

Climate Change Leadership in Higher Education Institutions

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Abstract

Over the last decade, climate change has become a critical topic of concern. As a result, organizations, including higher education institutions, are responding by making significant organizational changes. Through a comprehensive survey, along with interviews of individual institutions, this research project seeks to understand how higher education institutions in the U.S. and Canada are restructuring their governance structures in order to respond to climate change. In addition, this analysis investigates commonalities and/or differences between institutions; the roles, responsibilities, and backgrounds of the persons responsible for climate change strategies; and whether climate change issues are being integrated into existing and/or new curriculum. The resulting data show that more than three-quarters of the 160 surveyed institutions have undergone organizational changes related to climate change in the last three years. Yet, the ways in which institutions adapt are quite variable, as each campus must address its own unique characteristics and challenges. Even who is tasked with the responsibility of addressing climate change varies greatly by institution, ranging from university presidents to sustainability coordinators. Nevertheless, some overriding themes are clear. Regardless of who is ultimately accountable for addressing climate change, executives within higher education institutions are actively involved, and can fundamentally alter how campuses perceive and respond to this issue. Additionally, stakeholder relations play a critical role when attempting to implement new climate strategies. This report lays the framework for future collaboration and learning opportunities among campuses, particularly for those institutions that are only in the early stages of addressing climate change.

Acknowledgements:

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About ACCO:

The Association of Climate Change Officers (ACCO) was founded in August 2008 and incorporated in Washington, DC in January 2009 as a 501(c)(6) non-profit corporation. ACCO's mission is to advance the knowledge and skills of those dedicated to developing and directing climate change strategies in the public and private sectors, and to establish a flexible and robust forum for collaboration between climate change officers

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Glossary and List of Abbreviations

Abbreviations

AASHE	Association for the Advancement of Sustainability in Higher Education
ACCO	The Association of Climate Change Officers
ACUPCC	American College and University Presidents' Climate Commitment
CAP	Climate Action Plan

Glossary of Terms

Branching	A survey tool that allows respondents that respond differently to questions to be routed to another sequence of questions, thus seeing only the most relevant ones
Climate Change	Refers to any distinct change in measures of climate lasting for an extended period of time. In other words, “climate change” means major changes in temperature, rainfall, snow, or wind patterns lasting for decades or longer.
Climate Change Governance	How a college or university is structured to respond to climate change, including the organizational structure of the college or university and the roles and responsibilities of climate change officers therein
Climate Change Officer	An individual who is responsible for developing, managing and implementing a comprehensive climate change strategy within an institution
Executive	Refers to executive level positions such as the University President, Vice President, Provost etc.
Higher Education Institution	Includes accredited 2 year, 4 year, and community colleges and universities
Project Team/Managers	Four Duke University graduate students in partnership with ACCO

Demographic Categories

Private	Institutions largely supported by state funds
Public	Institutions largely supported by tuition, endowments, and donations
Small Institution	Size between 1500-4500 students, average at 2500

Medium Institution	Size between 4500-12000 students, average at 8000
Large Institution	Size between 12000-36000 students, average at 25000
Non-Residential	Institution with primarily nonresidential students, commuters
Residential	Institution with primarily residential students, including ones that require on campus housing during academic years
New England	CT ME MA NH RI VT
Great Lakes	IL IN MI OH WI
Southeast	AL AR FL GA KY LA MS NC SC TN VA WV
Rocky Mountains	CO ID MT UT WY
Mid East	DE DC MD NJ NY PA
Plains	IA KS MN MO NE ND SD
Southwest	AZ NM OK TX
Far West	AK CA HI NV OR WA
<i>The following codes represent the “urbanicity” (city/suburb/rural) by population size of the institution’s location. This urban-centric locale code was taken from the Carnegie Classification of Institutions of Higher Education and was assigned through a methodology developed by the U.S. Census Bureau’s Population Division. Codes were consolidated as indicated.</i>	
Large City	Large City (includes: City: Large, City: Midsize, City: Small)
Mid-Size City	Mid-Size City (includes: Suburb: Large, Suburb: Midsize, Suburb: Small)
Urban Fringe	Urban Fringe (includes: Town: Fringe, Town: Distant, Town: Remote)
Rural Town	Rural Town (includes: Rural: Fringe, Rural: Distant, Rural: Remote)

Executive Summary

A new profession: climate change officers. In response to mounting pressures from climate change, a new profession has emerged over the last decade. This new role, the climate change officer, has become significant in corporations, higher education institutions, municipalities, and elsewhere. Yet the attributes of this new and growing profession remain a mystery, including the nature of the work, the backgrounds and responsibilities of those personnel who are tasked with addressing climate change, and the strategic and operational similarities and differences across sectors.

Addressing climate change at higher education institutions. With thousands of campuses and millions of students as a part of their academic communities, U.S. higher education institutions represent a particularly important target for greenhouse gas reductions. In 2005, higher education institutions in the U.S. accounted for nearly 2% of the country's total emissions, or approximately 121 million MTCO₂E.¹ To address this issue a number of initiatives have been launched to motivate and help higher education institutions be more environmentally sustainable and reduce their carbon footprints. Some of these initiatives include the American College & University Presidents' Climate Commitment and the Association for the Advancement of Sustainability in Higher Education's Sustainability Tracking, Assessment & Rating System, which officially debuted in 2010.^{2,3} Higher education institutions are most certainly taking aggressive steps to reduce emissions, yet little is collectively known about the individuals and groups that are often leading an institution's response to climate.

Identifying the climate change officers, their backgrounds and current responsibilities, the challenges they face, and commonalities and differences among them. Due the knowledge gap that exists, a joint-effort, between the Association of Climate Change Officers (ACCO) and graduate students at Duke University's Nicholas School of the Environment, was undertaken to explore many of the unanswered questions about the climate change officer profession, specifically in higher education institutions. The Duke/ACCO team created and distributed a survey to higher education institutions in the fall of 2010, which resulted in data from 160 institutions in the U.S. and Canada, and later, supplemental interviews with 8 survey respondents.

This report includes several key findings:

1. Higher education institutions are restructuring to respond to climate change. Of the 160 participating institutions, 76% have undergone organizational restructuring related to climate change governance structures in the last three years. Additionally 51% of surveyed institutions have a climate action plan (CAP) in place and 35% currently have one in development.

2. Executives are actively involved in responding to climate change. Presidents and other college and university executives are either taking on the responsibility for overseeing their institution's climate initiatives or they work closely with other climate officers. In fact when a president is the institution's climate change officer, 96% of those institutions have a CAP in place or in development. An executive's involvement is not limited to strategy or administrative functions either. Over 50% of the presidents who are also climate officers are involved with integrating climate change into curriculum.

3. Stakeholders serve as both catalysts and barriers for climate response. Students, staff, and faculty can be drivers and active participants in an institution's climate strategies. Conversely, 95% of the climate change officers surveyed consider accommodating stakeholder needs to be a challenge to their work. Furthermore, 62% of respondents consider stakeholder relations to be an important part of their job.

4. Climate strategies are affected by the unique characteristics, challenges, and opportunities at each institution. It is difficult to find clear parallels among institutions that share common traits such as geographic location, campus size, or community setting. Although some trends exist, both anecdotal evidence and survey data indicate that institutions are affected by a multitude of factors, which thereby limits the commonalities that can be found between one another.

This report highlights that many higher education institutions are still in the early stages of addressing climate change, yet there are lessons that can be learned and potentially applied across institutions. Tremendous challenges stand in the way of climate officers and learning more about their peers may aid them in their work. The data and analysis provided in this report should serve as a starting point in uncovering a complex, and still evolving, profession of climate change officers.

Chapter 1: Introduction

1.1 Research Questions

1. How are higher education institutions structuring to respond to climate change?
2. What are the roles, responsibilities, and backgrounds of the persons responsible for climate change strategies?
3. Are there any commonalities and/or differences between campuses and the challenges they face?
4. Are climate change issues being integrated into existing and/or new curriculum?

1.2 Previous Research and Studies

Climate change is now widely recognized as a global problem that will likely have major impacts on the world's people and organizations. Higher education is no exception, and institutions are working to address this challenge; some are restructuring, others have added new programs or initiatives. More formally, more than 600 higher education institutions have signed on to the American College & University Presidents' Climate Commitment (ACPUCC). Additionally, there have been seven other international declarations related to sustainability in higher education: The Stockholm Declaration on the Human Environment, The Tbilisi Declaration, The Talloires Declaration, The Halifax Declaration, The Kyoto Declaration, The Swansea Declaration, and the Declaration of Thessaloniki.⁴

In a review of current literature, research was found on the potential effectiveness of commitments to formal climate declarations. Some research suggests that signing a formal declaration can serve as a symbol of a university's commitment to sustainability.⁵ However, other research suggests that many colleges and universities who have signed a sustainability declaration were not making any attempt to implement their commitment, which may be due to the non-binding nature of these pledges.^{6,7} Additionally, this non-binding nature may explain the finding that signing a national or international agreement is not a valid indicator of an institution's dedication to sustainability.⁸

Currently, there is limited information regarding higher education institutions and their organizational strategies to address climate change.⁹ Several studies have highlighted the current knowledge gap that exists regarding effective strategy implementation, and understanding of challenges and opportunities.¹⁰ The most often cited issue in the literature is the lack of information surrounding challenges faced by colleges and universities when attempting to implement sustainability or climate change policies.¹¹

Taking a closer look at this issue, eighteen main barriers to climate change policy implementation were identified. The three biggest challenges were lack of awareness, interest, and/or involvement of the university community, the organizational structure of the institution, and lack of funding and training, in that order.¹²

These findings are also supported by other studies which found that even though many universities are signing declarations, strong administrative leadership is necessary to make those signatures meaningful, and also concluded that sustainability strategies built from the bottom up are not as effective as those built from the top down, due to the organizational structure of colleges and universities¹³. Lastly, another study found that the most significant barriers to effective implementation of sustainability policy were lack of support from a senior administrative body, lack of centralized reporting, and lack of resources, both in terms of people and money.¹⁴

Given that climate change is a rather new topic of concern, and that higher education institutions are inherently unique organizations with unique structures and challenges, there is a lack of understanding of general trends or best practices among universities working on these issues. The identification of lessons learned and trends among universities could potentially lead to identification of best practices or guidelines. Additionally, there is a lack of information regarding the people who have recently been hired to specialize in climate change within these institutions, as well as their training and roles. By conducting a comprehensive online survey, along with interviews of individual institutions, this research project seeks to fill in this knowledge gap with the hopes of advancing this developing field and profession.

Chapter 2: Methodology

2.1 Survey Design and Distribution

Beginning in fall, 2010, a web-based survey was created in partnership with ACCO, and feedback on it was solicited from experts in climate change and sustainability at Duke University¹⁵. The Duke Statistics Department was also consulted regarding constructing questions that would produce meaningful data. The survey was conducted from October 2010 through December 2010, and was distributed via email and direct mailings to approximately 950 four-year universities and two-year colleges in the United States and Canada. Prior to distribution, an email was sent out to gauge interest and identify the appropriate contact at each institution, from which 200 responses from interested participants were received.

By mid-December, 160 responses were received, including 153 four-year universities in the U.S., two U.S. community colleges, and five Canadian universities. Three institutions entered the survey multiple times. After sending emails to verify with the point of contact which response was the correct one, multiple entries were removed and each institution was left with one final response.

Besides questions regarding institution identification, point of contact, and basic governance structure, all the other questions in this survey were not mandatory. Institutions had the option to skip any question at any time, and skipping did not prevent them from proceeding to the next question. For this reason, each question may have a different total number of responses.

To characterize the basic governance structure of each institution, the following question was asked at the beginning of the survey:

Who directly oversees your institution's response to climate change and is accountable for addressing the economic, operational and environmental implications of climate change, potentially including directing strategies and/or overseeing budgetary considerations?

- a. The President or chief executive;
- b. A single individual;
- c. A committee, panel or task force;
- d. Multiple people;
- e. Other type of organizational structure;
- f. No person or persons accountable

Based on the response to this question, the questions presented to each participant varied in order to customize the survey and receive relevant responses. Once responses were received, the data were compiled and analyzed using Excel, STATA statistical tools, and NVivo, a qualitative data analysis tool.

2.2 Categorizing Institutions

To further understand the demographics of our respondents, and more accurately categorize institutions, the Carnegie Classification of Institutions of Higher Education downloaded from the Carnegie Foundation website was used to assign demographic data.¹⁶ The Carnegie Foundation for the Advancement of Teaching is an independent policy and research center that produces this database.

The most recent classification database was published in 2005. These classifications provide different lenses through which to view U.S. colleges and universities, offering researchers greater analytic flexibility; collectively, they depict the most current landscape of U.S. colleges and universities. The institutions that responded to the survey were selected and merged with this demographic data into our spreadsheet. In several cases, the level of demographic specificity provided by Carnegie Classification system was prohibitive for analyzing a sample of only 160 institutions. Therefore many several categories were condensed for simplification purposes. For instance, the classification “Rural Town” that is used in this analysis consists of three Carnegie classifications: “Rural: Fringe,” “Rural: Distant,” and “Rural: Remote” (see Glossary for specific definitions). Also, due to having so few responses from community colleges and Canadian institutions, some analysis was done separately.

Four different demographic categories were selected as the primary methods of comparison among institutions, these include: 1) whether an institution is public or private, 2) the community setting surrounding a campus, 3) whether or not the majority of students reside in campus housing, and 4) the size of the student population. Geographical location was also considered in some cases; however, it was not a primary category for comparison. Tables 1 through 5 represent the demographic distribution of institutions that responded to the survey. Figure 1 represents the geographic locations of the responding institutions in the U.S. and Canada.

Table 1: Public and Private Institutions Surveyed

	Responses	%
Public	95	59.36%
Private	65	40.63%
Total	160	

Table 2: Urban Settings for the Institutions Surveyed

Urban Settings	Responses	%
Large city	47	29.38%
Mid-size city	45	28.13%
Urban fringe	35	21.88%
Town	33	20.63%
Total	160	

Table 3: Presence of Residential Facilities at the Institutions Surveyed

	Responses	%
Residential	55	34.38%
Non-residential	105	65.63%
Total	160	

Table 4: Enrollment Size for the Institutions Surveyed

Size	Responses	%
Small 4 years, 2 years, and medical schools	35	21.88%
Medium 4 years	47	29.38%
Large 4 years	78	48.75%
Total	160	

Table 5: Geographic breakdown of survey respondents (total = 160)

#	Geographic Region	States	Responses	%
1	New England	CT ME MA NH RI VT	10	6.25%
2	Great Lakes	IL IN MI OH WI	23	14.38%
3	Southeast	AL AR FL GA KY LA MS NC SC TN VA WV	40	25.00%
4	Rocky Mountains	CO ID MT UT WY	6	3.75%
5	Mid East	DE DC MD NJ NY PA	29	18.13%
6	Plains	IA KS MN MO NE ND SD	12	7.50%
7	Southwest	AZ NM OK TX	8	5.00%
8	Far West	AK CA HI NV OR WA	27	16.88%
9	Canadian		5	3.13%
Total			160	

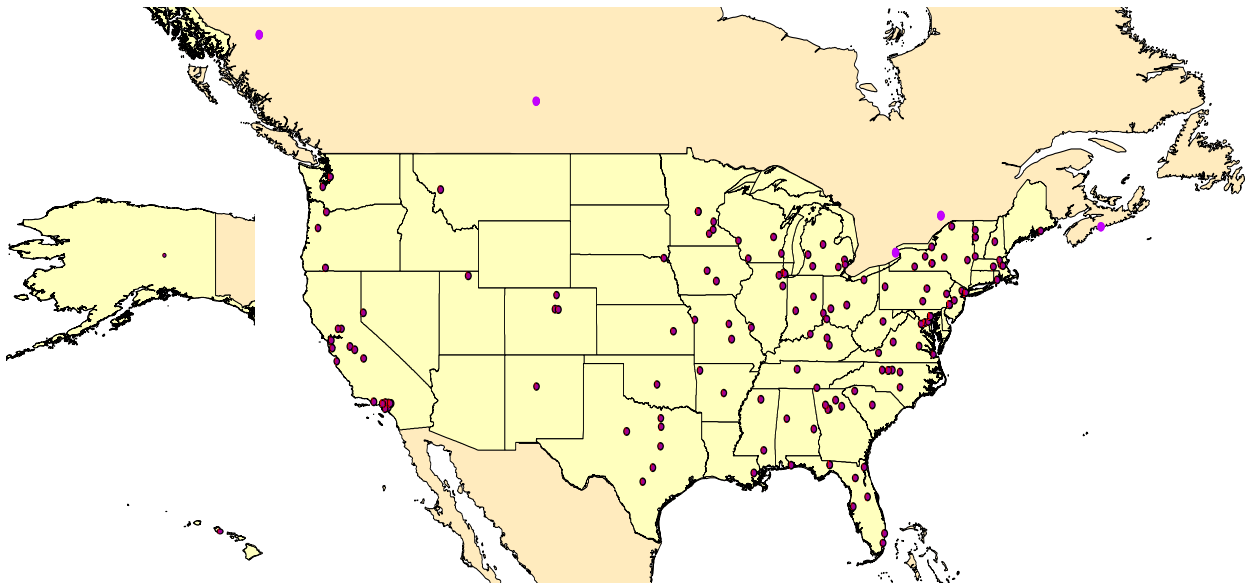


Figure 1: Map of responding institutions

2.3 Respondent Interviews

As part of the survey, respondents were asked if they would be willing to participate in a case study. Approximately half of the institutions responded positively to this question. Out of the 160 responses, eight institutions were chosen primarily based upon survey responses that indicated novel and/or successful organizational structures and initiatives for addressing climate change. Demographics, such as geographic location and student body size, were also considered in order to have a balanced representation of institutions. For each institution, a 45-minute to one-hour interview was conducted with the individual who was listed as the point of contact on the survey.

Below are the eight institutions that were selected for interviews:

- Berea College
- Duke University
- The Evergreen State College
- Middlebury College
- Stanford University
- Tulane University
- University of Northern British Columbia
- University of Washington – Seattle Campus

2.4 Note About Data Sampling and Analysis

With the relatively small sample size of 160, as well as a non-random sampling method, the data listed in this report are not assumed to be representative of the larger population of higher education institutions in the U.S. and Canada. This survey was completely voluntary, and the institutions that responded to it were self-selected into response. In other words, our sample was not selected at random. Responding institutions were clearly more aware of environmental issues, especially climate change. This group of institutions is more likely to recognize the importance of campus climate change governance issues compared with institutions that are not aware. Therefore, from the very beginning our respondents are self-selected to take action and fill out the survey. The strong evidence of self-selection is from the "affiliation" question.

There are 124 institutions out of 160 responses are affiliated with AASHE. These results may have the following implications: because the institutions were not selected at random, this data is skewed toward more environmentally aware institutions, and therefore cannot represent the true population, which are all higher education institutions in the U.S and Canada. Secondly, because institutions recognized the fact that this survey was sponsored by the Association of Climate Change Officers (ACCO), which is an organization that is proactive in climate change policy, they might have written responses that they thought were expected in this context.

Additionally, there was a general lack of statistically significant trends ($p\text{-value} < 0.05$). Therefore, all of the numerical observations described in this analysis can only be applied to the sample population of responding institutions. However, given anecdotal evidence from interviews with responding institutions, as well as the survey data, this report includes some general themes the project team believes are applicable on a broader scale.

A p-value is determined by running the Pearson Chi square test in STATA statistical software. Questions with categorical answers are compared to see if the difference among groups is random. If a p-value is less than 0.05, then the difference is not random, and is therefore significant. Note that the multiple choice questions with multiple answers are not used in statistical analysis, and therefore no p-value is generated for them. In addition, small sub-groups are not tested, either.

Chapter 3: Results

3.1 Trends in Higher Education Institutions:

3.1.1 Who is Accountable?

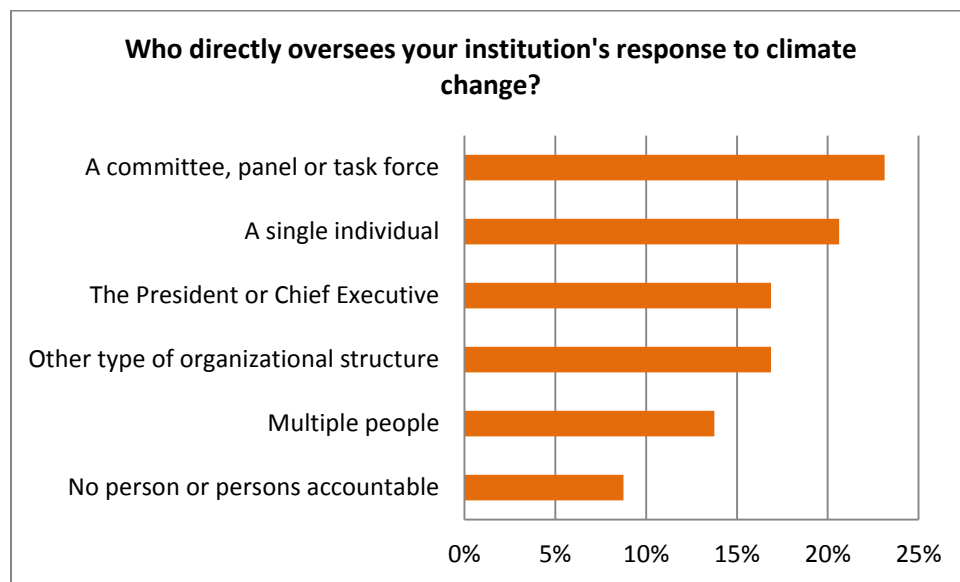


Figure 2: Governance structures among responding institutions

As previously mentioned, one of the critical questions of the survey was, “Who directly oversees your institution's response to climate change and is accountable for addressing the economic, operational and environmental implications of climate change, potentially including directing strategies and/or overseeing budgetary considerations?” The distinction of which person(s) are in the role of climate change officers plays a critical role in this report.

“A committee, panel or task force” was the most common response at 23%, and having “no person or persons accountable” was the least common at 9% (Figure 2). Looking across primary demographic categories, several distinctions can be made:

- *Public/Private:* compared to private institutions, having a president or a committee as the “accountable” entity is more common at a public institution. At private institutions, an individual (who is not the president) is the most common response (Figure 4).

- *Campus Locale*: a president is more common in a rural town, an individual is more common in an urban fringe area, multiple people is a more common response in a mid-size city, and a committee is more common in a large city (Figure 5).
- *Campus Size*: a president is more likely to be “accountable” at a small campus, a committee is more likely at a large campus, and multiple people is the most prevalent response at medium-sized campuses (Figure 6).
- *Residential/Non-Residential*: Having an individual as the “accountable” person or entity is more common at residential institutions (Figure 7).

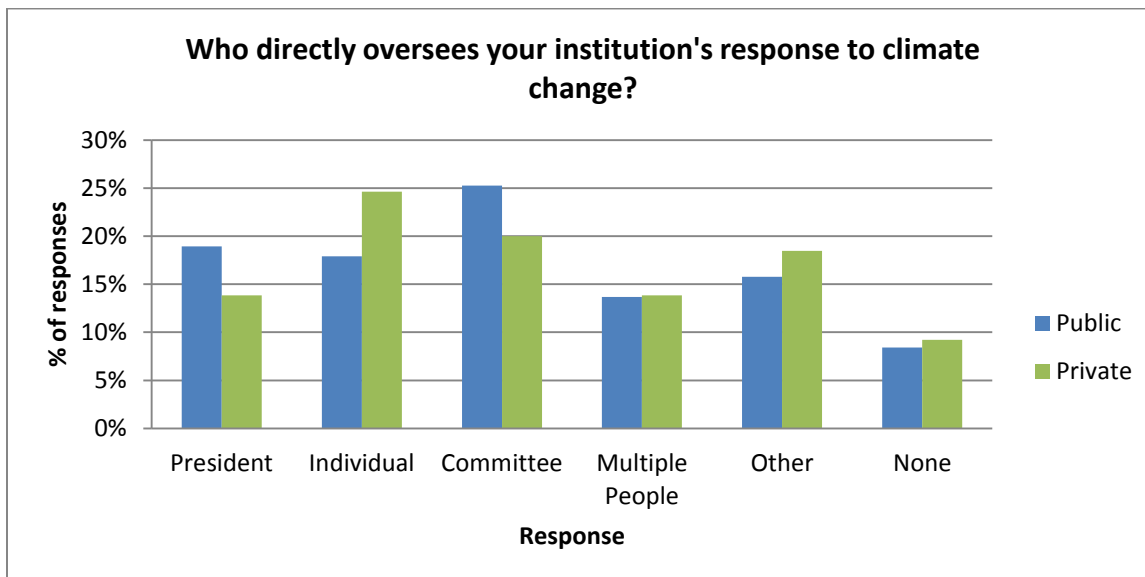


Figure 3: Governance structures compared between public and private institutions. p-value = 0.836.

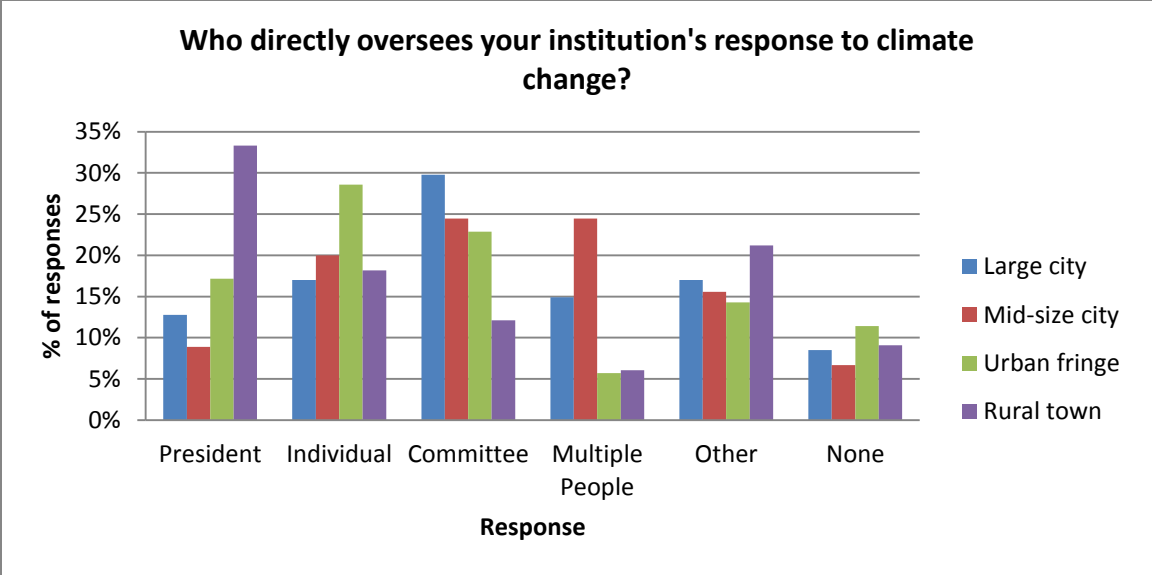


Figure 4: Governance structures compared across different campus locales. p-value = 0.191.

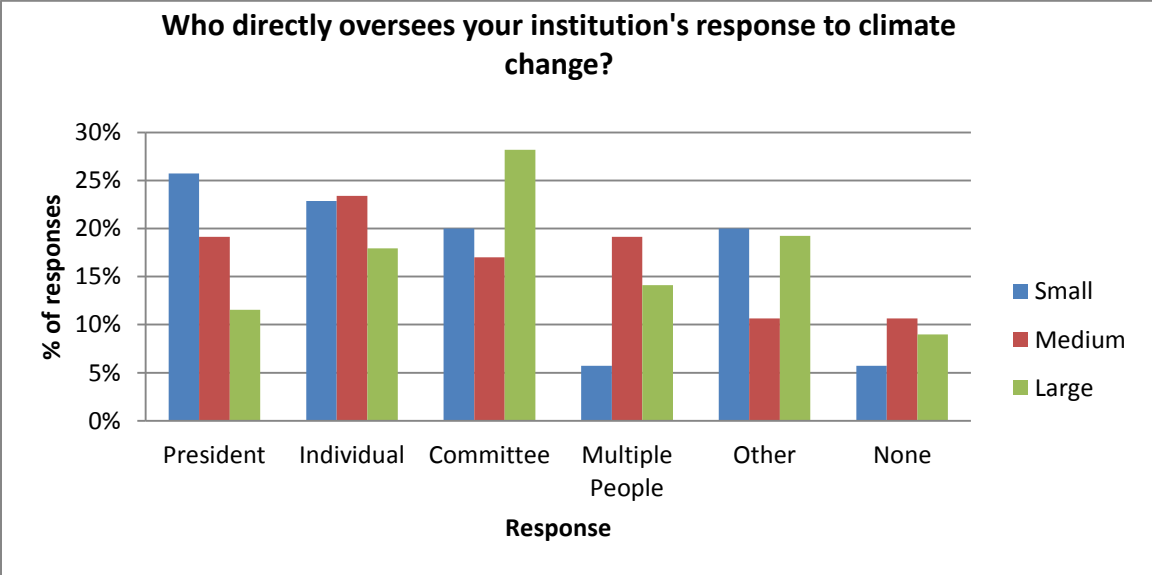


Figure 5: Governance structures compared across campuses of different sizes. p-value = 0.428.

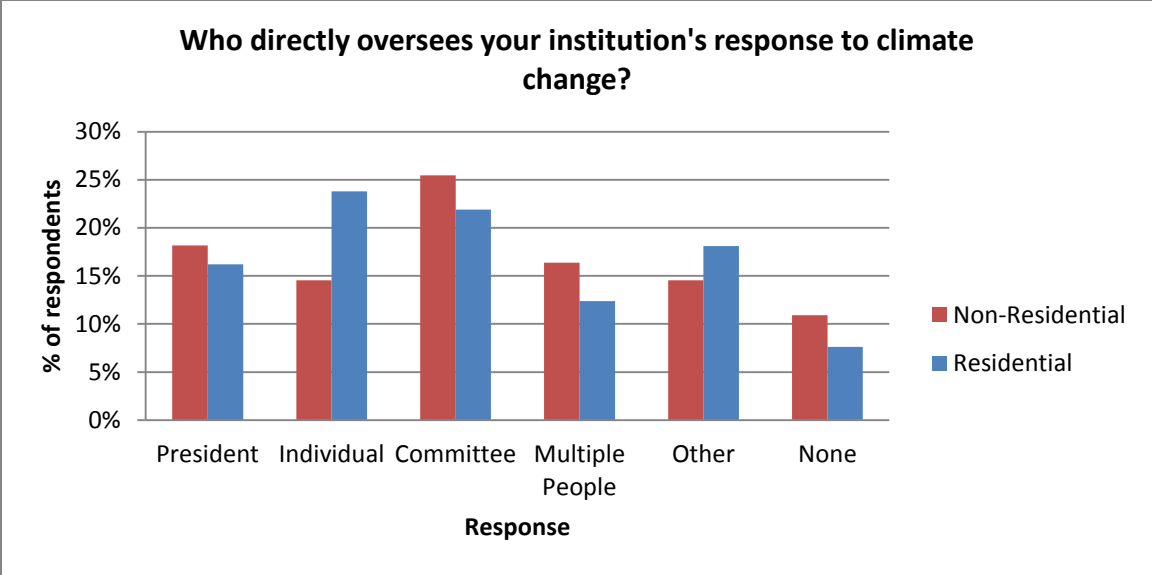


Figure 6: Governance structures compared between residential and non-residential institutions. p-value = 0.713.

3.1.2 Organizational Changes

Of the 160 surveyed institutions, 76% have undergone organizational restructuring related to climate change governance in the past three years. Organizational restructuring can include the creation of a new department or position, or consolidation of existing departments. The University of Wisconsin-Oshkosh and the California Institute of Technology provide examples of organizational changes.

Approved Campus Sustainability Plan in 2008, establishing a full-time Director of Sustainability and a Campus Sustainability Council. The Director reports to the Vice-Chancellor for Administrative Services and the Provost/Vice-Chancellor for Academic Affairs.

– Michael Lizotte, Director of Sustainability, University of Wisconsin-Oshkosh

Creation of the Office of Sustainability and 3 full-time positions to manage energy and climate related issues (Manager for Sustainability Programs, Energy Manager, and Energy Services Administrator).

- John Onderdonk, Manager for Sustainability Programs at California Institute of Technology

Regarding climate governance structures, the highest percentage (93%) of respondents whose institution had undergone organizational change are those in which the president or chief executive is accountable for climate response, such as the example above from the University of Wisconsin-Oshkosh. Conversely, 86% of those institutions that have no person(s) accountable for climate response have not had a recent organizational change (Table 6Table 6).

Table 6: Organizational changes between institutions with different governance structures

Governance Structure	No Change	Org Change
1. The President or Chief Executive	7.41%	92.59%
2. A single individual	30.30%	69.70%
3. A committee, panel or task	18.92%	81.08%
4. Multiple people	22.73%	77.27%
5. Other type of organizational structure	11.11%	88.89%
6. There is currently no person or persons accountable	85.71%	14.29%

There is little difference when comparing institutions that have undergone organizational change across different demographics. For example, institutions that are private, located in rural areas, or have a small campus size each have at least an 80% association with having an organizational change, and those institutions that are public, have larger enrollments, or are located in larger population centers have about a 70% to 80% association with an organizational change (Figure 8 and Figure 9). Geography is one exception, however. Although the numbers are small, and therefore difficult to draw any conclusions from, it is worth noting that four of six Rocky Mountain institutions and four of eight Southwest institutions have not had an organizational change. This is a striking contrast to New England, where all ten surveyed institutions have undergone an organizational change (Figure 10).

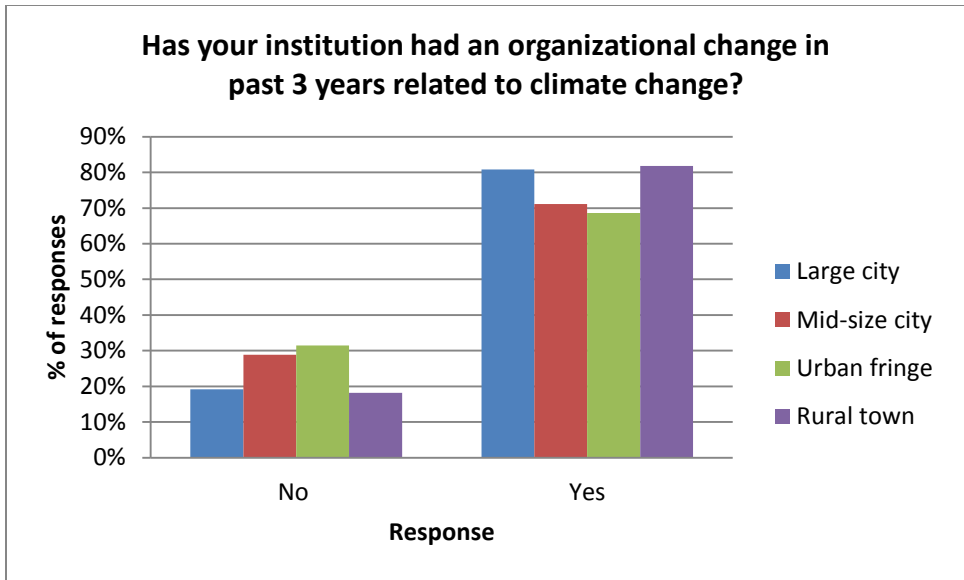


Figure 7: Organizational change compared across different campus locales. p-value = 0.419.

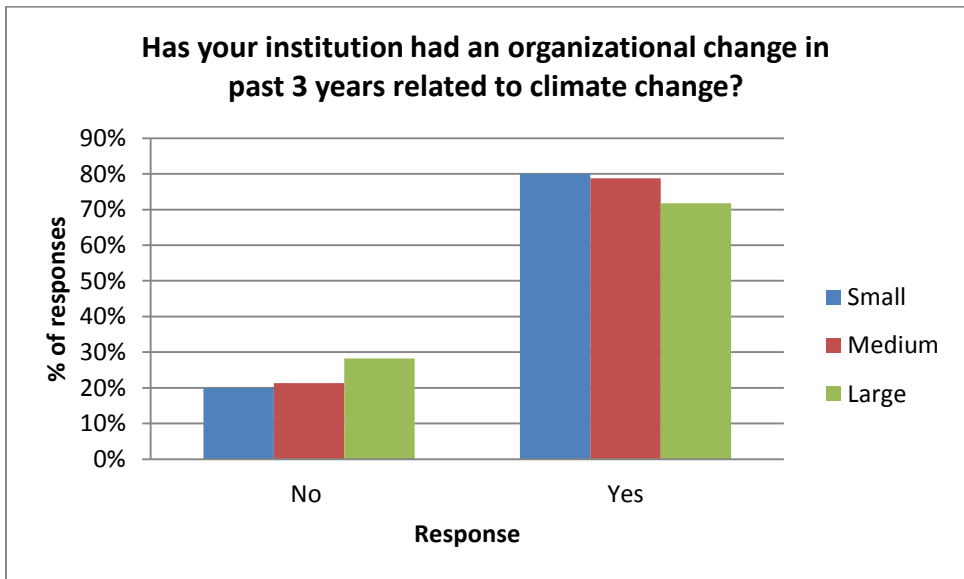


Figure 8: Organizational change compared across campus of different sizes. p-value = 0.541.

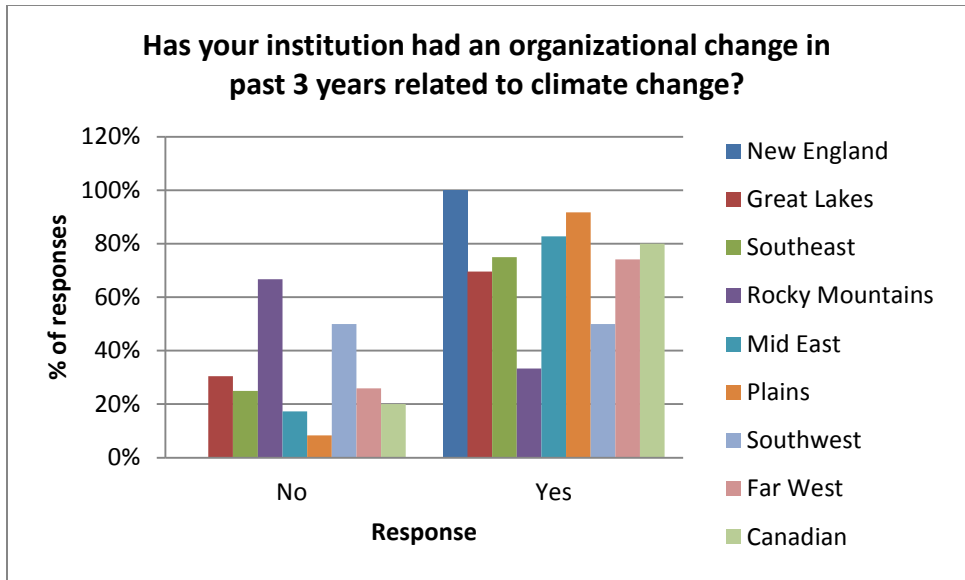


Figure 9: : Organizational change compared across different geographic regions. p-value = 0.062.

Among the institutions which have undergone an organizational change, the most frequent type of change is the creation of a new sustainability position in a sustainability office or its equivalent. These range from one to three positions, and include part-time and student internships. Furthermore, it is clear from the survey that the driving force behind some organizational changes came from a higher organizational level. More than 18 institutions stated that they signed the ACUPCC (American College and University Presidents' Climate Commitment), and that the resulting need to document and report greenhouse gas emissions was the key driver for the creation of new positions. The following survey responses highlight the effects of the ACUPCC:

The Office of Sustainability was created in August 2007. The Executive Steering Committee for Sustainability was established. Until 2007, there was no structure in place to support the President's commitment to the ACUPCC. In addition, the Strategic Plan 2014 includes metrics supporting emissions reduction. This is Mason's first step toward institutionalizing our commitment to emissions reduction.

- Lenna Storm, University Sustainability Manager, George Mason University

Since our President signed the ACUPCC in 2008, we have: incorporated sustainability into our university's strategic plan; convened a sustainability steering committee to oversee our transition to becoming a "greener" university; ... most recently, launched the world's first School of Global Sustainability.

-Christian Wells, Director, Office of Sustainability, University of South Florida

However, certainly not all changes are driven by being signatories of the ACUPCC. Among non-signatories, 60% still had an organizational change in the last three years (Figure 10).

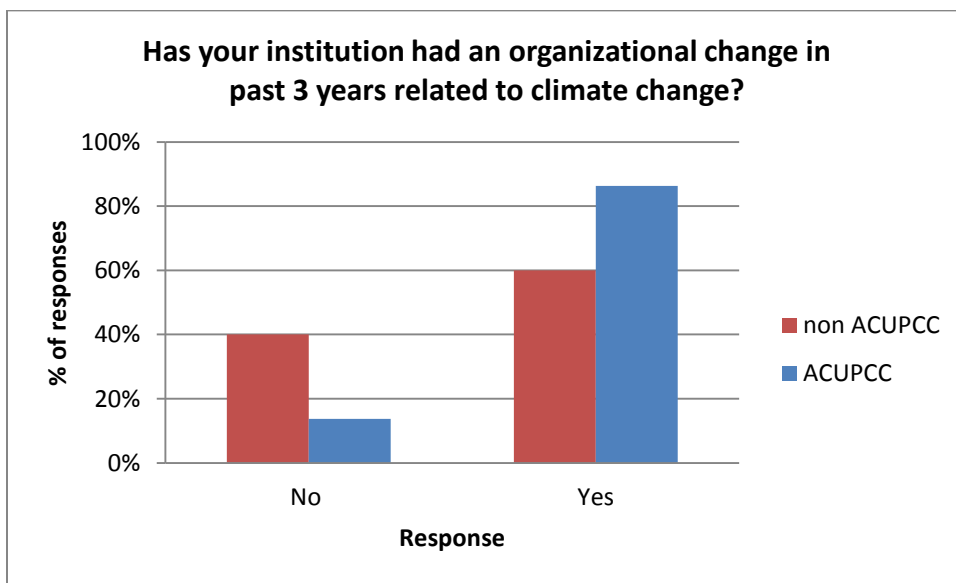


Figure 10: : Organizational change compared between signatories and non-signatories to the ACUPCC. p-value = 0.0.

3.1.3 Climate Action Plans

Of the surveyed institutions, 51% indicated they have a climate action plan (CAP), and 35% indicated they have one in development, which illustrates one of the clear differences found when looking across organizational structures. When a president is accountable for climate change response, 96% have a CAP in place (59%) or in development (37%). When a committee, panel, or task force is accountable for climate change response, 68% of campuses have a CAP, which is the highest percentage for any organizational structure evaluated. When no one is accountable for climate change response, only 28% of campuses have a CAP in place or in development (Table 7).

Table 7: Climate Action Plan development among institutions of different governance structures

Governance Structure	No Plan	Have Plan	In Development
1. The President or Chief Executive	4%	59%	37%
2. A single individual	15%	42%	42%
3. A committee, panel or task	5%	68%	27%
4. Multiple people	14%	36%	50%
5. Other type of organizational structure	4%	59%	37%
6. There is currently no one accountable	71%	21%	7%

The survey also indicates a correlation between CAPs and organizational changes. In particular, when an institution does not have a CAP, only a little over 5% of them have had an organizational change in the last three years (Figure 11).

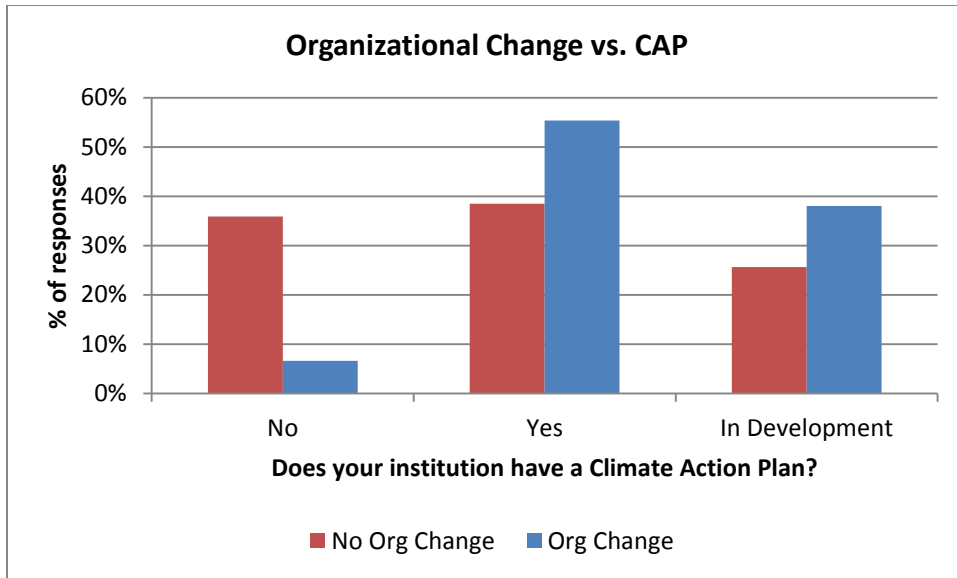


Figure 11: : Comparison between status of CAP and having undergone organizational change. p-value = 0.0.

Looking across the primary demographic categories, those institutions that are either public, medium-size, or non-residential have almost double the frequency of the “no CAP” response (Figure 12, Figure 13, and Figure 14. Part of this result may be attributable to some institutions that are both public and medium-sized. Fifteen of the institutions surveyed without a CAP are public or medium-sized institutions, of which five fall into both categories. Therefore these five institutions account for a large proportion of the observed differences.

From a geographical perspective, almost 70% of the institutions in the Rocky Mountains and Far West Region have a CAP in place. New England follows a similar trend, while other regions have more of a balance between the presence of an existing plan and having one in development. (Figure 15).

For development and implementation of a CAP, committees are frequently tasked with the responsibility, and survey responses indicate that the number of people involved ranges from 15 to 150. For example, at Middlebury College the CAP was developed by a cross-functional committee:

A sixteen member climate action plan committee was appointed to develop the plan co-chaired by the Director of Sustainability Integration and Director of Human Resources. The other members included: Budget Director, Assistant Director Public Affairs,

Assistant Director of Facilities, Professor of Physics, Commons Dean, Waste Services and General Services Supervisor, Director Dining Services, Asst. Treasurer and Director Business Services, Director of Principal Gifts, Head Coach Men and Women's Nordic Skiing, Associate Vice President for Facilities, Dean of Environmental Affairs, and three students.

- Jack Byrne, Director Sustainability Integration Office, Middlebury College

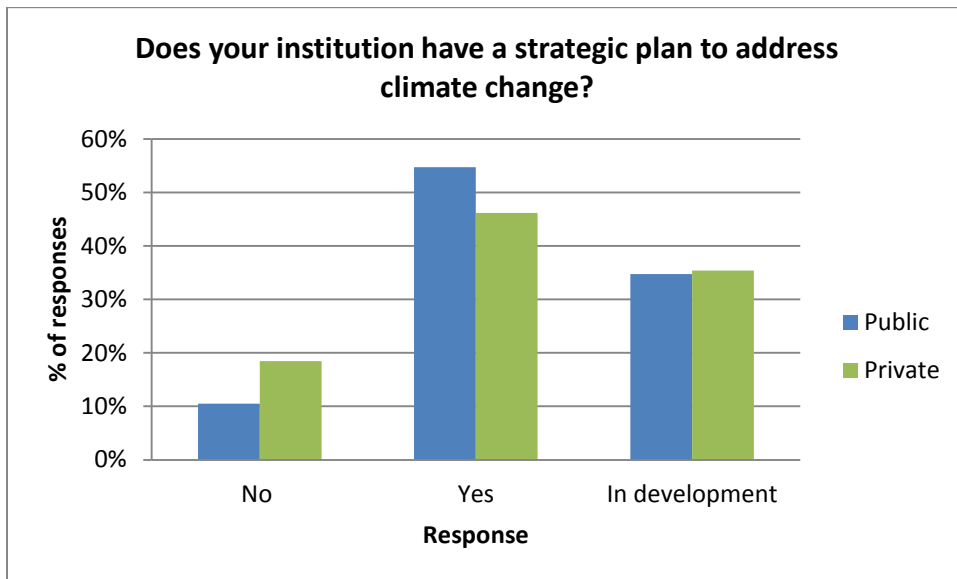


Figure 12: Status of CAP compared between public and private institutions. p-value = 0.312.

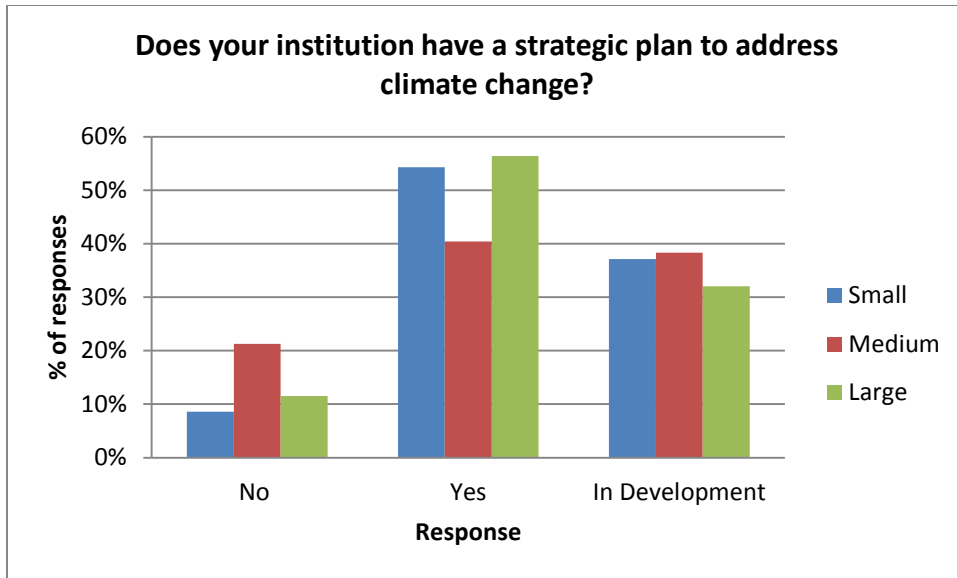


Figure 13: Status of CAP compared across campuses of different sizes. p-value = 0.306.

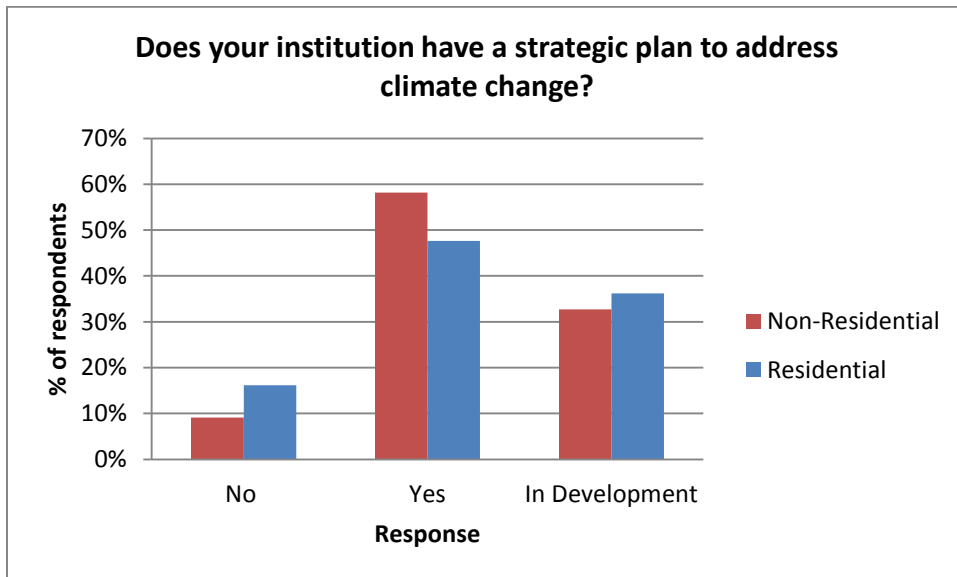


Figure 14: Status of CAP compared between residential and non-residential institutions. p-value = 0.327.

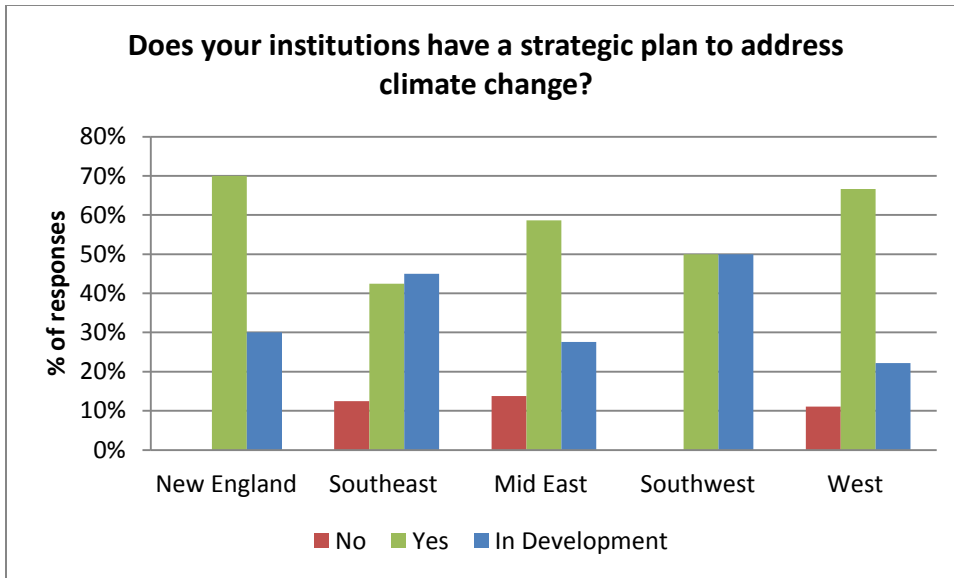


Figure 15: Status of CAP compared across different geographic regions. p-value = 0.139.

3.1.4 Organizational Structures

Climate officers are most likely to be found in an executive office, and this is particularly true with small campuses and rural campus locations. Survey results indicate that 56% of small campuses and 50% of rural campuses have the climate officer(s) in an executive office (Figure 16 and Figure 21). This is largely attributable to the high proportion of presidents being the designated climate officer in these institutions; 26% of small campuses and 33% of rural campuses have presidents serving this role.

Overall, the least common response chosen from the standard options for where the climate change officer(s) is located was Environmental Affairs. Therefore it appears that most institutions are not directing climate change activities from a traditional Environmental Health & Safety or environmental affairs group. “Administration” was a common response in the open-ended “Other” option on the survey, but in total it amounted to a small percentage of responses.

Below is a more detailed breakdown of personnel locations and who oversees the work of climate officers, arranged by primary categories:

- *Campus Size:* Smaller institutions have an executive office as the department or division of the climate officer(s), and the board of trustees is often involved with oversight. Relative to small institutions, medium-size ones have a higher proportion of climate officers in sustainability, facilities management, and environmental affairs groups. Also, state level government, staff, and faculty play a role in oversight, but students do not. Large institutions continue the trend of increasing size correlating with an increasing prevalence of climate officers being housed in sustainability and facilities management. However, within these large institutions vice presidents and other executives, university systems, and students have comparatively more involvement in oversight (Figure 16, Figure 17 and Figure 18).

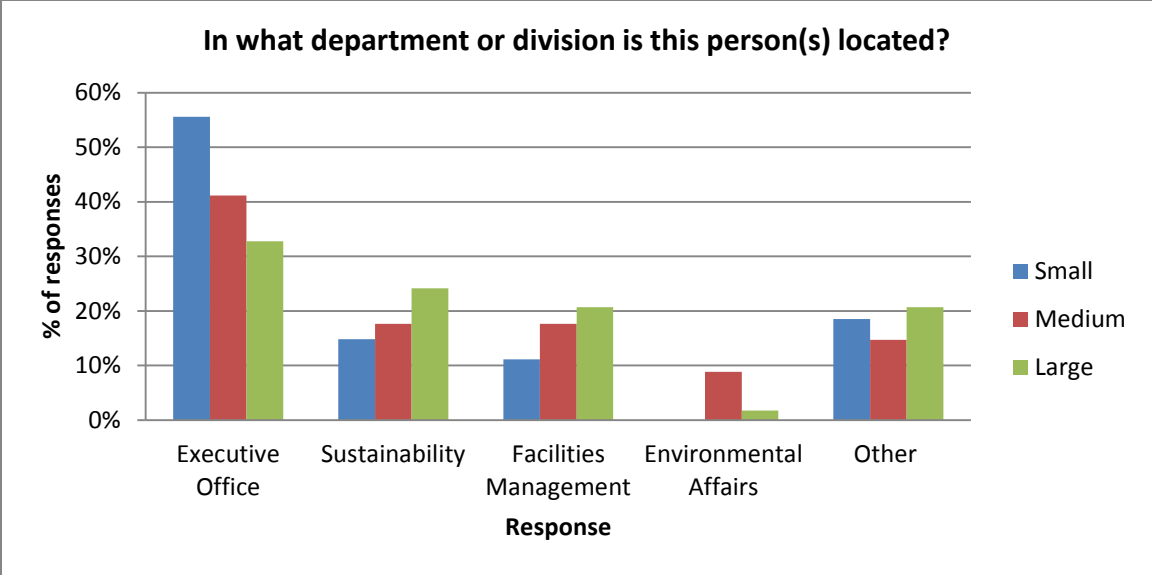


Figure 16: Location of climate officers, compared across campuses of different sizes.



Figure 17: Reporting structure compared across campuses of different sizes.

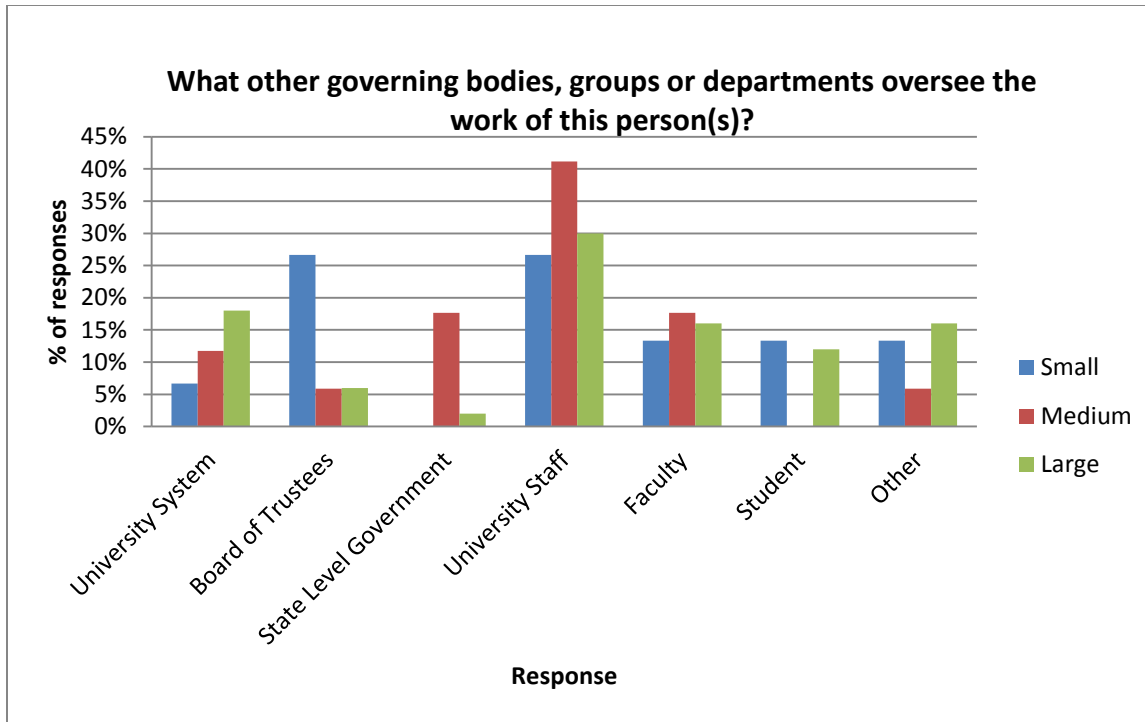


Figure 18: Supervision of climate officers, compared across campuses of different sizes.

- Public/Private:* Although there is little difference in who the climate change officers are at public and private institutions, who oversees them does vary slightly. Public institutions more frequently have the president, vice president, or other executive-level persons as direct superiors for the climate officers (Figure 19). University systems and state level governments also play a much larger role with oversight, as would be expected with publicly chartered institutions. Private institutions have a greater involvement of a board of trustees (Figure 20).



Figure 19: Reporting structures compared between public and private institutions.

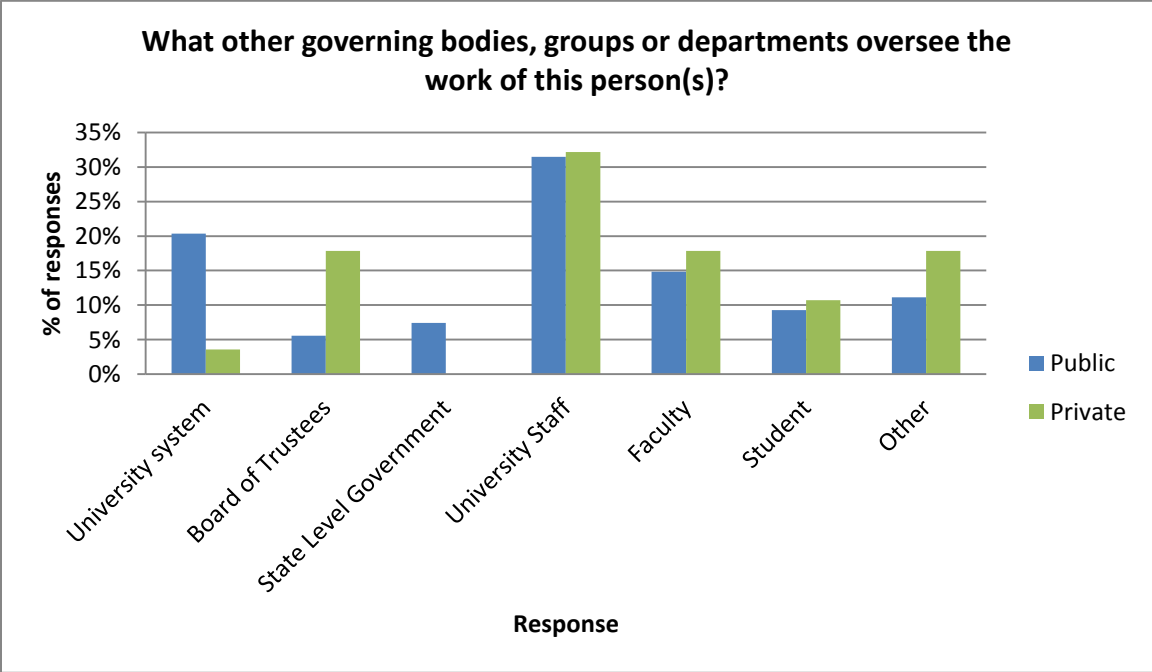


Figure 20: Supervision of climate officers compared between public and private institutions.

- Campus Locale:* When moving from large to small population centers, the executive office increasingly houses the climate change officers. Relative to other locales, rural towns lead in the prevalence of sustainability departments or divisions housing climate officers (Figure 21). Institutions in urban fringe areas tend not to have university systems and state level

governments overseeing their work (Figure 23). In large cities, executives appear to have a much smaller role as either climate officers or overseeing the work of climate officers (Figure 21, Figure 22 and Figure 23). Lastly, mid-size cities appear to deviate from other locales in many ways. Relative to other locales, institutions in mid-size cities are more likely to house climate officers in facilities management or environmental affairs, while being the least likely to house them in sustainability divisions or departments (Figure 21). Additionally, it is more common for climate officers to report to presidents and other executives in mid-size cities, while boards of trustees have little oversight (Figure 22 and Figure 23).

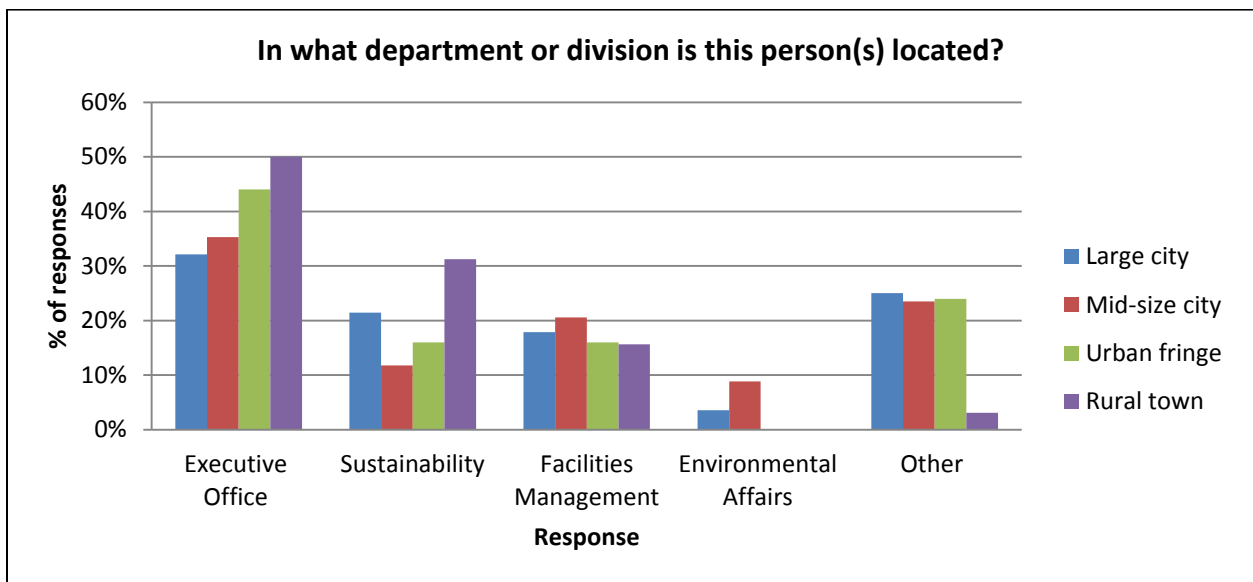


Figure 21: Location of position between different campus locales

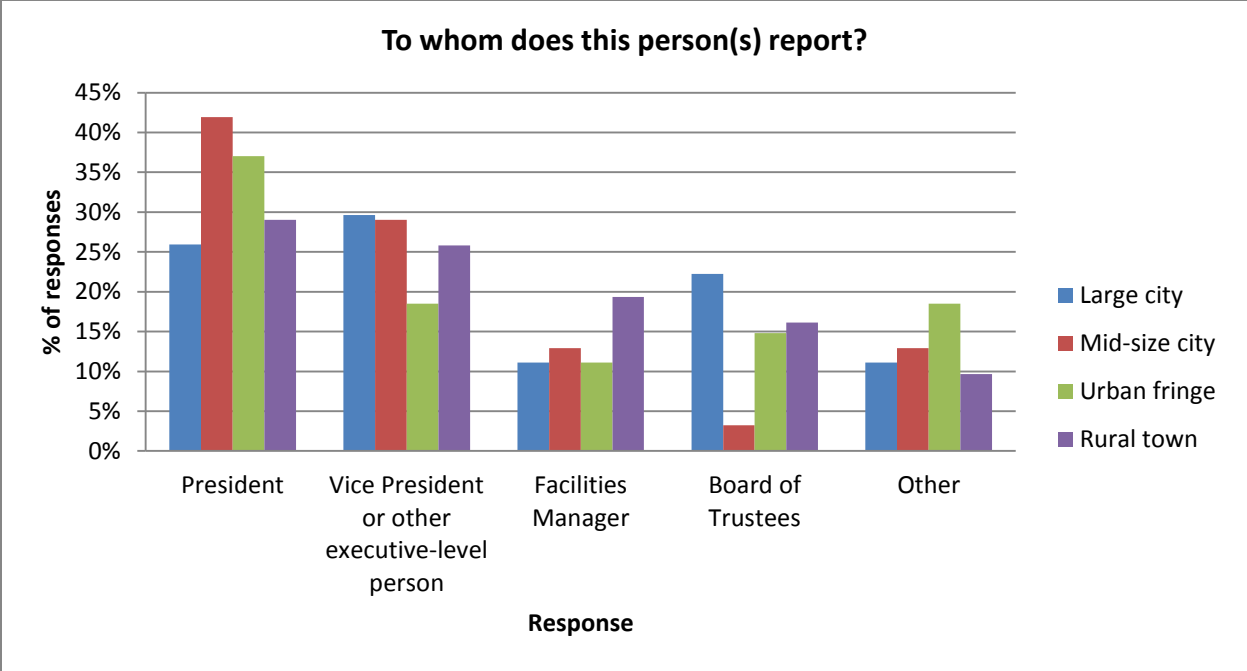


Figure 22: Reporting structure between different campus locales

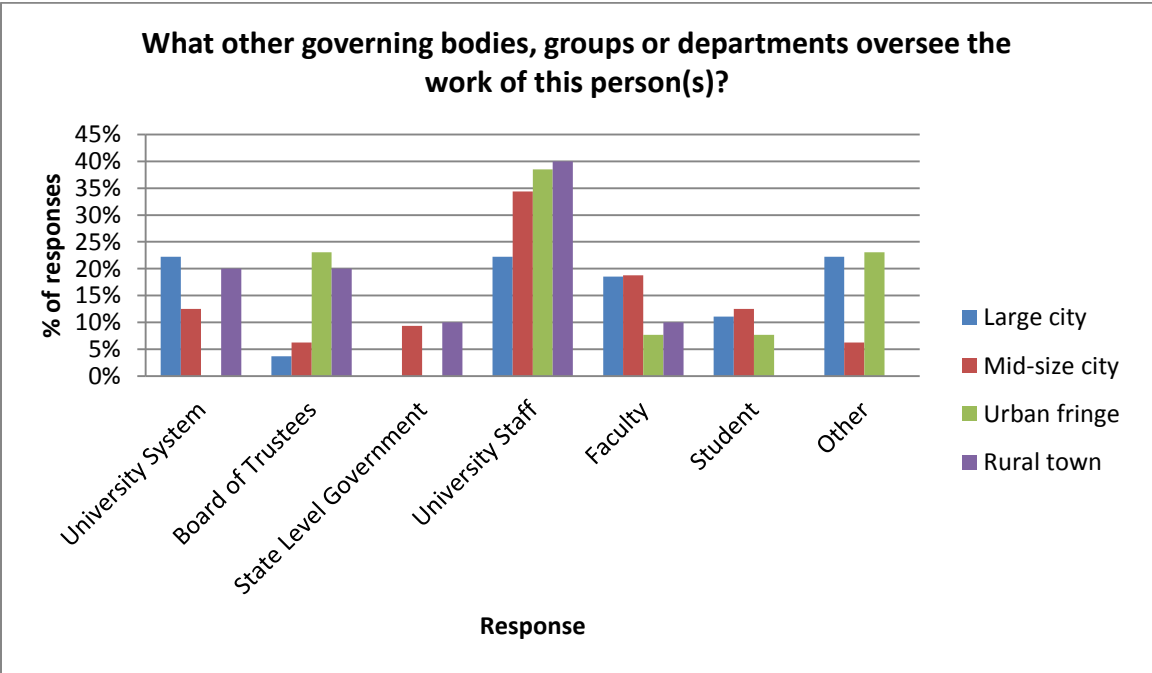


Figure 23: Additional governing structures between different campus locales

- *Residential/Non-Residential:* The major distinction observed is that university systems have more oversight at non-residential institutions, while boards of trustees are more involved at residential institutions (Figure 24).

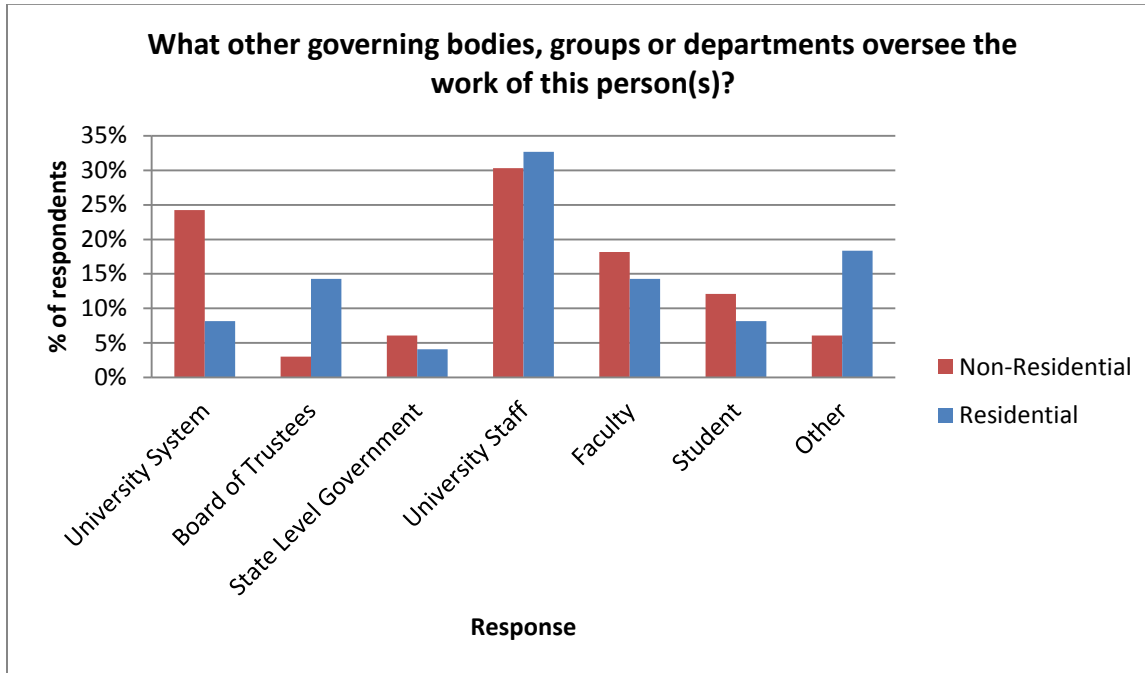


Figure 24: Additional governing structures between residential and non-residential institutions

3.1.5 Length of Position

At 38% of responding institutions, the position of climate change officer has been in existence for at least five years. 32% of climate officers are in positions that have only existed for one to three years. Additionally, only 8% have been in existence for less than one year. In the case of small institutions, the “greater than five years” answer was chosen most frequently, but looking closer it can be seen why this is the case (Figure 25). At small institutions, presidents are often responsible for climate response, and their positions have almost all existed for a very long time (Figure 5). In contrast, when looking at committees that are accountable for responding to climate change, the vast majority of them have been in existence for one to three years. (Figure 26). This dichotomy is well captured through one institution’s response:

The President, Provost, VP of Finance and AVP for Facilities have existed for the life of the institution. The Environmental Sustainability Manager position has existed for 2 years.

– Kurt Hoffmann, Environmental Sustainability Manager, University of Dayton

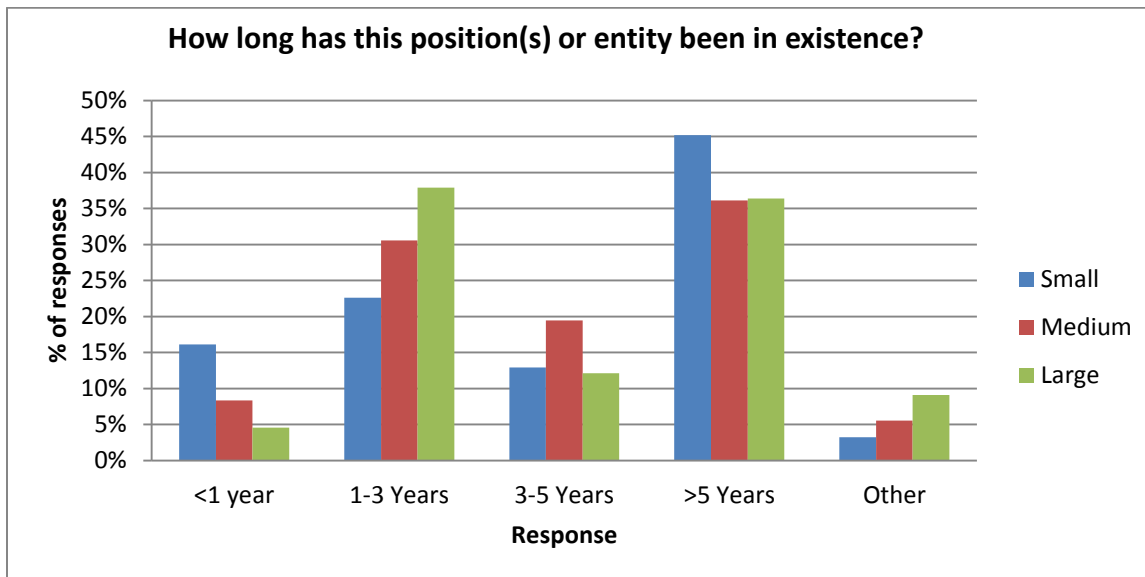


Figure 25: Length position has been in existence between different campus sizes, p-value = 0.517.

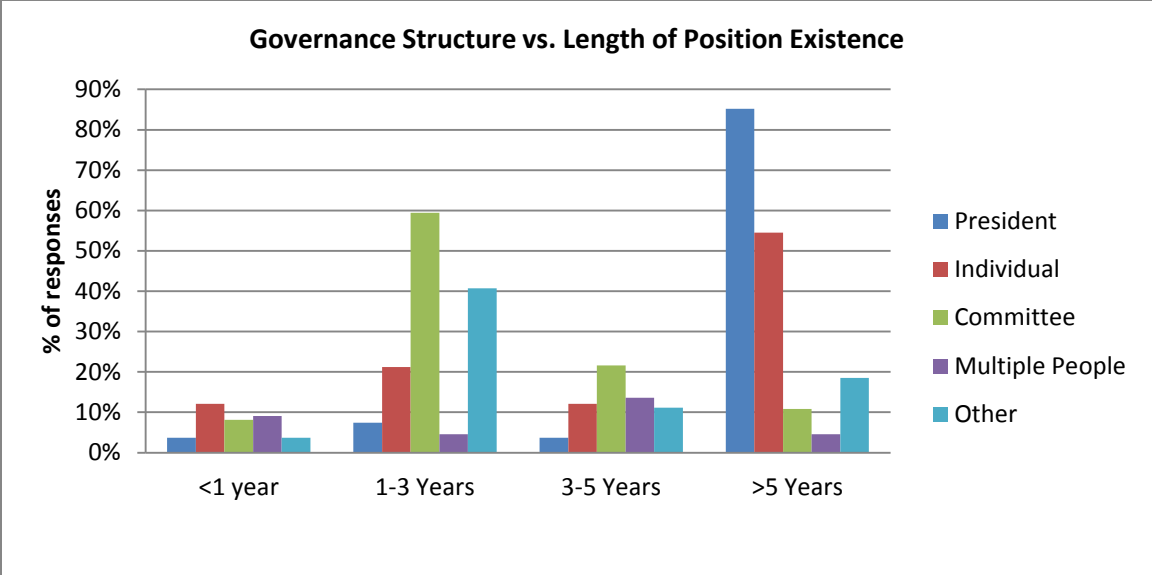


Figure 26: Length position has been in existence between institutions with different governance types, p-value = 0.0.

3.1.6 Professional Experience

The survey indicates that respondents who are involved with addressing climate change have a variety of professional experiences; however, there is an overall trend in these positions towards business, not environmental activities. In terms of previous work experience, university administration was the most common answer at over 40%, with business administration and facilities management at over 25% and over 20%, respectively. Sustainability experience was the second most common answer, at over 25%, but was the only environmentally-related topic in the top five choices selected (Figure 27). Operations and administration backgrounds likely dominate because executive-level people are often the ones accountable for climate response. Additionally, in some cases sustainability staff members started in different positions within their institutions, and either moved or expanded their responsibilities to formally include environmental sustainability. The majority (64%) of climate officers who did in fact have prior professional experience in sustainability did not start within the institution and were outside hires (Figure 28).

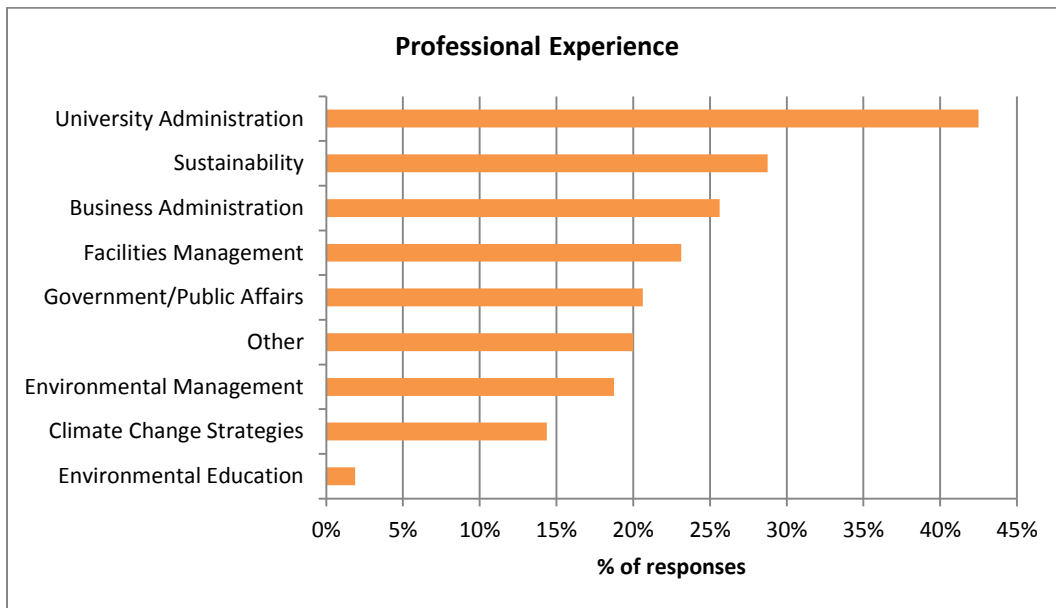


Figure 27: Professional experience among responding institutions

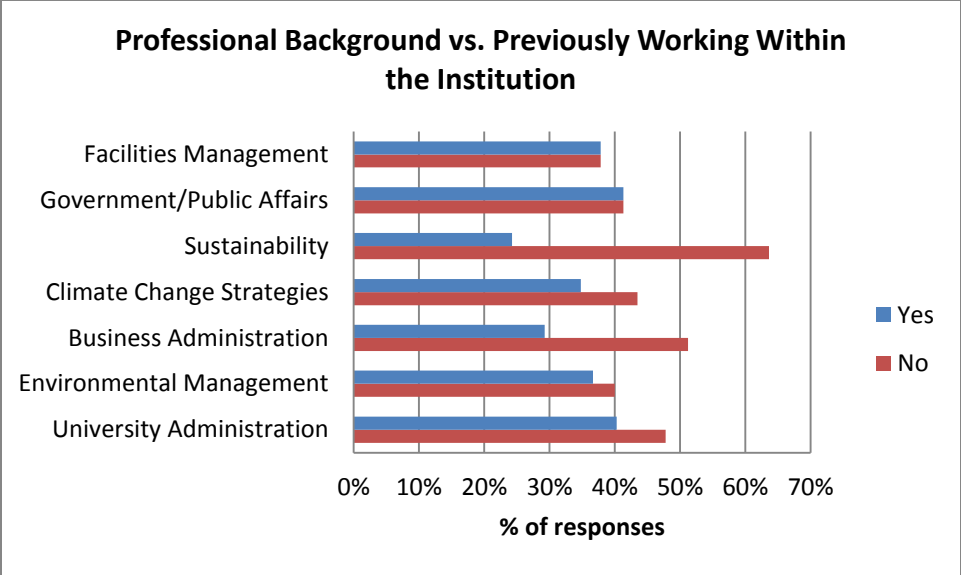


Figure 28: Professional background compared with whether or not previously employed with institution, p-value = 0.039.

3.1.7 Job Responsibilities

Respondents were asked to provide their job responsibilities, first by selecting any of the duties that applied, and then by ranking the three most important ones. When looking at the overall roles for climate officers, facilities management and design, renewable energy projects, climate action planning/setting goals and strategies, and transportation, public transit and fleet management were the four most common responsibilities. For each activity, at least 70% of climate officers consider it to be one of their responsibilities. Even with the least prevalent responsibilities, more than 1/3 of climate officers still address them (Figure 29).

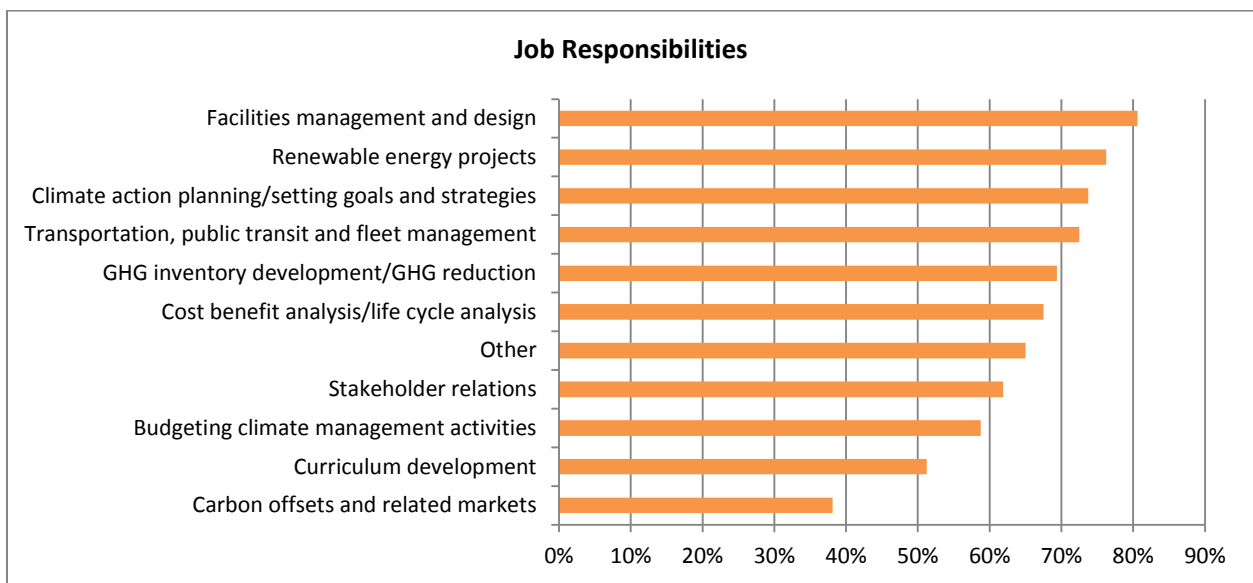


Figure 29: Most important job responsibilities as indicated by responding institutions

Respondents were also asked to rank the most important topics related to climate change that the person(s) accountable for climate change works on within their job. Below are responses based on primary categories:

- *Campus Size:* The most significant observations include that with increasing campus size, transportation becomes more important. Interestingly, in mid-size campuses climate action planning is given much less of a priority relative to small and large campuses (Figure 30).
- *Public/Private:* Public institutions ranked facilities management as most important while private institutions ranked climate action planning as most important. Also, at private institutions, responses are skewed towards climate action planning and the other leading categories, while those at the bottom of the

list have very little prevalence in the top three rankings. Public institutions have a more balanced distribution among categories (Figure 31 and Figure 32).

- *Locale:* The rural town setting appears to vary the most from the other locales. Rather than having climate action planning and facilities management design as the top two responsibilities, these institutions have GHG inventory, budgeting climate management activities, and stakeholder relations as the top three (Figure 33 and Figure 34).

Interestingly, some of the responsibilities that yielded that highest overall response from institutions were not considered high priorities. Renewable energy and transportation were ranked second and fourth overall for climate officers (Figure 29), however they usually were at the bottom of priorities (Figures –any/all of the categories-). Conversely, stakeholder relations and budgeting climate management were ranked highly for those who are tasked with those responsibilities, it is just that fewer people have these roles.

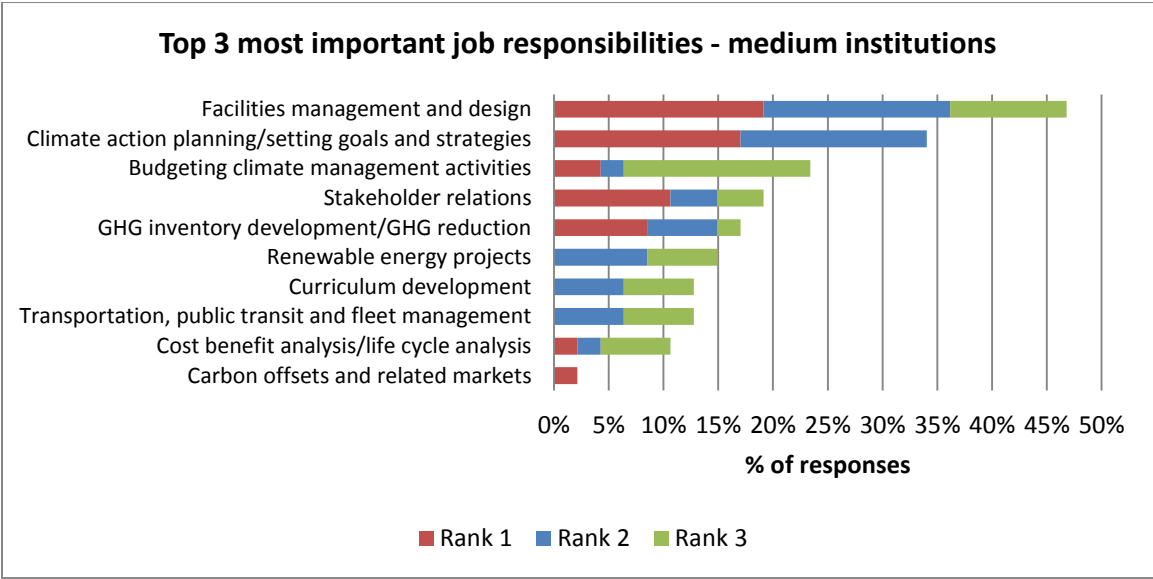


Figure 30: Top important job responsibilities for medium institutions

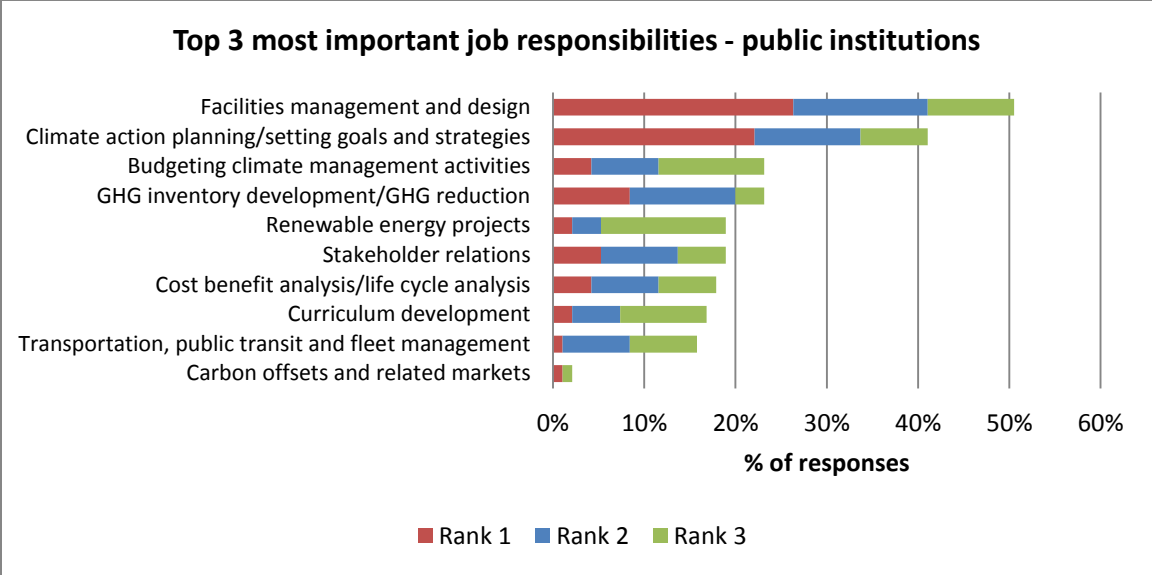


Figure 31: Top important job responsibilities for public institutions

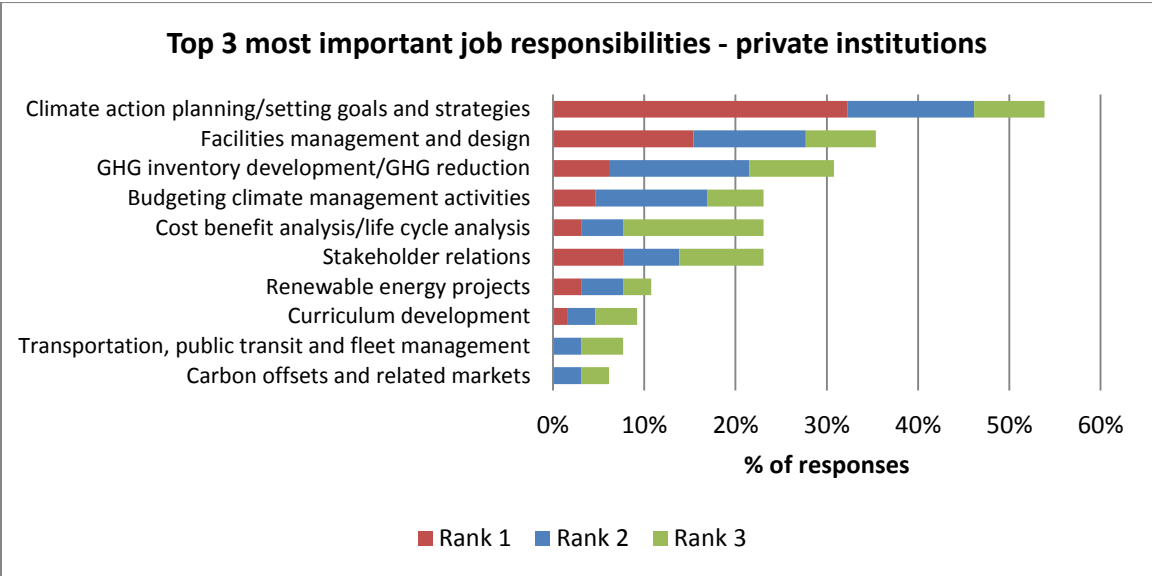


Figure 32: Top important job responsibilities for private institutions

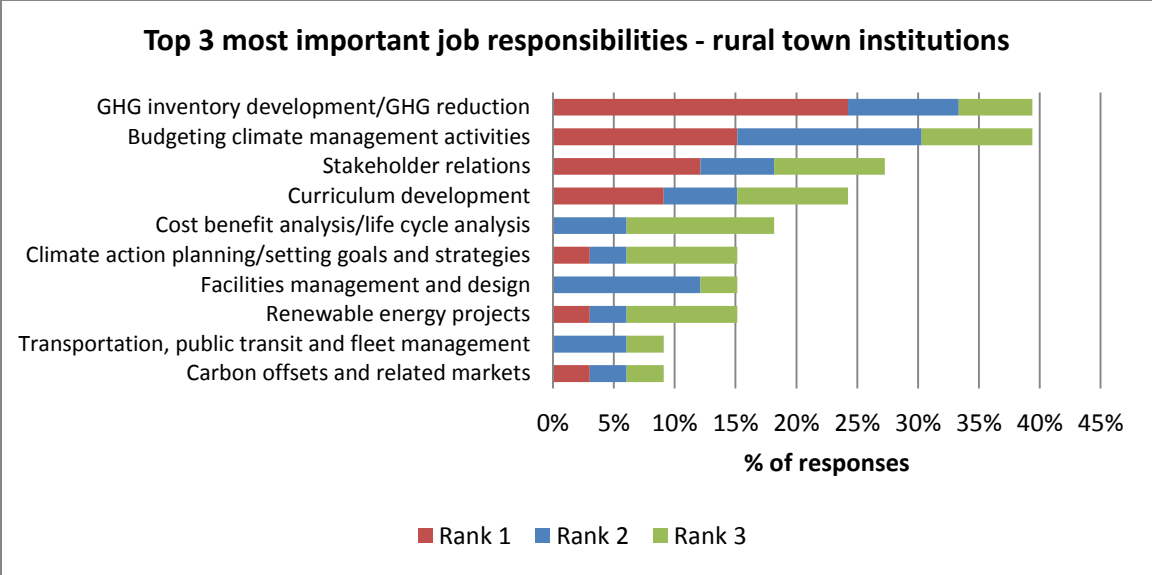


Figure 33: Top important job responsibilities for rural institutions

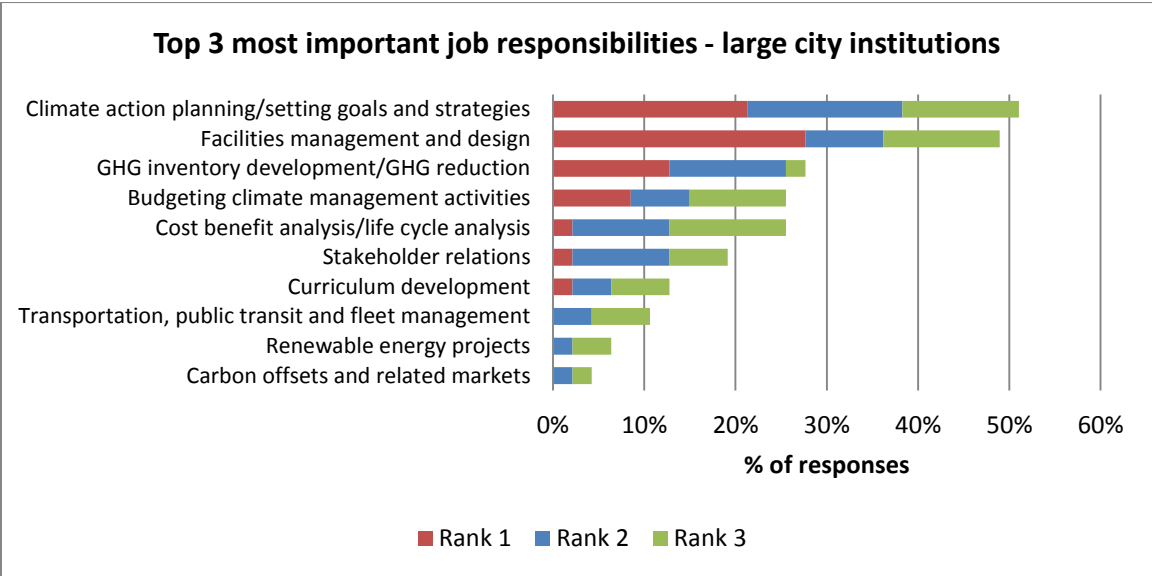


Figure 34: Top important job responsibilities for large city institutions

3.1.8 Training

Of the survey respondents, 90% indicated that there was no training requirement in their position. Only one person wrote that CSA climate change inventory training was required for the job. (CSA Standards is respected worldwide as a leader in standards development and has been instrumental in developing international environmental and carbon management standards). It appears part of this lack of required training comes from the belief that climate officers are already well qualified, as illustrated by the quotes below.

The president of our college has been a national leader regarding climate action issues and programs.

–Craig Ten Broeck, Consulting Advisor for Sustainability, College of the Atlantic

No, our institution does not require additional training. Our Chancellor is on the Board of Directors of AASHE and the Steering Committee of ACUPCC. Our Vice Chancellor of Finance and Facilities is on the Higher Education Committee of the American Council on Renewable Energy. At Morris, our top administrative staff is helping create climate change policy and action.

–Troy Goodnough, Sustainability Coordinator, University of Minnesota-Morris

Among respondents who said that training had been sought, but was not required, the main types of training were: self-studying, attending conferences (ASHEE annual conference and local conferences) and various workshops seminar, webinar and training opportunities funded by the institution. One institution even wrote in the job description that additional training was an employee benefit.

With regard to specific governance structures, presidents who are accountable for climate response are not required to participate in training related to climate, but about 50% have sought training on their own. Similarly, at least 50% of the individuals or groups within the other governance classifications have also sought additional training despite it not being required (Figure 35). Looking across the primary demographic categories, institutions that are either in an

urban fringe locale, are medium-size, or are public have a greater likelihood of requiring training of their climate officers (Figure 36, Figure 37 and Figure 38).

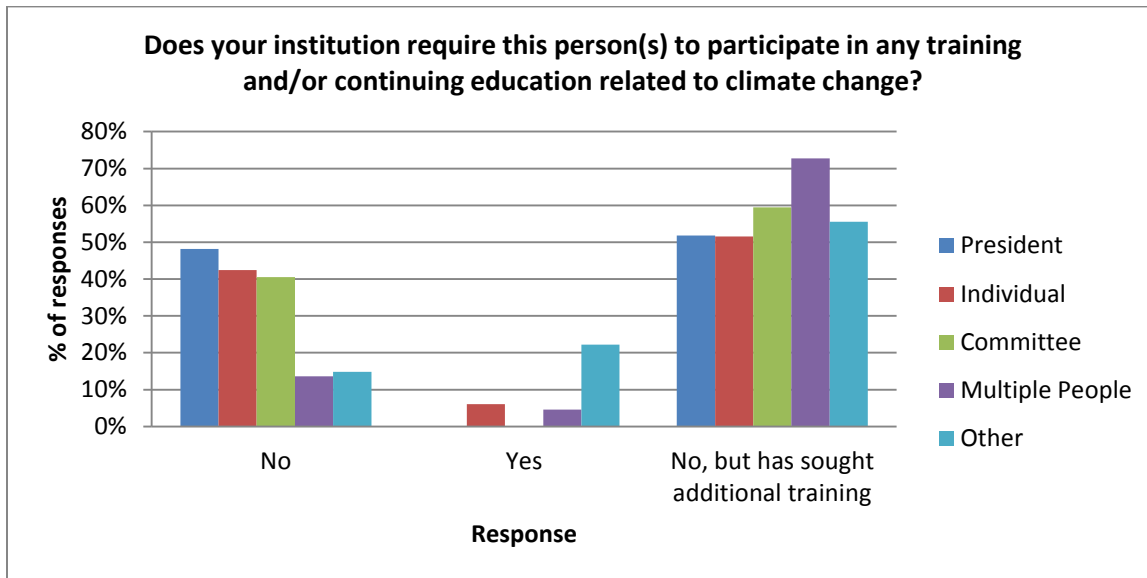


Figure 35: Training requirements across different governance structures, p-value = 0.003.

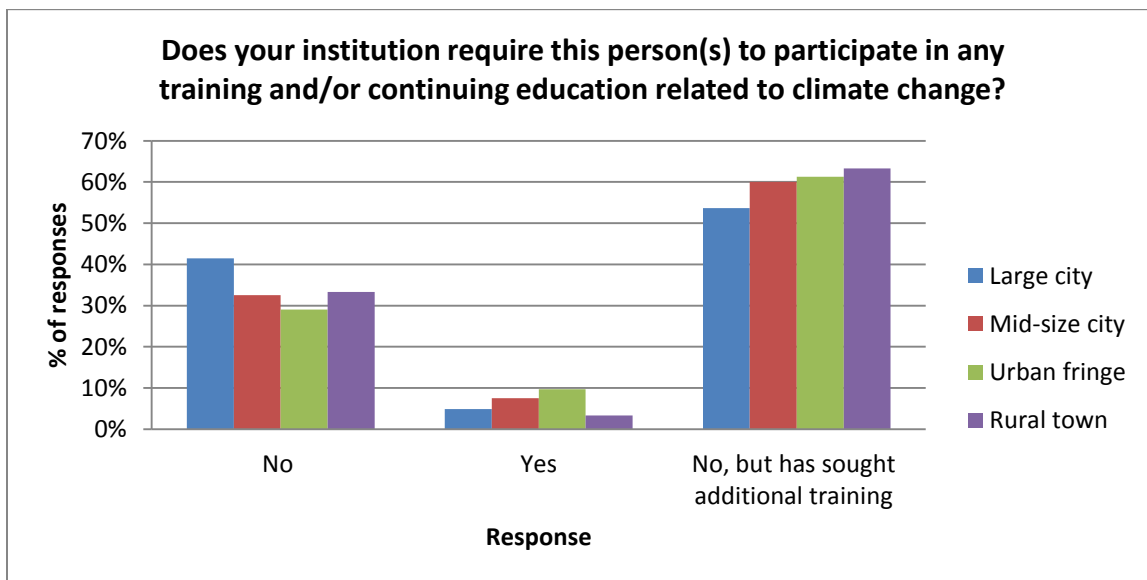


Figure 36: Training requirements across different campus locales, p-value = 0.892.

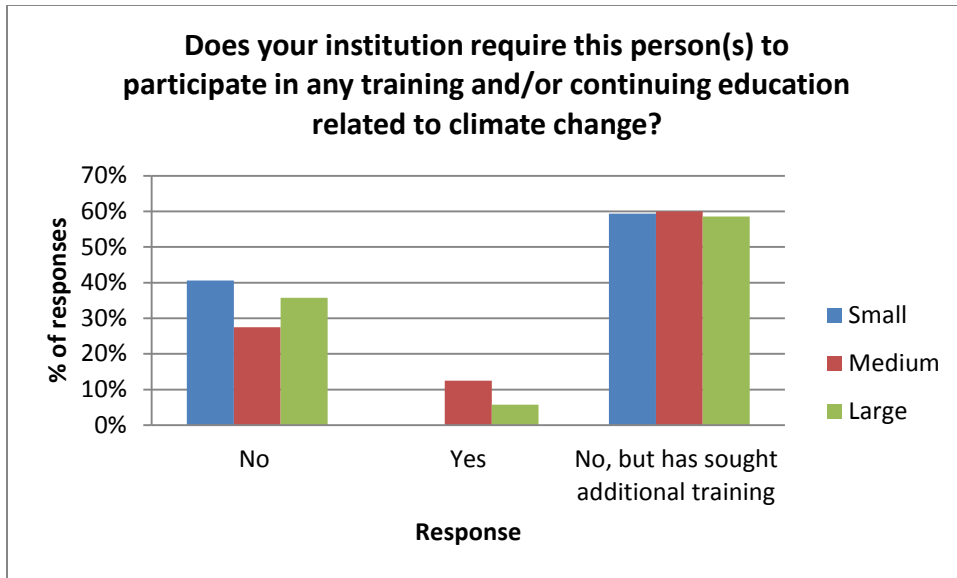


Figure 37: Training requirements across different campus sizes, p-value = 0.247.

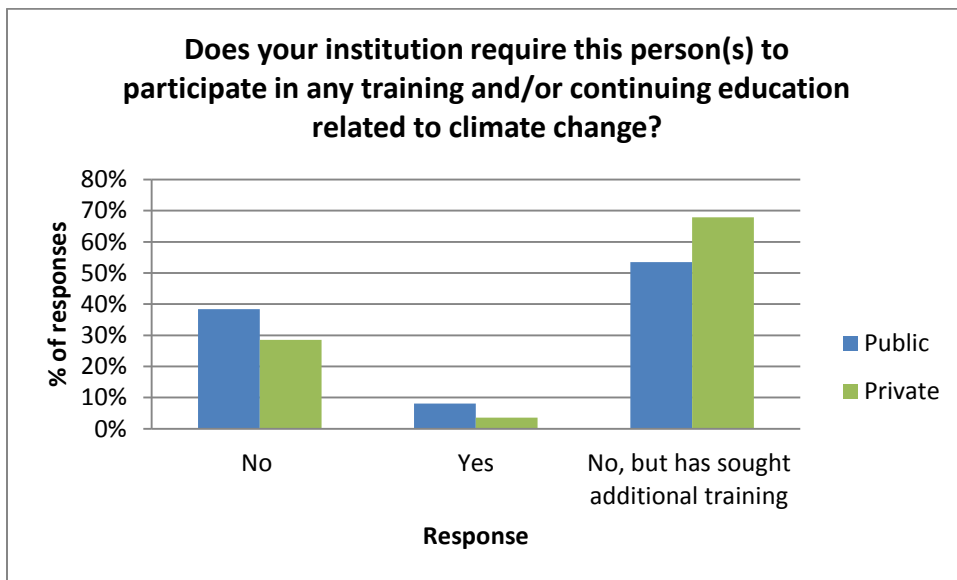


Figure 38: Training requirements for public and private institutions, p-value = 0.234.

3.1.9 Integrating Climate into Curriculum

When looking at professional experience and job responsibilities in previous sections, only 2% of respondents have environmental education experience, yet over 50% are involved in

curriculum development. This may lead to challenges with curriculum development if those implementing changes lack a background in environmental education.

In any case, committees are the most likely individuals or groups to be involved (Figure 39). This is largely due to having at least one representative on the committee who is either a faculty member and/or is tasked with specifically addressing curriculum. For example, at Grand Valley State University, a committee is held accountable for climate response, and its members include the Director of the Sustainable Community Development Initiative (SCDI), the Project Manager of SCDI, the Assistant VP of Facilities Services, the Operations Manager, the Housing Manager, the Chairman of Environmental Studies, and the Facilities Engineer. One member of the committee then takes on responsibility for climate response.

The Chairman of Environmental Studies is on the committee. Integrating climate change and sustainability into the curriculum is an ongoing effort. Classes on climate are also being taught to the community.

– Bart Bartels, Project Manager, Grand Valley State University

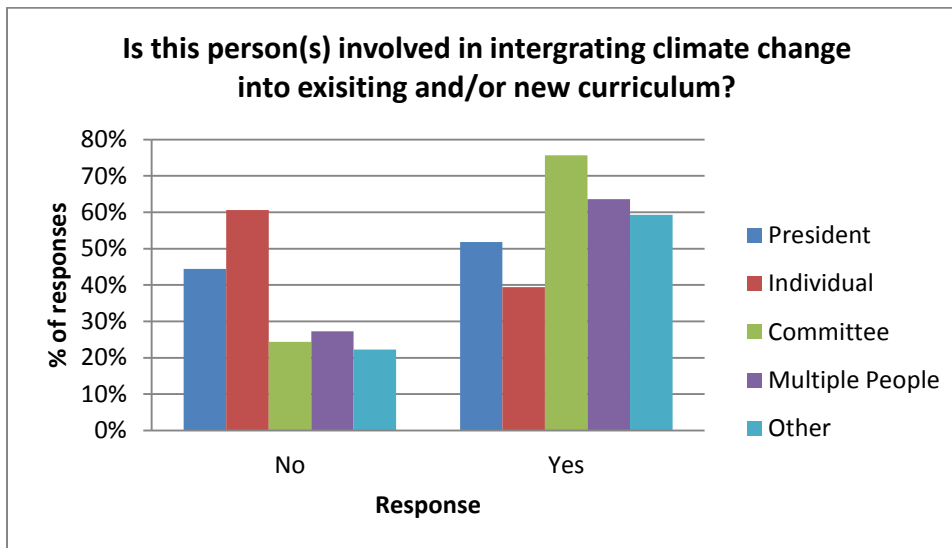


Figure 39: Curriculum integration across different governance structures, p-value = 0.0.

When comparing survey responses across the primary demographic categories, a few results stand out. First, institutions in both urban fringe and rural towns have significantly higher percentages of climate officers who are involved in integrating climate change into curriculum.

Conversely, mid-size cities have the largest percentage of climate officers who are not involved with curriculum design. The p-value (from Fisher’s exact test) of this result is 0.006, which is less than 0.05; therefore, the association between urban settings and curriculum design is significant (Figure 40). Although not statistically significant, it is also observed that large institutions more frequently have climate officers engaged in climate curriculum compared to smaller institutions (Figure 41).

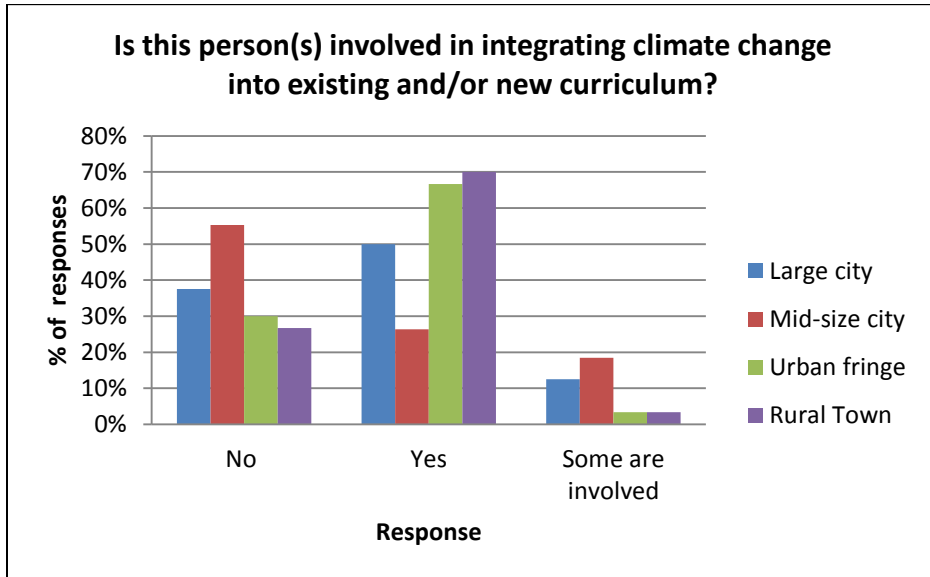


Figure 40: Curriculum integration across different campus locales, p-value = 0.006.

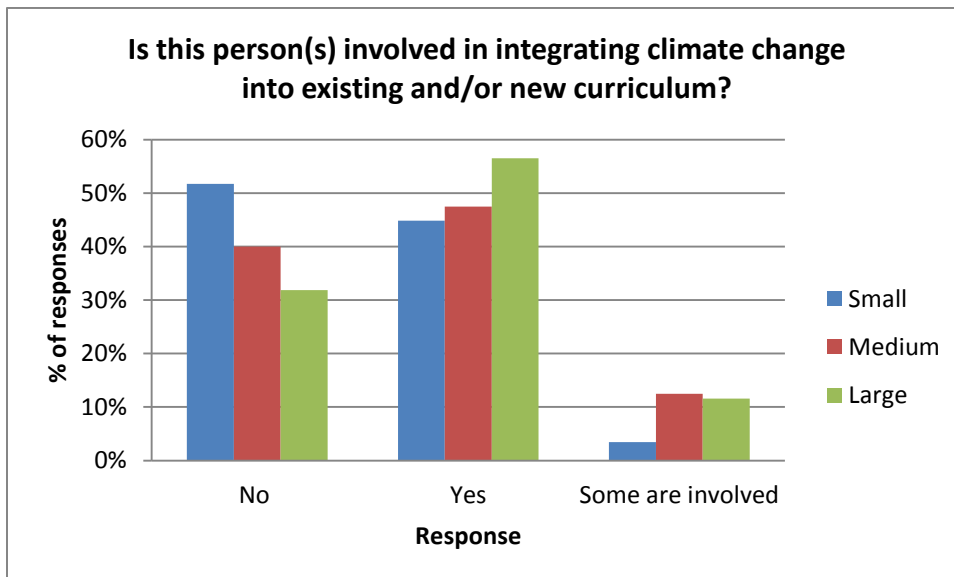


Figure 41: Curriculum integration across different campus sizes, p-value = 0.344.

3.1.10 Challenges

The highest ranked challenge indicated in the survey data was “budget issues”, with “competing institutional priorities” ranked second highest (Figure 42). Budgetary issues are related to many other challenges, including shortage of staff, no funding for projects even for the short term, and hampering the ability of climate officers to communicate climate change activities and raise awareness on campus. Without the ability to educate and train the campus community, it is even more difficult for the climate officers to obtain buy-in on campus. Budget issues are the overarching challenge and the could be a major reason why climate change response efforts cannot be pursued vigorously.

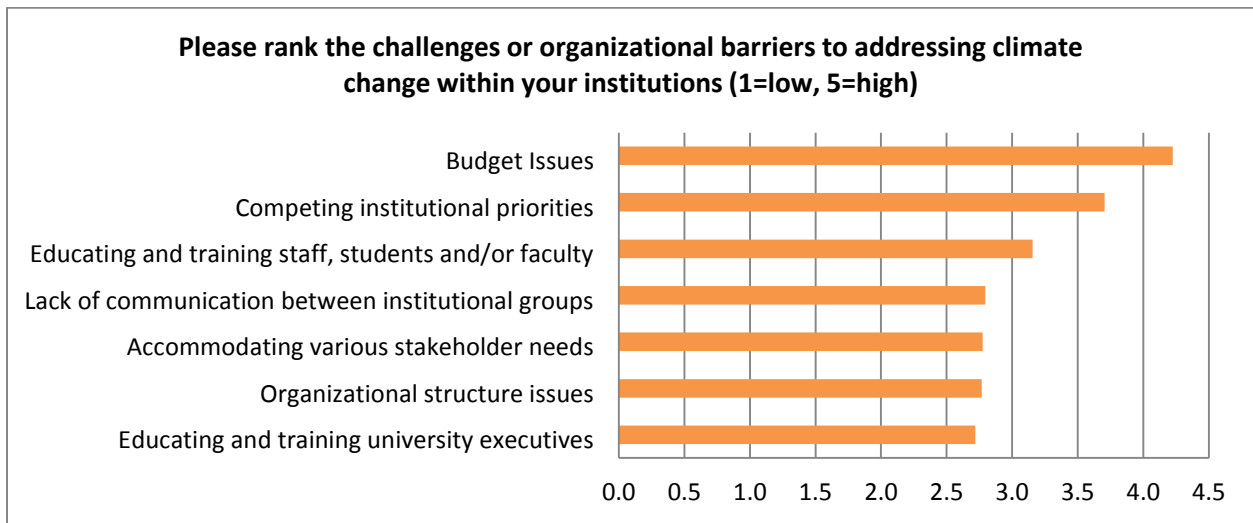


Figure 42: Top challenges within responding institutions

In addition, planning for changes in energy sources on campus or retrofitting old buildings requires a longer payback period. Therefore, under budget cuts, institutions are less likely to be able to undertake such projects. For instance, two managers wrote:

At this time, budgetary issues are very much on the minds of our community. While funding for sustainability initiatives are rewarding us with monetary savings, making the jump to renewables is difficult with low payback values. We will begin to experience an inability to expand on our sustainability programming and initiatives without additional resource support, which is difficult to foresee given the budgetary conditions.

- Mary Ellen Mallia, Director of Environmental Sustainability, SUNY at Albany

Integrating sustainability into the day-to-day operational, educational and strategic planning activities of the university is a major goal of our team, but is also a very resource consuming task. Budget constraints are the biggest concern right now, given the state budget cuts that continue to roll down to the university. Because there are so many different organizations on campus, with very specific independent goals, it is a challenge to get everyone to agree on one over-arching goal. We are getting closer to this as we spend more time in front of the various offices and organizations on campus and the see the positive results of the things we are trying to lead, including the positive response from our student body.

- Angela Rolufs, Director, Institute for Environmental Excellence, Missouri University of Science and Technology

Five institutions detailed their struggle with having limited power to decide where to purchase electricity. These institutions have little control over the generation process for the electricity, and little to no control over the extent of greenhouse gases produced during the generation.

A similar suite of issues is found in all kinds of procurement processes on campus. One institution in particular mentioned that campus procurement traditionally favors lower priced bids; therefore, to purchase green products, the green product must also have the lowest price, which may not always be the case.

Besides budgetary issues, many institutions also mentioned lack of campus buy-in, especially from the higher level decision makers, as a significant challenge. If sustainability is not the core value of the campus, and climate change is not on the priority list of the decision makers, sustainability staff and climate change officers will have much more work to do to move forward to address climate change issues.

In addition, organizational structure can become a challenge if there are too many layers of management between the campus sustainability manager and the decision maker. For many institutions, the current approach, which is predominantly "bottom up", has inherent limitations. Also of note is that the average institutional responses for "organizational structure issues" and

“lack of communication between institutional groups” were ranked as moderate challenges (Figure 38).

Many institutions have undergone organizational changes (i.e. new department or position created) in the last three years, possibly to address existing challenges. However, based on the current challenges being faced by those campuses that have undergone organizational changes as opposed to those that have not, it appears that there is a negligible difference between the two groups (Figure 43). Based on the observed data, the only category that is ranked as less of a challenge for those institutions that have undergone organizational changes is the “organizational structure issues” category. The institutions that had not undergone change gave an average score of 2.9 (on a scale of 1-5, with 5 representing a major challenge), whereas those that had undergone recent changes gave a slightly lower score of 2.7.

To sum up the overall observations, a lack of sufficient funding, lack of campus buy-in, lack of cohesive vision, and complex organizational structures are the primary challenges indicated by survey respondents.

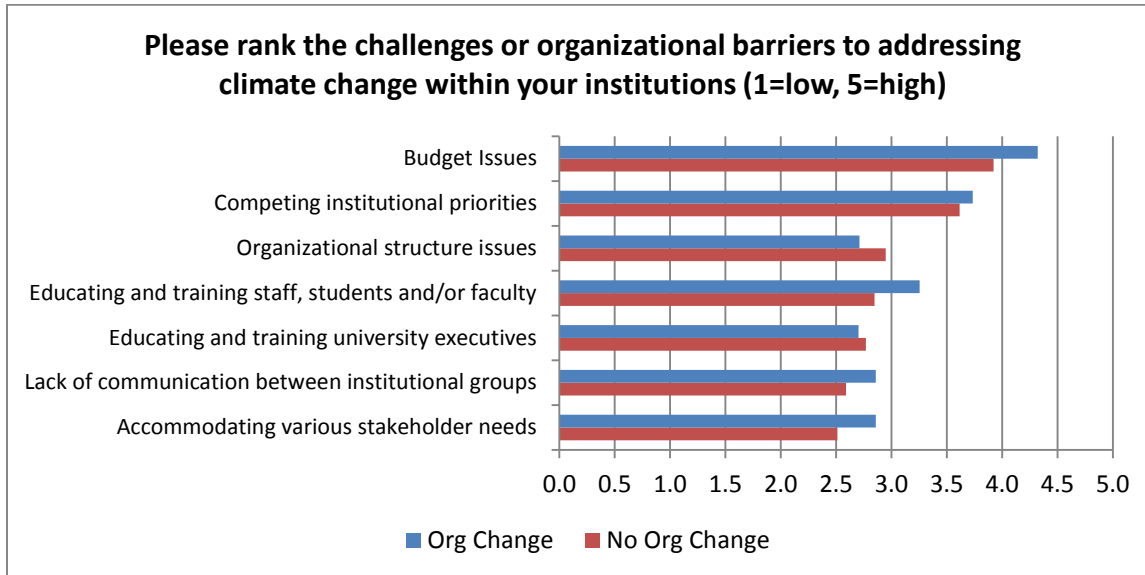


Figure 43: Organizational challenges facing responding institutions based upon whether there has been an organizational change.

Additional insights can also be gained by exploring challenges based on the primary demographic categories.

- *Campus Size:* Medium-size campuses ranked each challenge (except “other”) as being a greater obstacle compared to small and large campuses (Figure 44).
- *Public/Private:* Budgetary issues, educating and training staff, students, and/or faculty, and educating and training university executives are observed to be a greater challenge at public institutions (Figure 45).
- *Residential/Non-Residential:* For all challenges listed in the survey, residential institutions considered them to be greater obstacles compared to non-residential institutions (Figure 46).
- *Campus Locale:* Budgetary issues are, on average, a greater challenge for campuses in rural areas. "Educating and training the campus population, including executives, staff, students, and/or faculty", and "accommodating various stakeholder needs" is a more difficult challenge at rural campuses as well. On the other hand, competing institutional priorities and organizational structure issues are greater challenges at institutions in large cities (Figure 47).

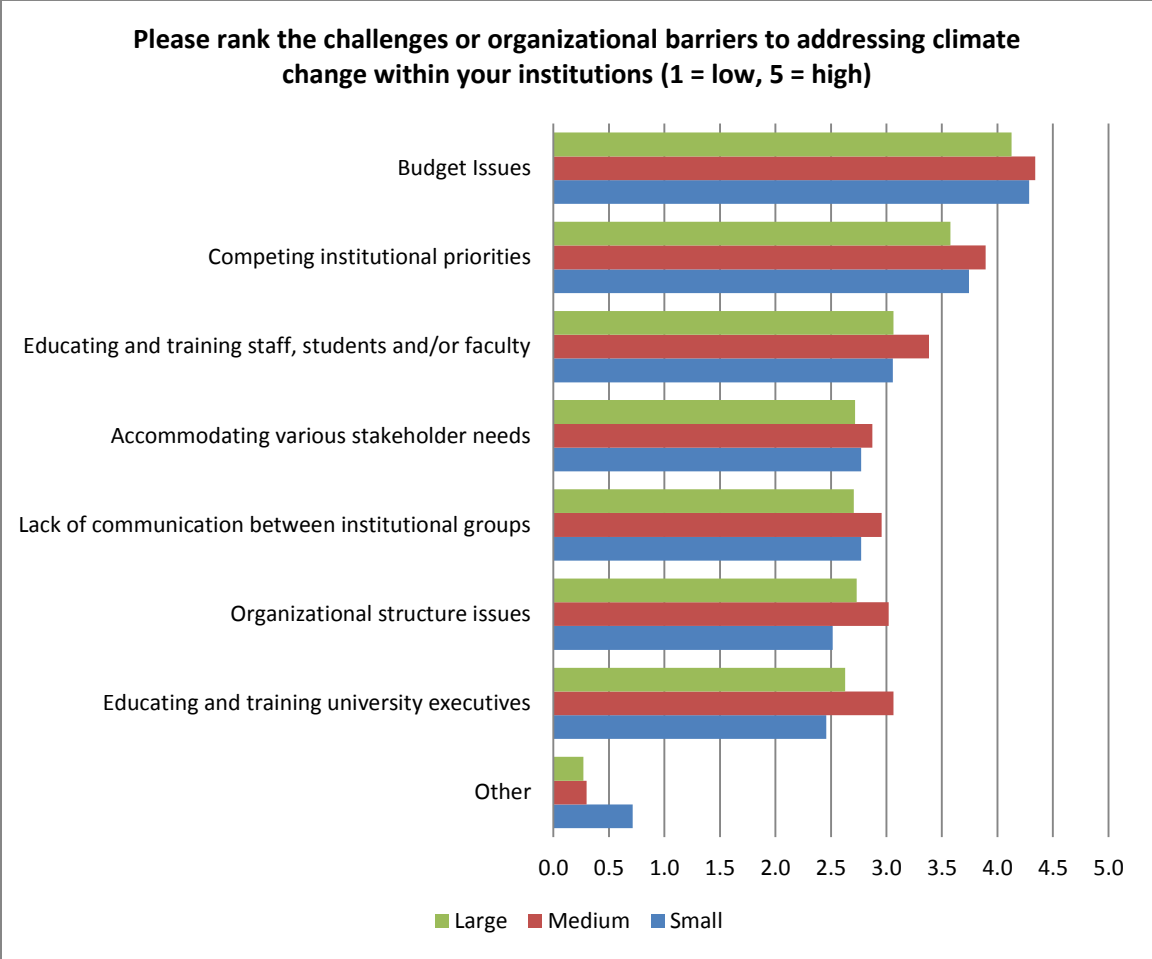


Figure 44: Top challenges across different campus sizes

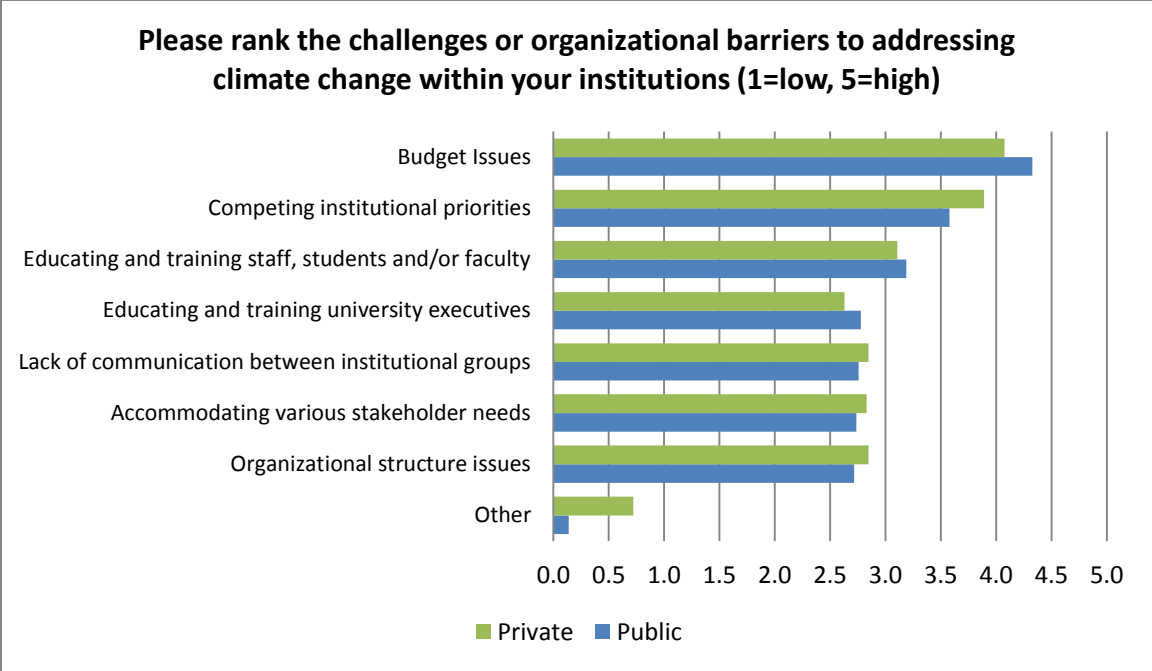


Figure 45: Top challenges across public and private institutions

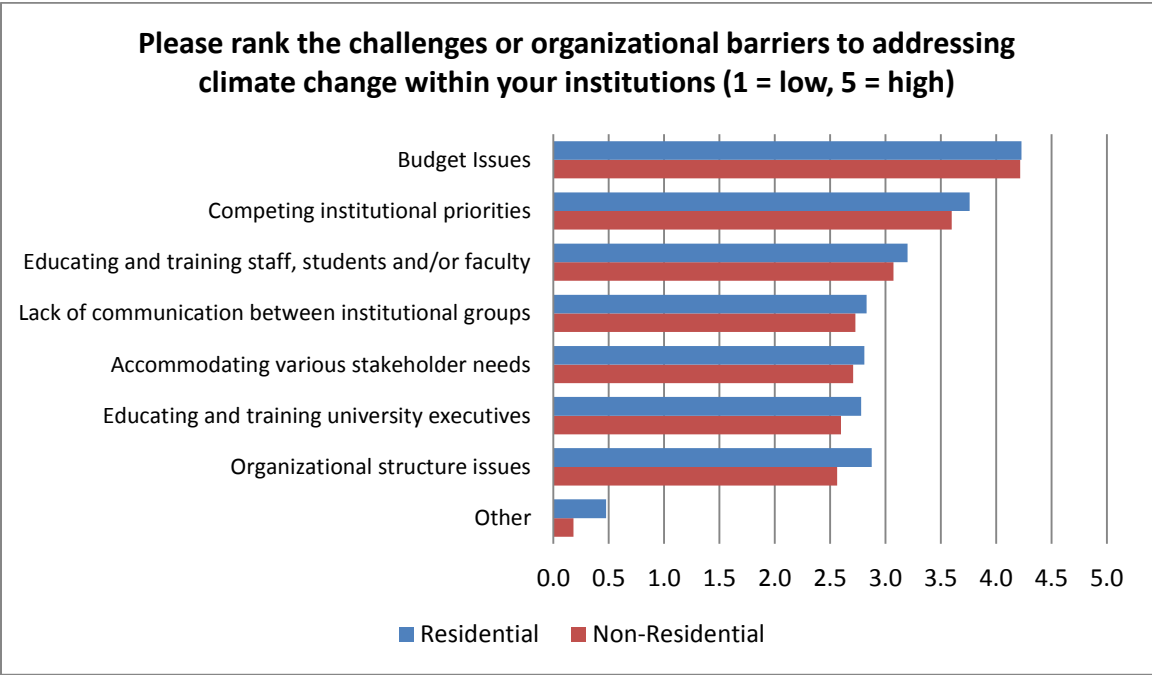


Figure 46: Top challenges across residential and non-residential institutions

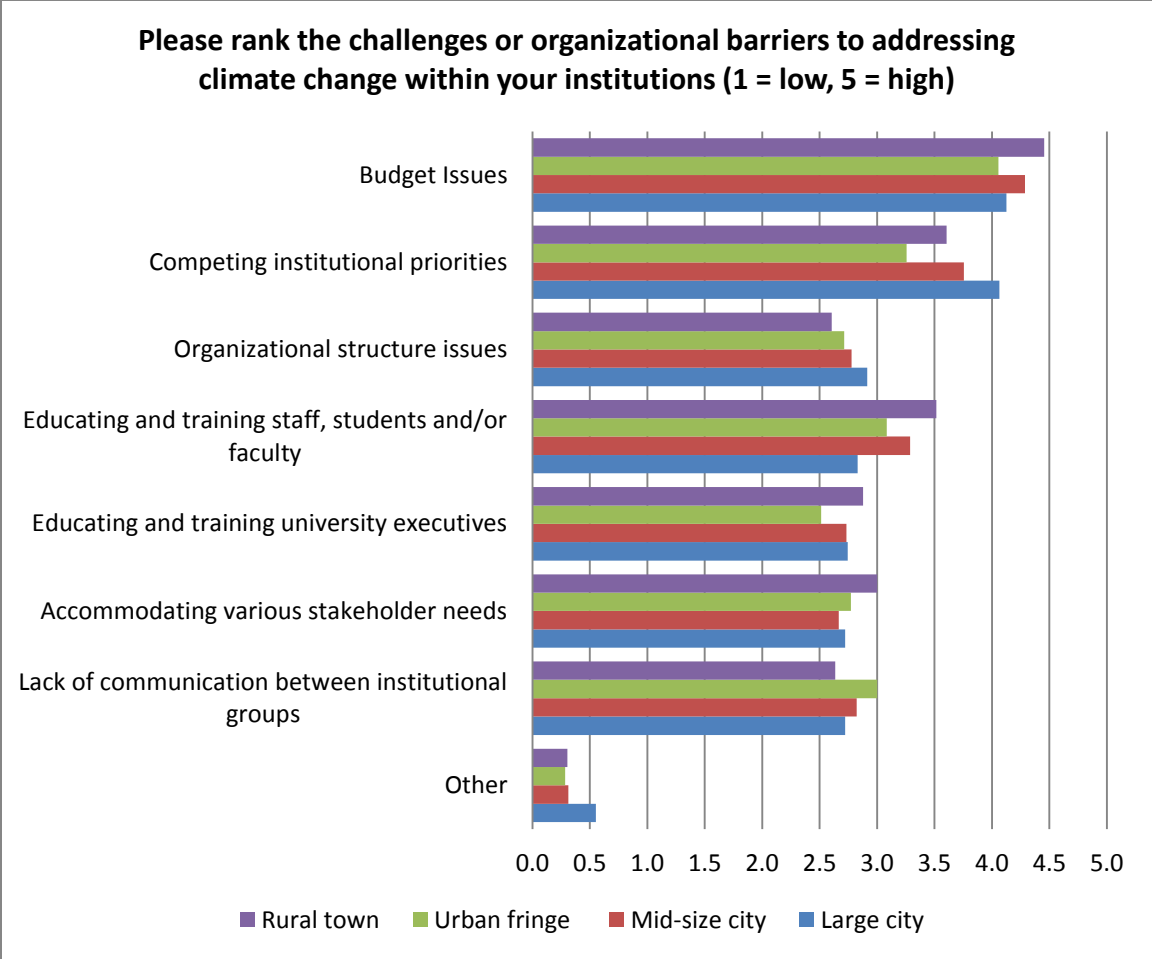


Figure 47: Top challenges across different campus locales

3.1.11 Budgetary Authority

Despite the fact that the greatest challenge identified was budget, more than half of all respondents have budgetary authority. This was consistent across the primary demographic categories, with the exception of institutions in large cities. These institutions appear to have less budgetary authority on average. (Figure 48). Examining the data more closely, it appears that one of the key differences is based on which people or groups are the climate officers. Based on the survey responses, 93% of presidents have budgetary authority while 65% of committees do not. (Figure 49).

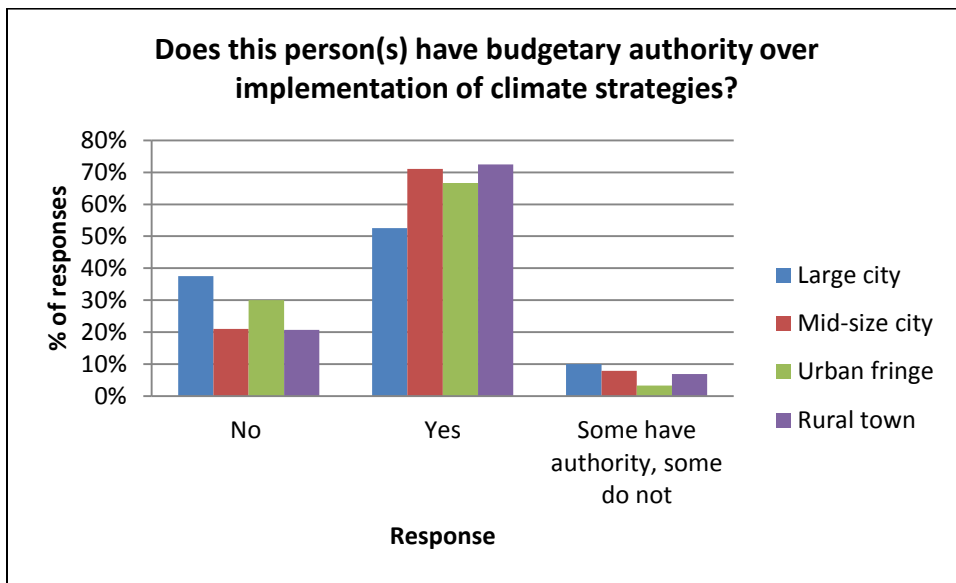


Figure 48: Budgetary authority across different campus locales, p-value = 0.535.

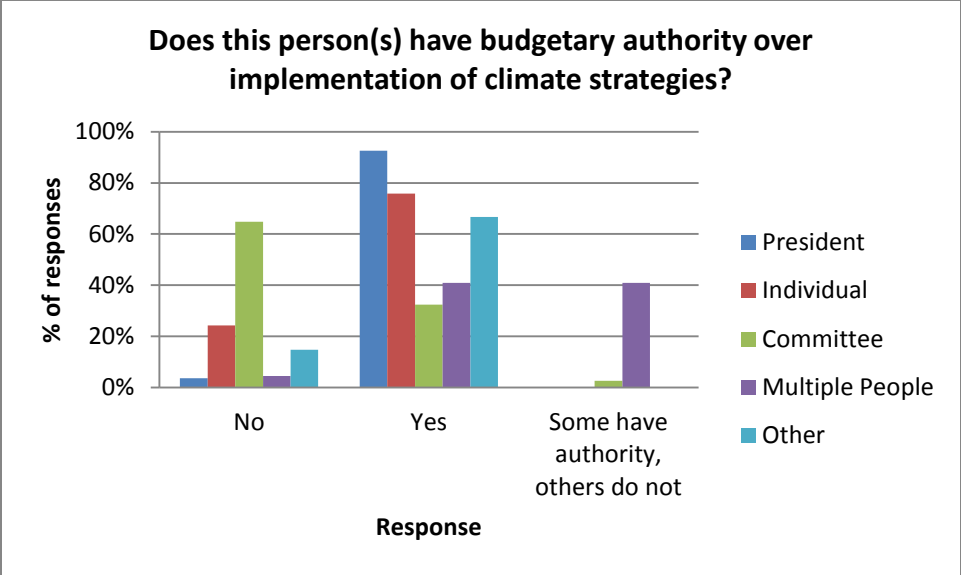


Figure 49: Budgetary authority across different governance structures, p-value = 0.0.

3.3 Customized Climate Strategies

Many factors can drive how an institution addresses climate change, such as geographic location, state or provincial policies, campus size, and/or facilities. The four primary categories used in this report represent some of these major drivers.

The 160 survey respondents represent a broad spectrum of institutions within many of the categories described. For example, institutions across the United States and Canada took part in the survey, which brings into play the effects of different statewide and regional policies.

Additionally, the person(s) who are accountable for addressing the economic, operational and environmental implications of climate change are distributed among executives, committees, staff, and other entities. Although some individual attributes are shared, taken collectively and with all of the different factors combined, very few, if any, institutions operate in the same way, experience the exact same challenges, and have the same opportunities for addressing climate.

Previous sections have discussed apparent trends that exist across primary demographic categories based on survey responses. However, even when these core dimensions are removed, it still appears that campuses are very unique. For example, 5 of the 160 institutions are public, non-residential, have a large campus size, and are located in an urban fringe area within the Southeast. Yet, there are distinct differences between them, particularly the governance structures for addressing climate change. The following examples include the institution name, the individual or group who is accountable for climate change at each institution, and whether or not the person(s) listed has budgetary authority for implementation of climate-related strategies.

- *George Mason University* – Executive Steering Committee for Sustainability, does have budgetary authority
- *Kennesaw State University* – President, does not have budgetary authority
- *University of Central Florida* – Director of Sustainability & Energy Management, does have budgetary authority
- *University of Louisville* – Sustainability Council, does not have budgetary authority
- *University of South Florida* – Director of the Office of Sustainability, does have budgetary authority

Interviews with survey respondents shed further light on how different factors drive strategies and specific actions, and how unique each institution perceives itself to be. Common responses obtained when interviewees were asked what other institutions they looked to as models or peers when addressing climate change, included: “so much of what we’re doing is place based,” “so university specific,” and “can’t look to many other colleges for guidance.” Below are three examples of how very distinct approaches are being taken at different campuses.

1. Consolidation – Stanford University

Stanford University provides an example of an institution that has undergone significant organizational restructuring and has chosen a consolidation approach when it comes to addressing climate change. Prior to 2005, the major emissions sources fell under different offices and departments. As one example, demand-side energy was managed by three different departments within a zone and maintenance program. This included buildings and zone engineers managing energy retrofits and building operations, a maintenance group dealing with HVAC systems and other physical systems on campus, and an energy efficiency group.

In 2005, Stanford decided that a centralized structure was the best approach, and thus put greenhouse gas reduction strategies in one category and academic research in another category. To address the campus’s emissions, the Department of Sustainability and Energy Management was created, which put energy procurement, energy use, and transportation in one place. This led to a single department that included Parking & Transportation, Utilities, and a new Office of Sustainability. As a result, the majority of all emissions and the ability to plan and control emissions in the future are centrally located.

2. Decentralization with Collaboration – University of Washington-Seattle Campus

Unlike Stanford, the University of Washington-Seattle Campus (UW) is a public institution, and as such must adhere to the minimum emissions reduction targets set by the state. In addition, it is located in an urban area, and has almost four times as many enrolled students as Stanford. For some or all of these reasons, it has pursued an organizational structure for addressing climate change that favors decentralization. According to Ms. Claudia Frere, Manager of the Environmental Stewardship and Sustainability Office, when it comes to climate change there is

not a fully vetted hierarchy for climate actions as is the case at other colleges. Yet, she believes the system works well and is well suited to the conditions at UW.

Despite a decentralized structure, Frere describes the campus's climate response as consisting of a large degree of collaboration among many independent operating units, based on function and expertise. For instance, when the CAP was being developed, one hundred and fifty faculty, administrative staff, and students provided input; and there was never a formalized committee. The Environmental Stewardship and Sustainability Office, which was founded in 2008, has primarily administrative duties as it serves as the "glue" that connects and communicates with the separate groups.

3. Effects of External Environment - University of Northern British Columbia

The University of Northern British Columbia (UNBC) presents several interesting examples of how both the natural environment surrounding a campus as well as external players, such as government, can greatly influence a university. As a public institution in British Columbia, UNBC was forced to abide by the province's Greenhouse Gas Reduction Targets Act, which required carbon neutrality by 2010. The university must also follow mandates from the Climate Action Secretariat, who coordinates climate action activities across the government and with stakeholders. In the past three years, UNBC has hired a Climate Change Site Coordinator, a Sustainability Manager, and an Energy Manager. According to Mr. Kyle Aben, UNBC's Climate Change Site Coordinator, these positions probably would not have been created so quickly if it hadn't been for the government policies that were put in place.

When considering emission reduction strategies, a campus's geography can be very influential as well. For UNBC, its location at a high latitude affects the amount of heating and lighting required and its region has a specific mix of available electricity sources. UNBC is also located in a forest, which presents the opportunity for bioenergy and biofuels. As a result, UNBC largely relies on a combination of offsets and local bioenergy projects in order to attain carbon neutrality. Going forward, UNBC hopes to expand the use of its forest resources as it continues to reduce emissions, which may impact the skills and types of personnel needed to execute climate projects.

3.4 Influence of Executive Leadership

Based upon interviews and survey data, it has been found that executives (including vice presidents, provosts, other executive-level positions) within higher education institutions are actively involved in addressing climate change. This involvement can come in many forms, including managing the key decisions for mitigating greenhouse gas emissions, defining environmental goals for an institution, or having direct involvement with the personnel who serve as climate officers. In the latter case, individuals and groups who are accountable for addressing climate change report directly to an executive-level person at 60% of the institutions that were surveyed. So even when not directly responsible, executives are well connected to the climate officers.

The President is Accountable for Climate Change Response

17% of respondents recognize the president or chief executive as the person who is ultimately accountable for an institution's response to climate change. As climate officers, these executives take on many different roles, which can vary considerably among institutions. When asked to rank these presidents' top climate-related activities, 46% of institutions have "climate action planning and setting goals and strategies" within the presidents' top three responsibilities, of which 31 percentage points are derived from a number one ranking. Almost as important is "Facilities management and design," which had the highest overall percentage for job responsibilities (48%) when summing the top three rankings (Figure 50).

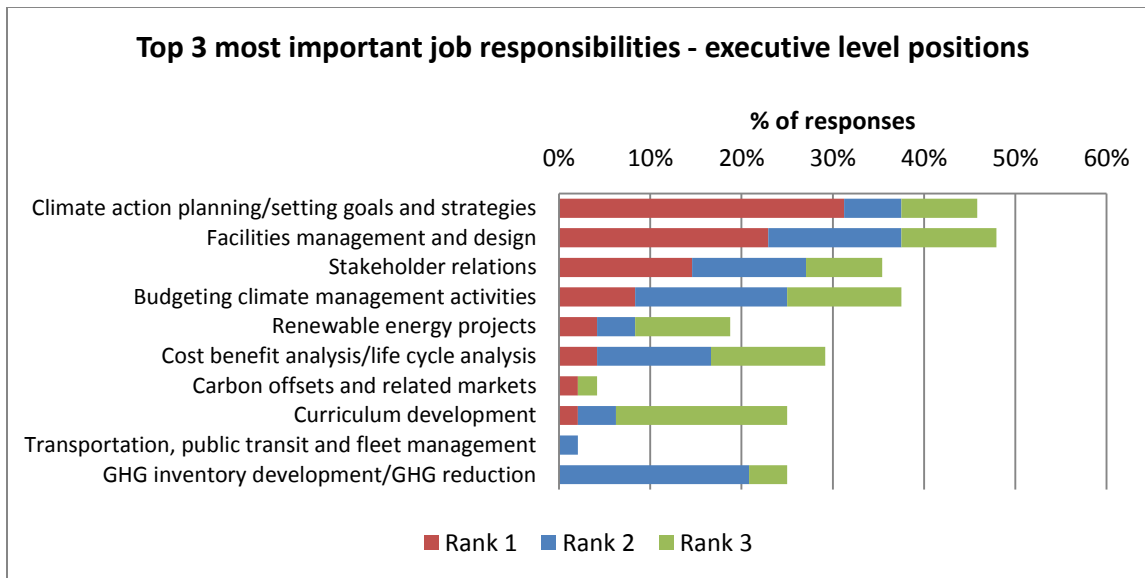


Figure 50: Top ranked job responsibilities of executive level positions

Presidents even play a role in integrating climate change into curriculum. Survey respondents indicated that of the presidents who are accountable for climate response, 52% are involved with curriculum development (Figure 34). 25% of these presidents have it as a high priority and have it listed as one of their top three climate-related job responsibilities (Figure 45).

Middlebury College, a small, rural institution, highlights the direct engagement, and hands-on-approach that exists with some presidents. Middlebury has established a number of positions and groups to assist its President. As one example, the Environmental Council (EC), which is an ad hoc committee appointed by the Vice President for Administration and Treasurer, undertakes assessments, recommends policy, and advises the President. Yet, the EC has no decision-making authority. Policy decisions, such as even converting to 100% recycled paper, require the approval of the President.

The President Sets New Goals

Berea College shows how a president can change the mission and alter the direction of an entire institution. Berea College is a small, private, liberal arts institution located in Berea, Kentucky. Berea’s mission emphasizes Christian values and dedicates the college to its eight Great Commitments, one of which includes plain and responsible living. Although living responsibly has always been a core value of Berea, environmental sustainability was not a major driver until

after Dr. Larry Shinn became president. Dr. Shinn made the connection between the college's existing mission and environmental sustainability, including having a smaller carbon footprint. Steve Karcher, VP of Operations and Sustainability at Berea, echoed the impact of the President by saying in an interview that environmental sustainability truly came from Dr. Shinn's leadership, and at that time there was otherwise not a concerted effort on campus to make this change.

Shortly thereafter, Berea formally incorporated sustainable values into its bylaws, and sustainability was also incorporated into one of the officer positions. The position that was created, the VP of Operations and Sustainability, was formerly the VP of Business Administration. Karcher said it was a great way to formally institutionalize sustainability and re-energize their environmental efforts on campus.

In the case of Berea, it is actually the VP of Operations and Sustainability who is held accountable for the campus's climate response. The president set the tone, but it was then left to executives and other faculty and staff members to achieve the objectives.

3.5 Impacts of Stakeholder Relations

Stakeholders at the institutions can be very influential, whether as the drivers for new climate activities or as obstacles to climate officers. When asked if accommodating stakeholder needs was a challenge they were facing, an overwhelming 95% of respondents said that it was. When asked if stakeholder relations in general were an important topic within their daily jobs, 62% of respondents chose it as something that was an important part of their job. This indicates that stakeholder engagement is a critical part of climate change strategies within institutions and is something that respondents see as an important issue (**Error! Reference source not found.**).

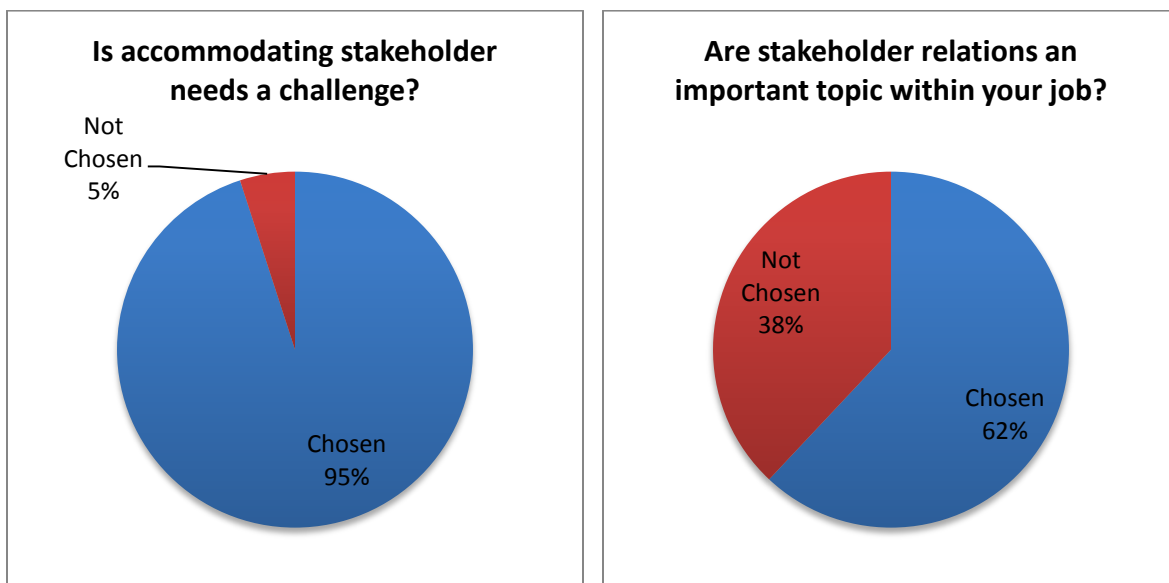


Figure 51: Importance of stakeholder relations is evident within challenges and job responsibilities

Interviews with respondents from Duke University, Evergreen State College, and Tulane University highlight the different impacts that stakeholders can have on an institution. At Duke University, the Campus Sustainability Committee (CSC), a group involving 25-30 students, faculty, and staff, is responsible for overseeing the university's response to climate change. When speaking with Ms. Tavey Capps, Duke's Environmental Sustainability Director, she felt when the committee was created, one important thing that its co-chairs did well was bring virtually every major stakeholder to the same table at the very beginning. She believes this led to more buy-in and credibility of the committee across the campus.

There was one group, however, that was not represented at the onset and in the development of Duke's CAP: the Duke Health System. Even though staff members from Health System institutions were present in the initial discussions, the leadership from those groups was not. Now, in the implementation phase, it has become clear that it is very difficult to separate those systems from the main Duke University campus; as a result, a greater level of engagement may be needed from the medical groups. This may become a challenge, and in hindsight, Capps believes that it would have been beneficial to have more authority figures from the hospital and medical system present in the early discussion.

When thinking about engaging stakeholders, it is not only important to include senior leadership, but also students and faculty. A great example of the influence that students and faculty can have on organizational governance is Evergreen State College, a small (somewhat non-traditional) public institution in Washington State. Evergreen's system can be described as non-traditional because it has a somewhat bottom-up hierarchy, meaning students truly drive the policies at the institution. Although this is not common, it does exemplify the fact that students are the largest population on almost all campuses and they can have significant influence.

In Evergreen's case, the sustainability office may actually move away from reporting directly to the president and instead become part of an academic department. One of the main reasons mentioned for this during the interview was to allow the climate officers to be more connected with the students and faculty, and more in tune with their wants and needs.

Lastly, Tulane University provides an example of how various organizational structures can be put in place to really encourage stakeholder engagement. After Hurricane Katrina hit New Orleans, Tulane reevaluated its mission and goals and decided to emphasize the importance of public service, including environmental sustainability. A number of new initiatives were undertaken to increase engagement on campus, including (1) their Climate Commitment Advisory Committee which has the role of listening to students, faculty and staff to hear their ideas for reducing emissions, works to increase transparency and increase communication between groups, (2) to get students involved in the climate action plan, an environmental sociology class estimated emissions from transportation and a business class reviewed commercial renewable energy technologies that could potentially be used on campus properties,

and lastly, (3) Tulane created the Center for Public Service to implement public service requirements in the undergraduate curriculum.

Chapter 4: Conclusions and Next Steps

The pressures of climate change are driving higher education institutions to make major changes, including modifications to the organizational structures, operations, and curriculum at their institutions. The data and interviews contained in this report offer a first glimpse at the types of changes that have been occurring. It was found that in just the last three years, 76% of surveyed institutions have undergone organizational restructuring related to climate change governance. Other observations indicate that there is tremendous diversity in the backgrounds of climate change officers and their current job responsibilities. Additionally, it appears that executives are very involved with their own institution's response to climate change; and stakeholders play a critical role as both barriers to potential solutions while also at times being the catalyst for new strategies. Deeper analysis indicates that when comparing characteristics, such as geography and campus size, there are distinct differences in how institutions with certain qualities are responding to climate change.

Yet, as the data set used in this analysis only encompasses approximately 3.5% of all 2- and 4-year higher education institutions in the U.S. and Canada, this opens the door for future studies.¹⁷ Observations within this report highlight some potential trends between different classifications of institutions and with further data collection, these findings could be strengthened. Additional insight could also be gained through comprehensive case studies that investigate the underlying mechanisms and drivers behind the organizational changes that are being witnessed. Rather than doing an interview with a single individual, multiple climate and sustainability officers could be included as well as institutions that are either just starting their climate change efforts or are struggling with their current efforts. Overall, this report helps to increase knowledge surrounding climate change governance within higher education institutions and will ultimately help to foster collaboration and allow for increased learning opportunities.

Appendices

Appendix A: Interview Summaries

Duke students conducted interviews with survey respondents from eight different institutions. The interview summaries provided below represent information gathered during those interviews as well as demographic data from the 2010 Edition of the Carnegie Classification of Institutions of Higher Education, data from the Duke/ACCO survey, and historical information from internet sources.

Interviews included:

Institution	State	Public/Private	Campus
Berea College	KY	Private	Rural (Forest)
Duke Univ.	NC	Private	Mid-Size City
The Evergreen State College	WA	Public	Mid-Size City
Middlebury	VT	Private	Rural
Stanford	CA	Private	Mid-Size City
Tulane	LA	Private	Large City
Univ. of N. British Columbia	British Columbia	Public	Rural (Forest)
Univ. of Washington (Seattle)	WA	Public	Large City

Berea College

Based on an interview with Steve Karcher, VP of Operations and Sustainability, conducted on February 7, 2011.

Institution Profile:

- Location: Berea, Kentucky
- Enrollment: 1,548
- Campus Locale: Rural
- Private
- Commitments/Affiliations: ACUPCC, AASHE
- Accountable Person(s) for Climate Response: Single Individual – VP of Operations and Sustainability

Overview:

Berea College is a small, private, liberal arts college located in Berea, Kentucky. Berea's mission emphasizes Christian values and dedicates the college to its eight Great Commitments, one of which includes plain and responsible living. Berea is unique in that they provide low-cost education to low-income families by charging no tuition and requiring students to work at least 10 hours per week. Approximately one in three students is of an ethnic minority.

According to the College Sustainability Report Card, Berea is the greenest college in Kentucky. There are several factors that led to this recognition including:

- A commitment to reduce greenhouse gas emissions by 10% from 2008 levels by 2015
- Cutting building energy consumption in half since 2005
- Dining services' focuses on buying local products, including meat and vegetables from an on-campus farm
- An Eco-village that provides housing for about 100 students
- Six hybrid and 12 electric vehicles added in the transportation fleet
- The Department of Sustainability and Environmental Studies, which aims to incorporate sustainability into Berea's physical plant operations and curriculum.¹⁸

History of Climate Governance:

Although living responsibly has always been a core value of Berea, environmental sustainability was not a major driver until after Dr. Larry Shinn became president. Dr. Shinn made the connection between the college's existing mission and environmental sustainability, including having a smaller carbon footprint. Mr. Steve Karcher, VP of Operations and Sustainability, echoed the impact of the President, saying that environmental sustainability truly came from his leadership and at that time there was not a concerted effort on campus to make this change. As a result of Dr. Shinn's influence, numerous changes took place, including having energy policies institutionalized and incorporated into construction and renovations.

After Dr. Shinn signed the American College & University Presidents' Climate Commitment (ACUPCC) in 2007, the Subcommittee on Sustainability II (SOS-II) was formed as a subcommittee of the Strategic Planning Council, and was charged with creating a strategic plan for sustainability on campus. According to Karcher, the Council examined the successes of the first sustainability initiatives on campus, if the approach was effective, and if there had been any progress. Additionally, they examined happenings external to the college and what else had been learned surrounding climate change and sustainability.

According to Karcher, a second inflection point came in 2008 when the economy crashed, forcing Berea to reorganize. The economic downturn had a major impact on organizational structure at Berea, including the elimination of various VP areas. However, despite being a challenging time for Berea, the college took advantage of the opportunity. It formally incorporated sustainable values into its bylaws and sustainability was also incorporated into one of the officer positions. The position that was created, the VP of Operations and Sustainability, was formerly the VP of Business Administration. Karcher said it was a unique opportunity to formally institutionalize sustainability and re-energize their environmental efforts on campus.

When asked if efforts are more focused towards climate change specifically or sustainability in general, Karcher said that climate change is not how the college goes about addressing the issues. It tends to focus instead on natural resource consumption. Along the same lines, the ACUPCC was not the driving factor for Berea's climate efforts, but the commitment did have a significant impact on its campus strategies. Additionally, when asked if the changes to the

bylaws would have a significant impact on his job responsibilities, Karcher said that rather than affect his job description, the change will add more organizational and institutional pressure to get things done.

It is also worth noting that Karcher said that when initial sustainability initiatives were put in place, there were still many on campus that were skeptical of climate science. The second time around, this hesitation had largely disappeared, and there was more of a focus on practical realities and the goal of balancing the educational mission with reaching carbon neutrality.

Integrating Sustainability in Operations:

When asked about the effectiveness of the current governance structure at Berea, Karcher indicated that a key to their success was the integration of operations and sustainability. He said that when he is working on energy planning it is hard to distinguish between operations or sustainability; it is a mixture of both. Karcher said that it would not work if he was solely a sustainability officer or climate change officer because operations need to be integrated into the decisions to be efficient and effective.

When looking to the future, Karcher does not see available funding for a dedicated sustainability or climate change position. Instead, he said that they are taking the opportunity to refocus current positions. For example, the central plant management position is focused on energy management as well as distribution systems. On the academic side, they have added an environmental and natural resources minor. Overall, Karcher said that they are working to integrate sustainability throughout many aspects of the college.

Duke University

Based on an interview with Tavey Capps, Environmental Sustainability Director, conducted on February 11, 2011.

Institution Profile:

- Location: Durham, NC
- Enrollment: 14,350
- Campus Locale: Mid-size City
- Private
- Commitments: ACUPCC and AASHE
- Accountable Person(s) for Climate Response: Committee - Campus Sustainability Committee

Overview:

For decades, Duke University has been promoting environmental conservation in the classroom. In 1938, Duke founded the School of Forestry and Environmental Studies and the Duke University Marine Lab (located in Beaufort, NC), which later merged, along with the Department of Geology, to form the Nicholas School of the Environment.¹⁹ Today, the Nicholas School of the Environment serves as a hub for environmental education, and its faculty members often have dual appointments with other professional schools on campus, such as the Law School and the Public Policy School. In addition to its long-time academic interests, Duke's geographical location, network of facilities, and the Duke Forest have also affected the university's approach to mitigating climate change.

Being in Durham, North Carolina presents Duke with many challenges and opportunities. To start with, the vast majority of Duke's electricity is derived from utility-owned, coal-powered plants. On the plus side, there is potential for offsets through the Duke Forest--7,060 acres of forest that the university owns, and as North Carolina is a major hog producer, there are potential agricultural offsets and partnership opportunities in the region as well.²⁰

Duke also has significant research facilities, athletic facilities, residence halls, and a large medical care system (the Duke University Medical Center and Duke University Health System). Duke University has almost 33,000 employees, of which more than two-thirds are affiliated with the Duke Medical system.²¹ For comparison, Duke has about 7,500 graduate students and 6,500 undergraduates.²²

Duke's recently approved Climate Action Plan (CAP) particularly reflects how a customized approach to emissions reductions is important. The CAP calls for climate neutrality by 2024, of which 45% of reductions are achieved through on-campus initiatives and the other 55% from local or regional ones. Interestingly, the CAP includes plans to only use offsets that have a tangible connection to Duke and the Southeast region.

History of Climate Governance Structure:

Duke University President Richard Brodhead signed the American College & University Presidents Climate Commitment and created the Campus Sustainability Committee (CSC) in 2007, which is the governing body that oversees the university's response to climate change. Since its creation, Executive Vice President Tallman Trask and Dean Bill Chameides (Nicholas School of the Environment) have served as co-chairs, and the committee involves 25-30 students, faculty, and staff.

Even though Duke had been conducting annual greenhouse gas inventories since 1990 and implementing some carbon reduction measures, long-term, strategic planning for climate neutrality had not occurred yet. Therefore, when the CSC was founded, it was originally charged with conducting a carbon inventory that aligned with the ACUPCC's requirements and developing a climate action plan. As the three major greenhouse gas sources were from the campus steam plant, purchased electricity, and transportation, three subcommittees were created for each focus area, in addition to a communications subcommittee and an education subcommittee. It is worth noting that Duke's GHG inventories do not include "leased space or satellite health system buildings and hospitals," as a result of the central administration having a limited ability to control the actions of those facilities.²³

According to Ms. Tavey Capps, Duke's Environmental Sustainability Director, one of the strengths of the CSC is that those who would be most impacted by the climate and sustainability plans were brought to the same table at the very beginning, including those who would not be directly involved in the implementation of climate strategies but were at high levels in the university and had significant influence. Having the leaders from different departments, as well as a presidentially-appointed committee, enabled the CSC to cross boundaries and have authority to make some of its recommendations.

Having a large and diverse committee also meant that the different campus departments and interests were represented at the start of the CSC's planning process, including setting the boundaries for the GHG inventory, determining targets, and developing future programs. In addition, those who had tremendous influence over a topic and who would also be involved with overseeing the implementation of CAP activities were asked to lead specific subcommittees. For instance, the Vice President for Facilities now chairs the Energy Subcommittee and the Assistant Vice President of Internal Communications chairs the Communications Subcommittee. Capps felt that by assigning responsibilities in this way, the chairs were more likely to feel a sense of ownership and responsibility for keeping their respective staff members involved with the entire process. In fact, she believes that if outside consultants are used without the leadership and involvement of internal Duke staff, recommendations would be much less likely to be implemented in many cases.

Whereas the CSC sets the overarching goals, for the day-to-day implementation of the CAP, Duke's Sustainability Office plays a key role in either coordinating or directly overseeing activities. In many cases though, other departments such as Parking and Transportation Services are responsible for specific initiatives and not the Sustainability Office. There have been some new hires recently, including two new staff members in the Sustainability Office to work on local offsets and a Transportation Demand Coordinator has been hired by the Parking and Transit Department.

Engaging Stakeholders throughout the Campus:

At the time when Duke's carbon inventory and CAP were being developed, most colleges with health system components did not include those parts of their campuses in their climate

strategies. Therefore, in order to be able to better compare Duke to other institutions, the CSC decided to exclude Duke's medical groups. As a result, only staff members from Duke's hospital and medical system were present in the initial climate discussions, but not the leadership from those divisions.

Looking back at the organizational changes and the involvement of key stakeholders over the last several years, Capps did express misgivings about the initial decision to essentially exclude the hospital and medical system from the carbon inventory and CAP (even though it was known at the time that this decision would lead to problems in the future). Now, in the implementation phase, it has become evident that it is very difficult to separate those systems from the main Duke University campus; as a result, a greater level of engagement may be needed from the medical groups. This may become a challenge, and in hindsight, Capps believes that it would have been better to have had more authority figures from the hospital and medical system present in the early discussion.

Among other upcoming projects, Capps said that the CSC has begun to look beyond the CAP and into developing a comprehensive sustainability plan that incorporates other environmental topics, such as water and green purchasing. In addition, the Education Subcommittee has been discussing numerous ideas for incorporating climate issues and sustainability into curriculum and making these types of courses more transparent, such as having an official "sustainability label" for courses. Furthermore, the Communications Subcommittee is continuing to encourage the use of a Duke-specific carbon calculator that has been created to help the campus community understand their impact on Duke's GHG footprint.

The Evergreen State College

Based on an interview with Scott Morgan, Sustainability Coordinator, conducted on February 7, 2011.

Institution Profile:

- Location: Olympia, WA
- Enrollment: 4,891
- Campus Locale: Mid-Size City
- Public
- Commitments/Affiliations: ACUPCC, AASHE, United Nations Environment Programme Climate Neutral Network, ACUPCC Leadership Circle
- Accountable Person(s) for Climate Response: Sustainability Council

Overview:

The Evergreen State College is a small public liberal arts college located in the capital city of Olympia, WA with a reputation for interdisciplinary, collaborative, and team-taught programs.

The campus culture requires that the direction of the college be strongly connected to students and academic work, which therefore creates a unique relationship among students, faculty, and staff.

Sustainability is an important value for the college, as evidenced in the following statement from their 2007 Updated Strategic Plan:

Evergreen will become a laboratory for sustainability — as demonstrated in our operations, our curriculum, and in the quality of life for our employees and students — and commit to becoming a carbon neutral college by the year 2020. Already the premier national model for interdisciplinary liberal arts education, ultimately Evergreen will become similarly known for its leadership in sustainability — providing educational and employment opportunities throughout the academic, public, nonprofit, and business communities.²⁴

In addition to a commitment to sustainability in their strategic plan, Evergreen's President Les Purce is a member of the ACUPCC Leadership Circle, which is an agreement to develop a comprehensive plan to achieve climate neutrality as soon as possible. Within this commitment, Evergreen completed its first carbon inventory in 2007 and discovered that its carbon footprint is less than half the national average for colleges and universities.²⁵

History of Climate Governance Structure:

Mr. Scott Morgan, Evergreen's Sustainability Coordinator, believes that the catalyst for recent environmental efforts at Evergreen came from a small group of faculty and students who were interested in improving sustainability on campus. This led to the development of a disappearing task force that was charged with engaging the campus to define the concept of sustainability as well as discrete goals and recommendations. At the time, the college was updating its strategic plan and campus master plan; therefore, these recommendations could be (and were) incorporated into the formal plans.

Along with recommendations for the strategic plan and campus master plan, the task force recommended having a formal administrative structure for sustainability on campus, which resulted in the creation of the Office of Sustainability and Sustainability Council. A Director of Sustainability was hired in 2008 as a member of the President's staff. The Sustainability Council and its subsequent working groups draw members from across campus, including high-level directors. The council is responsible for ensuring that sustainability goals and targets within the college's institutional commitments are met, particularly with regard to carbon neutrality and zero waste. It also strives to provide vision for a sustainable future. Therefore, the Sustainability Council is the main governing body that oversees the college's response to climate change.

There have been some additional organizational changes very recently, mostly as a result of budget challenges. The Director of Sustainability moved on to another university, and while an interim position was put in place, there are no concrete plans for a permanent position. The Council remains in place, however it is shifting away from having a predominantly advisory role and now taking responsibility for decision-making and implementation. Because this function is new to them, Morgan said that they are in an adjustment period and are working on finding more efficient processes.

When asked if this was an efficient top-down structure, Morgan explained that “top-down” was not the culture of Evergreen; their hierarchy was more bottom-up. He explained there was an advantage of having the Sustainability Director report to the President, because it put the department at the same level as other departments. However, it also makes it more difficult to connect with students and keep them informed of activities and efforts. He explained that a big challenge at Evergreen is the relationship and decision-making process that occurs between students and administrators. As a state college, the administration must answer to the state legislature while Evergreen’s governance structure also calls on the administration to be accountable to the student body. This can create tension at times, especially regarding substantial sustainability efforts and other issues of change around campus. Morgan said that if students are opposed to a decision then they have the freedom to express their opposition and to try and change the decision, and the students frequently exercise this right.

Adapting Organizational Structures:

As for any future changes to the governance structure, Morgan said that they are currently evaluating the Director of Sustainability position and where it should be placed. He said that the decision at hand seems to be whether or not the position should be on the President’s staff or on the academic side; this is a discussion still in process. Morgan mentioned that this topic has come up because of the large number of student projects happening on the academic side and the heavy engagement of students with the administrative decisions. Placing the position in academics would allow for more connection to the students.

Middlebury College

Based on an interview with Jack Byrne, Director of Sustainability Integration, conducted on February 11, 2011.

Institution Profile:

- Location: Middlebury, VT
- Enrollment: 2,482
- Campus Locale: Rural
- Private
- Commitments/Affiliations: ACUPCC, AASHE, UN Climate Neutral Network, EPA Climate Leaders
- Accountable Person(s) for Climate Response: President

Overview:

Middlebury College has a long history of promoting environmental conservation. In fact, its undergraduate Environmental Studies Program is the oldest undergraduate ES program in the United States. In addition, Bill McKibben, (one of the early voices warning of climate change) is a scholar in residence.²⁶ In 1994, President John McCardell set goals, including making Middlebury, “the environmentally aware campus” and establishing its ES program as the preeminent one of its kind.²⁷ In 1995, the Middlebury College Trustees adopted the following:

Middlebury College as a liberal arts institution is committed to environmental mindfulness and stewardship in all its activities. This commitment arises from a sense of concerned citizenship and moral duty and from a desire to teach and lead by example. The College gives a high priority to integrating environmental awareness and responsibility into the daily life of the institution. Respect and care for the environment, sustainable living, and intergenerational responsibility are among the fundamental values that guide planning, decision making, and procedures. All individuals in this academic community have personal responsibility for the way their actions affect the local and global environment.²⁸

History of Climate Governance Structure:

As was indicated on the Duke/ACCO survey, the President of the college is ultimately responsible for the institution's climate response. However, many different positions and groups have been established over the decades to help the president address environmental sustainability and climate. It is also worth noting, that there has been both organizational expansion and subsequent contraction as tasks have been completed.

To begin with, an Energy Council was formed in the mid-70s, which became the Environmental Council (EC) in 1992.²⁹ This ad hoc committee is appointed by the Vice President for Administration and Treasurer, and it principally undertakes assessments, recommends policy, and advises the President.^{30,31} As just one example of the EC's role, in 2008 the EC made a recommendation to require the use of 100% recycled paper, which then went to the president, and was subsequently approved.³² As is highlighted in this example, the EC has no decision-making authority.

There have been a few other major organizational expansions as well. In the mid-90s, Middlebury created a new position, the Director of Environmental Affairs, which eventually became the Dean of Environmental Affairs. The dean is responsible for advancing environmental academic programs and fostering "...an integrated institutional vision for sustainability."³³ In addition, a full-time Sustainability Coordinator was hired in 1998. A decade later, the Sustainability Integration Office (SIO) was created, and it housed SIO's Director as well as an Outreach and Communications Coordinator. SIO takes on development, implementation, and support roles; and it reports to the dean, who subsequently reports to the Vice President for Academic Affairs.^{34,35}

There have also been organizational changes specifically related to developing and implementing a climate action plan. Several years ago, the EC proposed that a Climate Action Implementation Working Group be created to develop a plan for achieving carbon neutrality by 2016, which was eventually approved. The sixteen-member group was co-chaired by the Director of Sustainability Integration and the Director of Human Resources. Three committees were created for the implementation stages: 1) Communications and Engagement Committee, 2) Master Plan Implementation Committee, and 3) Carbon Neutrality Coordinating Team.³⁶ Today, all except

the Master Plan Implementation Committee have been absorbed by the Sustainability Integration Office.

No Need to Address Curriculum:

The individuals and groups who are responsible for the climate action plan and implementing emission reduction strategies do not need to play a large role when it comes to the development of climate curriculum. According to Jack Byrne, the Director of Sustainability Integration, this is because, "...it's almost naturally being addressed...there is so much interest, knowledge and concern about the topic on the part of the faculty." As the oldest environmental studies program in the country, it appears the program has an expansive reach throughout the college. Although there are only twelve core faculty members, there are seventy affiliated faculty who teach environmental topics, including climate change. For example, a sociology professor may offer a course that relates to climate change, which also provides a more interdisciplinary approach to environmental topics.

The Sustainability Integration Office and the Program in Environmental Studies also sponsor an annual faculty development program. The Director of Sustainability Integration and a faculty member teach a two-day workshop, specifically for non-Environmental Studies faculty who want to integrate sustainability into their courses. After completing the workshops, participants then revise or write a new course with a sustainability focus.

Stanford University

Based on an interview with Joseph Stagner, Executive Director, Department of Sustainability and Energy Management, on February 8, 2011.

Institution Profile:

- Location: Stanford, CA
- Enrollment: 18,498
- Campus Locale: Mid-Size City
- Private
- Commitments/Affiliations: AASHE, The Climate Registry
- Accountable Person(s) for Climate Response: President - John Hennessy

Overview:

Stanford is a large, private research university located within the San Francisco Bay Area in Northern California. It has an expansive campus with multiple large facilities such as stadiums, research labs, a hospital, and several professional schools.

With their many sustainability initiatives and programs, Stanford is focused on being a leader in research, teaching, and institutional practices of environmental sustainability. A comprehensive and long-range Energy and Climate Action Plan was released in October, 2009 and implementation of this plan has begun.

Overview and History of Climate Governance Structure:

According to Mr. Joseph Stagner, the Executive Director of the Department of Sustainability and Energy Management, a reorganization process started at Stanford in 2005, in response to the growing public concern over climate change. To begin with, the Sustainability Working Group was formed in 2006, and it was tasked with taking a broad view of sustainability and ensuring that different units of the university worked collectively to achieve the university's sustainability goals. To develop long-term plans and also execute those plans, Sustainability Working Teams were later created, which involved six operations-focused teams and three cross-functional teams.³⁷

Both the Working Group and Working Teams are similar in that they both include a cross section of faculty, staff, and student representatives; however, the Working Group includes senior leaders from the different groups. The Working Group often provides guidance and support to Working Teams and serves as a bridge to senior campus leadership with policy and funding recommendations from the Working Teams. The Working Group and the Working Teams collaborate, along with sustainability staff members, to be the driving force behind Stanford's sustainability efforts.³⁸

It is important to note that at the core of the organizational changes was an emphasis on leveraging Stanford's experts and efficiently grouping different climate activities. As part of the reorganization process that led to the Working Group and Working Teams, Stanford looked at what their governance structure should look like, and decided to put greenhouse gas reduction strategies in one category and academic research in another category. In terms of dealing with Stanford's own emissions, they decided that the operations and facilities staff would be the people to turn to.

Stagner said the university decided that whoever crafts the long term energy plans both on the supply and demand side should be intimately involved with the operational functions that are related to emissions. There was a high degree of collaboration between the academic side and the operational side to seek input and knowledge in order to produce a plan that was long term, but still flexible enough to react to changes in the future.

One of the most significant changes that took place was the consolidation of departments working on climate change, energy and sustainability efforts. This led to the creation of the Office of Sustainability and the Department of Sustainability and Energy Management, which put the different operational groups that have control over procurement and use of energy and transportation in one place. This includes Parking & Transportation, Utilities and Sustainability Programs.

Previously, demand-side energy was managed by three different departments within a zone and maintenance program. This included buildings and zone engineers managing energy retrofits and building operations, a maintenance group dealing with HVAC systems and other physical systems on campus, and an energy efficiency group. The decision was made to bring all of the

demand side management under the Department of Sustainability and Energy Management so the management was moved and a new zone facilities management group was created. Now, management of both the supply and demand sides is located in the same department. As a result, the majority of all emissions and the ability to plan and control emissions in the future are centrally located.

Integration and Expertise:

Stagner believes that having direct operation control over all of these groups is working well for Stanford as it provides an efficient structure to take plans directly to the decision makers (President and Board). This minimizes bureaucracy and puts the people in charge that have knowledge and control over emissions and energy procurement. He also believes it is also very beneficial to have a person that has knowledge of the energy industry. Lastly, whether at a public or private institution, it is critical to have supportive and knowledgeable administrators.

When asked what the barriers to success were for Stanford, Stagner said that there are very few internal barriers and most barriers are external to the University, such as procurement of energy and local utilities. Stagner said the biggest tool a climate change officer needs is regulatory relief; they need to be empowered to procure energy of the carbon content they want. Stanford is currently working to find ways to overcome the California regulatory challenges and is hopeful for success.

Although addressing climate change and reducing emissions is of great importance to Stanford, it is worth noting that they do not have external pressure from the ACUPCC. Many colleges that took part in the Duke/ACCO survey stated that they have made organizational and strategic changes directly as a result of their commitments. Stanford is not under this pressure and presumably this offers greater flexibility with long-term planning. When asked why Stanford has not signed the ACUPCC, Stagner said that the university did not want to commit to a goal that they may not be able to reach. The university first wanted to determine what goal was realistic and then work towards that goal rather than set the goal first and then determine how to reach it. The President was not comfortable making a promise that they were unsure they could keep.

Tulane University

Based on an interview with Liz Davey, Director, Environmental Affairs, conducted on February 23, 2011.

Institution Profile

- Location: New Orleans, LA
- Enrollment: 11,464
- Campus Locale: Large City
- Private
- Commitments/Affiliations: ACUPCC, AASHE, U.S. Green Building Council
- Accountable Person(s) for Climate Response: Multiple People

Overview:

Even though student research and activism led to new sustainability initiatives and the development of the Director of Environmental Affairs position in the late '90s, the real turning point for the university came after Hurricane Katrina hit New Orleans. Following the flooding of the city, Tulane undertook many initiatives to make its campus more sustainable, including energy-efficiency and LEED Green Building projects and developing a climate action plan (it is currently awaiting final action by senior administration).³⁹ To impact the larger community, Tulane created the Center for Public Service to implement public service requirements in the undergraduate curriculum and Tulane's Center for Bioenvironmental Research helped develop the Holy Cross Historic District and Lower Ninth Ward Sustainable Restoration Plan.⁴⁰ In fact, according to one environmental ranking, the Sustainable Endowments Institute's "The College Sustainability Report Card," Tulane has gone from a grade of C in 2007 to an A- in 2011.^{41,42}

History of Climate Governance Structure:

When Liz Davey became the first environmental sustainability coordinator on campus in 1999, she was a program manager and reported to an academic research unit, the Center for Bioenvironmental Research. Later she moved to the Office of Facilities Management and Campus Development once it became clear that being in an academic research unit was no

longer a good fit given the sustainability goals and current organizational structure. For instance, after switching offices, Davey was then present at meetings when building decisions were being made, which is important when working on tasks such as energy efficiency.

The other major organizational change was the creation of the Climate Commitment Advisory Committee in 2009. The presidentially-appointed committee is chaired by the Director of the Center for Bioenvironmental Research and is composed of faculty, students, and staff. Its principal role is to review ideas and suggestions from the campus community that impact energy use and campus culture.

Campus Engagement:

Particularly after the events following Hurricane Katrina, Tulane has emphasized public service and sustainability in its region. Davey said, "...we had the elements of all these things here at the university, but I think it just became an overriding mission for the university and for everyone at the university to help rebuild the best city possible." She added that Tulane is "...thinking about how to create a lasting sustainable community for the future." To achieve such ambitious goals, it is therefore critical to engage the entire campus population and get everyone involved.

Tulane has found several ways to integrate the campus population into its climate plans and strategies. To start, part of the role of the Climate Commitment Advisory Committee is to listen to students, faculty, and staff and review and consider their ideas for reducing the campus's carbon emissions. The Committee even has a blog to keep the campus updated on their progress. Additionally, the climate action plan was developed with the help of students. An environmental sociology class and a global environmental politics class have conducted telephone surveys to estimate emissions from transportation and a business class reviewed commercial renewable energy technologies that could potentially be deployed on campus properties. To further foster collaboration between staff, faculty, and students, Davey also piloted an introductory course about climate change that features guest lectures by faculty.

University of Northern British Columbia

Based on an interview with Kyle Aben, Climate Change Site Coordinator, conducted on February 8, 2011.

Institution Profile:

- Location: Prince George, British Columbia
- Enrollment: 4,200
- Campus Locale: Rural (Forest)
- Public (Canada)
- Commitments/Affiliations: AASHE, Pacific Institute for Climate Solutions
- Accountable Person(s) for Climate Response: Single Individual – VP of Administration and Finance

Overview:

The University of Northern British Columbia is a small, northern, research-intensive university in Canada. Located in a forest, the university is focused on the environment surrounding it.

Since its establishment in 1990, the university has provided a number of courses on forestry and environmental science; thus, the concept of sustainability has been part of its curriculum since the beginning. Today, a large proportion of the student body is enrolled in environmental programs.

As a young university the infrastructure is already efficiently designed; however, it continues to improve upon its energy savings. Not only does it aim to reduce the campus's carbon footprint, it tries to better its surrounding city and the broader northern British Columbia area as well. The effort is so strong that the university has trademarked itself as "Canada's Green University".⁴³

One of the most significant drivers of the university's climate actions is the provincial government. Since the university is a public institution, UNBC was required to comply with the Greenhouse Gas Reduction Targets Act and reach carbon neutrality by 2010. To do this, UNBC must follow mandates from the Climate Action Secretariat, who coordinates climate action activities across government and with stakeholders.

UNBC did indeed achieve carbon neutrality by 2010 through a combination of carbon reduction efforts and carbon offsets; however UNBC's hope is to eventually be 100% emissions free and 100% renewable energy based. Among its environmental accolades, the university has received a great deal of recognition for its efforts in bioenergy and efficient lighting.⁴⁴

History of Climate Governance Structure:

In the past three years, UNBC has hired a Climate Change Site Coordinator as part of the new Pacific Institute for Climate Solutions (PICS), a Sustainability Manager, and an Energy Manager. Mr. Kyle Aben, the Climate Change Site Coordinator, indicated that these three positions probably would not have been created so quickly if it hadn't been for the government policies put in place. He said PICS is composed of four research universities in the province and its task is to focus on climate change solutions; therefore they look to bridge the gap between academia and the practitioners on the ground working on carbon neutrality, offsets, and GHG mitigation.

With the growing interest and availability of biofuels and bioenergy, new government policies, and support from the university administration, Aben said that things lined up to move them towards their goal of being a green university.

Although UNBC has reached carbon neutrality, the university is still dependent on carbon offsets. To reduce the offset portion, UNBC now focuses on expanding their bioenergy project. However, there is some debate within the university about the effectiveness of bioenergy when trying to reach carbon neutrality and this is a challenge the university will likely continue to face.

Effectively Communicating with Administrators:

Aben emphasized that he, the energy manager, and the sustainability manager are a team. He said that they are getting the attention of the senior administration and they sit on decision-making committees. He also said that the energy manager is particularly effective because he is able to monetize and estimate financial returns on possible investments, which is most relevant for the administration and therefore provides a more credible argument for environmental projects. Aben said that these issues need to be addressed at every level of the university, and they are in the process of gathering data to implement the AASHE STARS system, which has the

full support of the administration. This is their next big step and he hopes that benchmarking will allow them to reach broadly across the departments to find further opportunities for environmental stewardship.

University of Washington – Seattle Campus

Based on an interview with Claudia Frere, Manager, Environmental Stewardship and Sustainability Office, conducted on February 11, 2011.

Institution Profile

- Location: Seattle, Washington
- 2010 Enrollment: - 48,022⁴⁵
- Campus Locale: Large City
- Public
- Commitments/Affiliations: ACUPCC, AASHE, and National Wildlife Federation
- Accountable Person(s) for Climate Response: Other

Overview:

The University of Washington – Seattle campus (UW) is a large institution in downtown Seattle, comprising 48,000 students and more than 33,778 faculty and staff.⁴⁶ It has been the recipient of many environmental awards and positive ratings, including an “A-” on the Sustainable Endowment Institute's College Sustainability Report Card, and a ranking of #4 in the nation on the Sierra Club Magazine's “Cool Schools” list.^{47, 48}

History of Climate Governance Structure:

Over the last several years, significant organizational changes have occurred at the UW campus. Ms. Claudia Frere, the Manager of the Environmental Stewardship and Sustainability Office, said that the catalyst for the restructuring began when University President Mark Emmert established a policy statement on environmental stewardship in 2004. The following year, the Environmental Stewardship Advisory Committee (ESAC) was created, which is composed of faculty, staff, and students, and it serves as an advisory group to the President, Provost and Senior Vice President of Finance & Facilities. Later, ESAC was also charged with developing a Climate Action Plan (CAP).

In 2008, the Environmental Stewardship and Sustainability Office was established and given two primary roles: 1) coordinate information and activities related to sustainability on campus, and 2)

provide administrative support to the ESAC. One of its first tasks was to take the lead role and facilitate the development of the university's CAP, which was a ten-month process and ultimately included input from over one hundred and fifty faculty, administrative staff, and students. Frere described the process in the following way: "...it wasn't a formalized committee, such as the Environmental [Stewardship] Committee, although it was sponsored by ESAC; it was more of a collaboration. So the office was basically charged with project management for development of the plan."

Interestingly, when interviewing Frere it became clear that both before and after all of the new groups were created, there was not and is still not a fully vetted hierarchy for climate actions as is the case at other colleges. Rather there is a strong collaborative effort and responsibilities are shared among the different operational units, based on function and expertise. In the last year, however, senior leadership has asked that policies be written and will be vetted in the 2012 fiscal year.

The Environmental Stewardship and Sustainability Office operates within the F2 Administration/Strategy Management unit of UW Finance & Facilities (and therefore reports to the Senior Vice President of Finance and Facilities), ESAC reports to the Provost and Senior Vice President, and the Environmental Stewardship and Sustainability Office assists ESAC. Thus, from Frere's viewpoint, in terms of the actual implementation of emission reduction strategies there are many groups that essentially operate independently, but collaborate on campus-wide projects and initiatives, since her office's role is primarily administrative.

In addition, as a public university, UW's policies are largely driven by the state government, and this currently includes emissions targets--UW has set emissions targets that adhere to the State of Washington's goals. Frere pointed out that UW is not only accountable to the State, but also accountable to the public.

Students hold UW accountable as well. In 2010, after students collected 5,511 student signatures and spent over 1,000 volunteer hours, the Campus Sustainability Fund (CSF) was formed and seeded with almost \$340,000 from the Services and Activities Fee Committee.⁴⁹ A panel of seven student voting members now decides how to allocate funding for student, faculty, and staff projects.

A Decentralized, Yet Collaborative Structure that Works:

Looking back on the CAP and the many organizational changes, Frere said that the decentralized structure that UW now has is the most appropriate arrangement for its campus when dealing with climate. As a result, she believes UW has been able to fully utilize the extensive intellectual capital on its campus, specifically in the environmental field.

According to Frere, the role of the Environmental Stewardship and Sustainability Office is to serve as the “glue” for the many different functional units. This is why the Environmental Stewardship and Sustainability Office is part of the Strategy Management Office/Finance & Facilities Administration. Frere believes the Strategy Management Office has a great understanding of the university structure, and by being a part of it, it is easier to navigate and coordinate with other groups.

Appendix B: List of Responding Institutions

State	University Name
AK	University of Alaska Fairbanks
AL	Auburn University Main Campus
AL	University of Alabama, The
AR	University of Arkansas at Little Rock
AR	University of Arkansas Main Campus
CA	Azusa Pacific University
CA	California Institute of Technology
CA	California State Polytechnic University-Pomona
CA	California State University-Channel Islands
CA	California State University-Fresno
CA	California State University-Fullerton
CA	California State University-Long Beach
CA	California State University-Monterey Bay
CA	California State University-Sacramento
CA	California State University-Stanislaus
CA	Loyola Marymount University
CA	Pomona College
CA	Stanford University
CA	Univ of California, Merced
CA	University of California-Berkeley
CA	University of California-Davis
CA	University of California-Los Angeles
CA	University of La Verne
CO	Colorado School of Mines
CO	Colorado State University
CO	University of Colorado at Denver and Health Sciences Center
DC	American University
DC	George Washington University
DC	Georgetown University
DC	Howard University
FL	Florida Agricultural and Mechanical University
FL	Florida Atlantic University-Boca Raton
FL	Florida International University
FL	Florida State University
FL	University of Central Florida
FL	University of Florida
FL	University of North Florida
FL	University of South Florida
FL	University of West Florida, The

GA	Agnes Scott College
GA	Brenau University
GA	Emory University
GA	Kennesaw State University
GA	University of Georgia
HI	University of Hawaii at Manoa
IA	Central College
IA	Iowa State University
IL	Dominican University
IL	North Central College
IL	University of Chicago
IL	University of Illinois at Chicago
IN	DePauw University
IN	Taylor University-Upland
KS	Emporia State University
KY	Berea College
KY	Transylvania University
KY	University of Louisville
LA	Tulane University of Louisiana
MA	Bentley University
MA	Northeastern University
MA	University of Massachusetts Medical Sch Worcester
MA	University of Massachusetts-Lowell
MD	Bowie State University
MD	Goucher College
MD	Johns Hopkins University
MD	Loyola College in Maryland
MD	University of Baltimore
ME	College of the Atlantic
MI	Central Michigan University
MI	Eastern Michigan University
MI	Grand Valley State University
MI	Oakland University
MI	Wayne State University
MI	Western Michigan University
MN	Carleton College
MN	College of Saint Benedict
MN	Macalester College
MN	Saint Johns University
MN	University of Minnesota-Morris
MO	Missouri University of Science and Technology
MO	University of Missouri-Kansas City
MO	Washington University in St. Louis

MS	University of Mississippi Main Campus
MS	University of Southern Mississippi
MT	University of Montana-Missoula, The
NC	Duke University
NC	Elon University
NC	Fayetteville State University
NC	North Carolina A & T State University
NC	University of North Carolina at Greensboro
NC	Wake Forest University
NH	Plymouth State University
NJ	College of New Jersey, The
NJ	Montclair State University
NM	University of New Mexico-Main Campus
NV	University of Nevada-Reno
NY	Clarkson University
NY	Colgate University
NY	Cornell University-Endowed Colleges
NY	CUNY John Jay College Criminal Justice
NY	Hobart William Smith Colleges
NY	Ithaca College
NY	Long Island University-Brooklyn Campus
NY	SUNY at Albany
NY	SUNY College at Oswego
NY	SUNY College of Technology at Alfred
NY	Yeshiva University
OH	Case Western Reserve University
OH	Miami University-Oxford
OH	Ohio State University-Main Campus
OH	University of Cincinnati-Main Campus
OH	University of Dayton
OK	University of Oklahoma Norman Campus
OR	Oregon State University
OR	Reed College
OR	Southern Oregon University
PA	Bucknell University
PA	Dickinson College
PA	Drexel University
PA	Lehigh University
PA	Slippery Rock University of Pennsylvania
PA	Temple University
PA	University of Pennsylvania
RI	University of Rhode Island
SC	Furman University

SC	University of South Carolina-Columbia
SD	University of South Dakota
TN	University of Tennessee-Chattanooga, The
TN	Vanderbilt University
TX	Abilene Christian University
TX	Baylor University
TX	Saint Edward's University
TX	University of North Texas
TX	University of Texas at Arlington, The
TX	University of Texas at San Antonio, The
UT	Utah State University
UT	Westminster College
VA	George Mason University
VA	Hampton University
VA	Radford University
VA	Virginia Commonwealth University
VA	Washington and Lee University
VT	Bennington College
VT	Middlebury College
VT	Saint Michaels College
WA	Evergreen State College
WA	Seattle University
WA	University of Washington-Seattle Campus
WI	Marquette University
WI	University of Wisconsin-La Crosse
WI	University of Wisconsin-Oshkosh
WI	University of Wisconsin-Platteville
WV	West Virginia Wesleyan College
IL	City Colleges of Chicago-Wilbur Wright College
IL	Kankakee Community College
British Columbia	University of Northern British Columbia
Nova Scotia	Dalhousie University
Ontario	Brock University
Ontario	Niagara College
Saskatchewan	University of Saskatchewan

Appendix C: Additional Demographic Comparisons in Higher Education

Comparing Public and Private Institutions

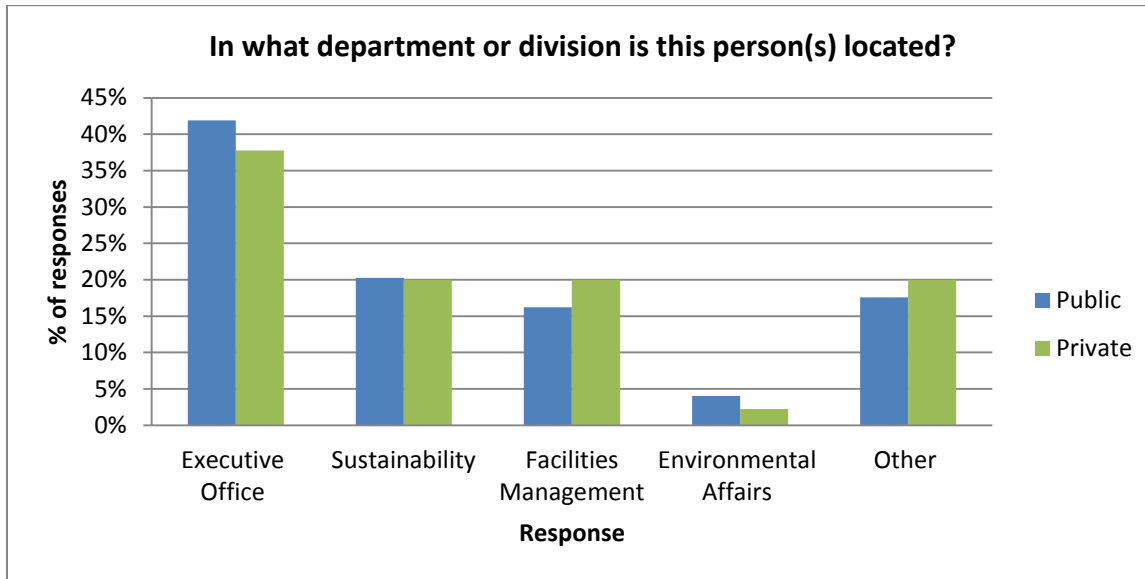


Figure 52: Location of position between public and private institutions

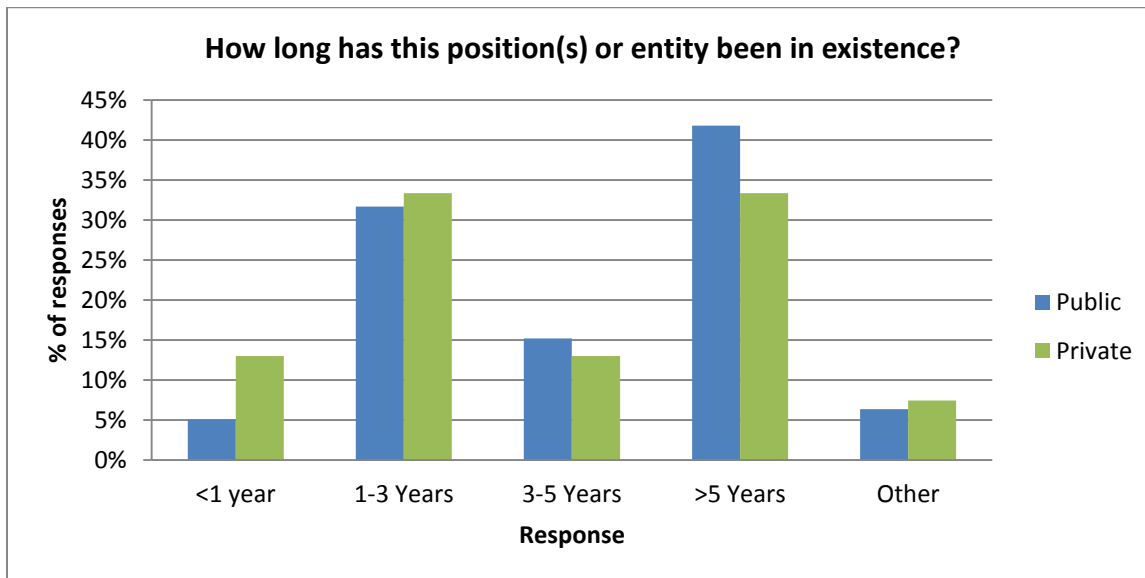


Figure 53: Length of position existence between public and private institutions

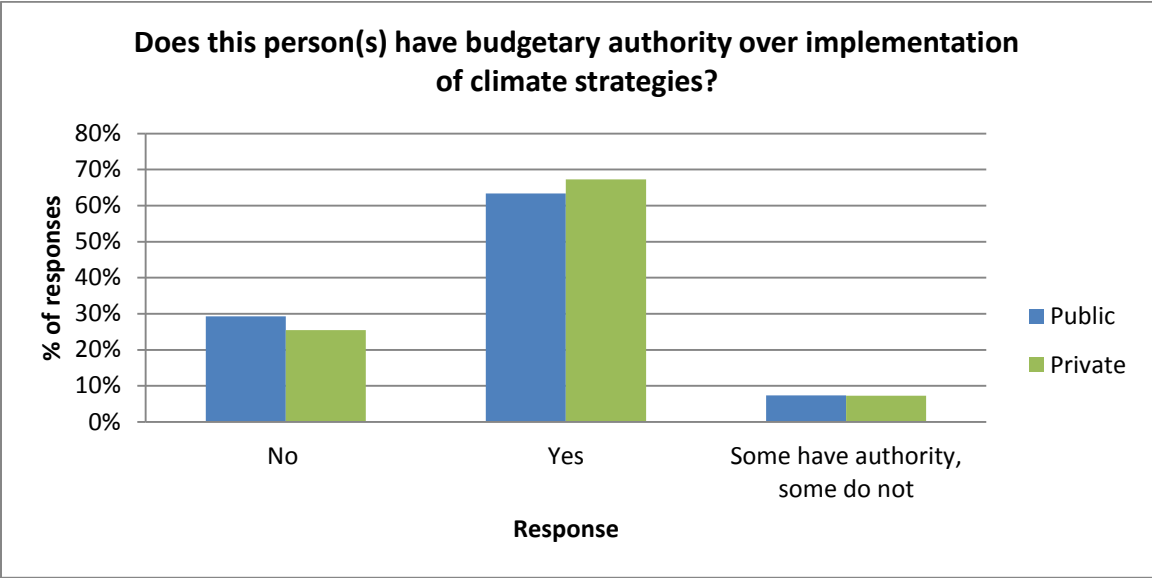


Figure 54: Budgetary authority between public and private institutions

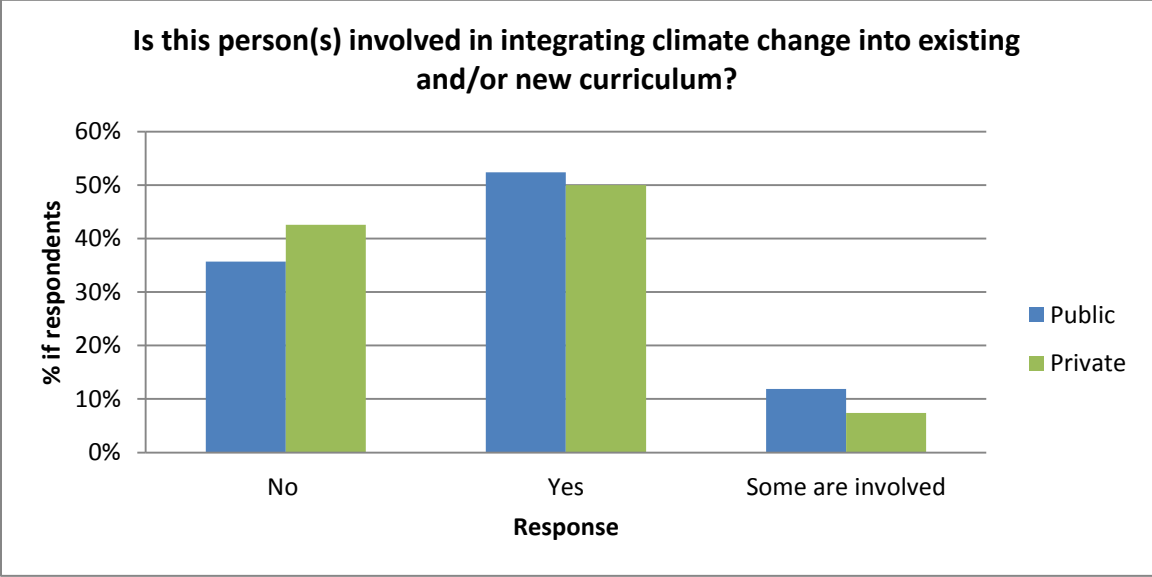


Figure 55: Curriculum integration between public and private institutions

Comparing Campus Locales

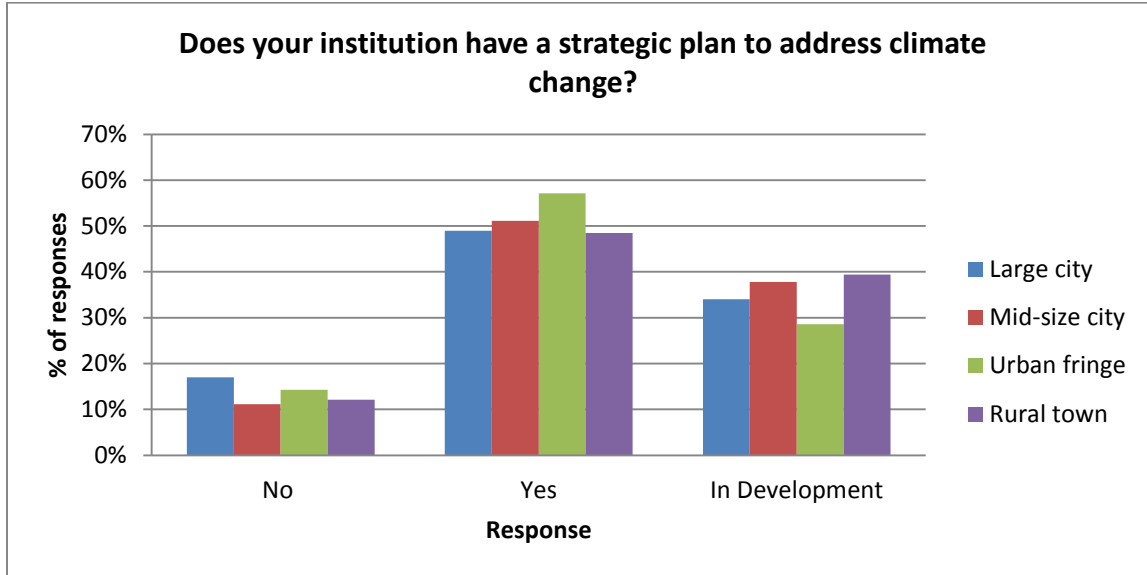


Figure 56: CAP development among different campus locales

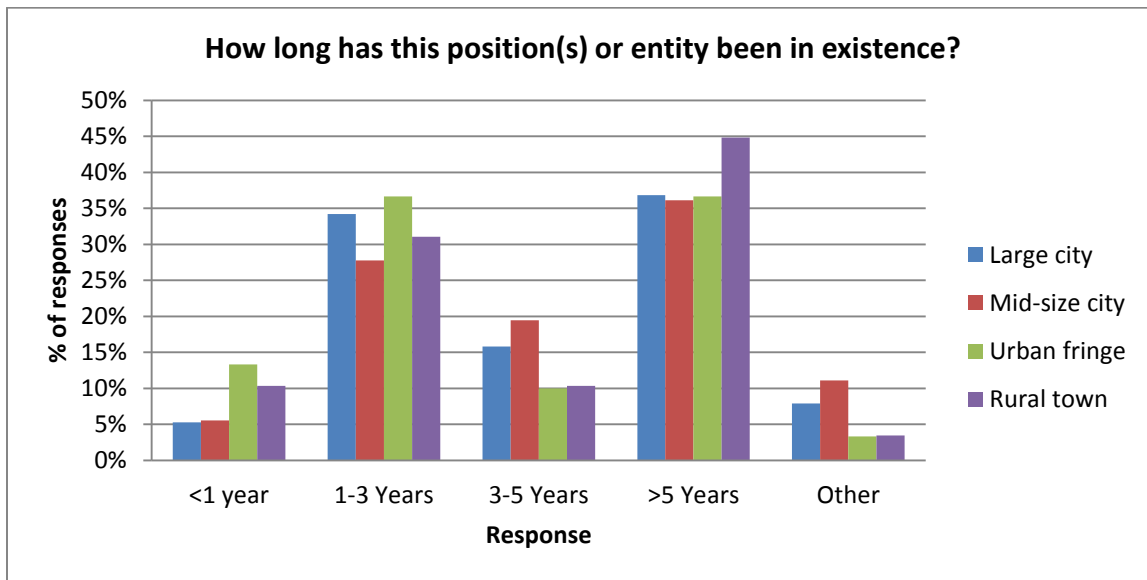


Figure 57: Length of position existence between different campus locales

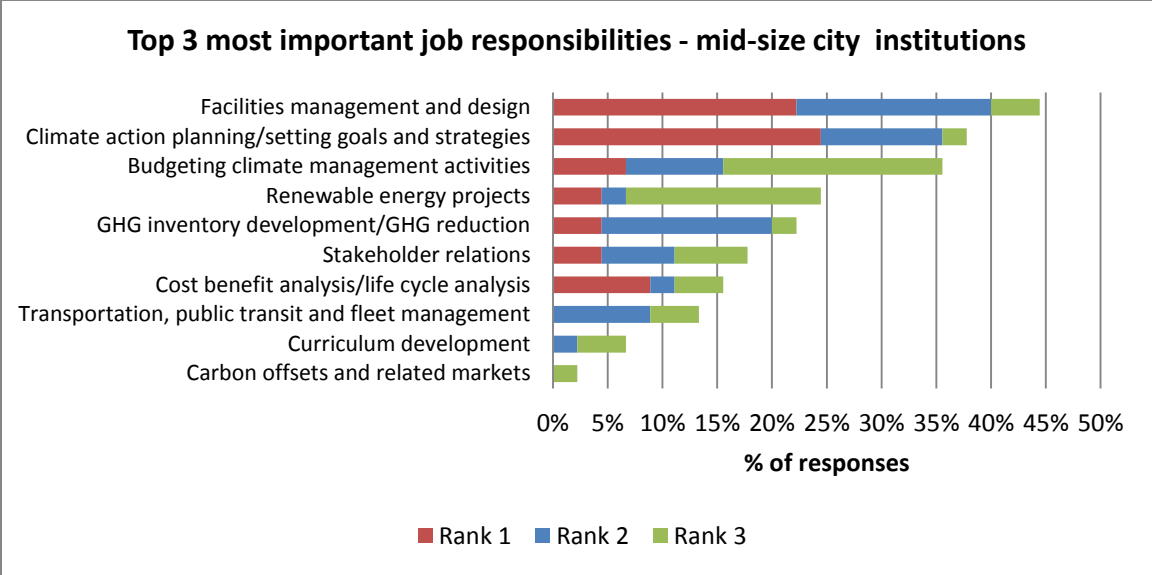


Figure 58: Top ranked job responsibilities for institutions located in mid-size cities

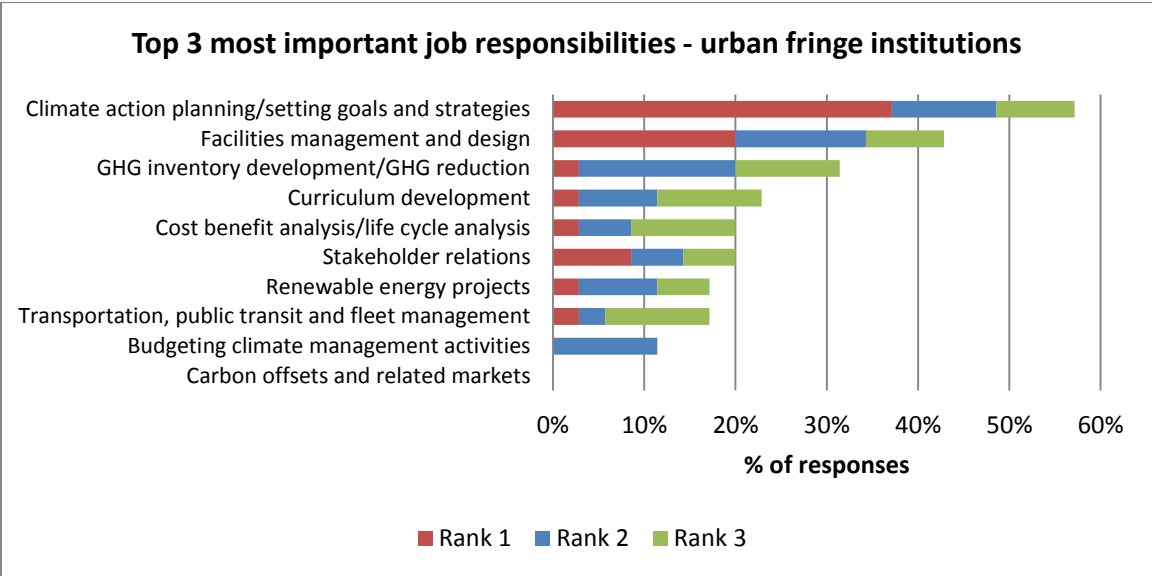


Figure 59: Top ranked job responsibilities for institutions located in urban fringe locations

Comparing Campus Size

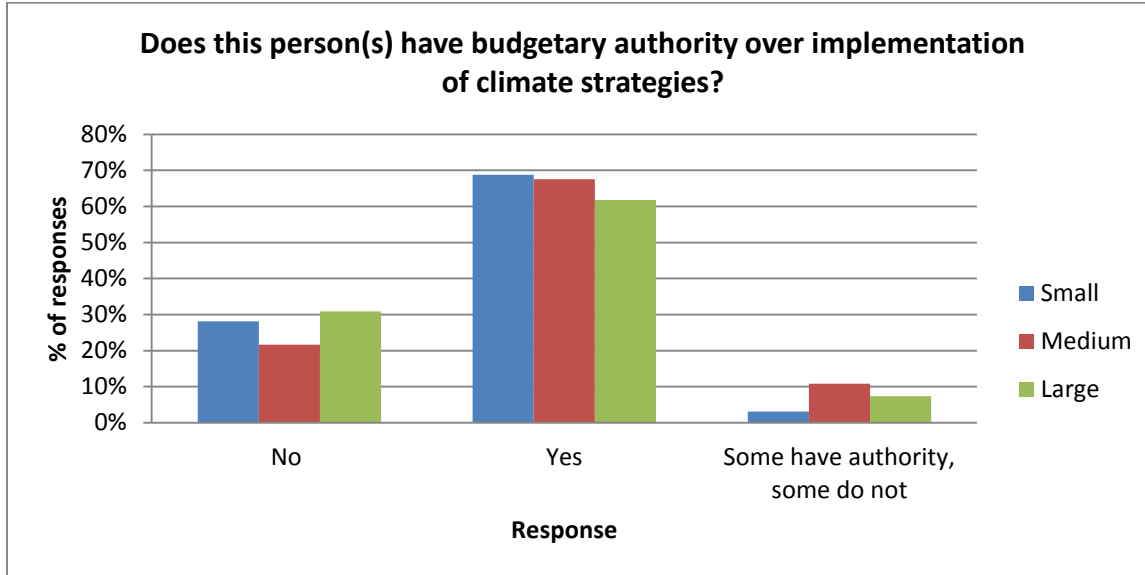


Figure 60: Budgetary authority between different campus sizes

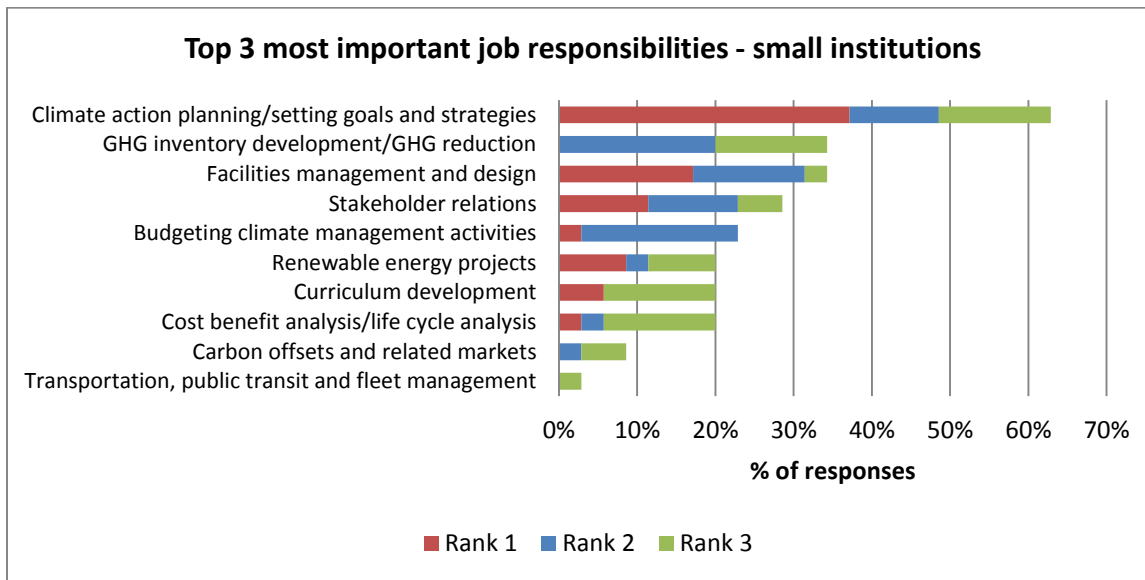


Figure 61: Top ranked job responsibilities among small institutions

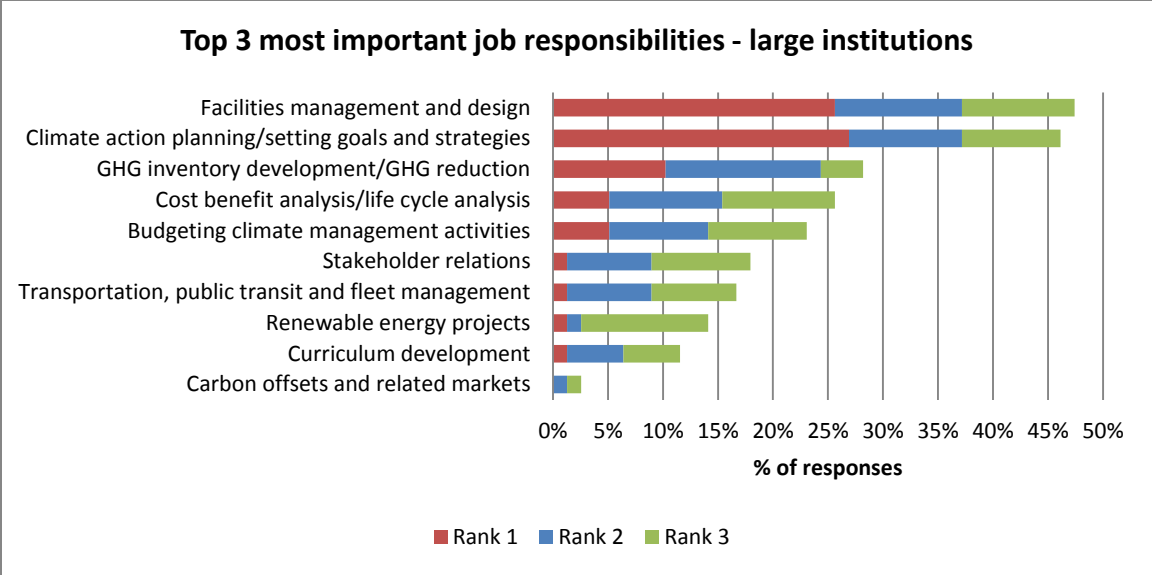


Figure 62: Top ranked job responsibilities among large institutions

Comparing Residential with Non-Residential Campuses

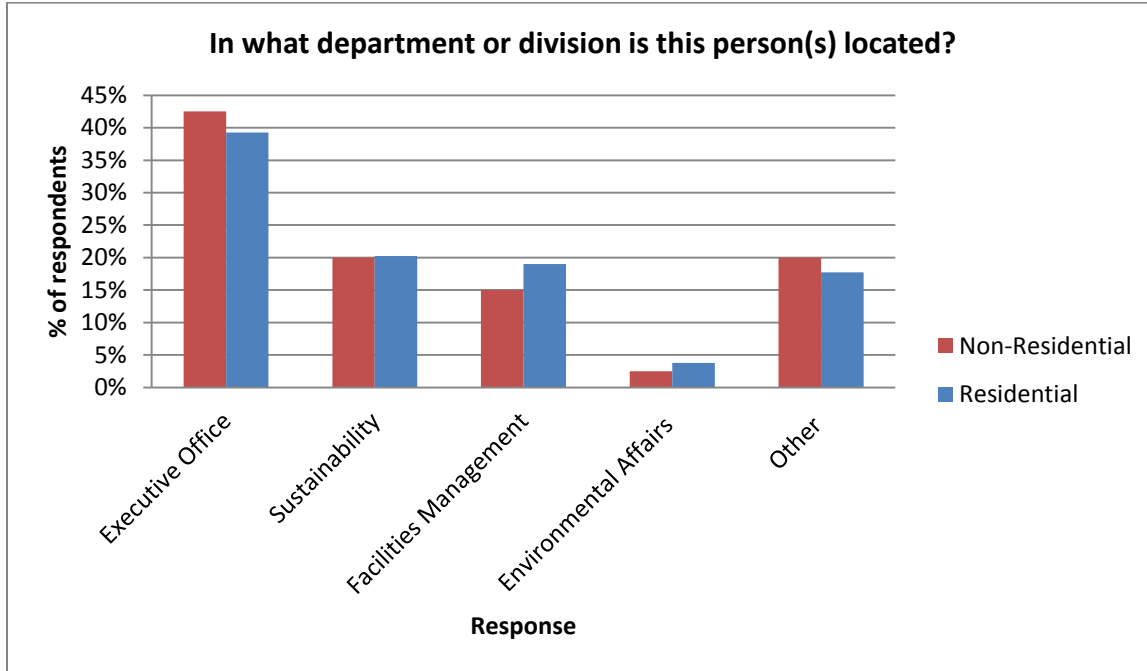


Figure 63: Location of position between residential and non-residential institutions

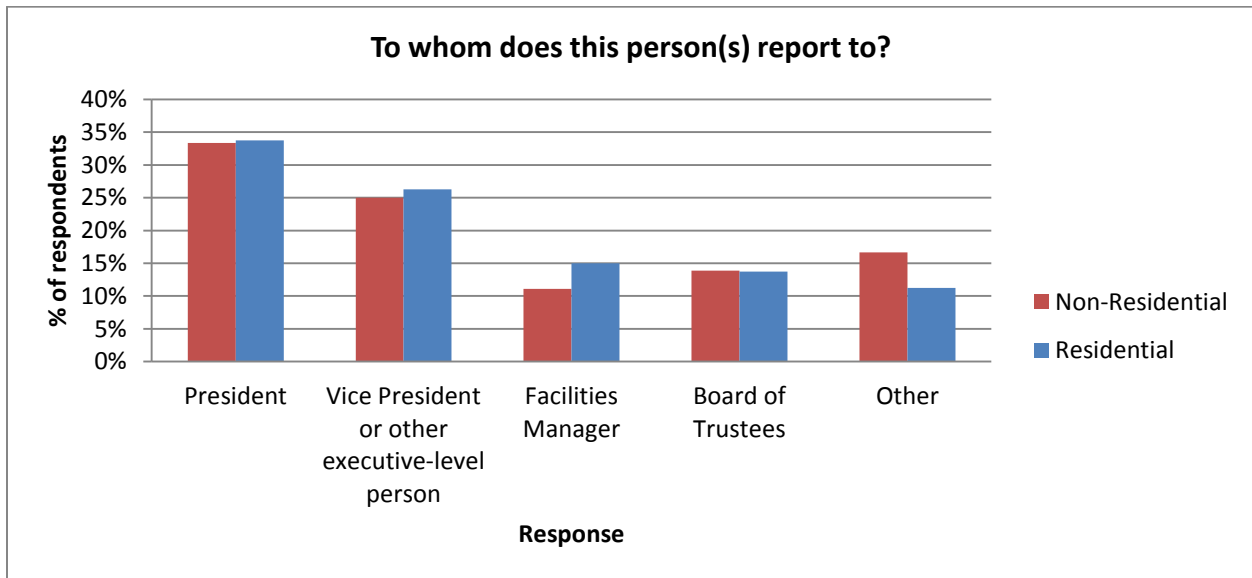


Figure 64: Reporting structure among residential and non-residential institutions

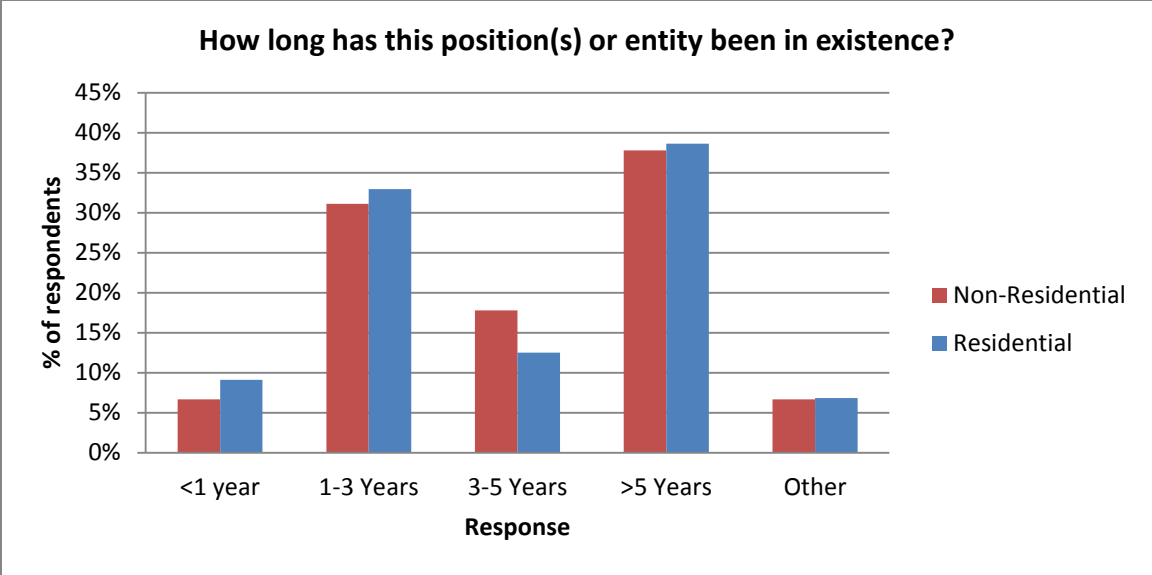


Figure 65: Length of position existence among residential and non-residential institutions

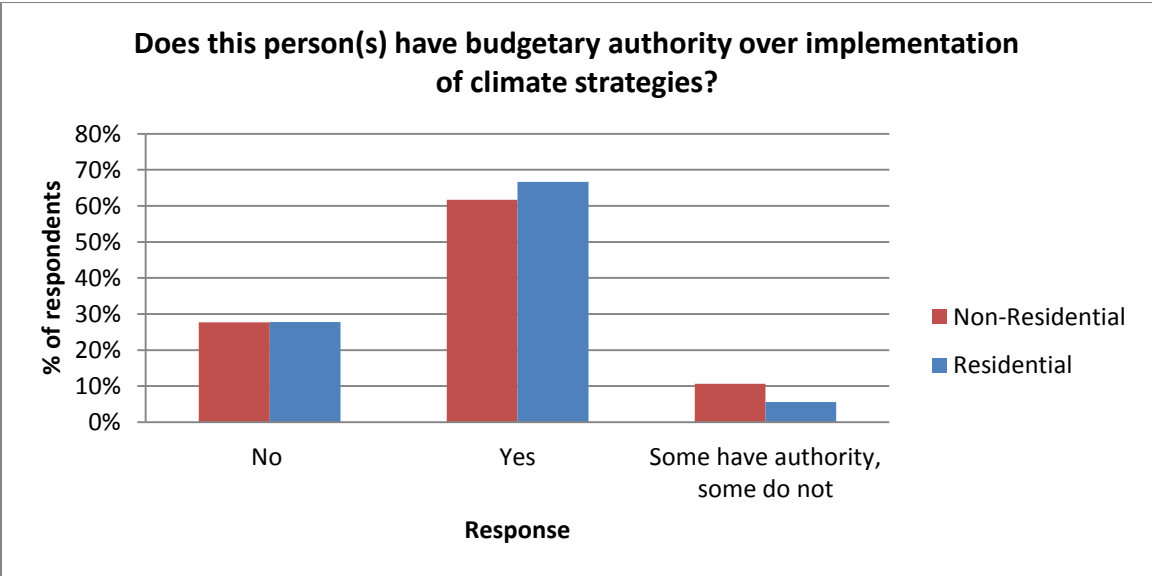


Figure 66: Budgetary authority among residential and non-residential institutions

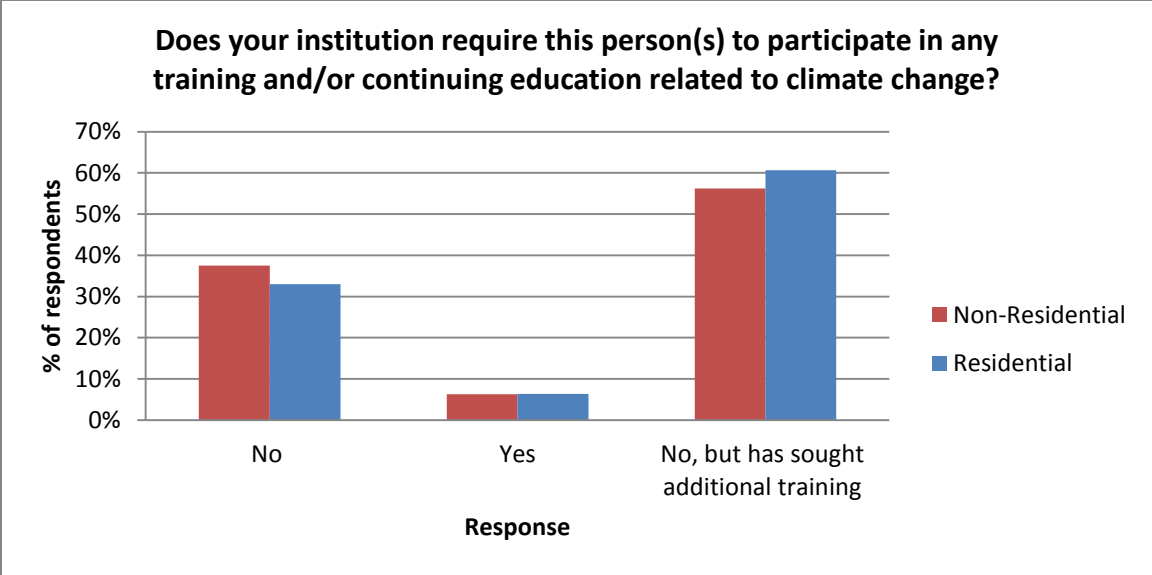


Figure 67: Training requirements among residential and non-residential institutions

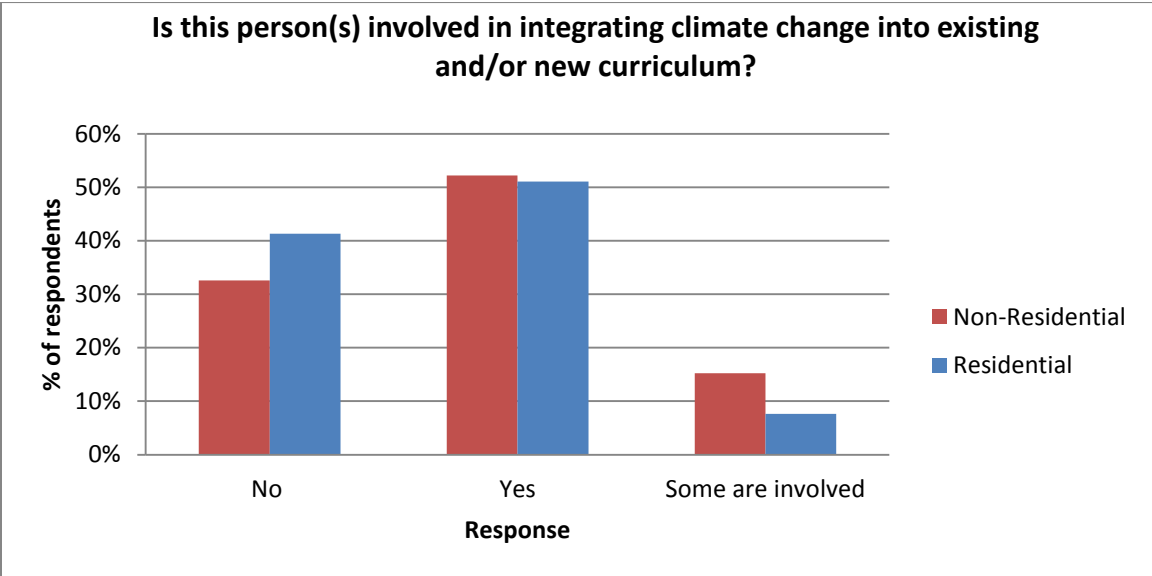


Figure 68: Curriculum integration among residential and non-residential institutions

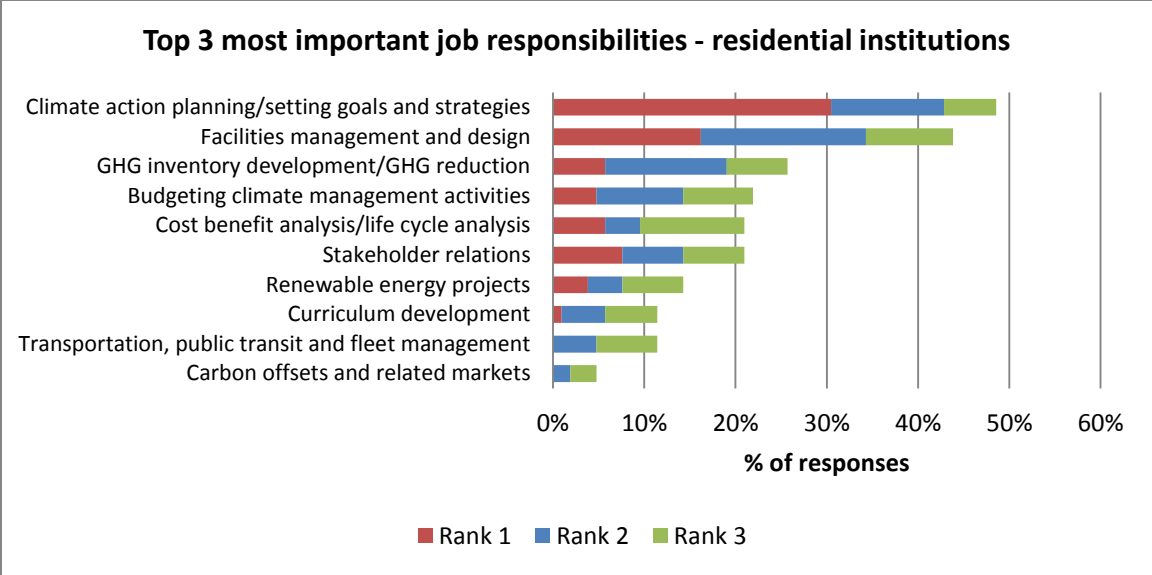


Figure 69: Top ranked job responsibilities among residential institutions

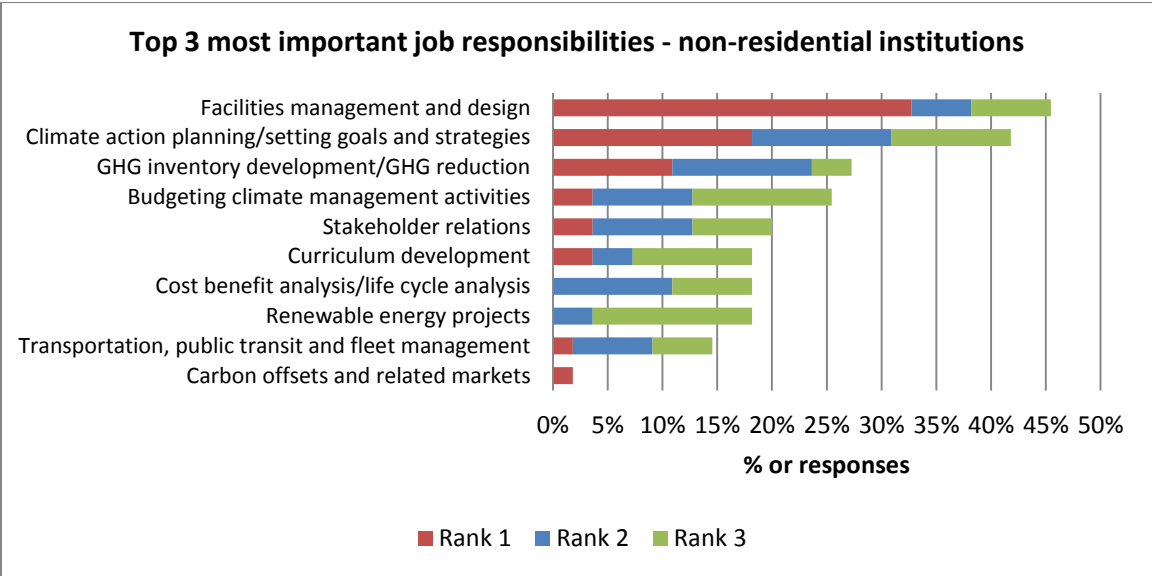


Figure 70: Top ranked job responsibilities among non-residential institutions

Appendix D: Full Questionnaire

The following pages include all of the questions included in the survey. Majority of survey responses were collected online via an online survey tool, Qualtrics.com. The remaining responses were collected in a Word document as shown and then subsequently entered into the online survey tool. Please notice there are some questions that will be skipped based upon question responses.

**ACCO-Duke Research Project on Climate Governance
in U.S. and Canadian Higher Education Institutions**

About this Questionnaire

This project is a joint effort between graduate students at Duke University and the Association of Climate Change Officers (ACCO). The purpose of this survey is to assess climate change governance and climate change professionals in higher education institutions. The information gathered and reported by the project managers will be used to draw conclusions on the state of climate change as a profession and will be shared via a publication and an April 2011 event to unveil the findings.

- Please only submit one questionnaire response per institution.
- Deadline for all submissions is COB on December 17, 2010.
- This survey is expected to take approximately 15 to 20 minutes.
- **IMPORTANT:** Please note that some questions posed in the questionnaire are dependent upon answers to previous questions. In this particular document, we've highlighted instructions in red and questions in blue.

Key Terms

- **Project Managers:** Four Duke University graduate students in partnership with the Association of Climate Change Officers (ACCO)
- **Higher Education Institution:** Includes accredited 2 year, 4 year, and community colleges and universities
- **University Executive:** Refers to executive level positions such as the University President, Vice President, Provost etc.
- **Climate Change:** Refers to any distinct change in measures of climate lasting for a long period of time. In other words, "climate change" means major changes in temperature, rainfall, snow, or wind patterns lasting for decades or longer.

Answer Type Terms (pertains to this Word document)

- **Radio Box:** Only one response may be selected.
- **Check Box:** One, multiple or all choices may be selected.

Questions

Please contact the Duke project managers (dukeproject@ACCOonline.org) or ACCO Executive Director Daniel Kreeger (dkreeger@ACCOonline.org - 202-496-7390) with questions about the research project.

An FAQ can be found at the following link: <http://www.accoonline.org/duke/faq.html>

By continuing with this survey, you agree that you have read and understand the above information and consent to participate in this survey.

1. Please choose the name of the institution the responses to this survey will be based upon. (NOTE: If not listed, please choose 'Not Found' in the 3rd drop down menu and enter institution name below.)

- **Answer Type:** Drop Down Menus
 - Country
 - State
 - University Name

If name is not found: Please enter your institution's name:

- **Answer Type:** Single Line Text Box
 - Enter institution name:
-

2. **Survey Participation Guidelines:** In an effort to disseminate potential lessons learned surrounding climate change governance in higher education institutions, project managers will be compiling results from this survey to produce a series of academic and published reports. If you would like to exclude your institution from being identified or referenced in any related reports/publications, please select the "Opt Out" box below. (NOTE: Selecting this box means that the answers provided in your response will only be used for aggregated information, and your response will remain completely anonymous.)

- **Answer Type:** Radio/Check Box
 - Opt out (Your institution will not be identified or referenced if this box is selected)
-

3. Please identify a point of contact responsible for survey responses submitted. The project managers anticipate receiving responses to questions that may require clarification. We ask that survey respondents identify a point of contact responsible for the content submitted, and whom can answer questions that may arise during the course of this survey (and/or future surveys on related topics).

Regardless of 'Opt Out' status selected above, project managers will not use any person's name or contact information in published materials, and further stipulate that this information will only be used to follow up with respondents regarding their survey responses (and/or for future surveys on related topics).

- **Answer Type:** Single Line Text Box
 - Name:
 - Job Title:
 - Email:
-

4. Please identify affiliations your institution maintains related to climate change (check all that apply):

- **Answer Type:** Check Box
 - Signatory to the ACUPCC (American College & University Presidents' Climate Commitment)
 - Membership in AASHE (Association for the Advancement of Sustainability in Higher Education)
 - Member of the EPA Climate Leaders Program
 - Member of The Climate Registry
 - Others (please list any additional affiliations): _____
-

5. Which of the following has significant climate and energy related implications for the institution (e.g. these operations would indicate significant energy consumption and/or climate-related risks/opportunities)? Please include facilities on satellite campuses. (Choose all that apply)

- **Answer Type:** Check Box (Other category includes a single line text box)
 - Membership in AASHE (Association for the Advancement of Sustainability in Higher Education) > 10,000
 - Research facilities/laboratories
 - Hospital or large clinics
 - Athletic facilities (capacity > _____)
 - Large Residence Halls
 - Professional schools (Business, Law, Medical)
 - Others (please describe and/or list): _____

6. Has your institution undergone any organizational restructuring related to climate change governance in the past 3 years? (e.g. creation of a new position and/or department; other changes to the organization chart)

- **Answer Type:** Radio Box
 - Yes
 - No

If “YES”: Please describe the restructuring that took place and the reasoning for the restructuring.

- **Answer Type:** Multi-line Text Box

7. Does your institution have a strategic plan (e.g. Climate Action Plan) to address climate change?

Note: This question is a branch question. Please note secondary questions or instructions based on the answers selected.

- **Answer Type:** Radio Box
 - Yes
 - A plan is in development
 - No

If “Yes”: Who is and/or was involved in the development of this climate plan? (Please identify the job titles of the people and/or parties involved and their roles)

- **Answer Type:** Multi-line Text Box

If “In Progress”: Who is and/or will be involved in the implementation of this climate plan? (Please identify the job titles of the people and/or parties involved and their roles)

- **Answer Type:** Multi-line Text Box

If “No”: Please Proceed to Question 13

8. Who directly oversees your institution's response to climate change and is accountable (i.e. possesses the highest authority regarding climate change decisions) for addressing the economic, operational and environmental implications of climate change, potentially including directing strategies and/or overseeing budgetary considerations?

Note: This question is a branch question. Please note secondary questions or instructions based on the answers selected.

- **Answer Type:** Radio Box
 - (a) The President or Chief Executive of your institution
 - (b) A single individual (either executive-level or staff-level)
 - (c) A committee, panel or task force (e.g. sustainability/climate change committee, a Board of Trustees committee or the Board of Trustees itself)
 - (d) Multiple people (e.g. multiple people are accountable for various components but are not formally in a committee)
 - (e) Other (e.g. any combination of the above options; governance not described by any of the options above)
 - (f) There is currently no person or persons accountable for climate change issues within your institution

If answer (a) or (b) above: Please proceed to the next question.

If answer (c) above: Please skip the next question and proceed directly to question 22 (page 8).

If answer (d) above: Please skip the next question and proceed directly to question 32 (page 11).

If answer (e) above: Please skip the next question and proceed directly to question 39 (page 14).

If answer (f) above: Please skip the next question and proceed directly to question 52 (page 18).

9. Please provide the specific job title of the individual who is accountable (i.e. possesses the highest authority regarding climate change decisions) for the institution's response to climate change issues:

- **Answer Type:** Single Line Text Box
 - Job Title:

10. In what department or division is this person located? (Check all that apply)

- **Answer Type:** Check Box
 - Executive Office (e.g. Office of the President)
 - Sustainability
 - Facilities Management
 - Environmental Affairs (or EH&S)
 - Other (Please specify): _____

11. To whom does this person report administratively? (Check all that apply)

- **Answer Type:** Check Box
 - President
 - Vice President or other executive-level person
 - Facilities Manager
 - Board of Trustees
 - Other (Please specify): _____

12. What other governing bodies, groups or departments oversee the work of this person? (Check all apply)

- **Answer Type:** Check Box
 - Board of Trustees
 - University system governing body (e.g. University of California, Office of the President)
 - State-level government agencies
 - University Staff (e.g. Director of Sustainability)
 - Faculty
 - Students
 - Other (Please specify): _____
-

13. Does this position receive any support from other people and/or groups (e.g. staff, students, faculty, external advisors)?

- **Answer Type:** Multi-line Text Box
 - Please describe.
-

14. How long has this person's position been in existence at your institution?

- **Answer Type:** Check Box
 - Less than 1 year
 - 1-3 years
 - 3-5 years
 - More than 5 years
-

15. Please choose the areas in which this person has professional experience (Check all that apply):

- **Answer Type:** Check Box
 - University Administration
 - Environmental Management
 - Business Administration
 - Climate Change Strategies
 - Sustainability
 - Government/Public Affairs
 - Facilities Management
 - Other (Please specify any additional areas): _____
-

16. Did this person previously hold a position within your institution? (i.e. Were they hired from within?)

- **Answer Type:** Check Box + Single Line Text Box
 - Yes (please specify previous job title): _____
 - No (please specify the job title at the previous employer): _____
-

17. Does this person have any budgetary authority over implementation of climate change strategies?

- **Answer Type:** Check Box + Single Line Text Box
 - Yes (please describe the nature of this authority): _____
 - No (please describe who does have authority) _____
-

18. Please indicate which topics are of importance to this person's job responsibilities particularly related to climate change (check all that apply):

- **Answer Type:** Check Box + Single-Line Text Box
 - Carbon offsets and related markets
 - Facilities management and design
 - Transportation, public transit and fleet management
 - Renewable energy projects
 - Stakeholder relations
 - Cost benefit analysis/life cycle analysis
 - GHG inventory development and/or identification of GHG reductions goals
 - Climate action planning/setting goals and strategies
 - Budgeting climate management activities
 - Curriculum development
 - Other 1 (Please describe): _____
 - Other 2 (Please describe): _____
 - Other 3 (Please describe): _____
-

19. Please rank the top 3 most important topics listed above (and below):

- **Answer Type:** Check Box + Single-Line Text Box
 - Carbon offsets and related markets
 - Facilities management and design
 - Transportation, public transit and fleet management
 - Renewable energy projects
 - Stakeholder relations
 - Cost benefit analysis/life cycle analysis
 - GHG inventory development and/or identification of GHG reductions goals
 - Climate action planning/setting goals and strategies
 - Budgeting climate management activities
 - Curriculum development
 - Other 1 (Please describe): _____
 - Other 2 (Please describe): _____
 - Other 3 (Please describe): _____
-

20. Does your institution require that this person participate in any training and/or continuing education related to climate change?

- **Answer Type:** Radio Box + Single-Line Text Box
 - Yes. (Please describe the training and if it was paid for by your institution):

 - No, however, this person has sought additional training/education. (Please describe the training and if it was paid for by your institution): _____
 - No, and this person has not received additional training/education.
-

21. Is this person involved in integrating climate change into existing and/or new curriculum?

- **Answer Type:** Radio Box
 - Yes
 - No

If “Yes”: Please describe the nature of involvement below.

- **Answer Type:** Multi-line Text Box

If “No”: Please discuss how climate change is being integrated into existing and new curriculum with a description of those who are accountable for this area.

- **Answer Type:** Multi-line Text Box

Please proceed to question 53 (page 19).

Proceed with this section only if you answered choice (c) to question 8.

22. Please describe the roles and responsibilities of the entity (committee, panel or task force) that is accountable (i.e. possesses the highest authority regarding climate change decisions) for the institution's response to climate change issues, including the job titles of the people involved:

- **Answer Type:** Multi-Line Text Box
-

23. Does this entity report to an executive-level person or the Board of Trustees of your institution? If so, please describe:

- **Answer Type:** Radio Box + Single-Line Text Box
 - Yes (please specify): _____
 - No (please specify to whom they report): _____
-

24. What other governing bodies, groups or departments oversee the work of this entity? (Check all apply)

- **Answer Type:** Check Box + Single Line Text Box
 - University system governing body (i.e. University of California, Office of the President)
 - State-level government agencies
 - University staff (e.g. Director of Sustainability)
 - Faculty
 - Students
 - Other (Please specify): _____
-

25. Does this entity receive any support from other people and/or groups (e.g. staff, students, faculty, external advisors)?

- **Answer Type:** Multi-Line Text Box
 - Please describe
-

26. How long has this entity been in existence at your institution?

- **Answer Type:** Radio Box
 - Less than 1 year
 - 1-3 years
 - 3-5 years
 - More than 5 years
-

27. Does the entity identified above have any budgetary authority over implementation of climate change strategies?

- **Answer Type:** Radio Box + Single Line Text Box
 - Yes (please describe the nature of this authority): _____
 - No (please describe who does have authority): _____

28. Please indicate which topics are of importance to this entity's responsibilities particularly related to climate change (check all that apply):

- **Answer Type:** Check Box + Single Line Text Box
 - Carbon offsets and related markets
 - Facilities management and design
 - Transportation, public transit and fleet management
 - Renewable energy projects
 - Stakeholder relations
 - Cost benefit analysis/life cycle analysis
 - GHG inventory development and/or identification of GHG reductions goals
 - Climate action planning/setting goals and strategies
 - Budgeting climate management activities
 - Curriculum development
 - Other 1 (Please describe): _____
 - Other 2 (Please describe): _____
 - Other 3 (Please describe): _____
-

29. Please rank the top 3 most important topics listed above:

- **Answer Type:** Check Box + Single Line Text Box
 - Carbon offsets and related markets
 - Facilities management and design
 - Transportation, public transit and fleet management
 - Renewable energy projects
 - Stakeholder relations
 - Cost benefit analysis/life cycle analysis
 - GHG inventory development and/or identification of GHG reductions goals
 - Climate action planning/setting goals and strategies
 - Budgeting climate management activities
 - Curriculum development
 - Other 1 (Please describe): _____
 - Other 2 (Please describe): _____
 - Other 3 (Please describe): _____
-

30. Does your institution require any members of this entity to participate in training and/or continuing education related to climate change?

- **Answer Type:** Radio Box + Single Line Text Box
 - Yes, all of the members are required to participate. (Please describe the training and if it was paid for by your institution): _____
 - Some of the members are required to participate. (Please describe the training and if it was paid for by your institution): _____
 - No, however, some or all of the members have sought additional training/education. (Please describe the training and if it was paid for by your institution): _____
 - No, and none of the members have received additional training/education.

31. Is this entity involved in integrating climate change into existing and/or new curriculum?

- **Answer Type:** Radio Box
 - Yes
 - No

If “Yes”: Please describe the nature of involvement below.

- **Answer Type:** Multi-line Text Box

If “No”: Please discuss how climate change is being integrated into existing and new curriculum with a description of those who are accountable for this area.

- **Answer Type:** Multi-line Text Box

Please proceed to question 53 (page 19).

Proceed with this section only if you answered choice (d) to question 8.

32. Please describe the people (roles and responsibilities) who are accountable (i.e. possess the highest authority regarding climate change decisions) for the institution's response to climate change issues. Please include their names and positions, as well as who they each report to and any support they receive from other people and/or groups (e.g. staff, students, faculty, external advisors).

- **Answer Type:** Multi-line Text Box
-

33. For each person (who was listed in the previous question), please describe how long his/her position has been in existence in its current form.

- **Answer Type:** Multi-line Text Box
-

34. Do the people listed above have any budgetary authority over implementation of climate change strategies?

- **Answer Type:** Radio Box + Single Line Text Box
 - Yes, all of them do (please describe the nature of this authority): _____
 - Some have authority, some do not (please describe who has authority and the nature of this authority): _____
 - No, none of them do (please describe who does have authority): _____
-

35. In this question, please consider all of the individuals (who were listed at the top of the page) to be one single entity, then please indicate which topics are of importance to this entity's responsibilities particularly related to climate change (check all that apply):

- **Answer Type:** Check Box + Single Line Text Box
 - Carbon offsets and related markets
 - Facilities management and design
 - Transportation, public transit and fleet management
 - Renewable energy projects
 - Stakeholder relations
 - Cost benefit analysis/life cycle analysis
 - GHG inventory development and/or identification of GHG reductions goals
 - Climate action planning/setting goals and strategies
 - Budgeting climate management activities
 - Curriculum development
 - Other 1 (Please describe): _____
 - Other 2 (Please describe): _____
 - Other 3 (Please describe): _____

36. Of the topics selected in the previous question, please rank the 3 most important ones relative to the job responsibilities of these people (if this varies between people please describe). Note: when ranking the top 3 topics, please include the numbers 1-3 with the corresponding topics, with 1 meaning the most important.

- **Answer Type:** Check Box + Single Line Text Box
 - Carbon offsets and related markets
 - Facilities management and design
 - Transportation, public transit and fleet management
 - Renewable energy projects
 - Stakeholder relations
 - Cost benefit analysis/life cycle analysis
 - GHG inventory development and/or identification of GHG reductions goals
 - Climate action planning/setting goals and strategies
 - Budgeting climate management activities
 - Curriculum development
 - Other 1 (Please describe): _____
 - Other 2 (Please describe): _____
 - Other 3 (Please describe): _____

37. Does your institution require that the people (who were described at the top of the page) participate in any training and/or continuing education related to climate change?

- **Answer Type:** Radio Box + Single Line Text Box
 - Yes, all of them are required to participate. (Please describe the training and if it was paid for by your institution): _____
 - Some of them are required to participate. (Please describe the training and if it was paid for by your institution): _____
 - No, however, some or all of them have sought additional training/education. (Please describe the training and if it was paid for by your institution): _____
 - No, and none of them have received additional training/education

38. Are any of these people (who were described at the top of the page) involved in integrating climate change into existing and/or new curriculum?

- **Answer Type:** Radio Box
 - Yes, at least one person is involved in curriculum development
 - No

If “Yes”: Please describe the nature of involvement below.

- **Answer Type:** Multi-line Text Box

If “No”: Please discuss how climate change is being integrated into existing and new curriculum with a description of those who are accountable for this area.

- **Answer Type:** Multi-line Text Box

Please proceed to question 53 (page 19).

Proceed with this section only if you answered choice (e) to question 8.

39. Please describe the climate change governance structure at your institution, including the names and titles of any individuals or groups involved (i.e. describe how your institution is organized to respond to climate change issues and who has the highest authority regarding climate change decisions):

- **Answer Type:** Multi-line Text Box
-

NOTE: Questions x-y in this section refer to the individuals or groups identified in your response to question 39. If any of the following questions do not apply to the current climate change governance at your institution, please select 'Not Applicable'.

40. In what department or division is this person(s) located? (Check all that apply)

- **Answer Type:** Check Box + Single Line Text Box
 - Executive Office (e.g. Office of the President)
 - Sustainability Office
 - Facilities Management
 - Environmental Affairs (or EH&S)
 - Other (please specify any additional affiliations): _____
 - Not Applicable
-

41. To whom does this person(s) report administratively? (Check all that apply)

- **Answer Type:** Check Box + Single Line Text Box
 - President
 - Vice President or other executive level person
 - Facilities Manager
 - Board of Trustees
 - Other (please specify any additional entities): _____
 - Not Applicable
-

42. What other governing bodies or departments oversee the work of this person(s)? (Check all apply)

- **Answer Type:** Check Box + Single Line Text Box
 - Board of Trustees
 - University system governing body (i.e. University of California, Office of the President)
 - State-level government agencies
 - University Staff (e.g. Director of Sustainability)
 - Faculty
 - Students
 - Other (please specify any additional entities): _____
 - Not Applicable
-

43. How long has this position(s) been in existence at your institution?

- **Answer Type:** Radio Box
 - Less than 1 year
 - 1-3 years
 - 3-5 years
 - More than 5 years
 - Not Applicable
-

44. Please choose the areas in which this person(s) has professional experience (Check all that apply):

- **Answer Type:** Check Box + Single Line Text Box
 - University Administration
 - Environmental Management
 - Business Administration
 - Climate Change Strategies
 - Sustainability
 - Government/Public Affairs
 - Facilities Management
 - Other (Please specify any additional areas): _____
 - Not Applicable
-

45. Did this person(s) previously hold a position within your institution? (i.e. Were they hired from within?)

- **Answer Type:** Radio Box + Single Line Text Box
 - Yes, (please specify previous title): _____
 - No (please specify job title at previous employer): _____
 - Not Applicable
-

46. Does the person(s) identified above have any budgetary authority over implementation of climate change strategies? NOTE: If there are multiple people involved in responding to climate change, choose 'Yes' if any people have any authority, then describe that nature of the authority.

- **Answer Type:** Radio Box + Single Line Text Box
 - Yes, (please describe the nature of this authority): _____
 - No (please describe who does have authority): _____
 - Not Applicable
-

47. Please indicate which topics are of importance to this person(s) job responsibilities particularly related to climate change (check all that apply):

- **Answer Type:** Check Box + Single Line Text Box
 - Carbon offsets and related markets
 - Facilities management and design
 - Transportation, public transit and fleet management
 - Renewable energy projects
 - Stakeholder relations
 - Cost benefit analysis/life cycle analysis
 - GHG inventory development and/or identification of GHG reductions goals
 - Climate action planning/setting goals and strategies
 - Budgeting climate management activities
 - Curriculum development
 - Other (Please describe): _____
 - Other (Please describe): _____
 - Other (Please describe): _____

48. Of the topics selected in the previous question, please rank the 3 most important ones relative to the job responsibilities of this person(s) (if relative to multiple people, please also describe what led you to rank the topics in the way that you did). Note: when ranking the top 3 topics, please include the numbers 1-3 with the corresponding topics, with 1 meaning the most important.

- **Answer Type:** Check Box + Single Line Text Box
 - Carbon offsets and related markets
 - Facilities management and design
 - Transportation, public transit and fleet management
 - Renewable energy projects
 - Stakeholder relations
 - Cost benefit analysis/life cycle analysis
 - GHG inventory development and/or identification of GHG reductions goals
 - Climate action planning/setting goals and strategies
 - Budgeting climate management activities
 - Curriculum development
 - Other (Please describe): _____
 - Other (Please describe): _____
 - Other (Please describe): _____

49. Does your institution require this person(s) participate in training and/or continuing education related to climate change? NOTE: If there are multiple people involved in responding to climate change, choose 'Yes' if any people have participated in training, then please describe.

- **Answer Type:** Radio Box + Single Line Text Box
 - Yes, (Please describe the training and if it was paid for by your institution): _____
 - No, however, this person(s) has sought additional training/education. (Please describe the training and if it was paid for by your institution): _____
 - No, and this person(s) has not received additional training/education
 - Not Applicable

50. Is this person(s) involved in integrating climate change into existing and/or new curriculum?

- **Answer Type:** Radio Box
 - Yes
 - No
 - Not Applicable

If “Yes”: Please describe the nature of involvement below.

- **Answer Type:** Multi-line Text Box

If “No”: Please discuss how climate change is being integrated into existing and new curriculum with a description of those who are accountable for this area.

- **Answer Type:** Multi-line Text Box
-

51. Are there any aspects surrounding your institution's response to climate change issues that have not been addressed in the survey thus far (i.e. any other arrangements within your institution that may be unique)?

- **Answer Type:** Multi-line Text Box
 - Please describe.
-

Please proceed to question 53 (page 19).

Proceed with this section only if you answered choice (f) to question 8.

52. Please describe any plans to create a position, function or entity which will be accountable for the institution's response to climate change issues, including addressing the economic, operational and environmental implications of climate change.

- **Answer Type:** Multi-line Text Box

Please proceed to question 53 (page 19).

53. Please indicate which of the following Greenhouse Gas Protocol scopes your institution is working on to address emissions (check all that apply).

- **Answer Type:** Check Box + Single Line Text Box
 - Scope 1 (All direct GHG emissions)
 - Scope 2 (Indirect GHG emissions from consumption of purchased electricity, heat or steam)
 - Scope 3 (Other indirect GHG emissions, such as the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, electricity-related activities not covered in Scope 2, outsourced activities, waste disposal, etc.). Please describe which aspects of Scope 3 your institution works on:

 - Not Applicable

54. Please rate the challenges or organizational barriers to addressing climate change facing the institution.

- **Answer Type:** Matrix Radio Box + Single Line Text Box

	(Minor Concern)				(Major Concern)	
	1	2	3	4	5	N/A
Budget Issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organizational structure issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Educating and training university executives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Educating and training staff, students and/or faculty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of communication between institutional groups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Accommodating various stakeholder needs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Competing institutional priorities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify): _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify): _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify): _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

55. Please elaborate on the challenges or organizational barriers to addressing climate change facing the institution selected in the above question.

- **Answer Type:** Multi-line Text Box

56. Please feel free to add any additional comments related to topics covered in this survey.

- **Answer Type:** Multi-line Text Box

57. In an effort to gather more qualitative data surrounding how higher education institutions are addressing climate change, the project managers will be conducting case studies of individual institutions.

Would you be willing to participate in a case study interview regarding how your institution is addressing climate change? (These interviews will take place early 2011 and will take approximately 30 to 60 minutes)

NOTE: Responding institutions can only participate in this case study if the institution has NOT selected the opt out clause at the beginning of the survey

- **Answer Type:** Radio Box + Single Line Text Box
 - Yes, I am interested in participating in a case study. Enter name, email and phone number here:

 - No
-

58. Please confirm by checking below that the information entered into this survey is accurate to the best of your knowledge.

- **Answer Type:** Radio Box
 - Yes, I have reviewed all survey question responses and they are accurate to the best of my knowledge

Works Cited

- ¹ Sinha, P, et al. "Greenhouse gas emissions from U.S. institutions of higher education." *Journal of the Air & Waste Management Association*. 2010 May;60(5):568-73. <<http://www.ncbi.nlm.nih.gov/pubmed/20480856>>.
- ² "Mission and History" *American College and University Presidents' Climate Commitment*. <http://www.presidentsclimatecommitment.org/about/mission-history>
- ³ "Timeline" *STARS Sustainability Tracking Assessment and Rating System*. AASHE. <https://stars.aashe.org/pages/about/history/timeline.html>
- ⁴ Wright, T.S.A. 2002. Definitions and frameworks for environmental sustainability in higher education. *Higher Education Policy*, V.15, N2. Pp105-120.
- ⁵ Bekessy, S.A., Samson, K., Clarkson, R.E. 2007. The failure of non-binding declarations to achieve university sustainability: A need for accountability. *International Journal of Sustainability in Higher Education*. Vol.8, No.3. Pp 301-316.
- ⁶ Bekessy, S.A., Samson, K., Clarkson, R.E. 2007. The failure of non-binding declarations to achieve university sustainability: A need for accountability. *International Journal of Sustainability in Higher Education*. Vol.8, No.3. Pp 301-316.
- ⁷ Wright, T.S.A. 2002. Definitions and frameworks for environmental sustainability in higher education. *Higher Education Policy*, V.15, N2. Pp105-120.
- ⁸ Wright, T.S.A. 2002. Definitions and frameworks for environmental sustainability in higher education. *Higher Education Policy*, V.15, N2. Pp105-120.
- ⁹ Herremans, I. and Allwright, D. 2000. Environmental management systems at North American universities: what drives good performance? *International journal of Sustainability in Higher Education*, Vol.1 No.2 pp 179-185.
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