

Making a Case for Sustainability at Queen's University

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Introduction

Through exploitation and alteration, humankind has attempted to gain dominance over every ecosystem on earth. These actions have resulted in an unprecedented level of degradation to the natural environment (Suzuki and Dressel 1999). Increasingly, it is becoming apparent that humankind has approached the limits of the Earth's carrying capacity. An enormous gap exists between humanity's demand on the Earth and the Earth's ability to provide for current human needs (Global footprint network, 2006). The 2005 UN Millennium Ecosystem Assessment concluded that the Earth's natural functions are under such strain from human activities that "the ability of the planet's ecosystems to sustain future generations can no longer be taken for granted." The report claims that "[n]early two thirds of the services provided by nature to humankind are found to be in decline worldwide" (UN Millennium Ecosystem Assessment, 2005). Humankind's habits of over-consumption and exploitation cannot be sustained forever. This grim reality marks a critical time in our history as species. For the sake of future generations of all species, including our own, it is essential that we take ownership of this ecological debt and find the compassion to solve these problems.

An emerging solution is the concept of sustainable development. This concept, first brought to light in 1987 with the Brundtland Report, has become popularized in recent years (Bartlett and Chase, 2004). The Brundtland Report (1987) defines sustainability as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." Twenty years later, sustainable development is a term that is globally recognized and scientifically respected. The benefits of environmentally conscious and conservation-minded thinking have become increasingly clear, and the concepts of sustainability are quickly moving to the forefront of thought on good business strategies. Nevertheless, much of this recognition and rhetoric has been followed with little action - the economy remains the principal bottom line. This culture of inaction and 'green washing' must be replaced with one of commitment - the world is in dire need of an influential, capable and committed leader.

A potential source of that leadership is the university. Universities have long been powerful vehicles of social change and in the last fifteen years universities from around the world have begun to rediscover this potential and responsibility (M'Gonigle and Starke, 2006). Many have embraced sustainability and are now emerging as society's beacons. Unfortunately, the vast majority still remain uncommitted to this increasingly important movement.

Queen's University is one such institution. Despite an awareness of sustainability, the movement on campus remains small and generally

unorganized. Although some significant gains have been made in recent years the University has yet to make any formal commitment to sustainability. This paper makes a case for creating an action-oriented sustainability strategy at Queen's. By combining the lessons learned from other universities with the challenges and opportunities unique to Queen's, this paper will offer recommendations that can serve as a starting point in the development of a sustainability strategy.

Defining Sustainability

While the Brundtland definition of sustainability is widely quoted and accepted, in practice the term is ambiguous and circumstantial. Nevertheless, it is generally accepted that sustainability is an intersection of three distinct but overlapping realms: economic, environmental and social (Bartlett and Chase, 2004). Sustainability refers to the movement towards a sustainable future by creating an environmentally and socially just world that can provide for the global population's livelihood without compromising future generations (Moore, 2005). This paper will focus primarily on the environmental pillar of sustainability. Under this narrow scope, sustainability will be defined as "the process of reducing the multitude of on and off-site environmental impacts resulting from campus decisions and activities" and raising environmental awareness within the university community (Dahle and Neumayer, 2001, p. 139). Reducing this loaded term to such a focused definition does have its limitations. For one, it fails to address matters like cultural diversity, which is an important issue at Queen's. The social and economic elements have been omitted because environmental sustainability is an urgent global problem and an obvious shortcoming at Queen's. Queen's has an active and well-integrated Human Rights Office that reports directly to the university senate, and Queen's has been sustained economically since 1841. In order for Queen's to be a sustainable university, economic, social and environmental impacts must carry equal weight. Queen's has an obligation and opportunity to institutionalize environmental sustainability throughout the University - this is something it can no longer ignore.

The University

There are three reasons why the university is ideally situated to address sustainability, the first being its authority. There are approximately 10,000 institutions of higher education in North America (M'Gonigle and Strake, 2006). These institutions employ hundreds of thousands of faculty and support staff, and supply research and millions of employees annually to every sector of the economy (M'Gonigle and Strake, 2006). The direct and indirect impact of higher education on the global economy makes it the industrial world's top industry (M'Gonigle and Strake, 2006).

Canada, a relatively small country with a population of roughly 33 million, has 90 universities and 175 colleges with nearly two million enrolled students. In 2004-2005, Canadian universities performed over nine billion dollars worth of research and development, which “sustained another one million jobs and contributed more to Canada’s gross domestic product than the pulp and paper and automotive sectors” (M’Gonigle and Starke, 2006, 35). Enrollment in higher education is expected to increase over the decade and in 2008 two thirds of all new jobs will require a diploma or degree from a postsecondary institution (M’Gonigle and Starke, 2006). A university’s huge economic output and tight connection with every major industry make it a powerful player on the global stage.

The second reason is its organization. Universities have the unique ability “to foster macro change from micro precedents” (M’Gonigle and Starke, 2006, p 205). Universities are world leaders in research and technology, and in teaching and learning (Moore, 2005); They promote creativity and the free expression of ideas (Moore, 2005), they combine knowledge from across disciplines and merge bright students with gifted faculty (Owens and Halfacre-Hitchcock, 2006), and they are not confined to quarterly profits – allowing them to think and act in the long-term (Owens and Halfacre-Hitchcock, 2006). The success of an institution depends on its ability to challenge paradigms and set examples for society. It is this approach that has allowed universities to be a prolific force for the past several hundred years. Universities serve as microcosms for society and can be the test site for how to implement sustainability throughout the world’s cities and businesses (Dahle and Neumayer, 2001; Owens and Halfacre-Hitchcock, 2006).

Finally, the university has several ethical and moral obligations to address sustainability (Wright, 2002). Universities enlighten and train the political, social and business leaders of tomorrow, and therefore have an obligation to arm these future leaders with the skills and knowledge to face global problems (Dahle and Neumayer 2001). Moreover, a university that does not incorporate sustainability into its daily functions may be massively contradicting what is being taught in the classroom and researched by its faculty (M’Gonigle and Starke, 2006). If universities are going to educate students on environmental values, they themselves must be authentic about embracing those values (Fisher, 2003). By infusing sustainability into the actions and decisions of the campus, a university can teach and demonstrate the principles of awareness and stewardship of the natural world, while contributing to a clean and pleasant local and global environment (Dahle and Neumayer 2001).

University Activism

Although relatively new, the idea of the university becoming the flagship for a sustainable future is not such a radical one. Universities have long been centres for discourse, challenging the status quo, as well as catalysts for paradigm shifts (M’Gonigle and Starke, 2006).

At the core of the university's potential to be a vehicle for social change are the students. Students have incredible power to influence national and global change. The most fruitful time for student activism was during the 1960's, when students in nearly every country in the world fought against "nuclear armament, radical segregation, suppression of women's rights, environmental degradation and war" (M'Gonigle and Starke, 2006). In the 1960's student upheaval was witnessed on virtually every campus in North America (Quarter, 1972).

Since the early 1970s, student protest has essentially fallen dormant (M'Gonigle and Starke, 2006). However, the current ecological and social crises, augmented by the gap between the university's actions and the expertise housed within, are revitalizing student discontent (M'Gonigle and Starke, 2006). A new movement - a sustainable campus movement - is taking root on campuses around the world. Queen's University provides an excellent example of a resilient student sustainability movement: there are over 50 student groups working under the umbrella of sustainability. In 2006, with tremendous support from the student body, the student government created a sustainability coordinator position. By doing this, the Queen's student government became the first in Canada to create a full-time sustainability position ahead of the University's administration. This position's goals are to assess and *green* the daily operations of the student government, but most importantly, to serve as a wake up call to the University that Queen's students are ready for change.

Similarities can be drawn between the social movements of the past and the sustainability movement of today. Like its predecessors, the sustainability movement is about questioning norms, fighting injustice, and meeting the most pressing issue head on (M'Gonigle and Starke, 2006). However, as the size and authority of the university has grown so too must the movement; it must not be just about making protest but about creating precedent (M'Gonigle and Starke, 2006). The mentality must shift from an "us-versus-them" to a collective effort. The campus sustainability movement "is about common obstacles and collective opportunities" (M'Gonigle and Starke, 2006, p. 17).

Barriers to Sustainability

Despite the strong case for universities' taking the lead in sustainability, there are likewise numerous barriers to implementation. These include financial restraints, a lack of leadership, interdisciplinary disconnect, an apathetic student body, and an unaligned rewards system.

The most commonly cited barrier is the university's financial constraints (Dahle and Neumayer, 2001; Kliucininkas, 2001; Arvidsson, 2004; Zimmerman and Halfacre-Hitchcock, 2006). Sustainability is not something that happens quickly, and tangible results from many sustainable initiatives are usually not seen for several years. Often preparatory work and developing project components that are truly cost-effective require more time and money than a university is willing to commit (Dahle and Neumayer, 2001). Arvidsson (2004),

found that a university's "short-term thinking very often overshadows the long-term thinking and planning that sustainable development requires" (p. 95).

This issue is often compounded at public universities, such as Queen's, because their source of revenue and freedom to spend it are restricted (Comm and Mathaisel, 2005). Ironically, however, sustainability initiatives are often worthwhile investments for public institutions. When sustainability initiatives are allowed to reach their full potential, universities regularly recover upfront costs and begin saving money through increased efficiency. Many universities that have invested in various waste, water and energy reduction projects are saving substantial amounts of money (Dahle and Neumayer 2001). One of the best examples of this is at the University of British Columbia (UBC), where initiatives launched in the interest of sustainability have resulted in an annual saving of over \$3 million (UBC Sustainability Office, 2007).

A lack of leadership is another well-cited roadblock that is closely connected with a lack of financial commitment. Proof of their close relationship can be drawn from experiences at Dalhousie University. In 1990 the University's president created the Senate Environmental Committee and a University Environmental Policy (Clarke, 2006). Shortly thereafter, paper recycling programs began; energy efficiency campaigns were launched; projects exploring indoor air quality were started; and the University created a campus plan which addressed transportation and grounds environmental planning (Clarke, 2006). In 1995, a new president was appointed and the university's priority shifted from the environment to fiscal accountability (Clarke, 2006). The funding was cut and no new programs were launched until 1998, when a group of individuals decided to reenergize the environmental movement and recreate a university-wide environmental committee (Clarke, 2006).

The long-term commitments required for changes in sustainable practices, combined with a students relatively short involvement, make it essential to have well informed, committed leaders in the upper echelons of the university. These leaders can ensure adequate funding, empower idealistic students, reach out to skilled faculty, and establish a sense of responsibility and ownership within the university community. Unfortunately, many of the individuals in high administrative positions are overwhelmed with other obligations and are unconcerned or misinformed on the issues. Kliucininkas (2001) found a direct correlation between the administrative knowledge of sustainability and extent to which the university is practicing and striving towards sustainable behaviour. The misconceptions regarding sustainability are sometimes used as an excuse for why the institution is not doing more (Dahle and Neumayer 2001). Without support from the administration, it is difficult for sustainability initiatives to be successful. But the onus cannot be entirely on the university's administration; students and faculty also play the essential role of monitoring and challenging the direction of the university.

Faculty are an important asset in the transition to a sustainable campus. The knowledge, research skills, and student influence that faculty provide must be utilized. Furthermore, linking activism with curricula enables students to explore unsustainable practices through academic analysis and empowers

students through education (Zimmerman and Halfacre-Hitchcock, 2006). However, current faculty reward systems, institutional mechanisms and bureaucracy severely limit faculty member's ability to be effective agents of change (Bringle, *et al.*, 1999). The faculty has little incentive for involvement as competitiveness and university expectations force them to function around isolated research and teaching (Bringle, *et al.*, 1999). Under this current structure faculty research, teaching and professional service is often isolated to a narrow discipline (Bringle, *et al.*, 1999). Universities that have isolated themselves in such a manner "are in danger of dealing with narrower and narrower questions of less and less intellectual and social significance and much less social value" (Bringle, *et al.*, 1999). Campus sustainability is an enormous and multi-faceted objective. Autonomous faculties, schools and departments frequently come in the way of the interdisciplinary collaboration that is required to effectively implement change (Fisher, 2003).

Too often, the university has become an assemblage of individual components that are only united because they share a common location (M'Gonigle and Starke, 2006). However, the ability of a university to be a global citizen and a vehicle for change depends on the degree to which faculty view their work "in terms of both the greater social good and an institution mission" (Bringle, *et al.*, 1999).

The final commonly cited component of successful implementation of sustainability at the university is the students. The importance of student involvement lies in their ability to coordinate smaller movements into a larger system of change (Zimmerman and Halfacre-Hitchcock, 2006). At many universities, student apathy and a lack of interest in sustainability have led to an ineffective student component in the development and implementation of initiatives (Dahle and Neumayer 2001; Zimmerman and Halfacre-Hitchcock, 2006). Additionally, the long-term commitment that is required for sustainability does not correspond well with student timelines. In many cases, students will graduate long before any tangible results are achieved.

At Queen's, however, it is perhaps more appropriate to argue that a lack of interest and apathy is not the problem but a lack of incentives is. Similar to faculty, students find themselves in highly competitive, time-consuming and isolated programs where their successes are often measured solely in grades. An assessment done at Queen's found that nearly 40% of students volunteer more than two hours a week (Queen's Sustainability Coalition, 2006) With over 50 clubs and student groups on campus that fall under the umbrella of sustainability (Alma Mater Society, 2007), the issue is not apathy or a lack of interest. There is, however, a lack of collaboration and cooperation, along with a high turnover rate, that is impeding the effectiveness of the student movement.

The current reward system does not align well for a transition to sustainability. Without meaningful rewards, it takes a special type of person who is willing to devote his or her weeknights and weekends to sustainability on campus. To truly embrace the ideals of a sustainable campus, Queen's

must ask different questions and rethink traditional methods. This is a difficult process that takes exceptional leadership, commitment, and creativity.

Hallmarks of Sustainability

Although no formal commitments on university-wide action have been made, the sustainability movement at Queen's has been gaining momentum. Across campus, an increasing number of people are beginning to realize the potential and opportunities for sustainability at Queen's. Most prominent is the student movement, which is quickly gathering members and gaining influence around campus. In 2006, the student government created a paid, full-time sustainability position, and the Queen's engineering society opened the Tea Room, a student-run coffee shop that operates with a triple bottom line and the goal of complete sustainability. Each of these major accomplishments is attracting attention from universities across Canada. Faculty involvement is also on the rise: faculty members now act as supervisors for the student government's sustainability coordinator and sit on the Tea Room steering committee. In November of 2006, fifteen faculty members gathered with 35 students for a one-day conference to discuss sustainability at Queen's. This symposium blossomed into the Queen's Sustainability Network, a student-faculty alliance with the mission of institutionalizing sustainability at Queen's. Perhaps most promising for the Queen's sustainability movement are the changes in the upper echelons of the university as, in 2006, the administration began showing specific and tangible interest in sustainability. There are several potential reasons for this shift, but the most obvious are the increased attention the environment and sustainability have received in the general media, the success of student programs, increased interest from faculty, and two new associate vice-principals who recognize the potential and importance of implementing sustainability program at Queen's.

In spite of the progress that was made in 2006, sustainability at Queen's remains on the fringe. Much of the discussion, which is an essential first step, has yet to progress into action. Although every university has unique challenges and opportunities, Queen's must look to the examples set by other universities. There are numerous success stories – from the largest research based institutions to the smallest liberal art colleges – where leaders have emerged, barriers have been broken, and paradigms challenged. Their experiences are a good starting point for a university trying to green its own campus.

Although there is a ready source of exceptional case studies, operational recommendations, and proven savings benefits, there is little consistency in the approach to sustainability (Fisher, 2003). There are, however, common principles and themes that can be drawn from the campus sustainability leaders.

The most common first step taken towards sustainability is the establishment of a sustainability policy that lays out objectives and ascertains

priorities (Clarke, 2006). There are a variety of ways a university can establish such a policy. Many have relied on recommendations put forward by international declarations - such as the Talloires Declaration. Other universities have opted to develop their own sustainability policy, alone or in conjunction with the international sustainability declarations. This approach is favoured, since the declarations offer no action plan for the implementation of sustainable operations (Wright, 2002). Regardless of how the policy is developed, it is vital that it be supported in theory and in practice at all levels of the university (Wright, 2002).

Although establishing a sustainability policy is an important first step, a study done by Herremans and Allwright (2000) concluded that having a set of guiding principles has no statistical significance in relation to a university's actions and performance regarding sustainability. They argue that what separates sustainability leaders is whether or not the university reports to a Board of Governors and has in place full-time staff responsible for environmental issues (Herremans and Allwright, 2000).

While the policy statement is important for setting objectives, having an employee or employees who are specifically responsible for environmental initiatives is essential for action (Herremans and Allwright, 2000). In Canada, seventeen universities have created full-time positions with a mandate of coordinating and reporting on environmental initiatives (SYC Sustainable Campus Project, 2007). This position is often called a Sustainability Coordinator or Sustainability Officer. Similar to establishing a policy, the approach each university takes in creating a sustainability office has been unique to that institution. UBC and the University of Toronto (U of T) are two universities that have established successful offices but achieved them through different paths.

The U of T Sustainability Office was born out of a proposal from the University's Environmental Protection Advisory Committee, which recognized the need for a central body to undertake energy and resource reduction projects (U of T Sustainability, 2007). The initiative was funded by a three-year grant from the Toronto Atmospheric Fund and with considerable support from the University itself (U of T Sustainability, 2007). U of T organized their sustainability office by reducing the workload of the Academic Vice-Principal and a physical plant services worker, by halving the teaching commitments of two professors, hiring one full time coordinator and providing part time jobs for 20 students (U of T Sustainability, 2007).

On the other hand, the UBC Sustainability Office was born from the University's 1997 Sustainability Policy, which made the recommendation to establish a Sustainability Office - to which \$50 000 was committed (UBC Sustainability Office, 2007). In the beginning, the UBC Sustainability Office existed on a one-year trial, with the director having to generate savings to cover her own salary in order to prove its worth - a challenge that she easily passed (UBC Sustainability Office, 2007). The office now has eight full-time staff members, employs dozens of students part time, and coordinates the efforts of hundreds of volunteers (UBC Sustainability Office, 2007). It continues to be

economically sustainable, with salaries paid through savings generated from the office's efforts.

A sustainability office is an important endeavor because it creates a focal point for sustainability on campus, increases opportunities for student and faculty involvement, establishes accountability, and helps to institutionalize sustainability. Institutionalization of sustainability ensures that progress is not dependent on a few individuals or on student activism (M'Gonigle and Starke, 2006). In a paper discussing the creation of institutional changes towards sustainability at UBC, Moore (2005) states that in order to be successful, the University must incorporate sustainability into both its mission statement and its daily activities. The paper goes on to suggest that connecting academic plans with the University's sustainability policies would be a method of "infusing sustainability into the organizational culture of the university" (Moore, 2005, p.79)

Perhaps the best example of a university that has institutionalized sustainability is Sheffield Hallam University located in Sheffield, UK. The University's environmental policy states that the Pro Vice-Chancellor, Academic Development and the Director of Estates and Facilities are responsible for the University achieving its environmental aims. They have created a sustainability implementation group, which represents the diversity of campus stakeholders, and the Vice Chancellor must submit a formal, annual report on the sustainability to the Board of Governors (Downey, 2004). These steps have ensured that sustainability is rooted deep into the fabric of the University. It is a responsibility shared by the entire institution, at every level and across all departments (Downey, 2004). Sustainability has become a fundamental element of the University's strategy (Downey, 2004).

Choosing the right initiatives to undertake is another characteristic of successful implementation. As there will likely be protest from some individuals within the university, it is important to aim for the low hanging fruit. Selecting initiatives that have tangible results and short payback periods is an effective way to gain support, silence critics and generate income for new projects. Successful implementation gives the university community a positive impression of sustainability and serves as a buffer for other, less tangible initiatives (Dahle and Neumayer 2001). Solid waste and energy conservation are excellent starting points for a new sustainability office; particularly with energy efficiency initiatives the university can generate immediate returns (Dahle and Neumayer 2001). To draw on one of the many examples of successful implementation, The State University of New York invested \$17,000,000 into energy retrofits and conservation programs. The savings this generated covered their costs in less than four years and now they save approximately \$9,000,000 annually (Dahle and Neumayer 2001).

Recommendations

With the current rate of environmental degradation and a growing citizen demand for social responsibility Queen's will inevitably have to adopt the concepts of sustainability. But by acting now Queen's can turn this potential problem into an opportunity. Without question, Queen's has the expertise to meet this issue head on. It will, however, take a major shift in the traditional attitudes and style of thinking that are common at Queen's.

The literature and case studies provide insight into the shortcomings and potential for Queen's. The following recommendations have been derived from the lessons learned at other universities and the opportunities at Queen's. They are meant to serve as a blueprint for how Queen's should approach sustainability. By embracing them, Queen's can save money, strengthen community, fulfill its mission, and emerge as a global leader.

Create a University Sustainability Policy

A sustainability policy is an important first step in implementing sustainability. The University should sign the Talloires Declaration or President Climate Challenge because both are formal commitments by which Queen's will recognize its obligation in addressing sustainability. Queen's should also create its own comprehensive sustainability policy. Doing so is not an easy task but the expertise and interest exist on campus. The University should look to bring together individuals representing every campus stakeholder to write a comprehensive *tailor-fitted* sustainability policy. By creating its own policy, the University can ensure that such a policy is targeted to the strengths and weaknesses at Queen's and is supported by an implementation plan.

Establish a Sustainability Office

A sustainability office is an essential component to the successful implementation of sustainability. Many universities that have committed to an office are achieving benefits in every facet of their operation - from improving the educational experience to saving vast amounts of money through improved efficiency. According to the Associate Vice-Principal Operations and Finance, the University recognizes the need for a sustainability office and claims that the only issue is determining the structure of the office, seeing that the funding and interest already exist. If this is the case, then the administration should begin multi-stakeholder discussions on how the office should be organized; establishing a sustainability office should be a priority for 2007-2008. Along with the creation of the office, the University should officially strike a sustainability steering committee. U of T offers a good example of this, with a vice principal, two physical plant staff, and two faculty members overseeing the office. An

additional recommendation would be to have a student representative on this committee: the student government's sustainability coordinator is in a perfect position to represent the student body. This committee should report to university senate or board of trustees because reporting to the highest levels of university government is advantageous and will help to institutionalize sustainability (Herremans and Allwright, 2000).

Change the Rewards System

By realigning the reward system Queen's can create incentives that favour sustainability. The University must develop sustainability-based classes where students can carry out sustainability projects on campus for academic credit. This is an excellent way of integrating faculty and staff into the campus sustainability movement. Through an initiative at UBC, university staff and faculty suggest research projects pertinent to their fields, and UBC students earn academic credit for their work on the projects (UBC Sustainability Office, 2007). Following this model, Queen's can improve both campus sustainability and the educational experience of its students

Queen's must also examine the reward system for faculty. At Queen's a faculty member's job requirements include research, teaching and service. However, the decision-making process for tenure and promotion is primarily based on peer-reviewed research publication with service and teaching taking a backseat (Moore, 2006). This leaves little incentive to get involved in the practical activities of the university community. Queen's should work to promote institutional self-reflection by creating avenues for discussion, research, and involvement. Altering the tenure and promotion process to include service for the betterment of the University would accomplish this. Queen's should explore the idea of offering research grants for faculty who want to work in sustainability; this would allow faculty to meet research requirements, improve the educational experience for students, and turn the campus into a living laboratory.

The capacity and ingenuity to transform Queen's into a global leader in sustainability exist, all that is missing is the political will. "It is time to rediscover that institution that, in our own backyards, we have for so long taken for granted. In the process, we might just sustain the world by reinventing the university" (M'Gonigle and Starke, 2006, p.205).

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