ACCO

ASSOCIATION OF CLIMATE CHANGE OFFICERS

CLIMATE CHANGE LEADERSHIP IN HIGHER EDUCATION INSTITUTIONS

COMPLIMENTARY SUMMARY

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Introduction

Over the last decade, climate change has become a critical topic of concern. As a result, organizations across sectors, including higher education institutions, are responding by making significant organizational changes. Through a comprehensive survey and in-depth interviews of individual institutions, we analyzed how higher education institutions in the U.S. and Canada are restructuring their governance structures in order to respond to climate change. The 146-page final report contains the results shown in dozens of tables, nearly 100 charts and graphs, interviews, sources, and institutional profiles. This complimentary summary presents some highlights and the full report is available from ACCO.

Academic institutions are in the early stages of addressing climate change, and little is known about the effectiveness of their respective climate plans. To take measure of their progress, we conducted an in-depth survey of 160 institutions. Specifically, this analysis investigates:

- Commonalities and differences between higher education institutions' climate plans
- The roles, responsibilities, training, and technical abilities of the persons responsible for implementing climate change strategies
- How climate change issues are integrated into existing and new curriculum
- The importance of signing voluntary climate initiatives from a leadership perspective.

The resulting data show that more than 75% of the 160 surveyed institutions have undergone organizational changes related to climate change over the last three years. Yet, the ways in which institutions adapt vary widely, as each campus must address issues inherent to its respective unique physical and geographical characteristics as well as internal institutional challenges.

This variety is also measured across leadership tasked with the responsibility of addressing and managing climate change impacts, from university presidents to sustainability coordinators.

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.[i] A number of initiatives, organizational changes, and internal and external policy mandates have been launched to motivate and assist higher education institutions become more environmentally sustainable and reduce their carbon footprints.

Our research helps demonstrate the effectiveness of some of these initiatives, including the American College & University Presidents' Climate Commitment and the Association for the Advancement of Sustainability in Higher Education's Sustainability Tracking, Assessment & Rating System (STARS).[ii,iii]

In addition to analyzing institutional governance, this research explores and identifies the backgrounds, responsibilities, challenges, commonalities, and differences of climate change officers across the higher-education sector. A research team and partnership was formed between the Association of Climate Change Officers (ACCO) and Duke University - Nicholas School of the Environment. 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. Supplemental interviews were conducted with eight of the institutions.

Key Themes

1. **Higher education institutions are aggressively restructuring to respond to climate change.** Of the 160 participating institutions, 75% have undergone organizational restructuring related to climate change governance structures in the last three years. Of surveyed institutions, 51% 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 executives are either taking on the responsibility for overseeing their institution's climate initiatives or they work closely with their institution's climate change officers. 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 implementing strategies, managing programs, or conducting administrative functions. 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, regardless of an institution's organizational structure, campus culture, or academic mission. Over 62% of respondents considered stakeholder relations across campus units and departments an important part of their job. Conversely, 95% of the climate change officers surveyed considered accommodating stakeholder needs a challenge to their work.

4. **Climate strategies depend on the unique characteristics, challenges, and opportunities within each institution.** Most institutions take an ad hoc approach to climate strategies. Geographic location, local climate impacts, demographics, and budgets differ widely between institutions. Best management practices and lessons learned in the field of higher education climate planning are scarce. Thus, few clear strategic parallels were found among institutions that share common traits such as geographic location, campus size, or community setting. Although some trends were detected, both anecdotal evidence and survey data indicate that institutions are affected by a multitude of factors including budget constraints and institutional capacity.

   Although higher education institutions are in the early stages of addressing climate change, there are lessons and practices emerging that could be applicable to concerned institutions. We found there are many challenges facing climate officers. Learning more about their peers' efforts is a critical need.

5. **Becoming a signatory to a climate commitment increases effectiveness of climate governance.** We found that committing to a formal climate declaration increases the potential effectiveness of institutional change and governance. Some research suggests that signing a formal declaration can serve as a symbol of a university's commitment to sustainability.[iv] Other research suggests that many colleges and universities that signed a sustainability declaration were making small attempts to implement their commitment – a problem that may be due to the non-binding nature of these pledges.[v, vi, vii]

Despite many universities having signed declarations, we found that strong administrative leadership is necessary to make those signatures meaningful. Due to the organizational structure of colleges and universities, sustainability strategies built from the bottom up are not as effective as those built from the top down.[viii] 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.[ix]

Formally, more than 600 higher education institutions have signed the American College & University Presidents' Climate Commitment (ACPUCC). And there have been at least seven 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.[x]

Methodology

A web-based survey of 160 institutions and eight in-depth interviews were conducted. The survey was produced with the advice of experts in partnership with the Association of Climate Change Officers, Duke University – Nicholas School of the Environment,[xi] and Duke's Institute of Statistics and Decision Sciences.

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. By mid-December, 160 responses were received. To characterize the basic governance structure of each institution, we asked respondents:

Who directly oversees your institution's response to climate change and is accountable for addressing the economic, operational and environmental implications of climate change?

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 subsequent questions varied – for example, questions tailored for rural institutions were kept from answering questions tailored for large, city-based institutions. This approach helped us build profiles of the institutions. Once responses were collected, the data were compiled and analyzed using Excel, STATA statistical tools, and NVivo.

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.

There were 124 institutions out of 160 affiliated with the Association for the Advancement of Sustainability in Higher Education (AASHE). The institutions were not selected at random. This means that these 124 institutions are more environmentally-aware and cannot represent the true population of all higher

education institutions in the U.S and Canada. A second implication from this result is that the survey was sponsored by the Association of Climate Change Officers, which is an organization proactive in the field of climate change leadership.

In addition to the above, 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. Summaries of the interviews are presented in the full report available from ACCO.

Institutional Profiles

We used the Carnegie Classification of Institutions of Higher Education to assign demographic data.[xii] Geographical location was also considered. Tables 1 through 5 represent the demographic distribution of institutions that responded to the survey. Four demographic categories were selected to compare institutions:

1) Whether an institution is public or private

2) Community setting surrounding a campus

3) Residency status of the majority of students

4) The size of the student population

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)

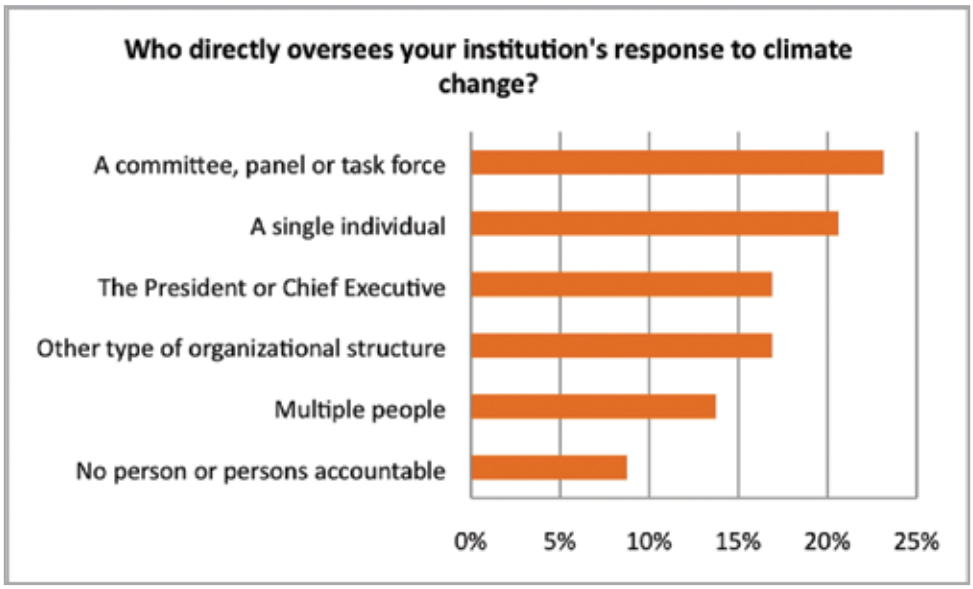
#	Geographic Region	States	Responses	%
1	New England	CT ME MA NH RI VT	10	6.25%
2	Great Lakes	IL IN MI OH WI	23	14.38%
3	Southeast	AL AR FL GA KY LA MS NC SC TN VA WV	40	25.00%
4	Rocky Mountains	CO ID MT UT WY	6	3.75%
5	Mid East	DE DC MD NJ NY PA	29	18.13%
6	Plains	IA KS MN MO NE ND SD	12	7.50%
7	Southwest	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	

Sampling of Results

The 146-page final report contains analysis of dozens of tables, nearly 100 charts and graphs, interviews, sources, and institutional profiles. This complimentary summary presents some highlights and the full report is available from ACCO.

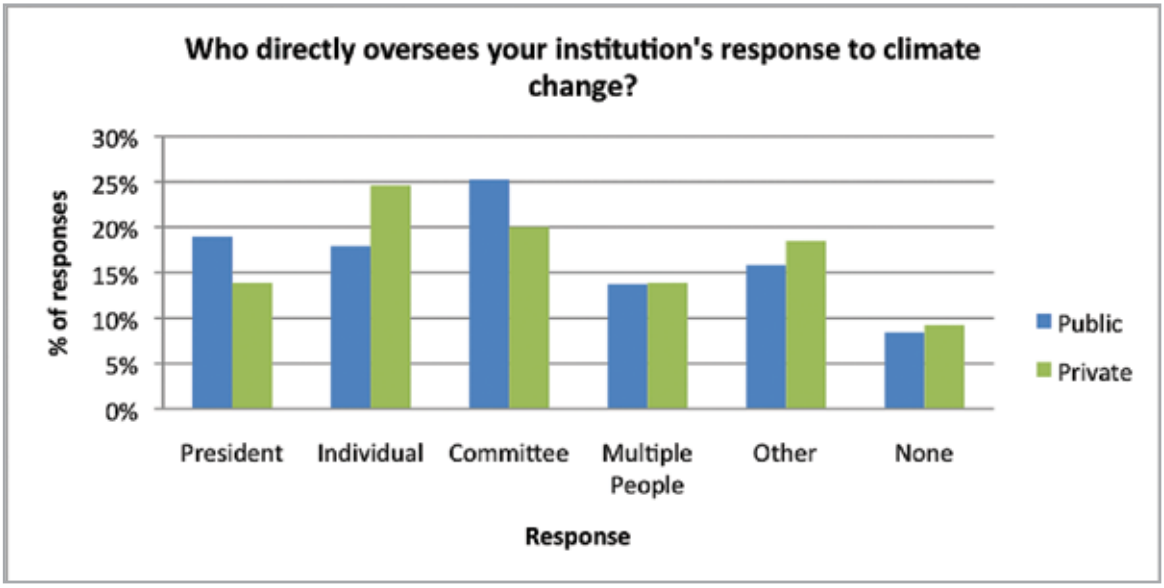
Accountability

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?"*** The distinction of which person(s) is in the role of climate change officer plays a critical role in this report. "A committee, panel or task force" was the most common response at 23%, "A single individual" second at 21%, and third was "The president or executive" at 17%. The least common assigned was "No person or persons accountable" at 9%.



We arranged the data by primary categories of Public/Private Institution, Campus Size, Campus Location, and Residential/Non-Residential. The chart below shows results from the Public/Private question.

- ***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 (not the president) was the most common response.



Organizational Changes

Of the 160 surveyed institutions, 75% had 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.

Regarding climate governance structures, the highest percentage (93%) of respondents whose institution had undergone organizational change were those in which the president or chief executive was accountable for climate response. Conversely, 86% of those institutions that have no person(s) accountable for climate response have not had organizational change (Table 6).

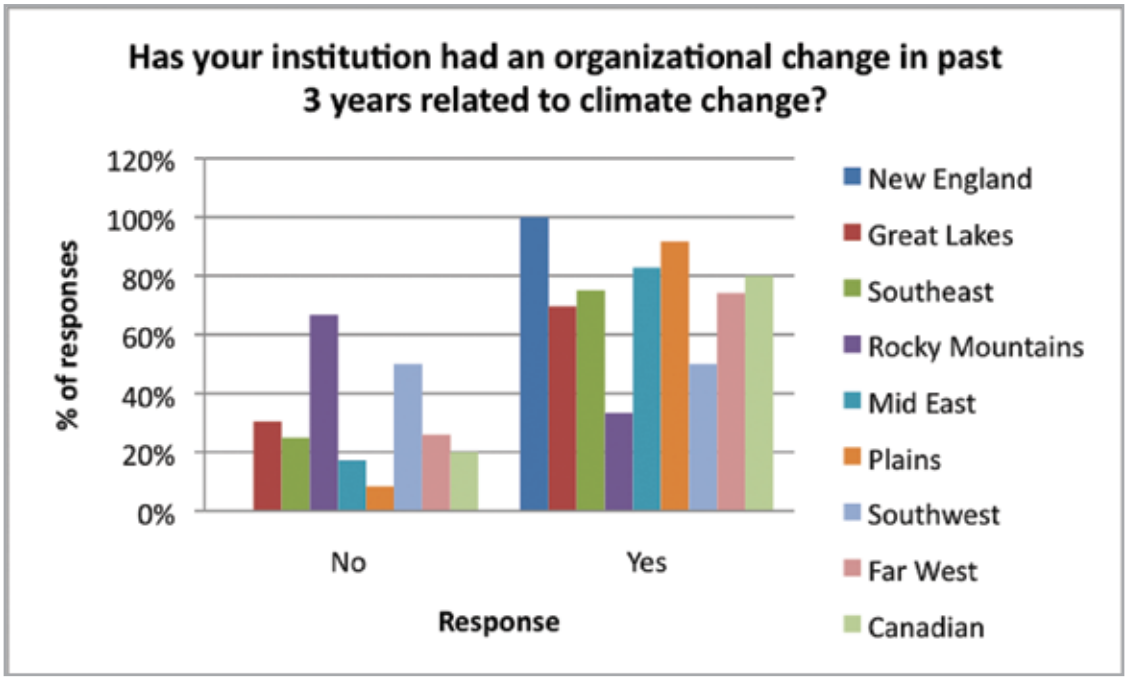
Table 1

Organizational changes between institutions with different governance structures

Governance Structure	No Change	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 force	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, and have a small

campus size each have at least an 80% association with having an organizational change. Institutions that are public, have larger enrollments, and are located in larger population centers have about a 70% to 80% association with organizational change. For more demographic comparisons, see the full report.

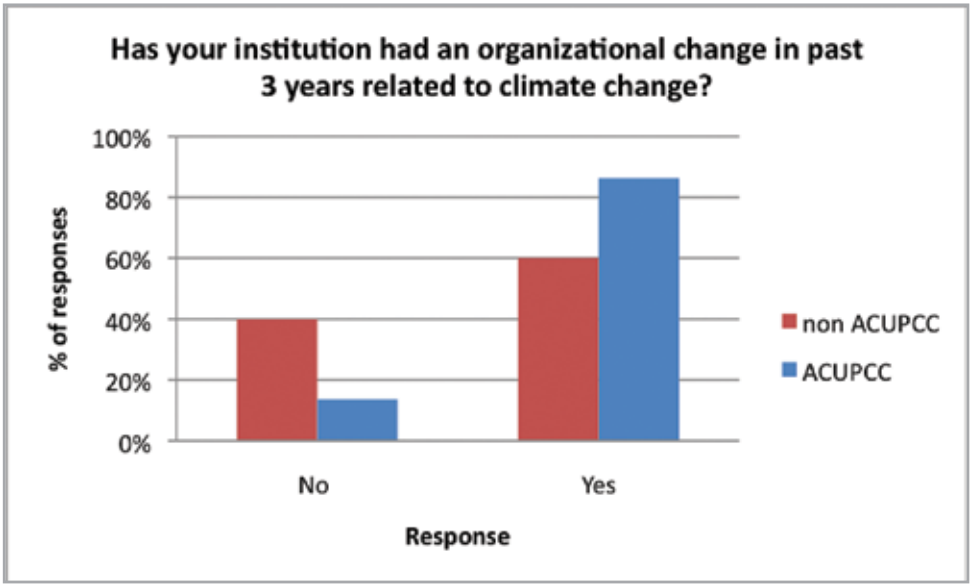


Geography is one exception to comparing institutions. Although the numbers are small, and therefore difficult to draw definitive conclusions from, it is worth noting that four of six Rocky Mountain institutions and four of eight Southwest institutions have not had an organizational change. This is a striking contrast to New England, where all ten surveyed institutions have undergone an organizational change.

Climate Commitments

Among the institutions that have undergone an organizational change, the most frequent type of change was 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.

Additionally, it became clear from the survey that the driving force behind some organizational changes came from a leadership level of commitment to change. 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.



Over 80% of ACUPCC signatories had an organizational change related to climate change. Comparatively, not all changes were necessarily driven by being signatories of the ACUPCC. Among non-signatories, about 60% still affected an organizational change in the last three years. It is more likely that institutions would follow through with organizational change with the ACUPCC. It is clear, therefore, that ACUPCC was a significant driving factor for many of respondent's academic institutional change.

From the comments and survey responses to this question, institutional leaders viewed the ACUPCC as an integral part of the mission of higher education. For example, George Mason University and University of South Florida both made organizational changes as part of committing to the ACUPCC.

Climate Action Plans

Of the surveyed institutions, Table 7 shows that 51% indicated they have a climate action plan (CAP), and 35% indicated they have one in development. This illustrates one of the clear differences found when looking across organizational structures. When a president is accountable for climate change response, a full 96% have a CAP in place or have one in development. And when a committee, panel, or task force is accountable for climate change response, 68% of campuses have a CAP. Both are the highest percentages 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).

The survey also indicates a correlation between CAPs and organizational changes. In particular, when an institution does not have a CAP, just 5% have had an organizational change in the last three years.

Table 1

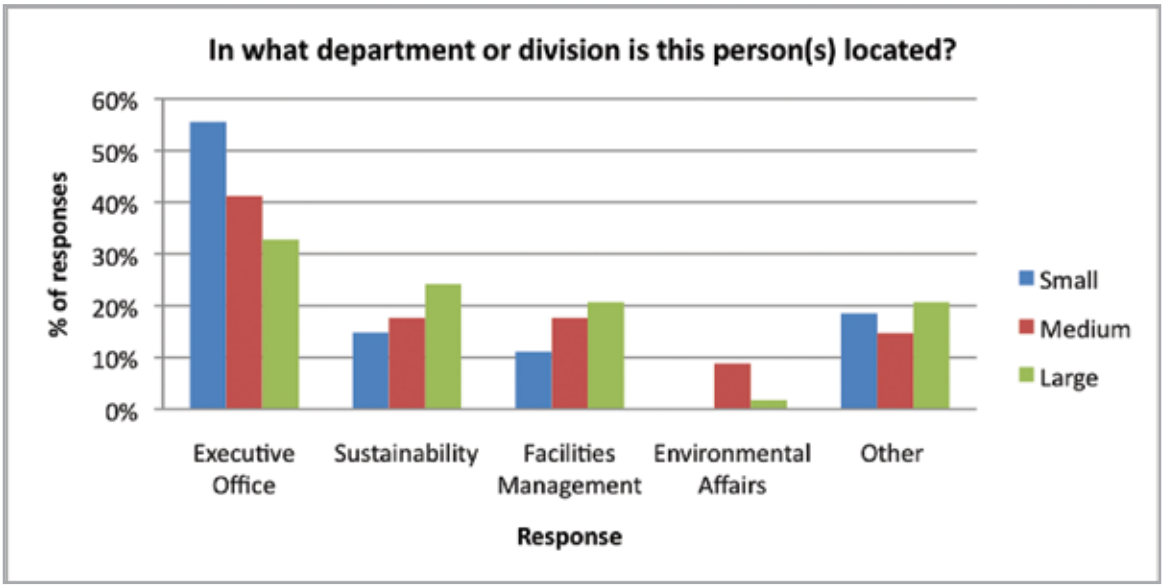
Climate Action Plan development among institutions of different governance structures

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 force	5%	68%	27%
4. Multiple people	14%	36%	50%
5. Other type of organizational structure	4%	59%	37%

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 a climate officer in an executive. 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 among the standard options for where the climate change officer is located was Environmental Affairs. This means that it appears most surveyed 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. The chart shows the locations of designated personnel.

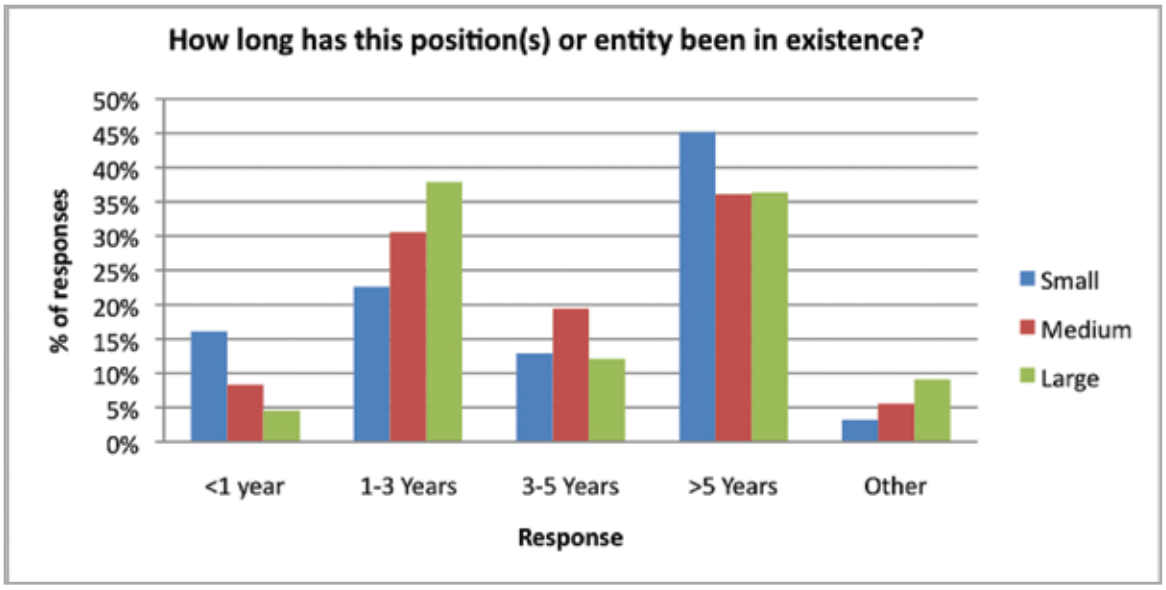


Length of Position

Over 80% of institutions have experienced organizational change with respect to including climate change into their institutional structures. These shifts have mostly occurred within the past three years. And most of the institutions have designated a climate change officer within a department with oversight function.

The data shows 38% of all sizes of responding institutions have had the position of climate change officer for at least five years. It also shows 32% of climate change officers were in positions that have existed for one to three years. Only 8% had a designated climate change officer for less than one year.

Forty five percent of small institutions responded that the position of climate change officer was in existence greater than five years. Measuring effectiveness of institutionalizing climate plans would be the next logical progression from this key finding.



Professional Experience

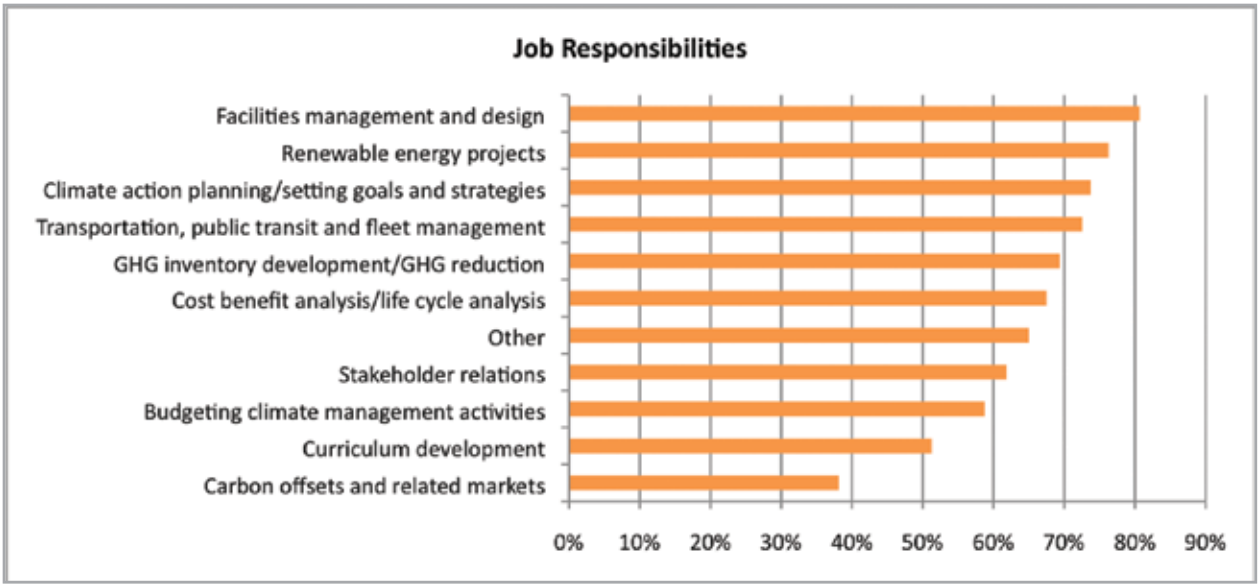
Respondents designated as climate change officers have a variety of professional experiences. Overall, they tend to come from business backgrounds rather than the environmental sectors. In terms of previous work experience, university administration was the most common answer at over 40%. Business administration and facilities management followed at over 25% and over 20%, respectively. Sustainability experience was the second most common answer at just under 30%, but we note this answer was the only professional experience option with direct relation to the environment.

Job Responsibilities

Respondents were asked to categorize their job responsibilities, first by selecting any from a list of common duties that applied, and then ranking the order of importance. Well over 70% of climate change officers considered the following as part of their job responsibilities:

- Facilities management and design
- Renewable energy projects
- Climate action planning/setting goals and strategies
- Transportation, public transit and fleet management

Perhaps the most interesting finding is that respondents did not rank the general questions on finances and budgets higher than the general management categories. Cost Benefit Analysis (67%), stakeholder relations (61%), and budgeting activities (58%), scored 5th, 6th, and 7th respectively and well behind the aforementioned four job responsibilities.



Challenges

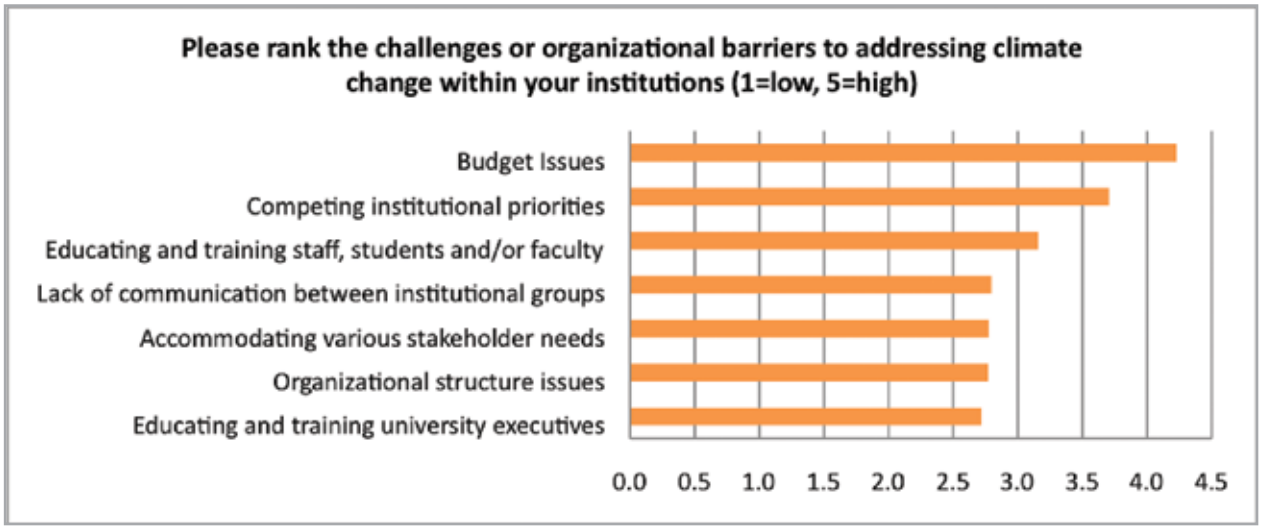
The highest ranked challenge indicated in the survey data was "budget issues," with "competing institutional priorities" ranked second highest. Shortage of staff and lack of funding are common challenges within most academic institutions, and implementing climate change plans, no matter how supported by leadership, are no exception. These issues impact the ability of climate change officers to 1) communicate climate change activities to stakeholders and 2) raise awareness across campus. Without the ability to educate and train the campus community, it is even more difficult for the climate officers to obtain buy-in across campus stakeholders and various constituent groups.

Planning for changes in energy sources on campus or retrofitting old buildings require a longer payback period. With several institutions reporting deep cuts to budgets, leadership and climate change officers were hindered in their ability to undertake such projects

A similar suite of challenges were found in the procurement processes across campuses. Campus procurement traditionally favors lower priced bids. And managers tasked with providing tangible sustainability outcomes were met with financial obstacles in purchasing green products - the green product must meet or be lower in price than the traditional product for orders to be placed and approved.

Many managers also mentioned lack of campus buy-in, especially from the higher-level decision makers. Managers believed that sustainability and climate change should become part of the institute's mission and core values of the campus. Without this type of institutionalization, effectiveness of sustainability staff and climate change officers will continue to be hindered.

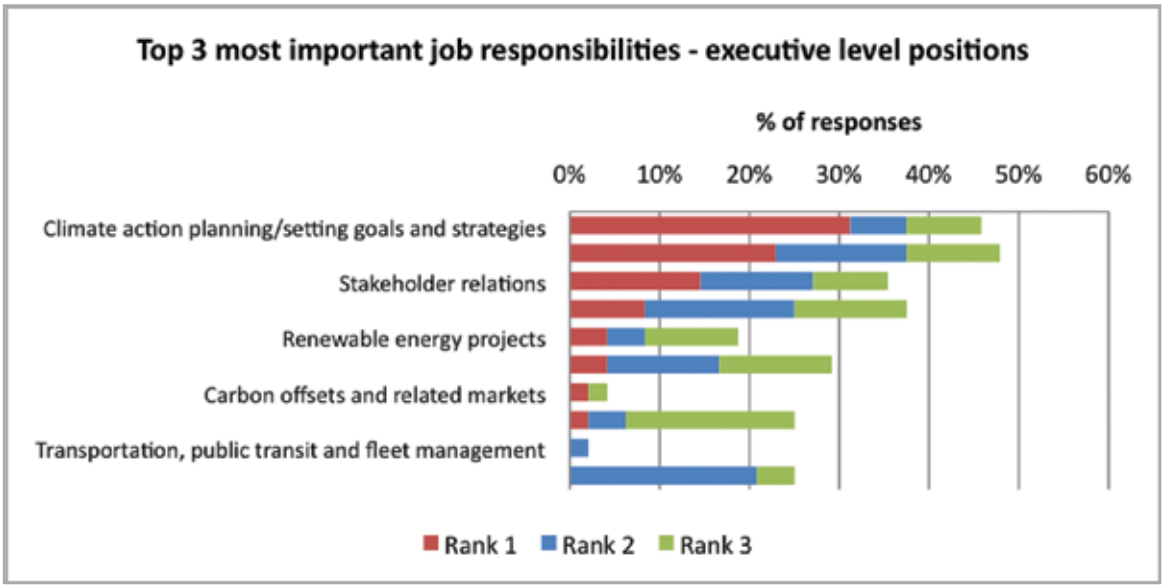
The primary challenges indicated by survey respondents were a lack of sufficient funding, lack of campus buy-in, lack of cohesive vision, and complex organizational structures.



Influence of Executive Leadership

Active executives have significant impact on the organizational approach and management of climate change. Executive involvement can come in many forms, including managing the key decisions for mitigating greenhouse gas emissions, defining environmental goals for an institution, and 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. Executives, therefore, were well connected and integrated with the climate officers.

When asked to rank the top climate-related activities, 46% of institutions have "climate action planning and setting goals and strategies" within the presidents' top three responsibilities. Almost as important is "facilities management and design," which, at 48%, had the highest overall percentage for job responsibilities when summing the top three rankings.



Just as active in managing strategies, presidents and executives reported they have a role in integrating climate change into curriculum. Survey respondents indicated that of the presidents accountable for climate response, 52% are involved with curriculum development. About 25% of these presidents believe integration is a high priority and list it as one of their top three climate-related job responsibilities.

Conclusions and Next Steps

The data set used in this analysis only encompasses approximately 3.5% of all two and four-year higher education institutions in the U.S. and Canada. More data is needed in order to grasp the best management practices required across the sector. Thus, this research project opens the door for future studies.[xiii]

Observations within this report highlight some trends between different classifications of institutions. With further data collection, these findings could be strengthened and adjusted. Additional insight could also be gained through comprehensive case studies that investigate the underlying mechanisms and drivers behind the organizational changes being witnessed. It is suggested that, in addition to conducting surveys with wider reach, interviews be conducted with multiple climate and sustainability officers – as opposed to the one-on-one interviews conducted for this survey.

Information

The full analysis is available directly from ACCO. For more information, contact Daniel Kreeger, Executive Director of ACCO at **dkreeger@ACCOonline.org**, or Michael Cote, Program Manager at **mcote@ACCOonline.org**.

[i] 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.

[ii] "Mission and History," American College and University Presidents' Climate Commitment. http://www.presidentsclimatecommitment.org/about/mission-history.

[iii] "Timeline," STARS Sustainability Tracking Assessment and Rating System. AASHE. https://stars.aashe.org/pages/about/history/timeline.html.

[iv] 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.

[v] 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.

[vi] Wright, T.S.A. 2002. Definitions and frameworks for environmental sustainability in higher education. Higher Education Policy, V.15, N2. Pp. 105-120.

[vii] Wright, T.S.A. 2002. Definitions and frameworks for environmental sustainability in higher education. Higher Education Policy, V.15, N2. Pp. 105-120.

[viii] 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.

[ix] 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.

[x] Wright, T.S.A. 2002. Definitions and frameworks for environmental sustainability in higher education. Higher Education Policy, V.15, N2. Pp. 105-120.

[xi] Survey created using Qualtrics. www.qualtrics.com.

[xii] The Carnegie Classification of Institutions of Higher Education. http://classifications.carnegiefoundation.org/.

[xiii] "Number of degree-granting institutions and enrollment in these institutions, by size, type, and control of institution: Fall 2006." National Center for Education Statistics. http://nces.ed.gov/programs/digest/d08/tables/dt08_234.asp.

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