



### FEATURED

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## Save that Stuff: Do You Know Who Handles Your Waste?

By Anne Marie Green

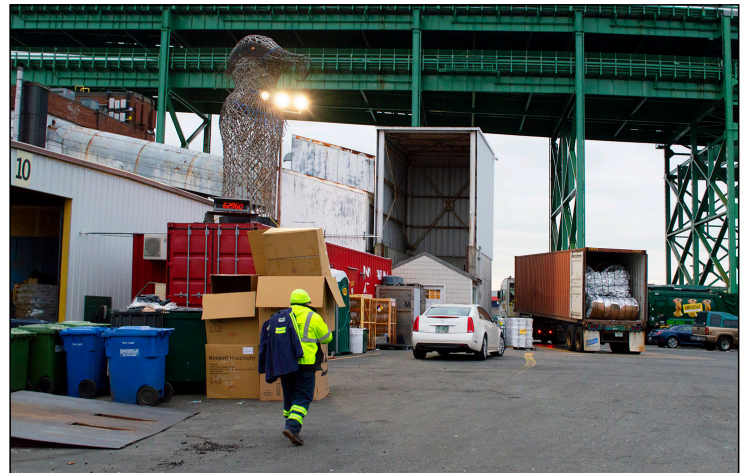
Ever wondered what happens to the food, water bottles, and magazines that you throw away? If your answer is no, you're not alone. The truth is, not many people want to know about the afterlife of the stuff that we consume. That's where Save That Stuff comes in.

Save That Stuff (STS) is a waste collector and processor in the Charlestown area of Boston that collects waste from local businesses and universities, including Boston College. They process all of our waste—compost, recycling, and everything else.

Last November, BC Dining sustainability interns as well as members of Real Food and EcoPledge visited STS to better understand the waste system at large—but STS is only the beginning of the story of where your waste goes. You can think of STS as the middle man. They take all kinds of diverse food waste and recyclables off of BC's hands, process and sort it, and then ship it out to its final destination.

Marc Galardi, business development manager and our tour guide for the afternoon, informed us that one third of all the waste STS receives gets shipped overseas. While food waste and municipal solid waste (the industry term for what most would call trash) can be handled domestically, the United States does not have an economical recycling industry. Galardi said that virtually all plastic gets shipped to and recycled in Indonesia, India, and especially China.

Since it recycles so cheaply, China has been the world's go-to recycler of plastics for the past two decades. However, in 2017 China enacted the National Sword Laws which not only banned the import of various plastics like PET, which covers everything from water bottles to jars of peanut butter, but also has



Paper waste is stored in bundles at the waste processing facility of Save That Stuff (top) and is later transported to the outside area of the facility (bottom).

increased its contamination threshold to 99.5 percent, accepting only the purest bundles of waste. Galardi stated that eventually, recycling industries may blossom in the US and elsewhere to compensate for China's newfound withdrawal as the world's chief recycler, but it could take years. Erik Levy, STS's founder and president, recently discussed the new laws and their consequences on PBS News Hour.

Beyond these stringent new

laws, recycling is already complicated. Since all recycling is now single-stream, there is an entire section of the facility dedicated to sorting plastic waste, of which there are seven overarching categories. While single stream recycling has undoubtedly simplified recycling for the consumer, it has made the process considerably more difficult for facilities like STS.

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Galardi showed us the sorting balcony in which about eight workers picked apart materials on a conveyor belt and sorted out the stuff that cannot be recycled, especially after the China's new laws. They formed piles of plastic odds and ends: bags, wrappers, foam and other material that will likely go to a landfill or incinerator. Plastics contaminated with food or liquid, like salad containers and jelly jars, are discarded because of stringent contamination rules. The mounds of miscellaneous and non-recyclable material clearly bothered Galardi, who told us he used to get a decent price per ton of this material, but now has to pay other facilities himself to divert it from incineration.

However, what the United States can recycle is paper, and STS has a lot of it. We walked through 15-foot-high stacks of mail, magazines, and paper waiting to be shipped out and recycled. Galardi informed us that much of what STS receives is returned mail, unopened magazines and labeling mishaps—items

that were never used. The paper gets sent to mills in the US, where the inks are removed and the material can be recycled about twelve times before becoming too brittle to transform again. The recent spark in online shopping from Amazon has revitalized the paper recycling market, with a newfound high demand for paper in the form of cardboard.

In terms of food waste, STS may be a pioneer to handle excess food. First, the food waste they receive goes through a sorting machine called a Clore, which is one of only four in the world. This machine sorts out contaminants like food containers, wrappers, or anything non-organic. This step is critical, since about 8-10 percent of the total weight of incoming food waste is not compostable. After sorting, STS does not literally compost the food, which is essentially a process in which food waste becomes nutrient-rich soil. Instead, they create an Engineered Bio Slurry (EBS), which is like a massive, chemically balanced smoothie of food waste. STS stores the EBS in industrial metal cylinders on site that handle so much food waste that about 40

thousand gallons of bioslurry gets shipped out every day.

Conrad, the engineer who oversees the food waste program, said that STS sends the bioslurry to a waste management facility in Lawrence, MA, for free as part of a five-year state-commissioned pilot program to explore new ways of handling food waste. The facility in Lawrence extracts the gas in the bioslurry to convert into electricity that powers its entire facility and then converts the solid remains into fertilizer pellets for farmers. Eventually, STS hopes to make a profit from the bioslurry so that it can expand its operations and put more food waste to good use.

To most, the waste system remains a mysterious puzzle that we take advantage of every day but rarely consider how it works or who takes care of our waste. However, to the men and women at STS, waste is personal. The company is an active participant in the valiant effort to achieve zero-waste, and it is eager to open its facility to us in order to illuminate our role in waste system. Therefore, the least we can do to



Conrad, an engineer for STS, is holding a sample of the Engineered Bio Slurry.

contribute to the goal of zero-waste is to take time to sort our waste, to recycle and compost properly, to refuse waste and reuse whenever possible, and to continue to learn about our own role in the waste system.

## The Best Bites in Boston? Consult EcoPledge's New Plant-Based Food Guide

By Christy Liu

In collaboration with abillionveg, a startup that aims to promote a plant-based diet based on user-generated food reviews, EcoPledge has created a food guide featuring both on campus and local eats. Each of the food items is plant-based, many being vegan or vegetarian.

The abillionveg app features reviews on plant-based food across the world. The company's mission is to increase people's awareness of the wide range of delicious plant-based food choices around them. Slightly different from vegan and vegetarianism, a plant-based diet includes natural foods grown from the earth with small to no additional portions of meat. Having plant-based diet contributes to both environmental sustainability and a healthier lifestyle. Meat production contributes significantly to green gas

emissions, water pollution, and a reduction of biodiversity.

"Our mission is to empower students with the tools they need to review plant-based dishes on and off campus at no cost to them, strike up conversations with local decision makers and community members about the growing vegan movement, and drive change in their local area for more sustainable food systems," according to abillionveg's employee Marina Quintab.

After abillionveg reached out to EcoPledge this past fall, a group of six EcoPledge members got together to review food both on campus dining halls and at local plant-based restaurants. These students then, in collaboration with abillionveg, created a twenty page comprehensive food guide detailing delicious plant-based dishes available for members of BC community.

According to Chris Russo,

EcoPledge president and CSOM '19, partnering with abillionveg to create a food guide will potentially inspire more students and local people to try these options. Russo plans to set up a table for students to check out the new food guide as well as sign up for the abillionveg app during the Earth Day Fair on Friday, April 12.

From a simple economic perspective, as food reviews of plant-based dishes containing small to no amounts of meat from on campus dining halls and local restaurants become more publicized and popular, food suppliers will increase their options of plant-based dishes that are not only healthier, but better for the environment.

Currently on campus, students can try plant-based dishes including the veggie quesadillas



The vegetarian hamburger at By CHLOE at Fenway was rated well in the food guide.

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or caprese salad at Lower. In Mac, students can try an avocado bowl made of sweet potato and

spinach, a pitaya bowl comprised of dried cranberries, cherries, blueberries, coconut, granola, and pumpkin seeds, or a quinoa bowl, all of which have a high

vegetarian-friendliness rating on the abillionveg app. At Stuart, Mediterranean sandwiches offer a good plant-based lunch option for students running between

classes. The food guide also provides several off campus options at locations including the Walnut Grille, By CHLOE, FoMu, and Saloniki Greek.

## Asia Spotlight: Education Encourages Environmentalism

By Alex Capozziello

Childhood obesity rates, mental health issues, and feelings of isolation continue to rise amongst youth worldwide. In China specifically, students entering primary school take on the burden of a rigorous and stressful academic workload. Parents desire their children's academic success, but at the expense of their children's psychological well-being. Students increasingly spend their time indoors, while recreation time is increasingly spent on electronic devices rather than outside. Robert Efir, a Professor of Anthropology and Asian studies at Seattle University, lead a discussion at Harvard University's Fairbank Center for Chinese Studies this past September titled Nature for Nurture: Environmental Education, Nature Experience, and the Healthy Chinese Child, where he presented the concept of nature education as a potential remedy to these issues to a group of local community members, college students, and a member of EcoPledge.

Nature education emphasizes students' opportunities to learn about and discover nature, while also fostering introspective reflection and deeper conversation between students in a non-academic setting. It also seeks to promote student health—both physical and emotional—while also showcasing the natural world's intrinsic beauties—a sentiment not emphasized in the traditional Chinese classroom. Simply put, nature education provides students a chance to exit the traditional classroom setting and spend time outdoors alongside their classmates—climbing trees, finding leaves, or even hiking in order to provide time to de-stress and focus on their spiritual well-being. By allowing students to spend time

outdoors, nature education can facilitate higher levels of physical activity, emotional development, and increased connectivity to nature amongst students.

In 2011, Efir received a Fulbright scholarship allowing him to travel to Kunming, China, for a year with his family to conduct research on China's rising demand for nature education. In the past 15 years, the Chinese Ministry of Education's attempts to provide environmental education within public schools has faced various obstacles. At the same time however, the value of nature exposure on children's health and emotional well-being have increased demand for nature education by parents and educators alike. Efir discussed the idea of "nature deficit disorder", which describes human alienation from the natural world. In one example, Efir recalled meeting a family of rural farmers in Kunming, whose children barely spent time out in their fields. Instead, these children were obsessed with the family computer, spending their recreation time inside playing computer games rather than playing out on the farm—ironically playing the virtual game FarmVille, where they

could tend to a virtual farm.

In an increasingly digital age, the incentive to go outside declines. Students spend less recreational time outdoors and continue to feel constant stress from their studies, and over time they become worn down and tired—physically and emotionally. According to Efir, exposing children to nature at a very young age also allows for greater appreciation for nature and facilitates respectful interaction with the natural world. Thus, nature education offers a path to enrich not just students' overall health, but also their spiritual appreciation for the world and its delicate systems. In time, China may observe increasingly healthier and happier students thanks in part to their decisions to spend more time in nature.

In terms of sustainability, nature education offers a possible solution to decreasing the overall human impact on global fossil fuel emissions. If nature education can effectively instill an appreciation of nature in students at a young age, then hopefully these students will be more sustainably-minded in their future careers and broader endeavours.



by Alinda Dersjant

## EcoPledge's Winter Theme: Asia and Africa

By Mira Begovic

During the fall, EcoPledge's outreach team focused on some key green initiatives in Europe. Some of the highlights included Copenhagen's new sustainable infrastructure, student education and volunteer events in Catalonia, Spain, and the implementation of sustainable fisheries in the Baltic Ocean.

The purpose of telling these stories was to shed light on some of the environmental struggles and solution efforts used by people around the world. This winter season, we will be focusing on Africa and Asia. There will be stories posted in the newsletter and on EcoPledge's social media platforms. EcoPledge hopes to educate the greater community and perhaps learn how to implement some of these sustainable initiatives in local communities from those seen being done abroad. It is important to support those who are struggling abroad and recognize those that are making an effort to improve the environmental situation in their communities. By supporting one another, local communities can come together to be one step closer to tackling climate change.