determination of the amount of carbon captured through biomass growth at the Campus’ Arboretum.
- Determination of biodiversity rates by the implementation of monitoring activities.
- Design and creation of a sensitivity program with the aim of increasing student, teacher and Campus staff environmental awareness.

To measure progress and success, a list of deliverables has been designed and developed. It includes not only the completion of periodical reports, but also the redaction of a guide to conduct environmental sensitivity workshops inside Campus and the development of a visualization platform where all the obtained information will be published with public access, along with updated maps and calculation tools (software) to register the improvements that the project achieves during the work year.

Regarding the schedule of activities, a summary of the initiatives includes the bimestrial quantification of CO2 emissions generated by consumption of fuels and electrical energy (measurements will be done in the months of January, March, May, July, September and November), trimestral registration of the amount of carbon captured by the Campus’ Arboretum and the University’s biodiversity rates (during the months of January, April, August and November). Finally, the data will be compelled in several media, including final written reports reviewed by sustainability experts, a methodological guideline that will allow the proposed actions to be replicated in other Universities, and several digital resources stated above which include a footprint calculation tool and an online platform to collect the recovered information.

Updates: Further action plans were provided in July 2016.

Final outcome: A final report has yet to be delivered.
Mitigation Actions to Reduce the Environmental Footprint:
Mid-Term Report

**Determination of the amount of carbon captured through biomass growth at the Campus' Arboretum**

We quantificated and registered the carbon captured by the Campus’ Arboretum. (This information is annexed)

**Design and creation of sensitivity program with the aim of increasing environmental awareness.**

We made a draft of the guide designed to conduct the sensitivity workshops. (This information is annexed)
Design of eco-tourism riding route for Eastern Chongming Island – Based on the concepts of green education and sustainable development
Tongji University, China

Through the design of ecological tourism routes based on planned bicycle greenways, our aim is to make tourist attractions, natural rural scenery, wind-power generation system has been built and some ecological environmental protection facilities we will design in eastern Chongming island in series. That can form an ecological cycling route allowing visitors to enjoy the whole process of low-carbon travel. The tourists can experience a healthy lifestyle while riding, breathing the fresh air, enjoying the different scenery area and the beauty of nature, at the same time, they can visit and experience the low-carbon activities and environmental protection facilities. We are going to improve tourists’ low-carbon awareness and increase their participation of low-carbon action through the interaction with the tourists. The whole green-low-carbon travel route promotes people to walk and ride instead of riding. The eco-tourism mode is not only a traveling which is healthy and can make tourists close to nature, but also can spread green, low-carbon, ecological, environmental protection ideas, it can help people develop low-carbon consciousness and low-carbon behavior.

Significance of the project: On one hand the project provides for residents and tourists with distinctive riding corridor, on the other hand, throughout the entire trip the promotion and popularity of the green low-carbon, eco-friendly ideas was carried out among the tourists, whose abstract becomes concrete sense with the help of the ecological practices base, experience hall, sustainable self-assembly theme pavilion and so on arranged along the way. An adequate understanding of these concepts will make significance in the participation of low-carbon green lifestyle. After a trip, no doubt the innovations of idea, technology experience and lifestyle will occur among people of all ages.

Updates: This team has not reported any updates yet.

Final outcome: A final report has yet to be delivered.

THIMBY – Tiny House in My Backyard
UC Berkeley, USA
The Tiny House in My Backyard (THIMBY) project started in Fall 2014 as an interdisciplinary team of students coming together to design and build an off-grid zero net energy tiny. In October 2016, the scope of the project has since expanded. It has evolved to meet the goal of constructing a “living lab” demonstration unit for a campus carbon-neutral housing community. The project represents an educational opportunity for both THIMBY team members and other students on campus. It will provide technical, hands-on training to help community members think globally but act locally in response to climate change. Our project goals are to promote energy self-sufficiency, hands-on green building opportunities, interdisciplinary collaboration, and climate-conscious housing design. The final product will consist of a tiny house constructed on an 8’ x 24’ trailer base that:

1) enables comfortable and convenient modern living without grid connection; 2) recycles and treats its own greywater through a plant-based filtration system; 3) composts all human and food wastes on-site.

The house will be constructed at the new Berkeley Global Campus (BGC)- formerly the Richmond Field Station- which is currently being developed into a research hub for visiting scholars, faculty, and community partners. Our goal is to create a model unit for a future community of carbon-neutral housing units, thus leveraging greater efficiencies at the community-scale than exist at the individual household scale (such as capacity for composting, gasification of waste, solar thermal water heating, food production, and resource recycling/sharing). We will measure success in two categories. Short-term success depends on the house’s ability to function as a comfortable, affordable, and climate-friendly dwelling. Fortunately, metrics for this combination of attributes are defined by SMUD for their competition. Success in this category will be measured by success in the explicit competition categories set forth by SMUD. Long term-success will be measured across educational and design-based axes. Both the number of community members engaged in learning about our project (e.g. through workshops, fieldtrips, etc.) and the number of community-level sustainable and affordable design projects spawned by this project will contribute to our long-term success.

**Updates:** THIMBY has consistently provided informative updates on their progress, through newsletters and video-blogs.

**Final outcome:** A final report has yet to be delivered.
A letter from our team

Construction of THIMBY is well underway! We began our build on May 23rd by putting together the support for the unit’s water tanks, and officially marked the beginning of construction by hosting a kick-off BBQ at our build site on the Berkeley Global Campus on June 8th. THIMBY team members, advisers, and sponsors gathered to celebrate the occasion and “christen” our trailer by breaking open a bottle of champagne on its tongue. And since then we have made rapid progress! All four of THIMBY’s walls are up, and we’ve secured materials donations from Taco, Warmboard Inc., and Phase Change Solutions. For more frequent updates on our progress, like us on Facebook or follow us on Twitter.

With gratitude,

The THIMBY team

Climate CoLab Semi-Finalists!

THIMBY’s entry in MIT’s Climate CoLab contest has been selected as a semi-finalist! Finalists will be selected by July 5th, 2016. Check out our entry here.

Warmboard Partnership

THIMBY is excited to announce that Warmboard Inc. is now one of our project partners! They have generously donated 63 sq. ft. of Warmboard-R radiant panels to THIMBY. Check out this blog post for more details about our partnership. We’ll be featuring more of our sponsors on our blog in
UpGreen
Université Pierre et Marie Curie, France

UpGreen’s team plans to install self-sufficient, locally adapted, green roofs on the Jussieu campus. Hence, the project aims at reducing the urban heat island effect; raising awareness among the Jussieu campus about air pollution and bringing down the amount of greenhouse gas (GHG) to improve air quality. Adding green roofs to building generates an important thermal inertia and allows the development of microclimates, because of the evapotranspiration phenomenon. On that account, up to 75% of our energy consumption could be cut. After a first phase of data collection regarding the building’s architecture and losses, a thermal envelope model will be developed. This will permit to estimate the gain arising from an adequate use of green roofs. Further on, we also plan on raising awareness by installing electronic billboards, displaying the potential amount of GHG absorbed by the installed green roofs, in high-traffic places on campus. These will be accompanied by an indication light system showing the daily air quality in accordance with a color scale. Lastly, green roofs have been distinguished as an air pollution control technology. Indeed, it has been estimated that 1 ha of green roofs remove between 72 and 85 kg of pollutants such as NOx or CO2. According to AirParif, in 2014, 2.3 million Parisians were exposed to a higher pollution level than the authorized threshold. We believe that UpGreen could truly benefit their health.

Plants will be selected from existing studies in order to guarantee the best GHG absorption and building insulation, resistance to climate conditions and low maintenance needs. To ensure self-sufficiency, an irrigation system recovering rainwater will be implemented. Moreover, the green roofs will be used as an experimental device to conduct further studies on their impacts.

From January to March, we plan on selecting species and on planting them in a greenhouse. Other required equipment will also be ordered and installed. The awareness campaign will start in January. In April, the plants will be transplanted on the roofs. First measurements will be done in May. Until the end of the Gregorian year, studies will be led on GHG absorption and heat losses.

The efficiency of the project’s three components will be measured: thermique models and monthly pictures for the thermic impact, sensor captor and scientific experiments for the atmospheric pollution and surveys of the knowledge of air pollution before and after our awareness campaign. 80 ha is the potential area for green roofs in Paris. If UpGreen shows conclusive results, it is scalable within 5 years. We believe it will, our interdisciplinary and motivation will ensure our success.

Updates: This team has not reported any updates yet.

Final outcome: A final report has yet to be delivered.

Greening HFT Stuttgart: Campus Engagement Campaign
University of Applied Science (HFT) Stuttgart, Germany

Greening HFT, the student initiative that promotes sustainability-related campus projects, will launch a Campus Engagement Campaign. The students aim to raise the group’s profile, increase
its level of activity and student involvement, integrate itself within the sustainability structures of the university, and create innovative social events. Complementary to these goals is the university’s desire for Greening HFT students to maintain a level of autonomy and bolster their voice within the ongoing discussion around the development of a Green Office (G.O.). To that end, the Campaign will develop a strong communication plan and engagement strategy for the campus sustainability movement. A goal of the G.O. will be to integrate community/communication issues into the existing sustainability structures and groups within the university. The greater vision is to develop a comprehensive sustainability management strategy that integrates the inner-city campus into the surrounding neighborhood, starting with a multi-scale approach:

1. Energy Integration (e.g. HFT Living Lab)
2. Mobility (e.g. HFT Living Lab and other research projects)
3. Space Sharing (cooperation with other local Living Labs).

Therefore, faculty and staff, will support Greening HFT with the Campus Engagement Campaign, including the Center for Sustainable Development, which is responsible for managing the implementation of the university’s sustainability strategy (as an integral part of the university’s “Structure and Development Plan 2012-2017”).

Greening HFT is poised to work on the development of a Campus Engagement Campaign and its associated tasks because of its strong connections to the student body, its relationship with other active students groups (e.g. the student union & other local university green groups), and its motivation to spread sustainability awareness via social engagement. Greening HFT will create a roadmap to define its mission, integrate itself in the developing Green Office concept, understand its target audience, create specific engagement strategies, and carry out at least 3 community events that bring together important stakeholders, such as e.g. university students, employees, and/or faculty/staff, along with the citizens of Stuttgart, to engage in meaningful sustainability-related activities to increase environmental literacy. Measurable outcomes associated with each goal will help the students track progress, stay on schedule, and assess effectiveness. The engagement events will be based on the group’s interests, which currently include energy efficiency, water conservation, waste reduction, fair trade purchasing, and cultural environmental awareness.

Greening HFT’s participation at the IARU Global University Climate Forum and the development of the Campus Engagement Campaign will complement existing university efforts to comprehensively manage sustainability topics and facilitate the transfer of knowledge between the university and its students, employees, surrounding community and other important stakeholders. Greening HFT’s dedicated core members will supply the time, effort, and energy needed for a successful engagement plan.

**Updates:** HFT Stuttgart provided regular updates on their progress. Below are photos of one of their on campus events.
Final outcome: HFT Stuttgart provided a clear and detailed summary of activities during their campaign.
BRING YOUR OWN MUG
FAIRER KAFFEE IN DEINE TASSE - FOR FREE!!!

MITMACHEN!!!

WAS: AKTION GEGEN PAPPBECHER
WANN: 25.04 - 29.04 13:00 - 14:00 UHR
WO: INNENHOF
Pooled Funds for Cambridge Bursars
The University of Cambridge, UK

The Positive Investment Cambridge (PIC) team - Gabriella Overodder, Georgia Stewart, Signe Kossmann, Ellen Quigley and Lily Macfadyen - propose to design and implement a “green” pooled fund for Cambridge college bursars. This falls under the Energy and Greenhouse Gas themes as well as the Building Efficiency, Energy, Inter-Collaboration, and Renewable Energy topics.

The group proposed to convene Cambridge college bursars and relevant experts in green investing to develop, in a collaborative manner, an assortment of investments the bursars can shift portions of their college endowments into. The first meeting between bursars from four different colleges and green investment experts was highly successfully held on 28 September and was met with great optimism: the bursars listened with great interest, asked pertinent questions and the notion whether to expand future meetings beyond present college bursars was even addressed.

The investment options were presented by respective leaders in their fields, including energy efficiency financing, direct investments into renewable energy projects, ESG (Environmental/Social/Governance) investing, and two different approaches to shareholder engagement. In short, Prof. D. Crawford-Brown (Director, Cambridge Centre for Climate Change Mitigation Research) addressed social retrofitting in Cambridge; Mr. Bruce Davis talked on Abundance Generation, the first regulated investment company allowing low-lending to renewable energy projects with shares in the returns from generating low-carbon electricity; Mr. Omar Selim, CEO of Arabesque Asset Management, which won SRI Manager of the Year for their integration of non-financial ESG factors, and acting in alignment with the values of the UN Global Compact and UN PRI; and Prof. H. Covington (founding shareholder of Newton Star Asset Management and chairman of the Isaac Newton Institute) addressed forceful stewardship.

This meeting will be followed by feedback from the bursars as to which topics will be pursued into the future, which one college bursar optimistically opted to host: a great signal of the seriousness with which they are taking this. The meetings with the bursars will last until mid-November, with the bursars’ final preferences shaping the ultimate make-up of the fund. Final approvals of the chosen mix of options should take place in December, with the first investments flowing into the fund by January or soon thereafter. Our measurements will be: the number of bursars attending meetings, providing feedback, and expressing interest in these investment options, and of course the total value of investments that are ultimately directed toward the green energy fund.

This project is extremely innovative; it has happened at no other university and is completely novel. If successful, however, it could very easily be adapted for the use of other universities (and their constituent colleges, in the case of Oxford) as it would involve similar institutional constraints and scale of funds.

Updates: This team has not reported any updates yet.
Green Revolving Funds for Cambridge  
The University of Cambridge, UK

The Positive Investment Cambridge (PIC) team - Gabriella Overodder, Georgia Stewart, Signe Kossmann, Ellen Quigley and Lily Macfadyen - propose to design and implement a Green Revolving Fund for Cambridge college and the University itself. This falls under the Energy and Greenhouse Gas themes as well as the Building Efficiency, Energy and Inter-Collaboration topics. We propose the creation of a green revolving fund to place and partially utilise the university’s endowment. This will not only provide major environmental benefits as energy efficiency will be improved across the university, but also a financial benefit. While Cambridge University takes part in a retrofitting fund, the Revolving Green Fund, which provides grants to reduce emissions that institutions repay through the savings they make, its small size and piecemeal action has meant that it is negligible and not at all of its potential scale.

A green revolving fund (GRF) invests in projects within the institution that aim to “improve energy efficiency, decrease resource and material use, reduce operating expenses and cut overall environmental impact” (Sustainable Endowments Institute, 2012). Savings from these initiatives are returned to the GRF to replenish it, and pay for further projects. Energy efficiency produces, by far, the best return on investment of any energy source, conventional or renewable (Lazard 2013). It is also the best investment in the sustainability sector. GRF has a longstanding history to demonstrate this: established funds such as those universities that have established the Billion Dollar Green Challenge gain average returns of 28%, with a range of 20-59% for all existing funds (Flynn et al 2012; Indvik et al. 2013).

We propose an initial small pilot project, looking at a small number of particularly energy-inefficient areas, such as waste- and energy-intense research labs. PIC proposes management of the pilot by a committee drawn from different stakeholder groups on campus: students, faculty, facility or energy managers, administrators, sustainability coordinators, and others.

This pilot has significant potential to expand in future years. Cambridge, with 19,385 students, 300 buildings, and an annual utility bill topping 15.6 million GBP – could likely support one of the largest GRFs in existence. Colleges have additional costs, and PIC looks forwards to exploring the creation of college GRFs separately to the university. The University of Cambridge could certainly profitably occupy itself with its own buildings’ energy efficiency for many years, based on the long-term performance of funds such as Harvard’s. However, there may be enormous potential in expanding the model to include institutions in the immediate vicinity, including perhaps Colleges, and in expanding outward as investment opportunities are exhausted. The results/impact will be measured by reduced energy use of the retrofitted buildings as well as financial savings (cuts in maintenance and energy expenses). The timeline would include a) convening stakeholders in mid-October, b) collecting data on emissions throughout the month of October, c) choosing an appropriate pilot project in November, d) securing funding from one of the colleges or the central endowment in November or December, and e) commencing the
retrofit as soon as possible, potentially as early as December or January.

**Updates:** This team has not reported any updates yet.

**Final outcome:** A final report has yet to be delivered.

---

**Positive Investment Blog**  
**The University of Cambridge, UK**

**GOALS:**  
- To maintain productive relationships between the student body, the investment advisory committee, and college officials.  
- To increase student involvement in the ethical and environmental considerations of investment decisions in the college.  
- To provide a platform for students to discuss and investigate the interaction between investment, ethics and sustainability.

**TACTICS:**  
- One undergraduate and one graduate student to attend every investment advisory committee meeting to take minutes and encourage discussions regarding the ethical and environmental aspects of the direction of future investment decisions.  
- Create an email bulletin and gradually develop this into a blog for the college community to discuss Positive Investment. Posts will include: minutes from investment advisory meetings case studies detailing the status of current college investments and planned future additions to the portfolio; updates focusing on news relating to college/university investments, investment management, and more broadly, other college news relating to environmental and ethical issues, with a focus on energy use and greenhouse gas emissions; analysis of other colleges'/universities’ investment portfolios; interviews with interested parties such as bursars, masters, relevant campaigns & organizations, other universities etc. on the subject of positive investment; advertise positive investment initiatives and promote ways for students to become more involved with the campaign, and other environmental and ethical initiatives within the university; any fitting contribution that is offered by the student body, college staff or other relevant parties  
- Use the interdisciplinary nature of positive investment to appeal to students with varied interests (people/groups interested in sustainability, human rights, investment, business etc.) encourage student participation through targeted advertisement  
- maintain a strong link with JCR, through the Ethical committee, and college publications manage links with the university Positive Investment campaign to develop content, expand to other colleges and widen readership.

**OUTCOMES:**  
- Encourage students and staff to become involved with sustainability and ethical issues  
- Stimulate interest, encourage participation and provide information about the relationship that sustainability and ethics has with business and investment  
- Create useful material that might be used to improve investment policy  
- Create more transparency about investment policy and practices in the college.

**MEASURES OF SUCCESS:**
Participation (writers, members of Fitz Positive Investment/ new university campaign members)

Readership (page-views)

Expansion to other colleges

Updates: This team has not reported any updates yet.

Final outcome: A final report has yet to be delivered.

UEA Food Rescue Initiative
University of East Anglia, UK

In the United Kingdom, an estimated 250,000 tons of food is wasted yearly by the wholesale and retail sector alone, despite the fact that all of this waste is avoidable through the redistribution, recycling and energy recovery of food (WRAP, 2015). Food wastage is not only ethically questionable, it is also a considerable factor in regards to anthropogenic climate change, with 320,000 tons of greenhouse gas emissions associated with food waste in the UK (ibid).

The University of East Anglia (UEA) has a reputation for leading climate research and alongside its ongoing work on sustainability; it is committed to implementing campus-based mitigation projects. The Union shop on campus is a student enterprise, whereby everyday surplus food is wasted because of restrictions to its date label, mislabeling and packaging damage, despite the food being generally still edible. Following the pioneering initiative of the organization "foodcycle.org.uk", which uses surplus food to feed local community members, we plan to hold
a weekly ‘food rescue’ on campus where surplus food from the Union shop that would otherwise be wasted, would be available to consume by the campus community. During other days of the week, we intend to donate surplus food to the local food cycle and other charities. Food rescue events represent an opportunity to raise awareness about food waste and sustainable consumption among students. In collaboration with the UEA ‘learning laboratory’ we hope to motivate students to implement their own projects to mitigate climate change. Our pilot operation focuses on the Union Shop, and we expect to reduce all consumable surplus food from the shop by 100%. We plan to escalate ‘food rescue’ so that all food outlets on campus participate within stage 4 of the project. This will be operationalized and supported by the Student Union, Sustainability and Environment officers along with other societies on campus.

**Updates:** Our initiative to reduce food wastage on the UEA campus and the wider Norwich community continued during the past months. One of our successes was to establish the weekly distribution of surplus food from the UEA Union Shop via the Norwich Food Hub to a local charity. Norwich Food Hub is a recent initiative aiming to distribute food that would otherwise be wasted from supermarkets and restaurants to charities in Norwich.

In April 2016, we held a **great kick-start event on UEA campus** for interested participants and explained the connection between greenhouse gas emissions and food wastage. The event produced lively discussions and we shared our ideas on posters on what can be done to reduce food wastage; at home, at university and nationally. For example, food wastage at home can be prevented through putting up spreadsheet with due dates on the cupboards/fridges and sharing food with friends and neighbours if you cannot finish it yourself.

During this event, people were able to sign up for further activities of the UEA Food Rescue and the next step is now to recreate a foodcycle on campus with cooking sessions using surplus food from the Union Shop to prepare meals for the campus community. These **cooking sessions** are also supposed to provide a space for discussing further sustainability initiatives on campus.
Final outcome: A final report has yet to be delivered.

**Carbon Railcard**  
**University of Edinburgh, UK**

The Carbon Railcard project is an effort to bring the University of Edinburgh and rail companies together with the mutually beneficial aim of moving people from flying to getting the train. The rail companies benefit from gaining more passengers and the university benefits from reducing its carbon emissions, contributing to the university’s sustainable campus aspirations. More
specifically, the Carbon Railcard constitutes a special offer for university staff to make domestic travel by train a more attractive form of business travel.

Initially we aim to target the business travel of the university, as this is a large contributor to the university’s carbon emissions. 93% of all business travel emissions are from air travel, and we’re targeting around 4500 domestic flights, which constitute around 1000 tons of CO2e. Currently the university has no deal or contract with rail companies, whereas cheaper ‘charity’ fares are available from flight companies, so this project will team up with the university to set up meetings with rail companies to negotiate a better deal. We will support the university by providing figures and research to strengthen the argument for a deal between university and rail companies. In the long run, our aim is to expand the program to allow access to the Railcard to staff personal travel as well as students, travelling between the university and their non-term-time addresses.

Although the university does currently collect business travel data, it lacks some detailed information regarding trips under §300, which include many domestic flights. We have raised this issue with the university, and as part of this project we hope to design and implement an improved data collection system. This will allow us to more rigorously measure the impact of our project, by establishing a stronger baseline to compare against future business travel data.

Updates: This team has not reported any updates yet.

Final outcome: A final report has yet to be delivered.
Carbon Railcard
University of Edinburgh, Scotland
Chris Palmer & Célia Nyssens
Reducing air travel emissions at the
University of Edinburgh by incentivising
a low carbon alternative - rail

In 2013-14:
4540 Domestic Flights
995 tonnes CO2 Emissions

Possible emissions saving by switching
to rail: 817 tonnes

The Project:
Bringing together the university and rail operators to collaborate and
negotiate incentives to travel by rail, e.g. free Wi-Fi, more flexible tickets, a
‘rail-miles’ loyalty points system.

University reduces its carbon emissions and gets better rail services, and
rail operators get more passengers and a reputation boost. A win-win
deal!

By making rail a more attractive option, we aim to change university
policy and eventually ban domestic flights.

4 Step Plan to Influencing your University’s Air Travel
1. Analyse your university’s travel patterns.
2. Build a business case for the switch to rail.
3. Approach rail operators.
Singapore Sustainable Solutions Network
Yale-NUS College, Singapore

As Singapore targets more ambitious environmental goals, she will require close collaboration between stakeholders from different facets of society, as mentioned in two major sub-goals in the global 2030 Agenda for Sustainable Development. However, there is currently no formal platform for collaboration in Singapore. Thus, we aim to create a Sustainable Solutions Network (SSN) comprising industry leaders, government representatives, non-governmental leaders, researchers and students working on environmental issues in Singapore, and bring these stakeholders together by organizing bi-annual flagship conferences.

Our intended goals and outcomes for the SSN are as follows:
- To provide opportunities for members to interact, share their challenges, brainstorm innovative solutions, and seek partners in collaborative projects through regular member events.
- To encourage government agencies to seek policy feedback from academic members and researchers, while allowing researchers to find collaborators and pitch recommendations to policymakers, thus furthering two-way collaboration.
- To facilitate the dissemination of insights gained from research and the discussion of environmental problems faced by individual organizations, by hosting online networking platforms.
- To keep all members updated about environmental events, as well as latest developments and initiatives in the field of environmental sustainability through the dissemination of a monthly newsletter.
- To provide opportunities for critical thinking and communication skills by involving students in the establishment of the network and in discussions.
- To provide corporations with opportunities to reach out to students and partners, while presenting an environmentally-responsible public image through involvement as event sponsors.

Tactics:
1. Work with the Yale-NUS administration and NUS Office of Environmental Sustainability (OES) to set up a joint committee, the ‘Yale-NUS/NUS Singapore Sustainable Solutions Network Team’ with a board of advisors and paid student positions.
2. Shortlist 200 organizations/people and invite applications for membership to the network.
3. Invite organizations to participate in a career fair held conjunctly with the conference, where employers and NGOs can reach out to a pool of students and professionals.

Success of this project will be measured by the number of spin-off collaborative projects from the networking events; the level of engagement and participation of the student population across the tertiary institutions in Singapore; and the ability to ignite interest from regional stakeholders and gradually expand the network.

Updates: The Singapore Sustainable Solutions Network has done an excellent job of updating us on their progress. Throughout their process they sent informative and detailed reports. As of February 2017 they are maintaining an active blog and Facebook page, with details about their work.
Webster Environmental Initiatives  
Webster University, Switzerland

Our team has come to notice that the campus we are currently studying on is not eco-friendly. In light of the global campaign to bring awareness to climate change and its effects on the environment, we saw an opportunity to improve our campus and better inform the students on
environmental issues. To achieve these goals, we will attempt to get our school ISO14001 certified. By developing an environmental management system for our campus, we will improve the current environmental performance and strengthen environmental awareness in our community. In parallel to obtaining certification, we will have two major events that will involve students in activities that promote environmental awareness. These two events will be held during the school year. The first event will be on environmental awareness and engaging the Webster Community. The second event will be on Earth day. Key Dates and Deliverables: Select members of Campus Environment Committee including Etsehiwot Negash, Joy Warugi, Nour Lashuel and Peter Carson, as well as additional faculty, staff and administrators. The role of the committee will be to set our detailed objectives and an implementation plan. Contest for student to submit ideas for improving campus sustainability. Winning solution will be integrated into EMS and certification process. On April 22, 2016, Earth day will be celebrated featuring an art exhibition, vegan food testing and various guest lecturers. Certification auditing will be in December 2016.

Updates: In May 2016, the Webster team announced that they would be replacing lights in their classrooms with energy efficient LEDs.

Final outcome: A final report has yet to be delivered.
Aim of the Project

Webster University Geneva will sustainably manage its campus environment by applying the ISO 14001 standard.

1. Environmental Committee
   Determine project scope and policy, direct implementation

2. Environmental Policy
   Draft a framework for setting environmental objectives.

3. Planning
   Establish processes to address environmental impacts and determine resources required.

4. Implementing
   Train, communicate, document, control operations, prepare and respond to emergency.

5. Checking
   Monitor and measure, check compliance, take corrective action, control records, conduct internal audits.

6. ISO 14001 Certification

Creating Awareness

Earth Week
- Vegan food tasting
- Environmental theme student photo exhibit
- Environmental messages in campus media

Contest
- Propose a solution to make Webster Geneva campus environmentally sustainable

www.webster.ch
C2U
Yale University, USA

C2U is an innovative, personalized museum experience that uses the self-identified core values of visitors to customize a climate change narrative that resonates with each visitor’s interests and experiences. This exhibit also enables visitors around the world to feel connected to one another based on common values through use of advanced technology and social media. The goal of the project is to tell the visitor a story. A story of how climate change affects them, their families and their communities. A story about how society has affected the environment and how innovation and humanity can bring society into the next era. A new world adapted to climate change, but more prosperous, healthy and secure than the one we currently know. This project is about showing people with varying priorities in life that climate science is a value and is in harmony with they already care about. A major element to the exhibit is not only to educate, but also to inspire and galvanize visitors into action by instilling hope. We want to show people that they have the power and ability to take action that will actually be effective in addressing their fears and concerns.

The impact of our project will be to draw broader and more diverse stakeholders into the conversation. In the past, climate change communications have focused on persuading people to act as a response to climate science, which is a value held by a relatively narrow audience and a value that alienates certain other audiences. This project will show people how climate change action is vital to the progress of their personal values; in other words, it will show people what climate change action will do for them instead of asking them to sacrifice for other peoples' values.

Updates: This team has not reported any updates yet.

Final outcome: A final report has yet to be delivered.
C2U
CLIMATE CHANGE TO YOU

A WALK THROUGH C2U

STEP 1

Once visitors enter the exhibit and take a short quiz that assesses their worldview and core values, they are assigned to one of seven value-tracks: social justice, economics, religion, public health, safety & security, food & water, and ethics.

SAMPLE QUESTION

If you were to move to a new neighborhood, the most important decision factor would be:

a. The quality of the schools/neighborhood
b. The quality of the medical care

The strength of the religious communities
d. The safety of the neighborhood
e. The diversity of the community
f. Proximity to grocery stores
g. The neighborhood’s sense of community

STEP 2

The visitors are guided to displays featuring tipping points with a strong tie to their core values. At these displays, museum-goers experience a scientifically accurate, multi-media account of the problem oriented around their own core values.

STEP 3

Each tipping point balances a scientifically accurate depiction of the problem with equally well-vetted accounts of points of engagement and hope. For example, the Boreal Forest tipping point will highlight local agroforestry efforts to sequester carbon. It will also describe the recent UNESCO bid to designate key aboriginal territories as world heritage sites.

SAMPLE NARRATIVE

The Boreal Forests:
Had previous significance for the planet's climate. Economically-oriented visitors will learn of the $1.8 billion at stake for the tourist and timber industries if the boreal forests collapse.

Social-justice-oriented visitors will learn how loss of the forests will cause the Cree Nation of northern Canada to lose sources of food, medicine, and cultural identity that have sustained them for millennia.

STEP 4

The exhibit will close by connecting museum-goers to a global network of peers, celebrities, and leaders who share their core values concerning climate change. They will have an opportunity to share their values assessment and climate change narrative on social media.

WHY C2U WORKS

COMMUNICATION PHILOSOPHY OF C2U

In recent years, climate change has been viewed as a scientific problem. This approach has resulted in a system of demographics whose values are addressed by a scientific narrative. But if reaction to a crisis is to be successful, the public must be engaged and educated in a way that makes them more informed about the issues and more active in the decisions they make.

HOMING VISIVERS TO AUDIENCES

Climate change is a complex problem requiring scientifically accurate solutions. C2U is a step towards that direction. It shows people, who experience scientifically accurate tipping points within narratives that speak to a variety of worldviews and values.

CONNECTING PEOPLE

Our exhibit connects people by creating social networks that reach around global values and a shared desire to change climate change. This exhibit will include a museum piece, a climate change awareness video, and create a community via social media among museum-goers who build believe peers with shared values. Building on the experience generated by museum-goers, a parallel community will form and the two groups will interact online, sharing ideas and experiences.

HUMANISTIC COMMUNICATIONS TO ADVANCE IMPORTANT IDEAS

The challenge of the anthropocene is one of our timeframes. To communicate this, we rely on various media and experiences that engage people with a deeper understanding of our relationship to the environment.

C2U applies humanistic communication strategies to this challenge. It uses the exhibition space to engage people by making the personal impacts of climate change available personally to museum-goers through various means, including multimedia narratives. C2U does this by offering the opportunity for people to share their experiences with the world.

C2U’S POTENTIAL FOR ENGAGEMENT WITH UNIVERSALISM, MULTINATIONAL

The magic of C2U is that it builds engagement for both the individual and the museum-goer. University students across the world will research the local demographics and corresponding values to construct narratives that blend together relevant scientific and social values. This exhibit can then be used as an example of research, and the principles behind it can be applied to other topics and sets of values. The museum-goer will be engaged in the experience of experimental tipping points, which are currently only offered in highly localized communities. The exhibit will conclude with an invitation to participate in these stories at home or through their work.

Global University

Page 52 of 67
Our project aims to articulate the importance of university engagement in the effort to combat climate change, and propose strategies and specific programs for formal university engagement. Universities offer a valuable opportunity as a partner with the UNFCCC because they provide unique resources in the form of faculty and platforms to engage with climate change. Greater university engagement would provide an opportunity to more fully engage with students (future leadership) through liberal arts and neutral fora through which to involve local community members and international experts from a variety of political, social, ethnic, and academic backgrounds.

Our research has uncovered four possible areas of immediate engagement for the UNFCCC. First, in fulfilling the seventeen Sustainable Development Goals released earlier this year. Second, in condensing, summarizing, and providing regional context for the IPCC’s yearly Assessment Report, and facilitating “Citizen’s Summaries” of UNFCCC conferences. Third, through official recognition and inclusion at UN events as an official member group and forum at COP events. This is vital for engaging liberal arts and humanities faculty. Finally, through a more comprehensive and faculty-targeted “Roster of Faculty” on the UNFCCC website that engages with humanities and liberal arts professors as well as researchers and scientists. In our presentation, we will discuss how we came up with these four areas and argue for a formal effort to engage with universities by the UNFCCC.

**Updates:** This team has not reported any updates yet.

**Final outcome:** A final report has yet to be delivered.
Global Environmental Video Series
Young Global Sustainabassadors
China/Greece/Pakistan/Australia/India/Ghana/Cuba

Ten high school students, nine different countries, one goal: saving the environment. We are alumni of the Yale Young Global Scholars 2015 program who care deeply about the current environmental issues and are eager to change this world for the better. Representing China, US, Ghana, India, Cuba, Canada, Greece, Pakistan and Australia, we have created a global team, in its truest sense. We are working together over the web in spite of the 14-hour time difference, and aiming to make an impact in the world.

Our global profile allows us to bring together groups of students who, through a series of video interviews, will speak to a set of questions, share their opinions on specific environmental situations, and express how they will take actions to solve these environmental problems. We want to present a global perspective of young people’s attitude towards the environment, because we have the responsibility to take care of our world; because we have the ability to improve the current situation; because we represent the future. Is the next generation worried, hopeful, determined, or cynical? We are excited to see how different high school students across the world feel about climate change and the future of the earth.

Once we formally begin, we aim on producing at least one video per month and sharing it on social media to a global audience. The videos will present student responses to a particular environmental issue, concern, current event, or ‘theme’ in general, along with introducing evoking environmental issues and solutions that they can introduce to make an impact. We will also challenge our audience to take actions toward solving the issue at the end of each video, and invite them to share their actions and results through comments. The success will be measured through student participation, video outreach and engagement on social media, and group member feedback.

We plan on spending the first week of the month researching environmental issues, solutions, conducting interviews in our local school community, and putting together the video. The video will be published by the beginning of the second week, and video engagement will be evaluated before publishing the next video. Depending on the intensity of the video engagement we receive, we may also make comment response videos where we can discuss different topics brought up in last week’s round of comments.

**Updates:** This team has not reported any updates yet.

**Final outcome:** A final report has yet to be delivered.

---

Tree biodiversity and carbon stock assessment in mountain forests in the Congolese Albertine Rift, the Kahuzi Biega National Park case and its surroundings in the Democratic Republic of
Congo
Université Officielle de Bukavu, R D Congo

This study aims to explore the treelike diversity and carbon stocks in mountain formations in the Congolese Albertine Rift following altitudinal gradient and soil factors. The DRC is the African country endowed with a multitude of forest formations and a huge forest area (FAO 2011). Among the types of forests, there are mountain forests characterized by significant diversity under altitude influence (Plumptre et al. 2007). Improving conservation measures for these forests contributes to the stability of the climate balance in the world as well as to increase ecosystem services for local communities. This project aims to assess the arborescent biodiversity and aboveground carbon stocks (AGB). It also aims to determine the factors of its variability in the Congolese Albertine Rift mountain forests specifically in the Kahuzi Biega National Park and its surroundings. Thus, we will characterize and compare along an altitudinal gradient the forest stands studied; since the forest carbon varies according to the type of forest formation; estimate and compare along an altitudinal gradient of the aboveground carbon stocks of the forest stands identified; highlight the influence of soil conditions on density, aboveground biomass and species richness in these forests. This work will contribute in providing some managements policy on behalf of protected area managers which allows them to increase the storage of carbon, enhance biodiversity and increase ecosystem services to undertake a better lobbying for the alignment of protected areas in the process REDD / REDD + especially for developing countries at the party conference (COP).

Methodological Approach
To achieve the assigned objectives, the methodology will be based on an inventory of all tree individuals of Dbh≥10 cm and soil sampling from 0 up 30 cm in depth. Inventories will be performed in 30 plots of 1 hectare each respecting the altitudinal gradient (between 1250 and 2600m altitude) in and outside the Kahuzi national park (in community forests). Soil conditions include soil texture, phosphorus, pH, carbon, CEC, exchangeable aluminum and Nitrogen. The floristic diversity will be characterized using diversity indices, while factorial correspondence analysis will allow to knowing the forest type and allometric equations will determine the aboveground biomass and then converted to carbon stocks (Chave et al 2014). Expected results upon completion of this study include the followings:

- Structure, composition and floristic diversity in mountain forest are identified
- Carbon stocks and factors influencing its variability are determined
- A management model to increase carbon stocks and biodiversity is proposed to the Kahuzi Biega National Park Manager

Updates: The University of Bukavu team did not provide regular updates, but did provided a comprehensive final report.
Final outcome: A final report was sent in July. The report was published in the Journal of Biodiversity and Environmental Sciences (JBES) Vol. 8, No. 6, p. 134-150, 2016.

SMART Canteens at University of Copenhagen
University of Copenhagen, Denmark

University of Copenhagen (UCPH) has 40000+ enrolled students, creating a considerably high demand for food and generation of food waste on campus. Therefore, it is imperative that uncertainty in food demand each day is minimized to reduce the food wastes, in order to help UCPH achieve its sustainability targets. For this, we are offering you the SMART-Canteen: Sustainable Measurable Applicable Realistic Technology. SMART will give canteens at UCPH the knowledge on their own consumers, based on online surveys, user patterns and predictability. The goals are to identify and increase the awareness of food waste, by the means of an app - the SMART-app. When implemented, this will render UCPH a beacon for other universities to follow.

How the project works: To identify the key areas of food wastes, online surveys and interviews will be conducted with the different canteens. The results will be evaluated over a period of time, whereafter the app will be launched with an awareness campaign for on-campus food waste problem. The SMART app works by customers ordering and paying for lunch meals at least 3 days in advance, by choosing from the canteen menus. On the day, customers show their receipts and the food is delivered. This will reduce uncertainty in food preparation and thereby, food waste in UCPH canteens, change customer behavior, and form basis for well-organized and sustainable canteens. With the SMART concept you are offered a glance into future, a way of buying and planning days in advance what your consumers actually eat. From an app solution to ordering three days in advance (depending on the canteen), to simple free source questionnaires, SMART offers scalable choice regardless of technical knowledge and means. The impact: Through surveys and interviews, research will be carried out over six months to gather relevant data on food wastes in the canteens. A base data inventory will be prepared. After the launch of the SMARTapp, and a probationary period of 6 months, data comparisons will be done with the base to see how effective this app has been in achieving the target.

Updates: This team has not reported any updates yet.

Final outcome: A final report has yet to be delivered.
SMART – Canteens University of Copenhagen

Fie Cathrine Støttrup Olsen & Juliane Erika Zibrandtser & Srijita Dasgupta

1. Introduction

The University of Copenhagen (UCPH) has about 40000+ enrolled students, creating a considerably high demand for food on campus and consequently, high food waste every day.

It is, therefore, imperative that uncertainty in food demand is minimized in order to reduce the food waste, so that UCPH can achieve sustainability – an important mission of the university.

As students, we know the world needs to be changed and despite having the awareness, we often do not have the means.

2. Go SMART

For this, we are offering you the SMART concept – a way of buying and planning days in advance what our consumers want to eat. The SMART concept:

- Sustainable
- Measurable
- Applicable
- Realistic
- Technological

3. How2

To identify the key areas of food wastes, online surveys and interviews will be conducted with the different canteens at the different university campuses. The results will then be evaluated over a period of time, after which an awareness campaign for on-campus food waste problems will be launched. Simultaneously, the SMART pilot project will also be launched at a chosen canteen on campus.

The SMART project works by customers ordering and paying for lunch meals at least 3 days in advance, by choosing from the canteen menus. On the day, customers show their receipts and the food is delivered. This will reduce uncertainty in food preparation and thereby, food wastes in UCPH canteens, change customer behaviour, and form basis for well-organized and sustainable canteens.

4. Methods

The SMART concept includes a homepage, an app and various lines of different free online source technologies. All these can be used separately or combined, based on individual needs of the canteens and campuses. Whether we choose one or more of the SMART concept solutions, they will all ultimately help to:

- Identify consumer needs
- Provide in-app statistics
- Downgrade CO2 emissions
- Generate patterns and predictability

5. We give you the future

As outcomes of this SMART project, we aim to:

1. Raise awareness on the issue of food waste both globally and locally
2. Reduce food wastes in UCPH canteens
3. Try to change consumer behaviors
4. Create predictability in the demand of food each day
5. Have well-organized and sustainable canteens

6. SMART is for everyone!

The SMART app uses easy access websites and technologies to create a platform that combines basic food needs, with the aim of addressing the world food waste challenge. Sometimes, changing the world is not only about compromising – in this case, it is simple and SMART!

Get MORE SMART?

For more information on the SMART project, please don't hesitate to contact:
- Srijita Dasgupta: dasgupta.srijita@gmail.com
- Fie Cathrine Støttrup Olsen: Fiolsetan1234@yahoo.com

** All images are taken from online sources searched through Google
UAE Food Rescue  
University of East Anglia, United Arab Emirates

In the United Kingdom, an estimated 250,000 tons of food is wasted yearly by the wholesale and retail sector alone, despite the fact that all of this waste is avoidable through the redistribution, recycling and energy recovery of food (WRAP, 2015). Food wastage is not only ethically questionable, it is also a considerable factor in regards to anthropogenic climate change, with 320,000 tons of greenhouse gas emissions associated with food waste in the UK (ibid).

The University of East Anglia (UEA) has a reputation for leading climate research and alongside its ongoing work on sustainability, it is committed to implementing campus-based mitigation projects. The Union shop on campus is a student enterprise, whereby everyday surplus food is wasted because of restrictions to its date label, mislabeling and packaging damage, despite the food being generally still edible. Following the pioneering initiative of the organization "foodcycle.org.uk", which uses surplus food to feed local community members, we plan to hold a weekly ‘food rescue’ on campus where surplus food from the Union shop that would otherwise be wasted, would be available to consume by the campus community. During other days of the week, we intend to donate surplus food to the local foodcycle and other charities.

Food rescue events represent an opportunity to raise awareness about food waste and sustainable consumption among students. In collaboration with the UEA ‘learning laboratory’ we hope to motivate students to implement their own projects to mitigate climate change.

Our pilot operation focuses on the Union Shop, and we expect to reduce all consumable surplus food from the shop by 100%. We plan to escalate ‘food rescue’ so that all food outlets on campus participate within stage 4 of the project. This will be operationalized and supported by the Student Union, Sustainability and Environment officers along with other societies on campus.

Updates: Our initiative to reduce food wastage on the UEA campus and the wider Norwich community continued during the past months. One of our successes was to establish the weekly distribution of surplus food from the UEA Union Shop via the Norwich Food Hub to a local charity. Norwich Food Hub is a recent initiative aiming to distribute food that would otherwise be wasted from supermarkets and restaurants to charities in Norwich.

In April 2016, we held a great kick-start event on UEA campus for interested participants and explained the connection between greenhouse gas emissions and food wastage. The event produced lively discussions and we shared our ideas on posters on what can be done to reduce
food wastage; at home, at university and nationally. For example, food wastage at home can be prevented through putting up spreadsheet with due dates on the cupboards/fridges and sharing food with friends and neighbors if you cannot finish it yourself. During this event, people were able to sign up for further activities of the UEA Food Rescue and the next step is now to recreate a foodcycle on campus with cooking sessions using surplus food from the Union Shop to prepare meals for the campus community. These cooking sessions are also supposed to provide a space for discussing further sustainability initiatives on campus.

**Final outcome:** A final report has yet to be delivered.
Plastic Pellets Pollution in Abu Dhabi
Zayed University, United Arab Emirates

The international plastic production increased from 1.5 million tones in 1950 to 230 million tones in 2009. In 2010 the production of plastics in Europe reached about 57 million tones. The improper management and unsustainable disposal of plastic debris increases the biological and ecological impacts on the environment and the ecosystems. One of the major issues of plastics is the loss of the raw plastic pellets during loading and transportation. The size of these pellets usually ranges between 2-6 mm, and they are made mostly from polyethylene (PE), polypropylene (PP). The loss of plastic pellets threatens the environment since they are highly resistance to degradation under even extreme conditions. In addition, different organic micro pollutants including polychlorinated biphenyls (PCB’s), pesticides such as organochlorine pesticides (OCPs), and metals such as zinc (Zn), iron (Fe), and magnesium (Mg) adsorb on these pellets. Plastic pellets may cause damages in the gut, infection, or death of marine species, due to leaching of contaminants. The death of marine species causes a distorted balance in the amount of CO2 in the ocean and thus the amount of CO2 in equilibrium with the atmosphere. The variation in CO2 levels causes serious climate changes such as global warming. The increase of the CO2 level by 450 ppm causes an increase in temperature by 2°C. The objective of this proposal is to determine the density of plastic pellets in Abu Dhabi coastal area along seven beaches including Saadiyat, Raha, Eastern Mangroves, Mina, Mussafah Industrial, Sheikh Zayed Bridge, and Al Bateen, The contamination of heavy metals such as Arsenic, Zinc, Aluminum and Cobalt will be determined using Inductively-Coupled Plasma Atomic Absorption Spectroscopy (ICP-AAS). The contamination of pesticides such as organochlorine pesticides will be extracted then separated using High performance liquid Chromatography (HPLC). Plastic pellets will be collected from seven beaches in Abu Dhabi. These measurements can give insight about the potential damage caused to marine species inhaling the plastic pellets.

Updates: No updates were given by this team.

Final outcome: A final report has yet to be delivered.
Phytoremediation of Wastewater by Saltcedar
Zayed University, United Arab Emirates

Due to increased levels of anthropogenic activities, environmental pollution is becoming more serious. Many studies worldwide report soil contamination with heavy metals, polyaromatic hydrocarbons (PAH’s), polychlorinated biphenyls (PCB’s), and pesticides. There are several technologies available to clean up the soil and water. However, they could be high in cost, or disturbing to the nature e.g. they lead to soil degradation. It is estimated in the United States, that the use of these technologies costs more than 81.7 trillion dollars. Phytoremediation is a modern and cost-effective technology that relies on the use of plants in situ to clean up contaminated soil and water. The plants have the ability to extract contaminants in their roots, leaves and stems. Phytoremediation is critical in avoiding the accumulation of heavy metals, after precipitations and erosion, from soil to water. Once safe limits are exceeded, heavy metals can be highly toxic and deadly upon intake and digestion. Heavy loads of pollution can lead to the death of animals living in polluted water. The death of animals is highly involved in the nitrogen cycle (through their amino acids), the phosphorous cycle (through their genetic carriers DNA/RNA and energy currency ATP/ADP/AMP) and the carbon cycle. All three cycles are heavily related to the aquatic and atmospheric CO2 release and uptake. The change in CO2 leads to climatic changes such as global warming. The increase of atmospheric CO2 levels by 450 ppm results in 2oC increase in temperature. The purpose of this proposal is to study the intake of heavy metals such as Pb, Ni, As, and Cu by Saltcedar (Tamarix aphylla) seeds. The seeds will be soaked in solutions that contain predetermined amounts of heavy metals. The leaves, stems and roots of the grown plants are then separately analyzed to determine the levels of heavy metal uptake using Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES). The outcome of this project is to explore a cost-effective method to improve the quality of the water after phytoremediation by Saltcedar plants which grow naturally in the United Arab Emirates (UAE). The recommendations based on data obtained from this project will be establishing stringiest local guidelines for reclaimed wastewater in the UAE.

Updates: No updates were given by this team.

Final outcome: A final report has yet to be delivered.
Green UTokyo App Project
The University of Tokyo, Japan

The University of Tokyo (UTokyo) is the largest emitter of greenhouse gases in the Tokyo Metropolitan Area; therefore, UTokyo has a social responsibility to make its campuses green. As a proactive measure for achieving a low-carbon society through energy conservation, UTokyo launched a university-wide initiative called the Todai Sustainable Campus Project (TSCP) in 2008. In addition, some of our student project members commit to TSCP activities by collating and analyzing data on operational energy uses on the campuses. However, programs carried out by TSCP are limited to facilities; therefore, it is necessary to encourage all members of the university to proactively join the initiative.

To promote sustainable activities by students, the faculties, and staff, as members of the students’ project, we are developing a mobile application named App for Green UTokyo. Specifically, this application provides energy-use data to all members on the campuses, where there is a tight electricity supply-demand balance in summer and winter. The data can be used for green campaigns such as a green labs competition, which is referred to later. In the near future, the application will award exchangeable eco-points as an incentive for sustainable actions. The most important characteristic of this application is that it aims to facilitate voluntary actions for sustainability rather than enforce actions. In addition, we are holding the Green Labs Competition to promote implementation of sustainable practices in lab buildings. This competition has great potential for reducing operational energy use on campuses; in spite of their high energy intensity, limited efforts have been made to change behavior in laboratories. A trial calculation has found that a lab building can save 70 tons of CO2 a year. To identify the winner of the competition, we will use real-time data on energy usage as well as online surveys to specify environmentally friendly usage of chemicals. During the period of the competition, the application will continuously update competition rankings and give energy-conservation tips on a daily basis. This will help to identify waste in laboratories. We have already developed a trial version of the application and applied it experimentally to facilitate energy conservative behavior. The application has demonstrated that it can categorize laboratories based on trends of energy use and can propose the best ways to save energy in each laboratory. This experimental application provides empirical data to upgrade our project’s application. The schedule of this project is as follows. In December 2015, we are planning to present the following: contents of application, simulated reductions of greenhouse gas emissions from the laboratories, and schedule of project over the coming months. By the end of May 2016, we will have developed the application and defined fair criteria for the competition through discussions with users of laboratories. Then, we will hold the competition in June 2016. Following the competition, we will review the results and research the effectiveness of the application. Last but not least, we will assess how much the application contributes to conserving energy in summer and winter.

Updates: The University of Tokyo team did a fantastic job of providing regular updates, with reports, pictures, and even videos. Members of the team were always very enthusiastic, and quick to respond. Below is an example of one of their updates:
At first, we planned to implement ‘lower the sash’ campaign with reasonable evaluation by real-time data analyses. However, unfortunately, we faced difficulty to build the system that output the energy consumption data in real time through application or web site. Therefore, we changed the plan to proceed with the project even if it’s a small step.

In present, we are going to put posters and stickers, which notify us, the waste of leaving the sash open. I’ve just uploaded the posters as examples. In addition, we are planning to put the poster, which shows the waste energy consumption every day or every week as a campaign. We can download the data from existing BEMS (Building Energy Management System), and our team has developed a spreadsheet which calculates the waste energy consumption from raw data of BEMS.

We are going to have a meeting with professors in Chemistry Building on 21st July, and discuss the posters and the campaign.

Final outcome: A final report has yet to be delivered.
Did you know how much a fume hood exhausts?

- An open fume hood exhausts as much as the amount of ventilation 60 people need*.
- ‘Lower the Sash’ can save energy for ventilation.
- Reduction of ventilation also results in reduction of heat load**.

*An open fume hood exhausts 1800 m³/h (width: 2 m, sash opening: 0.5 m, surface wind speed: 0.5 m/s) and a closed fume hood exhausts 108 m³/h (width: 2 m, sash opening: 0.03 m, surface wind speed: 0.5 m/s). A person needs 30 m³/h for ventilation to keep the air quality well. It is calculated to keep CO₂ concentration lower than 1000 ppm.

**Heat load: Gross amount of heat which includes sensitive heat and latent heat to keep the room temperature as the setting. There are two kinds of heat load, cooling load and heating load.
Outcomes and Next Steps

The University Global Climate Forum allowed student from around the globe to come together to bring about actionable changes on a global and local level. With 31 participating Universities, hundreds of student team members, and thousands of students impacted by their projects, the Global Climate Forum can be hailed as a great success.

With the creation of a new program, there are often some adjustments to be made that can add value to future iterations. Some of these adjustments may include.

1. Further counseling students on the realistic nature of the implementation of their project. All ideas are welcome, but a refinement of ideas may lead to a higher return of time investments, and project success.
2. Clearer guidelines for when reporting is due. While many teams provided excellent reporting in a timely manner, a large number of teams did not.
3. More dialogue between teams. While some teams did make attempts to share their work with other teams, most teams seemed to be focused on their own work. Allowing the teams to create a dialogue by perhaps setting up “sister” teams (or partner teams), to whom teams are required to report, and engage in communication about their project via email, text, or video chat.
4. Incentives to produce a final report. While the majority of teams completed large portions of their plans, a large majority of teams did not provide a final report. Incentives, such as certification or recognition on a website, may help increase the number of final reports collected.

The greatest obstacle in the Global Climate Forum process was a lack of commitment due to external circumstances outside of the program’s control. With 31 participating teams, there were several teams whose members graduated, changed faculty, or simply quit. To ensure a broader commitment to the program, it is recommended that each team have a Faculty liaison that can help keep the team on task and in communication.

As mentioned above, incentivizing students to produce a final report is likely to result in a larger number of completed projects. Therefore it can be recommended that students participating in the Global Climate Forum will attend two conferences: The initial Climate Forum, and a final forum, where teams present their work. Other solutions may include video presentations, or the creation of websites highlighting their work.

Conclusion

Eighteen months ago 31 teams of University students committed to fighting climate change by joining the Global University Climate Forum. Their work, passion, and dedication to their
projects has demonstrably proven the benefits of grass-root initiatives. These projects, which include hand-planted orchards in Tanzania and water-conservation smartphones apps in Finland, have started a dialogue among students at some of the world’s top Universities. The impact of these projects has already been felt by thousands of students around the globe; over the coming years that number will grow to include hundreds of Universities, and hundreds of thousands of students.

It is in the creation of grass-roots initiatives that students can learn the skills they need to shape the global climate future and create a powerful impact, in their own communities and on a global scale.