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# Crafting a Campus Sustainability Action Plan: A Grassroots Approach

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# Crafting a Campus Sustainability Action Plan: A Grassroots Approach

## **Abstract**

In recent decades, colleges and universities have taken a leadership role in developing institution-based Sustainability Action Plans (SAPs). A SAP includes a summation of past achievements, current initiatives, and the prioritized goals and implementation strategies for future action in terms of promoting environmental sustainability. These plans can also serve as pedagogical devices that teach students, staff and faculty important lessons of intentional living, global citizenship, and environmental responsibility. While many plans are adopted as top-down initiatives, there is great value in finding ways to engage the entire campus community in such endeavors at the grassroots level. This project documents a ground-up approach to developing a SAP at Gettysburg College, a liberal arts institution in Pennsylvania. Consisting of three phases, the project began with an assessment of current sustainability accomplishments as detailed in ASHE's Sustainability Tracking and Rating System (STARS) data base. The second stage included an investigation of recent SAPs adopted by peer institutions and work by the college's Sustainability Advisory Committee, President's Office and student groups to develop and implement a campus survey on potential sustainability priorities. Finally, a series of focus groups consisting of various campus constituencies provided input for crafting a final draft SAP, which was then offered to the campus community for a second round of review. This bottom-up approach helped to cultivate grassroots ownership of the resulting SAP, leading to a greater likelihood of successful implementation. This project may serve as a useful model for other liberal arts institutions.

## **Keywords**

Sustainability, Action Plan, Gettysburg College

## **Disciplines**

Environmental Education | Environmental Health and Protection | Environmental Sciences | Environmental Studies | Natural Resources Management and Policy | Sustainability

## **Comments**

Environmental Studies Senior Honors Thesis

[Click here to see the poster](#) presented at the 2016 American Association of Geographers' Annual Meeting in San Francisco, CA, March 29 - April 2, 2016.

# Crafting a Sustainability Action Plan: A Grassroots Approach

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## **Abstract**

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## **Introduction**

Efforts to address the challenge of being sustainable at the national and international scale have been fragmented at best; falling short of the carbon emission reductions and new legislations needed to effect significant change (as exemplified in the Kyoto Protocol). In response, actors and institutions at the regional, state and local scale have frequently sought to fill the gap by crafting organization-specific climate action plans for carbon reduction. Institutions of higher education have frequently played a leading role in these endeavors (White, 2012). Oftentimes this participation in sustainability is through the pressure of students, alumni, government incentives and administration or faculty (Sharpe 2016).

There are two primary reasons that institutions of higher education are essential to reducing the effects of climate change. First, by their direct impact as an emitter of 3 percent of U.S.' emissions as well as through their influence on the global economy as a heavy investor (Herman, 2005). Second, and arguably of greater value is the role university's play on their community, by acting as a learning tool for students and the broader campus community in terms of modeling global citizenship, social responsibility and critical understandings of nature-society relations. Kerr (2001) states "As society goes, so goes the university; but also, as the university goes, so goes society"; indicating clearly that academic institutions play a fundamental role in heading societal interests and leading change. Such initiatives towards sustainability will have influences on the academic curriculum, the operations budget, facility planning and the campus culture (Herman 2005).

The movement for campus sustainability developed during the 1990's, with the signature of the University Leaders for a Sustainable Futures (ULSF), and has since experienced two evolutionary waves (Sharp 2009, Henson 2007). The first wave was made through the desire for creating the appearance of green campuses through new innovations such as adding gardens, bike paths, recycling options, grey water treatments, low flow fixtures and much more. Yet these ideas did not really address any institutional changes to the actual system of management at institutions, which only began in the second

wave. This wave had a greater insistence on commitment towards creating a sustainable governance structure, which led to many new organizations accessing and holding these institutions responsible for their commitment. The largest of these organizations, American College and University Presidents' Climate Commitment (ACUPCC), was established in 2006 to encourage institutions of higher education to achieve a "zero" carbon footprint by a certain date. Since then over 600 colleges have signed, committing not only to reaching climate neutrality but also to addressing climate change issues as part of their institutions' course-based curriculum, faculty research, operational decisions and student-focused programs. Gettysburg College is a charter signatory to ACUPCC and has selected the year 2032 – the college's bicentennial – as the goal for achieving carbon neutrality. To this end, the college has adopted a Climate Action Plan and taken direct steps to reduce its carbon footprint.

Another important organization, with 751 participants, is the Association for the Advancement of Sustainability in Higher Education (AASHE) provides resources for campuses to measure and evaluate the extent to which their campus is 'green'. AASHE has been a primary documenter for changes in the positions for sustainability in higher education. Over the past couple of years, 11 new campus sustainability directors/coordinators/managers have been hired, 22 sustainability-themed academic courses have been introduced and an entire University, the Arizona State University of Sustainability, has been dedicated towards sustainability. Additional efforts include a transition to purchasing green energy, in 2006 alone the top 10 biggest power purchasing universities have tripled their green power purchases (Henson 2007). This shows a rising trend for sustainability across many institutions which will hopefully create a positive feedback as more information about the benefits of these changes are documented.

Yet, to achieve harmony and balance between human society and the natural environment over the long term, it is imperative that we go beyond carbon reductions and adopt an approach designed to

achieve sustainability in a much broader sense. The question is, how is this best achieved within an institution for higher education?

*Methods/procedures of sustainability in higher education*

One vitally important aspect to creating a sustainable campus is to institute sustainability across all aspects of the community, from administration to faculty to students. Ideally this shift should come from ingrained habits and desires for an ethical, sustainable environment from the entire community (Friedman 2008). It is through the same shared vision, goals and action of all three subcultures (e.g. students faculty and staff) that the greatest degree of leverage and institutional change can occur (Sharp 2016). This collaboration among various members of the campus will foster more creative and realistic ideas, specific to their own institution, that they will be more prepared to implement (Henson 2007). However this cross campus movement will still need financial support by high level administrators and the encouragement of student activism (Henson 2007). In close tandem, studies indicate that the most effective way to bring about change is to spread a social behavior, idea or trend across the entire community through ideas, people and resources (Bezbatchenko 2010).

There is still much discussion on the best individuals or groups and most effective methods for actually implementing cross-campus sustainability. It should first be noted that institutions of higher education have a unique organizational power structure that is decentralized and can allow for more variety and possibility towards making change (Baldrige, Curtis, Ecker, & Riley 1978). This structure is particularly dominant in Liberal Arts Schools which are generally even smaller, more flexible, and influenced by student action. Ackerman (2011) stresses that the most effective group within a college community are the 'middle level' individuals meaning faculty and staff since they are able to make the most positive long-term changes. This is because they are typically the constituency which have been at the college or university for the longest and have observed which initiatives work or fail. This gives

faculty perhaps the most accurate understanding of the institutions proceedings. Unfortunately some issues they must consider includes worrying over job security, a lack of time and/or resources to devote, unsupportive superiors, and lack of connections to those in the field of interest (Ackerman 2011). Sharp (2016) includes that though faculty can be wonderful advocators throughout research, there has long been a structural exclusion of faculty in management positions. In contrast, students sometimes have more influence over administration and are also very effective in engaging their fellow students, but are often involved in short term action (Sharp 2016). Students spend the least amount of time at their institution, they are therefore often disconnected from past initiatives and will reinvent the wheel. Finally administration plays a huge part in the structural functions of the college or university and have the power to make changes. This leaves the argument that any initiatives needs at least some top leadership involvement. “Perrin’s Law” on leadership included that “No college or University can move far towards sustainability without the active support of at least two senior administrators” (Perrin 2001). According to Bezbatchesenko (2010), it is vital for top leadership, such as the governing board, president and administrators, to be committed in order to achieve any kind of coordinated ‘strategic vision’. Indeed research has shown that sustainability initiatives are often lead by a single leader hoping to create some degree of improvement (Bezbatchesenko 2010).

The actors involved in promoting and achieving more sustainability are incredibly vital, as is the method in which they choose to do so. Due to the structure of an institution of higher education creating policies or goals is one effective method for making a direct and long lasting impact. One such strategy involves creating a “logical and generic set of guidelines to inform the sustainability process and implement a plan” (Bezbatchesenko 2010). The inclusion of a Sustainability Coordinator has been linked to a positive and effective method of increasing sustainability across all fields by implementing the goals and policies suggested (Henson 2007).

### *A Sustainability Plan*

Simply put, a Sustainability Action Plan (SAP) includes a summation of past achievements, current initiatives, and the goals, priorities and implementation strategies for future action in terms of promoting greater environmental sustainability within the campus community. Although SAPs can differ greatly in terms of structure, terminology and format, an important common component is that they directly and meaningfully reflect the concerns and ideals of the campus community's core values (New York University, 2009; University of Delaware, 2008).

Some of Gettysburg College's peer institutions have combined their Climate Action Plans (CAPs) with their SAPs as a single document. Examples include the plans used at Ursinus College and Babson College. This allows them greater efficiency in seeing how carbon reduction initiatives relate to broader sustainability goals. Other institutions have gone a step further, using SAPs as the basis for the overall Strategic Plan adopted by the institution. This is the case at Dickinson College, where all aspects of college planning are weighed out in light of their potential implications for sustainability. Beyond this distinction, there is also great variety in the format and terminology adopted. Swarthmore College lists a set of 'green action areas' which divides the different goals of the college into eight categories (food, services, administration, transportation, academia, water, energy, waste and investments) and each category discusses both the long and short-term goals (Swarthmore University, 2007). This is just one example but there are many different ranking systems and many different ways to establish campus principles within SAPs (White, 2014).

### *Benefits of such a Plan*

In the context of higher education, Sustainability Action Plans can serve as learning tools that allow students and, indeed, all members of the campus community to witness, live and model responsible actions and global citizenship with regards to environmental stewardship (Sustainability

Planning Guiding Team, 2003). A well-crafted SAP can lead to improvements in the academic curriculum, bolster support for student-faculty research initiatives, and engage the campus community in a variety of important and ethical activities and programs (Thomashow, 2014). It can also help a college or university model ideal behavior for students by taking responsibility for the way it manages, values, and interacts with environmental resources (Eagan, Calhoun, Schott, & Dayananda, 2008). As climate change becomes an ever more prevalent issue, institutions of higher education must take a leadership role in preparing students with the scientific facts and a critical understanding of the various alternatives for mitigation and adaptation so they are better equipped for the future (Babson Sustainability Steering Committee, 2011; UC Santa Cruz, 2013). There is an increasingly large market and prospects for students who have studied the environmental implications of their work as employers are increasingly involved with sustainability (Blackburn 2007).

There are also financial incentives for crafting and adopting a SAP. By seeking a balance between economic and ecological concerns, and by investing wisely, a college can demonstrate how improvements in environmental sustainability can also be cost effective (Thomashow, 2014). Some sustainable initiatives, such as promoting recycling and reducing waste generation, reducing fossil fuel-based energy consumption to cut carbon emissions, and shifting toward more efficient types of appliances and motorized, can render impressive and easily identifiable short-term economic gains. Other actions may produce savings over the long-run, such as shifting financial investments into green infrastructure, buildings, and technologies, purchasing sustainably produced materials and office products, increasing public transportation opportunities, and providing locally-sourced organic or naturally-grown foods (Eagan, Calhoun, Schott, & Dayananda, 2008, White, 2014). Applying for government funded subsidies for various greening initiatives is another way in which sustainable practices can generate economic benefits (Eagan, Calhoun, Schott, & Dayananda, 2008).

Efforts to enhance environmental sustainability can contribute in a positive way to the health and well-being of the campus community. Environmental health intersects with human health in a multitude of ways. It promotes locally-sourced fresh and healthy food sources, efforts to achieve cleaner air and water, reducing exposures to toxic or hazardous chemicals, and protecting valuable parks, open spaces and wildlife habitats that can also serve as recreational and exercise destinations. A healthier and more sustainable environmental directly translates into improved community health. (Sustainability Planning Guiding Team, 2003).

Finally, the adoption and implementation of a SAP can provide myriad intangible benefits by positively impacting the prestige and reputation of the host institution. By actively addressing sustainability issues, a college or university can not only model good citizenship for the campus community, but for the region and nation as a whole. By establishing itself as sustainable, institutions will have created an ethical lens to their reputation which can lead to increased student applications as well as potential revenue or other resources becoming available from those who share similar concerns.

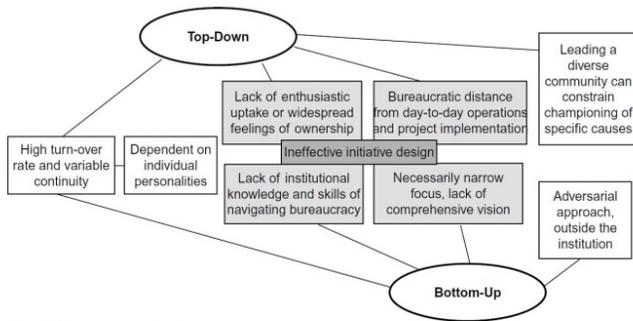
### *Why Gettysburg College?*

Gettysburg College is well poised for the development of a SAP due to the achievements it has already made toward the goal of sustainability. As noted above, Gettysburg College is a charter signatory to ACUPCC, and consequently has already conducted a Green House Gas inventory and developed a draft Climate Action Plan. Along with many other institutions, Gettysburg College has adopted the self-reporting Sustainability Tracking Assessment and Rating System (STARS) tool to inventory, track and measure the campus' performance. This was updated most recently in summer 2015. The STARS tool uses the information uploaded to provide a graded assessment of an institution's efforts to achieve various sustainability goals. It also serves as a common repository that allows colleges and universities to compare themselves using a shared set of metrics.

In addition, Gettysburg College has established a Campus Sustainability Advisory Committee, boasts one of the largest Environmental Studies Departments in the nation among liberal arts schools, and hosts a number of different student-led environmental organizations. The latter include the Gettysburg Environmental Concerns Organization (GECO), Gettysburg Research and Action by Students for Sustainability (GRASS), Biosphere, and the Farm House. Moreover, the Facilities Department, Dining Services and the Center for Public Service all offer sustainability internships to students. And each of these departments and organizations have taken multiple steps to achieve greater environmental sustainability on campus, including the adoption of a single stream recycling system, the use of local and organic food in the dining hall, and earning LEED certification for campus buildings.

Some of these projects provide a benefits to the larger community as well. For example, the Painted Turtle Farm works with local migrant farmer families to grow fresh foods. Campus Kitchens provides food for low-income and elderly residents. And the college sponsors a yearly Give It Up For Good Sale and Campus GIV day where students volunteer in service projects, some of which are aimed at enhancing the community sustainability. Each of these accomplishments is notable and suggests that Gettysburg College is ready for taking the next step in the journey towards increased sustainability.

Additionally, even though Gettysburg College has made many achievements towards sustainability, not enough attention is paid to these accomplishments and with more recognition even more progress could be made. This inclusion and the relevance of this project is further strengthened because the Strategic Plan for Gettysburg College is about to undergo revision. This will allow consideration of our sustainability priorities to take place alongside an assessment of the overall goals and values guiding our institution, which is the approach advocated and implemented at Dickinson College.



Source: Author generated

Figure 1. Challenges facing top-down and bottom-up change makers

## Methods

### *Purpose*

The purpose of this project is to draft a Sustainability Action Plan for Gettysburg College that reflects the goals, concerns and priorities of the campus community. The project includes the following four objectives:

1. To research the procedures involved in making a sustainable campus by examining other SAP's from peer institutions.
2. To assess the current status of sustainability at Gettysburg College.
3. To conduct a survey and a number of focus groups to gather information from the various campus constituencies with regards to their opinions and priorities on various topics and actions related to sustainability.
4. To use gathered data to craft a Final Plan for Gettysburg College to be presented/considered for final review/acceptance by the campus community in Spring 2016.

### *Research Design*

The project design follows the general methodological frameworks laid out in the academic literature as well as those successfully implemented by a number of peer institutions (Eagan, Calhoun, Schott, & Dayananda, 2008, Sustainability Task Force, 2012, Swarthmore University, 2007).

The first objective was to research information on sustainability at our peer institutions. A workshop on 'Building a Sustainable Campus' sponsored by the Pennsylvania Environmental Research Consortium (PERC) provided a starting point. This was followed by a comparative assessment of SAPs and Climate Action Plans that have been developed by peer liberal arts institutions. Communication through informal interviews with Sustainability Coordinators and a close study of the Sustainability Plans from schools such as Dickinson College, Lehigh University, Swarthmore College, Bucknell College, Wilson College and Franklin & Marshall College has provided additional guidance on the structure and implementation of the proposed Gettysburg College SAP. These resources has also offer more information on the actual procedures taken to creating a plan for a campus community to affirm that the plan for Gettysburg is not just re-inventing the wheel but is made from careful consideration of what methods work best (Eagan, Calhoun, Schott, & Dayananda, 2008). The various layouts and configurations of such a plan for Gettysburg College has been discussed by the Sustainability Committee.

The second objective was to gather information on where Gettysburg College currently stands with regards to sustainability. This assessment specifies a measure of the institutions sustainability which will in turn demonstrate the areas of strength as well as weakness with strategies for improvement (Henson 2007). A close assessment of the Gettysburg College Sustainability Tracking Assessment and Rating System (STARS) report provides a comprehensive list of the measures the college has already taken towards achieving a more sustainable campus, as well as areas in need of greater attention. Because the STARS report was recently updated in summer 2015, the timing was ideal for such an exercise. The data was then summarized and formatted into a reader-friendly brochure and presented to key constituencies of the Gettysburg College community for feedback. These included the Campus Sustainability Advisory Committee, Student Senate, various student clubs, and high-level administrators including the President. The final product was disseminated to the Gettysburg campus community in order to increase awareness and general knowledge about sustainability issues and actions, with the goal of improving the quality of campus input into the process of crafting the SAP. Additionally, the STARS report combined with the

comparison of other plans provided a comprehensive list of categories that could be included in the final Gettysburg Plan. The ten major categories include academics (e.g., curricular matters, faculty research), engagement (e.g., college life, campus-community relations), operations (e.g., facilities, energy, transportation, building infrastructure, etc.), and planning and development (e.g., governance issues, finances and investment). These have been used to serve as the basic template for organizing the Gettysburg College SAP.

Following El-Mogazi (2005) the next step in developing a SAP, is to engage the campus community in constructive discussions of past sustainability achievements, current initiatives, and future goals. Simpson (2009) underscores the importance of community engagement and ownership in the process of crafting a campus plan. Indeed, the successful implementation of a Sustainability Action Plan can only occur if the interests and concerns of the entire campus community are given serious consideration and ownership in the planning process itself (Sustainability Planning Guiding Team, 2003). To this end, one campus-wide survey and a series of focus groups –one for the faculty, one for college staff and a three for students– has been conducted in order to solicit the views and priorities of campus community members. The survey was organized according to the ten thematic categories, listed above, which included a series of sustainability policies and goals for each theme and asked campus community members to rank them in terms of prioritization (Appendix A).. The survey consisted of 54 topical questions measured using a five-point Likert scale. It also included several demographic questions to discern campus constituency membership (e.g., student, faculty, or administration/staff). It was administered in person in using a representative random sampling method as well as through an online portal. The five focus groups had attendance ranging from 5-15 participants with a similar structure in terms of addressing these main goals but allowed for a lot more discussion and creativity for improvements or new objectives (Appendix B). The focus groups were initially introduced to the brochure of the STARS report as an informative tool to contribute in more constructive ways in discerning the future goals and priorities for sustainability at Gettysburg College (Hitchcock & Willard, 2008). Throughout this entire process I was assisted by interested individuals willing

to commit time and resources in distributing surveys, taking notes in focus groups and getting others interested.

The final project objective entails synthesizing the survey and focus group data, and translating it into a final draft Sustainability Action Plan document for Gettysburg College. The final draft has been composed of an executive summary, a brief account of current achievements, the sustainability planning goals according to the priorities specified by the campus, and a list of sustainable strategies to reach these goals (Sustainability Planning Guiding Team, 2003). The resulting SAP will then be presented back to the campus community and Sustainability Advisory Committee for additional feedback. Ultimately, a final revised document will be presented to President Riggs, the President's Council and Board of Trustees for final approval, with the intent that it can help to direct future sustainability programs and priorities in accordance with the broader educational mission of Gettysburg College.

## **Results**

The survey yielded 672 student responses from a total population of 2632, providing a 3.27% margin of error at the 95% confidence level. A total of 135 responses were collected from faculty, staff and administration (F/S/A) out of a total population of 928, providing an 8% margin of error at the 95% confidence level. However, it bears noting that the vast majority of respondents of this group (113 of the 135 responses received) were from faculty members.

The results show an overwhelming positive response to most of the sustainability actions and policies measured. To discern a measure of prioritization for each goal, frequency responses were calculated and are presented below for responses by both constituencies (Figure 1 and 2).

In order to better visualize the results we combined both the 'Very Important' and 'Somewhat Important' into a single category representing the positive results, and 'Very Unimportant' and 'Somewhat Unimportant' were combined to represent the negative results (Figure 3 and 4). These

figures were used to observe the general trends within each of the categories. For example question number 15, which refers to making dining trayless and is discussed later, has a greater distribution of responses. The last four questions also appear to have greater variability as these questions are all about the governance and finance sector.

As prioritization is the primary goal for these results, one goal with the highest positive percentage response by constituency and one goal with the most negative percent responses was extracted from within each of the 10 topical categories (Table 1). From this table you can more clearly see the actual percentages involved, positives being in the 80's range and negatives mostly under 10 percent (Table 1). From all of questions on the survey there were higher average positive responses from the students at 80.9% than the faculty, staff and administration at 79% (Table 2). Yet faculty staff and administration had some of the most positive responses they also had a wider range, from the highest being 92.6% and the lowest at 64.7% (Table 1).

To place reference to the percentages from Table 1, Table 3 has the actual goal that were most positively or negatively responded to, from each topical category. Of the ten categories, students, faculty, staff and administration had the same highest positive goal within five of the categories and seven of the same negative goals (Table 3). For students the most positive goal was to “increase campus composting and its use” while the most negative response was to “implement trayless dining.” For Faculty, Staff and Administration the most positive goal was to “improve awareness of existing sustainability efforts” while the most negative response was to “hire a sustainability coordinator.”

To consider some of these goals at a closer level some of the listed goals that were the same for each constituency were broken down into pie charts. The goals or policies with a high positive ratings for all groups (receiving “very important” or “somewhat important” scores) are shown in Figure 5 and 6. This question, though not the highest of the positive responses, was a good representation of how most of the breakdown of the goals appeared. It is a question from the food systems category and shows that

the faculty staff and administration thought quantifying food management was slightly less important. In a similar fashion, goals and policies with the highest percentage of negative responses for all groups (e.g., “very unimportant” or “somewhat unimportant”) are shown in Figure 7 and 8. In contrast to the previous figures, the students responded more negatively to having trayless dining than faculty, staff and administration, who would be less impacted by this change. When considering the responses from all groups the most positive goal was to “improve awareness of existing sustainability efforts” while the most negative response was to “implement trayless dining.” Lastly the differences in prioritization by different campus constituencies was also measured in Figure 9 and 10. They show an extreme difference between constituencies which was consistent with all goals within the category of Finance / Governance.

Focus group data largely confirmed the survey findings. The most important priorities noted a need for more education and awareness of the sustainability occurring on campus to increase enthusiasm for more efforts. This was mentioned by both constituency as they feel there is a disconnect of information and activity between them. In every group we also discussed the importance of having a sustainability coordinator and made clear how necessary that position would be to achieve much of the SAP. Beyond these two main trends the focus groups offered a place for many additional suggestions, most of which were Gettysburg College specific, to be presented. Some of these suggestions were the same across all constituencies which included riding bullet of non-reusable food containers, using less and better quality paper, recycling printer cartridges, making sustainability a be part of First Year Orientation, and promoting the initiatives already in place.

Combining the survey and focus group data with the Gettysburg College STARS and Sustainability Report, we have been able to craft an initial draft of the Sustainability Action Plan. Following the formatting templates provided by peer institutions, the data reflect our past achievements, current initiatives and, now with campus feedback, our prioritized future goals. The survey results were the primary indicators for prioritizing the list of goals within the SAP, by placing them in order of most

to least positive results. Any of the goals that were below 80% positive by the combined category of students, faculty, staff and administration were categorized into a different color at the bottom of the list as an indication that either it is of low priority to the college or that there would first need to be more discussion on the matter.

## **Conclusion**

The grass-roots approach to developing a campus Sustainability Action Plan documented here, at Gettysburg College has provided critical information pertinent to developing and implementing a successful SAP for Gettysburg College. While feedback was overwhelmingly positive for most of the goals and policies presented, the process provided clear guidance in terms of which goals are highly prioritized and which goals require additional education and community discussion.

The results of the survey and focus groups provided valuable information on the prioritization of sustainability at Gettysburg College. Since many of the responses were so positive it indicated a high level of interest by the college community for a Sustainability Action Plan at Gettysburg College. These responses as well as the overall quantity of feedback were both very encouraging pieces to the potential success of this plans implementation. Before implementation these results were placed in order of importance according to the percent of positive responses. Yet the results also suggest there is more work to be done in terms of providing a deeper level of understanding with regards to the costs and benefits of various initiatives. For example, it is possible that the resounding positive feedback for many sustainability goals from students reflect a lack of knowledge on costs and benefits. Most mixed responses from students occurred over questions where they identified a potentially negative impact (e.g., smaller meals if a trayless dining option were to be implemented, impacts to Greek life or higher fees, see Alher et. al. 2016). While this impact may be much less pronounced than perceived, or even non-existent, the survey responses suggest more education is needed to clarify the pros and cons of

particular goals and policies as well as explaining the reasoning behind them. In terms of increasing sustainability on Greek life, it seems likely that the goal was unlikely to occur, yet about 70 percent of students at Gettysburg are a part of Greek life. This high percentage means that influencing the attitudes towards sustainability for this sector will mean a huge shift in the entire campus attitude. There were also situations where it appeared that the campus considered goals that were not as clearly defined to be of less importance. For example, in the grounds category the campus thought reducing the environmental impacts of maintenance to be of greatest importance but not to create a landscape management plan. In this situation such a plan would be of primary importance in order to enforce the reduction of impacts on the grounds. Again in a situation like this more education on the definition and methods of achievement for this specific goal would result in a more informed response.

This process also identified topical areas in which there is a difference of perspective between different campus constituencies (e.g., students versus faculty, administration or staff). The difference in constituency response provides valuable guidance for next steps. For instance both the buildings and water category had a direct conflict of interest between the constituencies. In the buildings category, faculty, staff and administration had creating a policy for upgrades and renovations as their top priority, while students had this as their lowest priority. This is again probably due to a lack of understanding between the positive benefits involved in broader goals. Overall it seemed that the faculty, staff and administration had a better grasp on how an actual plan within a field would benefit the overall success of implementation. This means that they were also more aware of the financial costs involved in making these plans, noticeable by the clear and consistently more negative responses to the goals in the finance and governance sector. Another such observation may be made for the lack of administrative support for hiring a sustainability coordinator. While this position will require an initial financial cost, there is strong agreement among most institutions of higher learning that the benefits of this position over time more than cover the costs. Of the top 50 Liberal Arts schools over half currently have a Sustainability

Coordinator or entire office most of which also have a Sustainability Action Plan, or the equivalent. Moreover, not all benefits are easily quantified in financial terms, but render positive returns in the form of education, aesthetics and environmental health. Nonetheless, findings suggest that clear evidence still needs to be presented to the campus community to make this case for several topics. This will help in the delineation of more precise short-term, intermediate and long-term goals, as well in cultivation of support for implementation. This delineation was made difficult by the difference in response from the focus group where issues like the hiring a sustainability coordinator. While in the surveys there was a clear negative response to goals in the survey, focus groups were informed about the benefits and came to realize their importance in implementation of this plan. However, though the survey responses indicated low importance for hiring a sustainability coordinator, this goal is still part of the plan since there were direct advocates for the position in focus groups and other meetings.

The grass-roots approach also provided a valuable learning opportunity for community members about past and current initiatives. Many were simply not aware of what the college has done so far in terms of achieving sustainability goals and learned about them for the first time through this process. It was very apparent how much the campus, even those actively involved in campus environmentalism, lacked information of the ongoing sustainability initiatives. This made the ideas for increased education, and promotion of these initiatives even more essential for improvements. Going forward, the process of engaging with the campus community will also yield a sense of ownership in the SAP which will translate into greater legitimacy and support for plan implementation (Simpson, 2009). The process, though primarily student led, has attempted to generate feedback across the entire campus community by distributing surveys and holding focus groups. Additionally, the methods for this plan were made and implemented by an Environmental Studies Professor with an Environmental Studies student, and there were many other constituencies more directly involved throughout the entire process. This included many meetings and feedback from the Campus Sustainability Advisory Committee, faculty interaction

and discussion, student workers help via feedback and ideas as well as the overall approval by high level administrators, including the college president. Such involvement was accomplished in order to generate the most amount of public approval of a plan that would hopefully positively impact the entire college.

As mentioned above it would have been valuable to discuss more details and specifics for each of the future initiatives but for the primary stage this would have been too intensive. Each of the goals on the survey was backed by a list of possible methods for achieving these goals and these were only discussed in focus groups. Instead as we move forward, additional initiatives can go through a more extensive review by the campus community.

Ultimately, the final document will be presented to the college president, the President's Council and Board of Trustees for formal approval. This presentation will most likely occur during the summer of 2016. Given that the SAP is a "live" document, it will continually be revisited and revised over time by the campus community as it serves to direct future sustainability priorities and programs in accordance with the broader educational mission of Gettysburg College.

**Appendix A.**

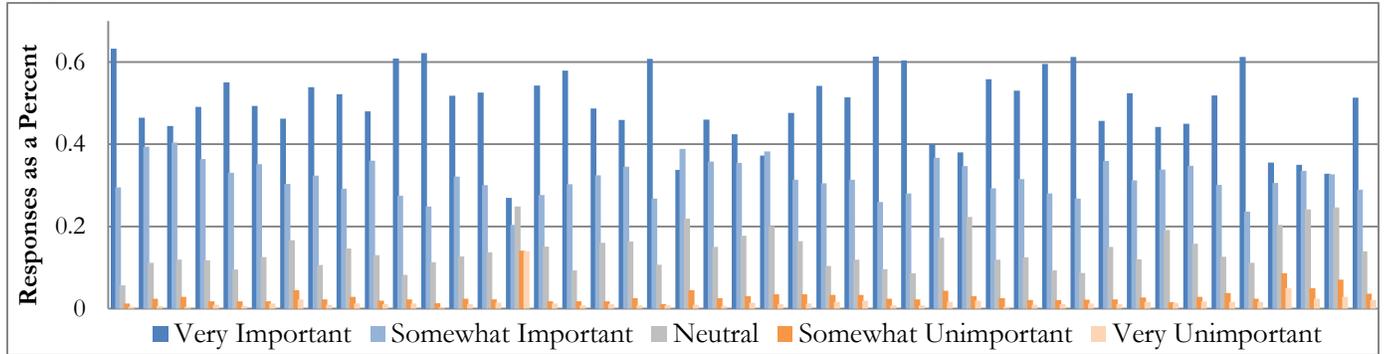


Figure 1. Percent Student Responses to each Survey Question

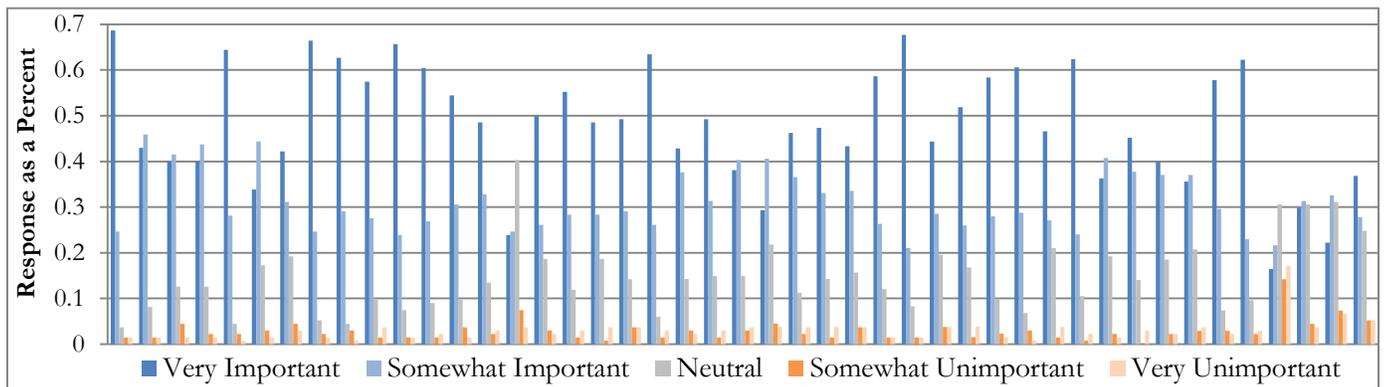


Figure 2. Percent Faculty, Staff and Administration Response to each Survey Question

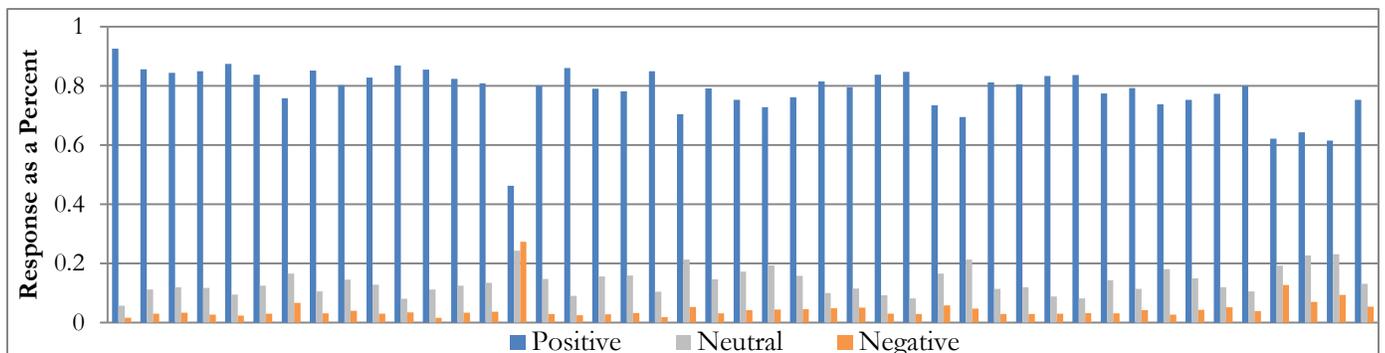


Figure 3. Percent Student Response to each Survey Question broken down into only three categories

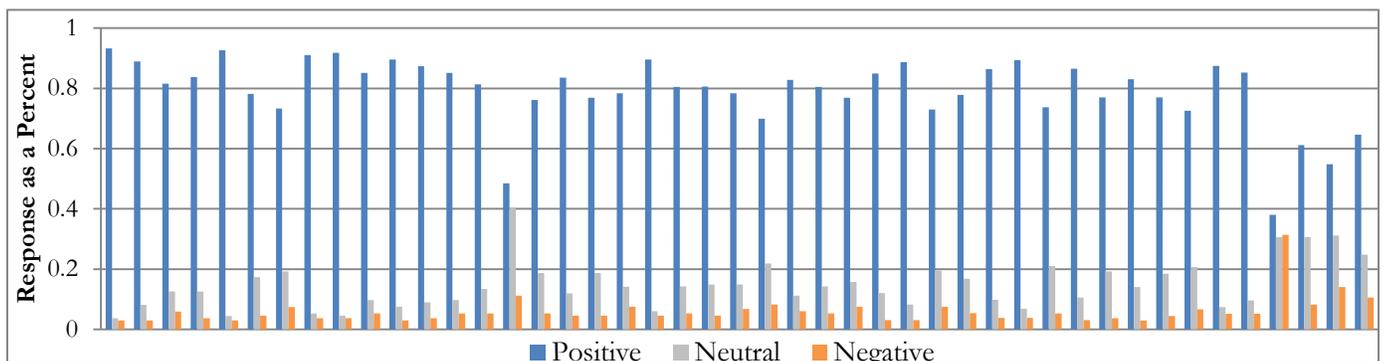


Figure 4. Percent Faculty, Staff and Administration Response to each Survey Question broken down into only three categories

Table 1. Goals from survey which received the highest and lowest responses within each category

	Positive Responses			Negative Responses		
	Students	FSA	Combination	Students	FSA	Combination
<b>Academics</b>	Improve Existing Sustainability Awareness	Increase Env. Education opportunities for Faculty and Staff	Improve Existing Sustainability Awareness	Sustainability in Greek Life		
<b>Building</b>	'Greening' of living spaces	Create Policy for new construction and upgrades	'Greening' of living spaces	Create Policy for new construction and upgrades	Create list of preferred products/materials for construction/maintenance	Create Policy for new construction and upgrades
<b>Food System</b>	Quantify Food Management			Trayless Dining at SERVO		
<b>Energy</b>	Goal for % of renewable energy on campus	Create Energy Plan		Create Baseline for buildings energy consumption		
<b>Grounds</b>	Reduce Environmental Impacts of grounds maintenance			Create Landscape Management Plan		
<b>Purchasing</b>	Educate campus on sustainable procurement practices			Educate campus on sustainable procurement practices	Establish % of purchases with sustainable standard	
<b>Transportation</b>	Reduce fossil fuels in campus fleet			Reduce fossil fuels in community travel		
<b>Waste</b>	Increase composting	Ensure building materials from construction are RRR	Increase composting	Achieve Zero solid waste in dining		
<b>Water</b>	Reduce water bottles	Create efficient Temperature	Reduce water bottles	Create efficient Temperature	No water-intensive procurements	Create efficient Temperature
<b>Finance / Governance</b>	Invest to green, environmentally sound and socially just options			Hire Sustainability Coordinator		

Table 2. Calculation on overall percent positive and negative responses per class

	Students	F/S/A	Combination	Students	F/S/A	Combination
<b>Average</b>	80.9	79	80.6	4.7	6	5
<b>Median</b>	82.7	81	82.8	3.4	5.2	3.8

Table 3. Percentage approval of Goals from survey which received the highest and lowest responses within each category

	Positive Responses (%)			Negative Responses (%)		
	Students	F/S/A	Both	Students	F/S/A	Both
Academics	88.1	92.6	88.8	6.8	7.4	7.0
Building	88.3	91.8	88.5	4.0	5.2	4.0
Food System	87.0	87.3	87.0	28.0	11.2	25.4
Energy	88.2	89.6	87.7	3.3	7.5	3.9
Grounds	81.8	80.6	81.7	5.4	5.3	5.5
Purchasing	79.0	82.8	79.7	4.7	8.3	5.0
Transportation	84.5	80.5	84.0	5.3	7.5	5.7
Waste	88.5	88.8	88.6	6.0	7.5	6.3
Water	84.8	87.4	85.0	5.4	6.7	5.3
Governance	80.3	64.7	77.8	13.5	31.3	16.3

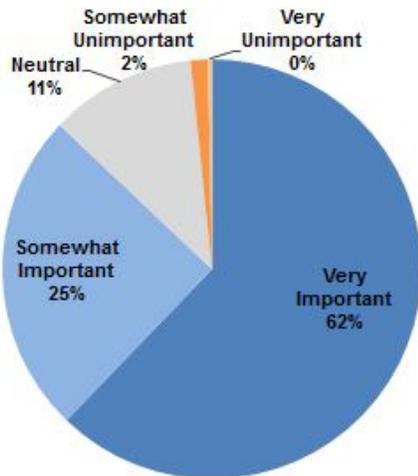


Figure 5. Student Response to Quantify Food Management Question

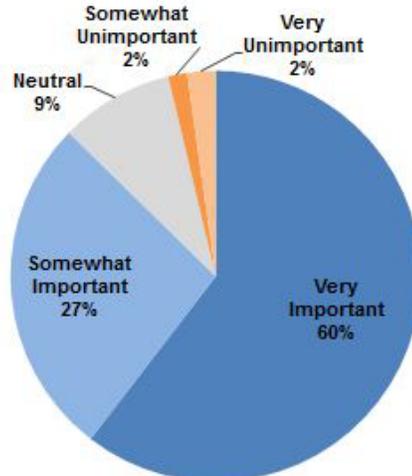


Figure 6. F/S/A Response to Quantify Food Management Question

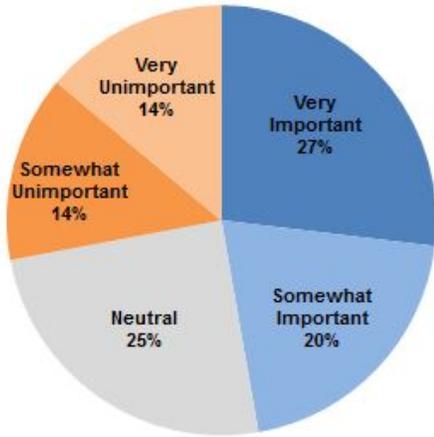


Figure 7. Student Response to Trayless Dining Question

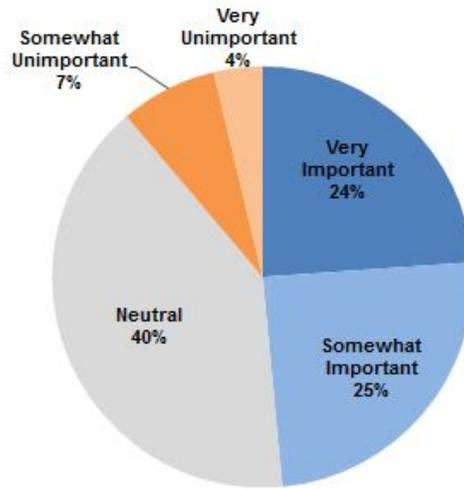


Figure 8. F/S/A Response to Trayless Dining Question

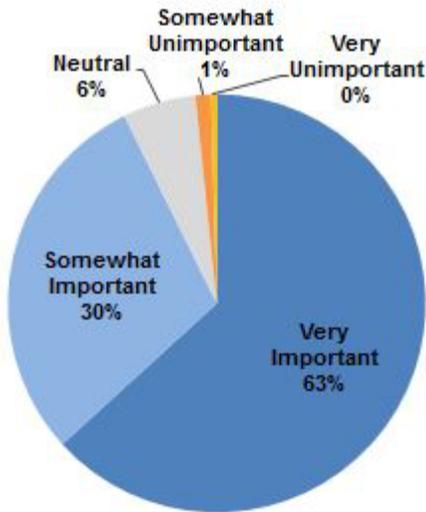


Figure 9. Student Response to Hiring a Sustainably Coordinator

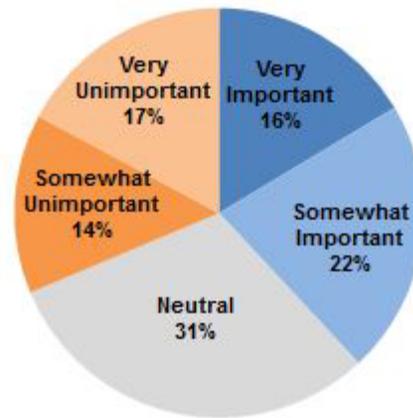


Figure 10. F/S/A Response to Hiring a Sustainably Coordinator

## Appendix B

# GETTYSBURG SUSTAINABILITY GOALS SURVEY

Thank you for filling out this survey! You have now become an active member of change for sustainability on this campus. **Please choose only one option for each goal.**

Sustainability Goal	Very Important	Somewhat Important	Neutral	Somewhat Unimportant	Very Unimportant
1. I think promoting Sustainability at Gettysburg College is					
<b>Academics</b>					
2. Increase environmental sustainability education for students					
3. Increase environmental education opportunities for faculty/staff					
4. Promote community education and outreach					
5. Improve awareness of existing sustainability efforts					
6. Promote Sustainable Research					
7. Integrate sustainability into Greek Life					
8. Additional Suggestions:					
<b>Operations: Buildings</b>					
9. Regularly assess sustainability of existing infrastructure					
10. Create a policy for all new construction and upgrades					
11. Create list of preferred products and materials for construction and maintenance					
12. Promote the 'greening' of living and work spaces					
13. Additional Suggestions:					
<b>Operations: Food Systems</b>					
14. Quantify food management (trans, prep & disposal)					
15. Create a Baseline and set a Goal for Local, Organic, and Fair Trade foods					
16. Increase availability of Holistically Nutritious Foods					
17. Implement trayless dining at SERVO					
18. Additional Suggestions:					
<b>Operations: Energy</b>					
19. Achieve Climate Neutrality by 2032					
20. Set goal for % of renewable energy used on campus					
21. Procure electricity that has a Renewable Portfolio Standard with a % higher than state required minimum					
22. Create Baseline of energy consumption by building					
23. Create an Energy Plan					
24. Additional Suggestions:					

Sustainability Goal	Very Important	Somewhat Important	Neutral	Somewhat Unimportant	Very Unimportant
<b>Operations: Grounds</b>					
25. Create a Landscape Management Plan					
26. Reduce environmental impacts of grounds maintenance					
27. Additional Suggestions:					
<b>Operations: Purchasing</b>					
28. Create Standard for academic departments and campus-wide sustainable purchases					
29. Establish threshold of percentage of goods/services procured consistent with the purchasing standard					
30. Educate faculty, staff, and students on the sustainable procurement practices and standard					
31. Additional Suggestions:					
<b>Operations: Transportation</b>					
32. Reduce the use of fossil fuels in campus fleet					
33. Reduce fossil fuels in community travel					
34. Additional Suggestions:					
<b>Operations: Waste</b>					
35. Set goal to reduce production of solid waste by 2032					
36. Increase campus composting and its use					
37. Achieve Zero solid waste in dining hall food services					
38. Implement campus wide e-waste program					
39. Procure products that reduce packaging waste and one-time use					
40. Ensure that building materials from construction and demolition are reduced/recycled/reused					
41. Implement a reusable container program in carryout dining (again)					
42. Efficiently place waste receptacles on campus to reduce incidences of placing waste in recycling bins					
43. Additional Suggestions:					
<b>Operations: Water</b>					
44. Achieve 100% containment of storm water through Storm water management plan					
45. Set goal to reduce water consumption by 2032					
46. Create cost-benefit analysis of gray water recycling systems for potential adoption					
47. Procure products that aren't manufactured with water-intensive methods or require excessive water to use					

Sustainability Goal	Very Important	Somewhat Important	Neutral	Somewhat Unimportant	Very Unimportant
48. Create efficient temperature schedule for buildings					
49. Reduce bottled water consumption					
50. Additional Suggestions:					
<b>Governance / Finance</b>					
51. Hire a Sustainability Coordinator					
52. Further develop mandate/mission and resources for Campus Sustainability Advisory Committee (STARS)					
53. Create sub-committee at Board of Trustees or Alumni Level, Presidents Council					
54. Investments geared toward green, environmentally sound and socially just options					
55. Additional Suggestions:					
<b>Background/Demographic Info (circle answer)</b>					
56. Gender:	Female	Male	Non-Binary		
57. Year in School	First Year	Sophomore	Junior	Senior	
58. Major (or interest if undeclared) If a double major, pick favorite	Arts/ Humanities	Natural Science	Social Science	Interdisciplinary (ES, GS, IDS)	
59. Political Viewpoint	Very Conservative	Moderate Conservative	Moderate Liberal	Very Liberal	

## Works Cited

- Baldrige, J.V., Curtis, D.V., Ecker, G., and Riley, G.L. (1978). *Policy making and effective leadership: A national study of academic management*. San Francisco: Jossey-Bass.
- Bezbatchenko, A. (2010). Sustainability in Colleges and Universities: Toward Institutional Culture Shifts. *Journal of Student affairs at New York University*. Vol 6
- Blackburn, W.R. (2007). *The sustainability handbook*. Washington, DC: Environmental Law Institute.
- Brinkhurst, M., Rose, P., Maurice, G., & Ackerman, J. D. (2011). Achieving campus sustainability: top-down, bottom-up, or neither?. *International Journal Of Sustainability In Higher Education*, 12(4), 338-354.
- Creating a Culture of Sustainability: How campuses are taking the lead. 2005. Herman Miller Inc.
- Cortese, A. D. (2003). The Critical Role of Higher Education in Creating a Sustainable Future. *Planning For Higher Education*, 31(3), 15-22.
- Cubasch, U., Wuebbles, D., Chen, D., Facchini, M., Frame, D., Mahowald, N., et al. (2013). *Climate Change 2013: The Physical Science Basis*. Cambridge Intergovernmental Panel on Climate Change (IPCC).
- Eagan, D., Calhoun, T., Schott, J., & Dayananda, P. (2008). *Guide to Climate Action Planning: Pathways to low-carbon campuses*. National Wildlife Federation Campus Ecology , 1-48.
- El-Mogazi, D. (2009). *A comprehensive Environmental Assessment of Bucknell University*. Campus Greening Initiative Bucknell University Environmental Center.
- Friedman, T.L. (2008). *Hot, flat and crowded: Why we need a green revolution – and how it can renew America*. New York: Farrar, Straus and Giroux.
- Hamin, E., & Marcucci, D. (2013). *Mainstreaming Climate in the Classroom: Teaching Climate Change Planning*. *Planning Practice & Research* , Vol. 28 Issue 4, p470-488.
- Harris, T., Meiser, J., Rosenberg, H., Salamack, A. (2001) *Greening UCSB: Development of an assessment protocol and policy statement to improve campus sustainability*. Master's Group Project in Environmental Science and Management. University of California.
- Henson, M., Missimer, M. & Muzzy, S. (2007). *The campus sustainability movement: A strategic perspective*. Doctoral dissertation. Blekinge Institute of Technology
- Hitchcock, D., & Willard, M. (2008). *The step-by-step guide to sustainability planning*. London: Earthscan.
- Kerr, C. (2001). *The uses of the university* (3rd ed.). Cambridge, MA: Harvard University Press.

- Leith Sharp, (2002) Green campuses: the road from little victories to systemic transformation. *International Journal of Sustainability in Higher Education*, Vol. 3 Iss: 2, pp.128 – 145
- Leith Sharp, (2009) Higher education : the quest for the sustainable campus. *Sustainability: Science, Practice, & Policy*. V5:1
- Moore, J. j. (2005). Barriers and pathways to creating sustainability education programs: policy, rhetoric and reality. *Environmental Education Research*, 11(5), 537-555.  
doi:10.1080/13504620500169692
- O'Brien, W., Sarkis, J. (2013). The Potential of Community-Based Sustainability Projects for Deep Learning Initiatives. *Journal of Cleaner Production*. Worcester, MA. Vol 62 pg 48-61.
- Rochelle Owen, E. F. (2013). Beyond reduction: climate change adaptation planning for universities and colleges. *International Journal of Sustainability in Higher Education* , Vol. 14 Iss: 2, pp.146 - 159.
- Richard Emanuel, J.N. Adams, (2011). College students' perceptions of campus sustainability, *International Journal of Sustainability in Higher Education*, Vol. 12 Iss 1 pp. 79-92  
<http://dx.doi.org/10.1108/14676371111098320>
- Shriberg, M. (2002). Sustainability in U.S. higher education: Organizational factors influencing campus environmental performance and leadership. Doctoral dissertation, The University of Michigan.
- Simpson, W. (2009). Cool Campus! A how to guide for College and University climate action planning. Lexington: AASHE.
- Stephen M. Posner Ralph Stuart, (2013). Understanding and advancing campus sustainability using a systems framework, *International Journal of Sustainability in Higher Education*, Vol. 14 Iss 3 pp. 264 - 277
- Sustainability Planning Guiding Team. (2003). A Sustainability Planning Guide for Healthy Communities. Center for Disease Control and Prevention.
- Survey Sample Size Calculator - FluidSurveys. (2016). Survey Monkey, Retrieved March 22, 2016, from <https://fluidsurveys.com/survey-sample-size-calculator/>
- Tang, Z., Brody, S., Quinn, C., Chang, L., & Wei, T. (2009). Moving from agenda to action: evaluating local climate change action plans. *Journal of Environmental Planning and Management* , Vol. 53, No 1, pg 41-62.
- Thomashow, M. (2014). The nine elements of a sustainable campus. Cambridge: The MIT Press.
- USGCRP. (2015). Our Changing Planet: The U.S. Global Change Research Program for Fiscal Year 2016. Wasington D.C: U.S. Global Change Research Program (USGCRP).

White, S. S. (2014). Campus sustainability plans in the United States: where, what, and how to evaluate? *International Journal of Sustainability in Higher Education* , Vol. 15 Iss: 2, pp.228 - 241.

### **Bibliography for Institutions**

Babson Sustainability Steering Committee. (2011). *Babson College Sustainability and Climate Action Plan*. Babson Park: Babson College.

Consroe, K. (2009). *Climate Change Action Plan*. Carlisle: Dickinson College.

Dudman, T., Forteir, R., Johnson, D., Karwaski, D., Katz, N., Lelah, T., et al. (2008). *Climate Action Plan*. Los Angeles: University of California, Los Angeles (UCLA).

Environmental Studies Capstone Seminar. (2007). *The Greening of Swarthmore: Sustainability Action Plan*. Swarthmore College.

Lehigh University. (2012) *2012: Campus Sustainability Plan*. Lehigh University

Nahman, D. Lehigh Environmental Advisory Group. (2012) *Campus Sustainability Plan*. Lehigh University. Bethlehem, Pennsylvania.

New York University. (2009). *New York University Climate Action Plan*. New York: NYU Sustainability.

Sustainability Task Force. (2012). *Franklin & Marshall Sustainability Master Plan 2012*. Lancaster: Franklin & Marshall.

UC Santa Cruz. (2013). *Campus Sustainability Plan*. Santa Cruz: UC Santa Cruz.

University of Delaware. (2008). *A Sustainable University of Delaware: Climate Action Plan*. Delaware: Center for Energy and Environmental Policy