

# Applied & Engaged Learning for Equitable Sustainability & Social Justice

*By Geoffrey Habron*



**Dr. Geoffrey Habron (he/his)** attended mostly international schools in Thailand and Nicaragua before attending a predominantly white private high school and being one of the only Black students in Marine Science at the University of Miami. After serving as a Peace Corps fisheries volunteer in St. Lucia, he went on to study fisheries as a graduate student at Mississippi State University (M.S.) and Oregon State University (Ph.D.), where he was a teaching assistant for Multicultural Perspectives in Natural Resources. He then taught for 15 years at Michigan State University with a joint appointment in Fisheries and Wildlife and Sociology where he established a competency-based Sustainability Specialization using electronic portfolios which included Social Justice as one of the required competencies. Dr. Habron served as President of the Equal Opportunities section of the American Fisheries Society and campus advisor for the Minorities in Agriculture and Natural Resources Association. Since 2017, he has served as Professor of Sustainability Science in the Department of Earth, Environmental and Sustainability Science at Furman University, where he developed a course on Sustainability and Social Justice.

## Introduction

While sustainability often revolves around the triple bottom line of ecological integrity, economic vitality and social equity, efforts around ecological concerns often garner much of the attention, especially around issues of climate change, greenhouse gas emissions, recycling, ecosystem protection and agriculture. Sustainability has more recently taken much from the field of environmental justice, which looks at the disproportionate impacts of environmental ills such as the siting of landfills, chemical plants, and wastewater treatment facilities - on vulnerable populations (Bullard et al., 2008; Pellow, 2016). Only recently has the field begun including the disproportionate impacts and distributions of environmental goods on vulnerable populations as well, in the form of green gentrification (Gould and Lewis 2016) and now climate gentrification (Anguelovski et al., 2019). The enormity of both unequal climate change impacts and disproportionate racial and social strife, especially since 2020 after the killing of George Floyd in the United States and the global COVID 19 pandemic, raises the need to elevate the social equity dimensions within sustainability.

This essay provides an overview of the benefits of applied learning and describes two courses in Furman University's sustainability science program that use experiential applied learning to help students develop a deeper understanding of the role of justice and equity in sustainability.



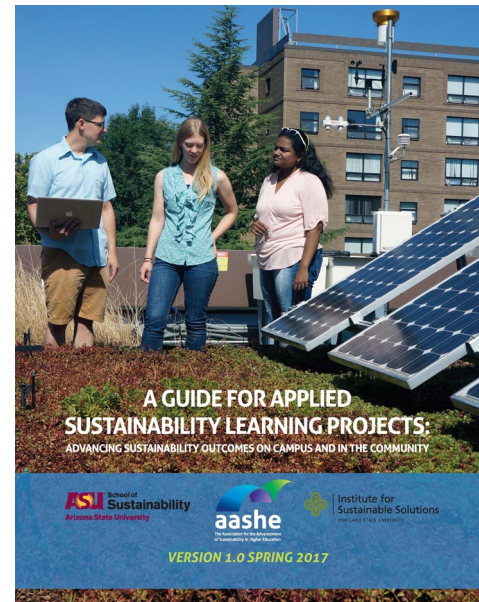
# Overview of Applied and Engaged Learning

While higher education institutions have much to do to develop more sustainable campuses, opportunities exist to move in this direction through curricular and applied learning programs that focus on addressing problems and providing solutions to issues of equity and justice. A great resource to develop these actions emerged from AASHE through [A Guide for Applied Sustainability Learning Projects](#) (Beaudoin and Brundiers, 2017). A key goal of the guide is to mindfully scaffold engaged learning to prepare students to participate in complex, unscripted, applied experiences that involve and impact off-campus communities. Implementing such experiences becomes ever more important given the complexity of global sustainability challenges—especially those with unequal impacts on vulnerable populations. After all, “navigating this turbulence requires college and university students that are imbued with a special set of skills and temperaments:

- a steely equanimity,
- adept at conflict management,
- familiar with notions of social change,
- well versed in the science of sustainability with a rootedness in values of justice and community, and
- more at home in the metaphorical turbulence of whitewater rafting than the placid predictability of canoeing on a gentle summer’s day” (Maniates, 2017:197).

To prepare students to navigate such unscripted and turbulent issues requires educators to curate experiences whereby students, “come to understand themselves not as “I have the right answer” elites, ready to assume their place in the halls (or cubicles) of power, but as “knowledge brokers” tasked with creating and disseminating knowledge in ways that privilege values of precaution, systems thinking, and advocacy for the defenseless—typically the poor, the environment, and future generations” (Maniates, 2017:197).

In the Sustainability Science Bachelors of Science program at Furman University in Greenville, South Carolina, we embrace the approach of preparing students to be knowledge brokers (Habron, 2019). At the introductory level, the program emphasizes the importance of key sustainability science competencies: systems thinking, futures thinking, strategic thinking, collaboration and values thinking (Brundiers et al., 2021; Wiek et al., 2016). We then infuse these competencies throughout the curriculum from knowledge and awareness to critical analysis and application, particularly at the third-year level courses in preparation for a required signature learning experience during the senior year. Signature work is when “students pursue an individual project related to a significant issue, problem, or question they define for themselves—immersing themselves in exploration, applying what they learn to real-world situations, and preparing to explain the significance of their work to others ([AAC&U Integrative Learning](#), 2022).



## Introductory Course Application: Sustainability and Social Justice

To address the relative inattention to social justice and equity that is prevalent in the sustainability field, Furman faculty developed a Sustainability and Social Justice course first offered in 2019. In addition to covering key concepts and principles, the course required students to engage in a campus project to further the institution's sustainability and social justice efforts. For each of the three course iterations, students have progressively worked toward improving Furman's sustainable purchasing practices with an emphasis on Furman branded apparel sold in the bookstore. This required students to visit the bookstore and record data regarding the brands and models of apparel, the countries of origin, the materials used to create the apparel, and any other information gleaned from the product labeling such as Fair Trade or fair labor designations.

Students then researched the brands and materials through online work as well as through use of the environmental, social and governance (ESG) reporting through the proprietary MSC Index database. This database was originally developed by investment company Morgan Stanley and is available through the Furman library. MSCI generates ESG data that guide investors toward assets that match their values while clarifying their risks. Students read the labor scores and investigated the controversies involved in publicly-traded companies such as labor law violations or claims of discriminatory practices. This brings principles to life and connects students' campus life with the lives of others throughout the world, most often those of women in countries such as China, India, Bangladesh, Dominican Republic and El Salvador.

Students then prepared findings to present both to the bookstore vendor, in this case Barnes and Noble, as well as university purchasing and branding officials. Students advocated for discrete actions such as dropping the brands with lower social scores, adding and promoting the brands and products with stronger social justice attributes, and formally joining organizations such as the Fair Labor Association with mechanisms and protocols for accountability and transparency through vendor supply chains. Students strongly encouraged adoption of more stringent supply chain standards than those already practiced by major brands, or even beyond the standards found in AASHE STARS. ([OP-11 Sustainable Procurement](#) recognizes written standards and policies for garments and linens as well as other commodities, and [EN-15 Trademark Licensing](#) recognizes membership in the Worker Rights Consortium (WRC) or Fair Labor Association (FLA).)



Fair-trade related products at the Furman University Bookstore. Photo credit: Geoffrey Habron, Furman University

Such research and engagement with stakeholders and decision makers has led to conversations around the tradeoffs of supporting small local operations compared to larger entities that can afford to verify and trace their social justice footprint throughout the supply chain. It has also called into question the alignment of Furman University's official athletic wear provider (Nike) compared to alternatives with better labor practices and transparency (e.g., Adidas). However, given their length and timing, these sponsor contracts are difficult to alter midstream.

Students worked with several stakeholders throughout the process, which led to a final presentation with findings and recommendations (Figure 5). Those stakeholders included the Director of Creative Services and Brand Management, Director of Auxiliary Services, Vice President for University Communications, Senior Associate Athletic Director for External Affairs, Senior Associate Athletic Director for Business Affairs, General Manager of the Barnes and Noble College Bookstore, and the Associate Director of Sustainability Assessment. As a result, Furman requested that its licensing contractor survey existing vendors regarding their FLA membership status and willingness to join FLA with a pending decision to formally rejoin the FLA. In this way, students can see the results of their applied learning even if it did not achieve all of their requests for even more stringent standards and criteria beyond FLA certification. The overall project benefited from previous iterations of the course in terms of engagement with stakeholders and developing a framework for analysis. Subsequent offerings of the class will also utilize an applied project-based learning approach that could assess progress on implementation of the FLA measures or the course could move onto other sustainability social justice focus areas.



Student final presentation to campus sustainability stakeholders in the intermediate-level Sustainability and Social Justice course. Photo credit: Geoffrey Habron, Furman University

## Advanced Course Application: Sustainability Science Practicum

In addition to affecting change on-campus, sustainability education must expose students to applied experiences in the larger community off-campus. Furman launched a Sustainability Science Practicum in 2016 that each year works with a community entity seeking assistance and provides senior students the opportunity to engage in a required signature learning experience as an alternative to a traditional individual thesis. While the course typically works with partners in the immediate Greenville, South Carolina community, the 2021-2022 effort involved nine Sustainability Science students working to support an African-American community four hours away to improve its climate resilience.

[Bucksport, South Carolina](#) is a census designated place in Horry County comprising a population of 607 people that is 89 percent African-American. 22.6 percent of Bucksport residents live in poverty, with 50 percent living in mobile or manufactured homes. Residents hold a strong Gullah-Geechee cultural heritage with legacies tied to post-slavery resistance and survival. Located in the floodplains at the nexus of the Pee Dee and Waccamaw rivers, the Bucksport community has experienced a sudden onset of catastrophic flooding events since 2015, resulting in property damage and loss of population. As a consequence of racist policies and discrimination, many residents reside on heir's property, so they lack the necessary property deeds to receive disaster funding from the Federal Emergency Management Agency (NBC News, 2021). Many properties that experienced flooding also didn't reside in areas that had previously been officially designated as FEMA flood zones, so residents were surprised by their sudden risk of flooding (James, 2021). Even when flood maps are updated, they are based on past flood events and do not incorporate future risks due to climate change.



A Bucksport resident is taken from his flooded home. Photo by Janet Morgan/Myrtle Beach Herald, myhorrynews.com.

From August 2021 through April 2022, the nine members of the senior Sustainability Science Practicum course partnered with the Association for the Betterment of Bucksport and a coalition of organizational partners to develop three proposals to support equitable climate resilience and adaptation to protect assets subject to flooding. Unfortunately, a home elevation and weatherization project did not receive funding. However, a cultural preservation project in collaboration with Coastal Carolina University and the Gullah Geechee Chamber of Commerce to support the Association for the Betterment of Bucksport was selected to receive \$61,000 from Horry County through the American Rescue Plan Act (ARPA) in January 2022. In addition, while a low-impact development project developed in partnership with the Carolina Wetlands Association failed to receive ARPA funding, American Rivers did receive \$19,000 from the Butler Conservation Fund to support the development of rain gardens in collaboration with Clemson University, The Coastal Conservation League, and Winyah Rivers Alliance.

The formal course ended in December 2021, but students continued to engage in the planning and implementation efforts during spring 2022, leading to a community event in April where residents could view and vote on their preferred rain garden sites. The project culminated with the June 2022 installation of [two small rain gardens](#) at the community center (Laguerre 2022) where Furman faculty and one student were able to engage with community members and partners. To illustrate the longer-term commitment to the community beyond the typical span of a college course, two Furman senior Sustainability Science students have begun to build upon these efforts for their thesis research during summer 2022. The success of the strong partnership network and activities in Bucksport provided groundwork to garner additional support from the expertise and focus of a five-year \$5M Carolinas Collaborative on Climate, Health and Equity team led by North Carolina State University, and funded in 2021 by the National Oceanic and Atmospheric Administration.



Furman student Anna Justice and Dan Hitchcock (Clemson University Extension) joined the Bucksport community in the installation of two small rain gardens. Photo courtesy of Geoffrey Habron, Furman University

Students were able to see tangible results of their work at two levels. The first yielded actual federal dollars for Bucksport achieved through Horry County governing processes. The students also learned that short term failure to achieve federal funds for the low impact development project still led to another source of money from American Rivers to support the effort. Finally, students were able to learn of the implementation of the rain gardens even after they had graduated, with one student still close enough in the area to actually participate in the rain garden installation and physically visit the site and meet the community members for the first time. Two of the students have leveraged their experience into community-oriented AmeriCorps positions upon graduation.

One student's final paper from the project was submitted to a peer-review journal for review. Subsequent efforts to support the community include applied and engaged thesis research in 2022 and over the next four years funded by the NOAA NC State Carolinas Collaborative on Climate Health and Equity grant. There is also an opportunity to build upon the previous course efforts in a 300-level Resilience and Adaptation sustainability science course offered in the spring of odd years, such as in 2023.



Work in progress at the James R. Frazier Community Center rain garden. Photo courtesy of Geoffrey Habron, Furman University

## Implications for other Campuses

Furman's experiences with these courses demonstrate the importance of developing and nurturing higher education's commitment to fostering the social justice dimensions of sustainability, with a particular focus on vulnerable, oftentimes marginalized communities and groups that have typically been disproportionately impacted both by environmental bads such as pollution, but also environmental goods such as efforts to improve environmental sustainability and climate resilience such as green infrastructure (rain gardens, tree planting). Those environmental benefits can sometimes fail to adequately involve communities or fail to recognize unintended consequences (e.g., green gentrification) that can lead to community displacement or increase cost of living. Unfortunately, those communities and groups often include Black, indigenous, people of color, women, and those in the Global South. Addressing these problems requires higher education institutions to develop student capacity to address these issues through mindful, scaffolded preparation. It also requires a commitment of resources, the willingness of campus decision-makers to listen to student findings, and a willingness to engage with and listen to communities and decision-makers beyond the control and purview of the institution itself.

Successful community-focused applied learning activities yield positive results for students, community members and institutions. At Furman, students revealed the opportunity for Furman to select a different athletic sponsor that would better reflect Furman's commitment to social justice. It also resulted in Furman approaching current vendors to request membership in the Fair Labor Association, which necessitates Furman deciding whether to discontinue working with sometimes longstanding vendors who decide not to join. As a result, engagement with entities and issues outside of the institution could generate controversy for taking a stand for those with less power and influence such as the residents of Bucksport or female textile workers in Bangladesh. Regardless, the scaffolded and applied learning approach working directly with stakeholders to foster social justice demonstrates that experiential learning projects can help to "contribute to understanding or advancing sustainability" which is among the criteria for recognition in the STARS criteria under AASHE STARS' [AC 8: Campus as a Living Laboratory](#).

The Association of American Colleges and Universities has urged that, "educating students to be socially responsible, informed, and engaged citizens in their workplaces, nation, and the global community should be an expected goal for every major. Achieving this goal will require that departments, programs, and disciplines define the public purposes of their respective fields, the civic inquiries most urgent to explore, and the best way to infuse civic learning outcomes" (AAC&U Civic Learning, 2022). Further, the AAC&U "exhorts educators and public leaders to advance an educational vision that would make civic learning and democratic engagement an expected part of undergraduate education" (Kanter and Ochoa, 2012). Institutions committed to racial equity and social justice should make such a commitment and implementation a clear-cut priority. Campuses should also engage in work to prepare students for such applied projects by developing smaller opportunities for students to ease their way into applied learning opportunities that are safer to fail. Institutions also need to provide students educational opportunities such as cultural competence and guidance about authentic community engagement through readings (e.g., Romero, 2021) and webinars such as the [Building and Sustaining Community Partnerships Workshop](#) through Hawaii Sea Grant, as was done in the upper level Sustainability Science Practicum class.



Bucksport community members at a completed rain garden. Photo courtesy of Geoffrey Habron, Furman University

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