

SUSTAINABILITY PLAN 2016-2020 | ACADEMIC COMPANION DOCUMENT

DEEPENING SUSTAINABILITY EDUCATION AND SCHOLARSHIP





The University of Alberta acknowledges that we are located on Treaty 6 territory, and respects the histories, languages, and cultures of First Nations, Metis, Inuit, and all First Peoples of Canada, whose presence continues to enrich our vibrant community.

A PLAN FOR DEEPENING SUSTAINABILITY EDUCATION AND SCHOLARSHIP at the University of Alberta 2016-2020

Developed by:

Naomi Krogman, PhD
Director of Sustainability Scholarship
and Education, Office of the Provost

Apryl Bergstrom
Research Assistant, Office of the Provost

“Sustainability is the process of living within the limits of available physical, natural and social resources in ways that allow the living systems in which humans are embedded to thrive in perpetuity.”

—Academic Advisory Committee Working Definition, Office of Sustainability, 2010

Table of Contents

4	Introduction	20	Final Note
5	Background	21	Appendix A Summary of Workshops and Consultations
7	Visions for Education & Research	25	Appendix B People consulted
8	Goal 2.1 Encourage the campus community and the public to learn about sustainability	31	Appendix C Backgrounders for Sustainability Plan Workshops
11	Goal 2.2 Encourage exposure to interdisciplinary and transdisciplinary teaching and research connected to sustainability.		
17	Goal 2.3 Support faculty members to integrate sustainability into their teaching.		

Introduction

"Whatever we do now is going to influence the future, and probably more the future of our students than our own futures. We are going to make an impact that we may never actually see and that we may never hear about. That's why doing this matters. That's what teaching is: you stand in front of a classroom or in front of a computer, and you are influencing people who may never come back and tell you that you've made a difference. You trust that it sometimes happens, because we know that it does. It's appropriate that we do this at the University."

—Christie Schultz, Assistant Dean (Academic), Faculty of Extension

Universities have a responsibility to make the world a better place. They generate and share inspiration, ideas, knowledge, and visions of pathways for change, all of which are needed to create a more sustainable world. The University of Alberta is in a particularly strong place to address the challenges of sustainability. We have the faculty, students and staff committed to a stronger shift in our own society, and other societies across the world, for long-term change that supports the health, vitality and resilience in the social-ecological system. The expertise, leadership, collective good will, program and course offerings, and research at the University of Alberta point to an enormous opportunity to inform multi-faceted ways of thinking and doing that shape sustainability.

There is no discipline, no professor, no student who is not touched by the constraints and opportunities that exist in a world with more clearly recognized limits in resources, needs for human capital and creativity, and ways to cooperate and organize to meet collective goals. This report summarizes an array of ideas to deepen and broaden sustainability education and scholarship at the University of Alberta that were brought forward by University of Alberta professors, administrative leaders, students, student leaders and alumni. There is energy and commitment to pursue these ideas, and the time is ripe to strengthen our role as a higher educational institution that helps build a better future for all.

Background

This is an academic companion document to the University of Alberta's Sustainability Plan 2016–2020. It provides information about the goals and strategies that were suggested to guide sustainability in education and research at the University of Alberta and that will connect to the overall campus sustainability initiative.

The University of Alberta's Board of Governors endorsed the University's sustainability commitment and guiding principles in 2008. Subsequently, sustainability was featured as a companion element to the most recent academic plan and a key component of the first sustainability plan. In 2015, the University of Alberta began the thinking that will lay the foundation for the next 5 to 10 years under our new president David Turpin. This report complements the University of Alberta's Comprehensive Institutional Plan (2016), which calls for a sustainability commitment in planning documents and building projects. This document was created to inform the University of Alberta's commitment to sustainability education and scholarship.

The goals and strategies in this document originated from several consultations and workshops held between October 2014 and February 2016¹:

- Workshop on October 17, 2014 on "Sustainability, Environment and Social Justice in the Social Sciences and Humanities at the University of Alberta" with 22 professors in the social sciences, arts and humanities. This workshop was part of the Provost's Initiatives and supported by the Kule Institute of Advanced Studies and the Office of Sustainability.
- Sustainability Plan workshops on education and research with two groups: 1) the Office of Sustainability Academic Advisory Committee (OSAAC)², and 2) a group composed of undergraduate and graduate students, non-academic staff, faculty, professional staff, alumni and community members. Each group attended a Vision workshop that sought to understand our shared vision for sustainability in education and research at the University of Alberta in 2020. Participants subsequently attended an Obstacles and Strategies workshop to look for ways to overcome obstacles and develop strategies to help the University of Alberta realize our shared vision in the next five years.
- Several individual consultations with faculty deans, associate deans, representatives, program chairs, centre directors, and graduate and undergraduate student groups to obtain additional suggestions on how to deepen and broaden sustainability education and scholarship at the University of Alberta.
- Luncheon Discussion on February 29, 2016 on Academic Initiatives in Sustainability at the University of Alberta

¹ Appendix A provides additional details about these workshops and consultations. Appendix B lists the participants who were involved in the consultation process.

² In spring 2015, the Office of Sustainability Academic Advisory Committee (OSAAC) was renamed the Provost's Academic Advisory Council on Sustainability (PAACS).

One of the key challenges that came out of these consultations is the need to change the perception held by some of the faculty, students and staff that sustainability is only about improving the environment. A broad definition of sustainability is applied to the goals and strategies in this plan:

“Sustainability is the process of living within the limits of available physical, natural and social resources in ways that allow the living systems in which humans are embedded to thrive in perpetuity.”

—Academic Advisory Committee Working Definition, Office of Sustainability, 2010

This definition addresses the ability for individual, social, ecological, economic, health and cultural systems to *thrive* and exist within the limits of the ecosystem sustenance base upon which all life depends. Professors and students in professional programs with stringent accreditation requirements, such as law, rehabilitative medicine, pharmacy, and medicine and dentistry, appear to recognize themselves less in the concept of teaching and researching in sustainability, yet they play a critical role in the health, design, and social justice systems of society. Students in particular may not readily recognize that sustainability is the healthy functioning of society and an economic system that supports the well-being of all.

The following two sections outline a vision for education and research at the University of Alberta that came out of the Sustainability Plan consultations, along with suggested goals and strategies to help attain that vision. The Goals and Strategies section uses the same numbering system as the Education & Research section in the University of Alberta’s Sustainability Plan 2016–2020. The main headings are the key goals (Goals 2.1 to 2.3), and the strategies associated with each of these goals are included beneath them. Additional background information from workshops and individual consultations is provided below each strategy to provide context useful to guide strategy implementation and strengthen connections across the university. After Goals and Strategies, Next Steps discusses the process for sharing content in “A Plan for Deepening Sustainability Education and Scholarship at the University of Alberta 2016–2020”. This is followed by a final note about the future of sustainability in education and research at the University of Alberta.

Visions for Education & Research

Our university's teaching and research efforts incorporate sustainability and advance our institution's mission.

We envision students having opportunities to learn, research and apply sustainability using interdisciplinary approaches. Through outreach and partnerships, the university brings research and new knowledge to the community, enabling individuals, communities, organizations and industries to achieve sustainability. The university is recognized as a leader for taking significant action on climate change and for capitalizing on the knowledge and strengths of our academic and research communities.³

³ The draft Sustainability Plan (2016-2020) describes the process used to create this vision statement.

Goals and Strategies

The goals and strategies provided below are identified with numbers that match with goals and strategies identified in the University of Alberta's 2016-2020 Sustainability Plan, Section 2, Education & Research.

GOAL 2.1

Encourage the campus community and the public to learn about sustainability

- i. **Strategy:** Create awareness of resources, research findings, demonstration projects and expertise

One approach to prompt broader learning about sustainability is through the offering of the University of Alberta's varied embedded undergraduate certificates. There are several embedded certificates at the University of Alberta that are either current or in development. The Certificate in Sustainability is available to undergraduate students in nine faculties, including the Augustana campus (and will likely be expanded to Campus Saint-Jean). Augustana also offers a Certificate in Sustainability as part of five one-day courses through their Extended Education program. Other options with connections to sustainability at the University of Alberta include the undergraduate Certificate in International Learning, the Certificate in Community Engagement and Service-Learning, and the Certificate in Global Citizenship. The Faculty of Science is developing a Certificate in Leadership with the Faculty of Arts, as well as a Certificate in Interdisciplinary Science Studies and a Research Certificate in Science. There has also been discussion on moving forward with Adapted Fitness Provider Certification (embedded and free-standing) in the Faculty of Physical Education and Recreation that would serve to support students, new graduates, and exercise professionals in the community to learn ways to adapt physical activity and exercise for individuals experiencing disability. There is potential and public interest in a professional certificate for post-graduates offered by the Faculty of Extension, in sustainability or a more focused area (e.g. Climate Change Policy and Practice).

Graduate students (incoming and outgoing elected members of the Graduate Students' Association) suggested developing a Sustainability Certificate for graduate students that is practicum- and research-based, rather than course-based. They suggested creating more professional development opportunities tied to sustainability and offering online, for-credit professional development courses. An example of such a course could be a credit course on green building certification (the Faculty of Extension currently offers this as a non-credit course). They would also like to see sustainability-related events and learning opportunities across the disciplines. This could include team-based graduate student research opportunities to work on wicked problems (i.e., hard-to-solve problems that are interconnected with other problems).

Massive open online courses (MOOCs) could make a sustainability curriculum more accessible to students limited by mobility, work schedules, and living in remote areas. Examples of forthcoming MOOCs at the University of Alberta include: Indigenous Studies 101 (Faculty of Native Studies), Introduction to the Arctic: Climate (Faculty of Science), Mountains 101 (an interdisciplinary course in the Faculty of Physical Education and Recreation), and other Arctic courses that will focus on People and Cultures, Economics and Natural Resources (Faculty of Science). Potential future MOOCs, such as "Transitions to Sustainability" and "Climate Change Policy, Practice and Programs", could offer more direct sustainability learning. The Faculty of Nursing would like to offer a future MOOC on nutrition and exercise, which are also key subjects for sustainable social systems.

Greater access to sustainability education through the University of Alberta could also include more online courses, as well as course-based Master's degrees (both online and on campus) in related areas of sustainability, to broaden and deepen sustainability learning. The Faculty of Nursing is particularly interested in online sustainability courses that could be offered to their nursing students as electives. Several Master's programs are currently being developed at the University of Alberta. For example, the Faculty of Science is developing a professional Master's degree in Environmental Monitoring or Environmental Innovation. The Faculty of Science also has recently been approved for a course-based Master's in Planning. The Faculty of Agricultural, Life and Environmental Sciences is developing an interdisciplinary, course-based, distance learning (online) Master's program in Forestry, and Ecological Restoration and Reclamation. The Faculty of Native Studies is working on an online, course-based Master's in Native Studies.

ii. **Strategy:** Promote sustainability-related programs

The University of Alberta could train those who regularly interact with current and prospective students, such as campus recruiters, internship coordinators and career advisors, about the academic, curricular and co-curricular opportunities to learn about sustainability at the University of Alberta. Those who were consulted often held that out-of-the-classroom opportunities for learning about sustainability should be accessible and affordable to all students. Promotion of these opportunities may include reaching out through the Students' Union and targeting student clubs and organizations on campus where uptake is likely to be strong. Graduate students asked for better communication on new course offerings in sustainability among departments, graduate coordinators who advise students on courses, and the Graduate Students' Association.

iii. **Strategy:** Encourage diverse educational approaches to teach about sustainability across the disciplines

Many people recommended that leaders at the University of Alberta encourage the development of new courses in sustainability and the integration of sustainability concepts and applications into existing courses. The development of sustainability content and courses could be encouraged by offering course releases to build new courses or to substantially revise existing courses. Funding could be provided for pilot projects, course field trips, or special learning and training opportunities for faculty. For example, faculty could receive funds to attend the annual conference of the Association for the Advancement of Sustainability in Higher Education, which provides rich learning opportunities on sustainability course content and delivery. An example of an interdisciplinary course being developed by the Faculty of Arts and the Faculty of Science is a global issues course to address the connections between science and society.

Some professors argued for more flexibility in pedagogical structure. Blended learning would reduce utility use, because roughly half of the learning is done outside the classroom. Flipped classrooms are classes that physically meet less frequently to focus on exercises, projects or discussions. Massive open online courses (MOOCs) are courses that people can take remotely, thus eliminating travel to and from class. Finally, alterations to class duration and frequency can better enable students to take courses outside of their disciplines and enable instructors to involve outside experts.

Strong interest exists in topics such as sustainable businesses, technological advances in energy savings and renewable energy, and science citizenship, yet the courses that are available are generally limited to students who are in those majors (e.g. Engineering, Business and Science). There is an opportunity to deepen and broaden sustainability learning by developing courses for non-majors. Graduate students in particular asked for more opportunities to take sustainability-focused courses.

Project challenges and competitions that are hosted by faculties or broader units and posed to student-led groups could create a greater sense of efficacy and hope among students interested in sustainability. For example, the Heroes for Health challenge previously held by the University of Alberta's Health and Wellness team could be repeated in a Heroes for Sustainability competition.

Many participants in our consultations suggested having a long-range goal that all programs provide experiential learning opportunities involving systems and long-term thinking. For example, there is broad academic support for a new initiative called Learning Experiences in Applied Projects (LEAP), led by the Office of Sustainability. LEAP creates opportunities for problem-based teaching, research and hands-on experiences. These "living lab" projects use the natural, social and built environment of the campus as a testing ground to develop solutions to address sustainability goals on campus and beyond.

Several professors and leaders recommended that we teach sustainability through university programming in outdoor education, health, play, indigenous and other cultural events, storytelling, and the arts in general. When students come to know the university's campuses not only as places for classroom learning, but also as places with natural features that are aesthetically pleasing (e.g. Edmonton's River Valley), places for outside unstructured learning, and places for creative expression (such as the Fine Arts Building Gallery, which presents provocative student work), there is greater opportunity to tap into local capacity to see the value in nature, in place-based knowledge, and in creative talent.

It was also recommended that we should continue to invest in the natural beauty and ecosystem functioning of our university grounds and use this management knowledge as a teaching tool for students. There are extensive learning opportunities at the Devonian Botanic Garden, including opportunities for research involving human experiences with nature, plants, gardening, and alternative agriculture.

Many faculty members suggested that promoting our Education Abroad program, which offers exchange, internship and summer programs, can further enhance experiential learning tied to sustainability. Other international spring, reading week, or semester-long courses at the University of Alberta can broaden students' international learning of sustainability, particularly around cultural sustainability.

The widespread adoption of a healthy lifestyle is an important component of social sustainability. The Faculty of Physical Education and Recreation (PER) has extensive programming for university and community members that promotes health and wellness. This includes activities and courses with an outdoor component (such as INT D 284: Mountain Backcountry Field Skills). The Faculty of PER also provides opportunities for numerous activities in the facilities that they manage. This faculty is also building a new major in Adaptive Physical Activity in the Bachelor of Kinesiology that addresses access to physical activity and sport for those with disabilities. Physical Education and Recreation faculty could also highlight better their teaching contributions in the area of sustainability around behavioural medicine, recreation and health education, which promotes healthy behaviours among diverse populations.

GOAL 2.2

Encourage exposure to interdisciplinary and transdisciplinary teaching and research connected to sustainability

Interdisciplinary and transdisciplinary teaching and research require building bridges within and outside of the university. Several people who were consulted asserted that greater dialogue is needed among university administrators, program leaders, professors and students about the role of higher education in advancing teaching, research, demonstration projects, interventions, and outreach in sustainability. Departments, faculties, and academic program chairs are encouraged to engage in university and community dialogues about where academic needs are likely to change, in terms of important topics, methodologies, technologies, and changing socio-political contexts that will shift local, national and global conditions for sustainability. We could place further emphasis on professors' engagement with the broader community of government, industry, faith-based organizations, non-governmental organizations, indigenous organizations, and other civic and community organizations on the perceived needs for sustainability research. The consultations for this plan indicated an abiding interest in sustainable food systems, climate change mitigation and adaptation, energy conservation and renewable energy, cultural sustainability, and sustainable consumption.

To meet Goal 2.2, the number of instructors, students and researchers involved with or exposed to interdisciplinary or transdisciplinary teaching and research connected to sustainability would likely also increase. Some universities require a 100-level course in sustainability for all students. While this would be challenging in programs that have less room for non-required courses in their accreditation standards, a required sustainability course, even limited to some faculties, could create common ground across disciplines and showcase a distinct commitment to sustainability education at the University of Alberta. Such a course could be delivered online or through a MOOC.

Augustana has a core requirement for environmental sustainability. The Faculty of Science is developing a first-year course on critical thinking and weighing evidence for all incoming science students. This will foster common knowledge among science students and help them understand potential applications of science.

There was a common recommendation for more place- and project-based teaching, which may be more easily taught across the University of Alberta's campuses, field stations, research facilities, and demonstration projects. We have an opportunity to use our university as a sandbox, providing opportunities for creative and collaborative exploration. Greater linkages between the Prairie Urban Farm at South Campus and the Devonian Botanic Garden, for example, could complement a growing interest and concern in sustainable food systems. This could also include strengthening their connections to the University's operational activities (e.g. Dining Services). There could be greater use of Augustana's Miquelon Lake Research Station, which aspires to demonstrate sustainable operations and carry out teaching and research in sustainability. Greater flexibility for students to take sustainability courses outside of their degrees or to pursue a minor in sustainability in their respective programs would broaden exposure to sustainability topics across the majors. Graduate students would like the concepts of sustainability to be more widely incorporated into their courses, research training, and professional development opportunities.

- i. **Strategy:** Build the capacity to include aspects of diversity and inclusivity within research, and honour diverse research methods

Those consulted for this report often called for greater integration of indigenous content into courses across the University of Alberta to improve general knowledge about the recommendations of the Truth and Reconciliation Commission of Canada⁴, the current threats to sustainability across Canada, and the ways in which Indigenous peoples of Canada have maintained or sought sustainability in their communities. UAlberta North, a new initiative to coordinate northern research initiatives, can facilitate this capacity, especially in terms of building northern research capacity. Augustana has shown commitment in this area with the recent hire of a new professor who links sustainability to History and Native Studies. Others in the Faculty of Native Studies recommended exposing students, faculty and staff to the relationship between sustainability and traditional knowledge in native communities in Canada and elsewhere. In particular, the Faculty of Native Studies suggested offering more courses related to collaborative research skills to build land-based knowledge, and indigenous rights and benefits with respect to resource development. The Faculty of Extension is also offering a number of transformative learning opportunities in a project entitled, “We Are All Related: Reconciliation, Engagement, & Lifelong Learning through Indigenous Knowledge Sharing.”

The Faculty of Physical Education and Recreation suggested that they are in a good position to teach how to design spaces and be sensitive to diversity and inclusivity in various work and play settings. The Faculty of Physical Education and Recreation is also considering purchasing a property that would allow on-the-land training related to mountain studies, outdoor recreation, physical adaptations, sports training and performance, and other learning modules related to natural areas. Greater connections between the Faculty of Physical Education and Recreation and Human Resource Services or the Employment Equity Advisory Committee (EEAC) could foster greater in-house collaborations on sustainability.

Finally, University leaders can influence the funding of sustainability research by advocating for appropriate reviewers for research grants, as there is a sense that most internal grant applications are reviewed by those in strict disciplines who may not appreciate the interdisciplinary nature of sustainability research.

- ii. **Strategy:** Celebrate professors with a stated commitment to and/or expertise in sustainability

Many of our participants recommended that the University of Alberta showcase faculty, alumni and research teams that demonstrate excellence in advancing sustainability knowledge, practices, policies or projects. For example, the Office of Sustainability periodically showcases a professor who carries out sustainability research and/or teaching under the banner “Faces of Sustainability.” The University home page could also showcase professors, graduate students and professional staff members who make outstanding contributions to sustainability scholarship, education, programming or operations.

It is striking how many professors in the social sciences, arts and humanities are shifting their research focus to sustainable food systems, investigating areas like food justice, food sovereignty, food security and sustainable agriculture. Other strong areas of interest include: rural community development (especially at Augustana), sustainable energy systems, cold climate and resource-based economy sustainable design (especially in circumpolar regions), health and wellness, and governance and planning of cities and landscapes (including cumulative impact assessment and biodiversity protection).

⁴ The Truth and Reconciliation Commission of Canada (TRC) was constituted and created by the Indian Residential Schools Settlement Agreement. The Commission travelled throughout Canada over a period of six years to hear from Aboriginal people who had been taken from their families as children and placed in residential schools. In 2015, the Commission submitted its final report, which can be downloaded from nctr.ca.

Many of those we consulted also recommended that the University of Alberta increase the number of professors with expertise in sustainability and strategically hire new professors with a demonstrated interest in areas like climate change, corporate social sustainability, and inclusive governance systems for social change. Faculties and departments could also create awards and scholarships for sustainability and promote creative engagement between faculty and students on sustainability topics suitable for that faculty, as the Alberta School of Business has done with its student group, Net Impact.

iii. **Strategy:** Create opportunities to connect colleagues with a stated commitment to and/or expertise in sustainability

One common suggestion to foster greater opportunities for colleagues with a stated commitment to sustainability is to create a sustainability centre or related public policy institute focused on curriculum and research initiatives. Such a centre or institute could provide programming for public policy, for specific professional programs, or for a summer immersive experience in sustainability. It could carry out a number of integrative programs to build capacity in sustainability education and scholarship at the University of Alberta. Representatives from the Faculty of Arts and the Faculty of Law in particular, as well as graduate students, asserted the need for a place in which academics across faculties who are interested in sustainability could more easily collaborate with one another and coordinate sustainability-related projects. Those who promote such an institute should build on the lessons to be learned from the Alberta Centre for Sustainable Rural Communities at Augustana and liaise with that centre as appropriate.

The institute could host University of Alberta professors who are seconded to be part of the institute for one to three years to lead academic sustainability initiatives. It could also host think tanks or sustainability scholars from other universities. This institute could hold events such as “interdisciplinary speed dating” or “design and policy charrettes” on sustainability topics with students across the disciplines. There could also be panel discussions that link sustainability researchers (professors, undergraduate students, and graduate students, and researchers outside of the academe) and encourage them to share their research on common topics of interest and to develop research clusters in areas such as climate change. This institute would bring people together and build bridges across the disciplines and other sectors to encourage scholarship that informs global integrative efforts, such as the United Nations-endorsed Sustainable Development Goals. It could host reading groups and provide special courses that are not offered by the departments on innovative methodologies in sustainability sciences and scholarship.

Such an institute could also offer focused faculty and graduate student workshops and hold an annual conference on research and teaching in sustainability, potentially in collaboration with the Association for the Advancement of Sustainability in Higher Education, the Faculty of Graduate Studies and Research, and other institutions with successful academic sustainability initiatives. It could host a sustainability leadership summit for faculty and research associates, building off the Student Sustainability Summit (hosted each year by Sustain SU and the Office of Sustainability), as well as the Alberta Student Leadership Summit (hosted by the Student Group Services, the University of Alberta, and the Students’ Union). At these events, professors could learn how to incorporate more of the sustainability learning opportunities being offered by the Office of Sustainability and the Global Education Program⁵ into their course syllabi.

Graduate students in particular suggested an institute that could act as a “sustainability hub”, a space for graduate students to meet and work together on sustainability initiatives. The institute could be a clearinghouse of information for professors and graduate students about interdisciplinary journal publishing opportunities and networking possibilities across campus and across Canada on prescient sustainability research topics (e.g. integrated watershed management).

Professors frequently held that their research could have more impact if there was greater interaction between researchers and the media and government. The university could better facilitate this interaction by providing training in knowledge translation. The Faculty of Extension is offering a “Strategic Reframing Course” that focuses on communication methods to create change in common understanding, tools to help build general understanding of complex issues, and approaches to transform views on cultural and societal issues. This course would be a strong benefit to many faculty members to increase the impact of their research. Of particular interest are the processes around how university expertise can be more effectively applied to government decision-making and planning. Such training might be offered through the Centre for Teaching and Learning, the Faculty of Graduate Studies and Research, and/or the Research Services Office.

iv. **Strategy:** Promote opportunities for students and faculty to participate in sustainability initiatives

A centralized online information and networking system, in particular, was commonly suggested in our consultations as a way to promote opportunities for students and faculty to participate in sustainability initiatives. Many faculty and graduate students spoke of the need for an easier, faster way to find others across campus and across disciplines who are studying similar topics (e.g. water scarcity or disaster preparedness). The university should continue to support the Undergraduate Research Initiative, which has a portal system that effectively advertises research opportunities for undergraduates, and more recently offers research internships that focus on sustainability (funded by the Office of Sustainability).

An online system containing up-to-date information on sustainability-focused and -related courses would also help faculty and academic advisors suggest options to students for electives, especially “free electives,” that complement the student’s general interest in sustainability. The online system would help instructors articulate and advertise what students can learn from sustainability courses that they do not tend to learn from other courses. The University of Alberta’s standard online course catalog could also provide an indicator for courses that are sustainability focused.

v. **Strategy:** Encourage departments and faculties to develop long-range sustainability plans encompassing operational practices, teaching, research, and degree programs

Faculties and departments are encouraged, through an inclusive process, to identify programs they wish to add, enrich or discontinue, as part of their own long-range relevance to society. Part of this would be to conduct long-range planning on new hires in emerging sustainability areas or in areas for which the University of Alberta lacks expertise. A delegated faculty leader or sustainability committee could be assigned responsibility to inform the process, by summarizing what was done elsewhere and suggesting updates to programs and curriculum in regards to sustainability. This faculty leader or committee could report on the department’s or unit’s progress, such as facilitating the opportunity for students to take sustainability courses outside their faculties, fostering cooperation for co-teaching or course cross-listing, using the university

⁵ For the Office of Sustainability, these learning opportunities are led by the Campus Sustainability Initiative which provides institutional leadership and campus-wide communications and programs to integrate sustainability values into all aspects of the University of Alberta. The Office of Sustainability engages and encourages students, staff and faculty to engage in sustainability practices. A number of speakers, workshops, grants and volunteer opportunities exist for students to learn more about sustainability and lead sustainability efforts.

The Global Education program inspires and cultivates students as the next generation of leaders prepared to tackle critical issues facing the globe. Their signature event, International Week, is the University’s largest annual extra-curricular educational event and is the most extensive event of its kind on a Canadian campus, and offers workshops, exhibits and cultural performances. Other learning opportunities are fostered by International House, grants for international education, and themed programs that bridge students with internal and external partners.

for place-based learning, and facilitating collaborative program development with other faculties. The faculty leader or committee could also assist in finding instructors and resources to offer new courses that are currently needed but not yet offered.

Such review could be part of the academic unit reviews, carried out in support of the Office of the Provost, which will be underway for the next few years at the University of Alberta for the Canadian Council of Quality Standards.

Planning for greater sustainability content is considered, for example, in the Faculty of Agricultural, Life and Environmental Sciences, which expressed interest in developing a new interdisciplinary degree in sustainable systems. Building programs such as this requires cross-departmental conceptualization of the program, its purpose, its learning outcomes, and its capacity to provide excellent sustainability education across multiple disciplines. The Faculty of Arts representatives held that such long-range plans would help prompt the review and reinvigoration of programs such as the Bachelor of Arts in Environmental Studies, which is offered by the Faculty of Arts and the Faculty of Agricultural, Life and Environmental Sciences.

The long-range plans could also prompt departments and program leaders to evaluate existing programs and courses to identify gaps in sustainability content, remove outdated material, avoid unnecessary repetition, and share learning materials (such as curricular repositories). Faculty often recommended the need to find easier ways to develop courses in specific areas, such as sustainable food systems, climate change mitigation and adaptation, cultural sustainability, and so on. A repository for existing syllabi in emerging areas of interest would therefore be useful. Faculty members also discussed the rigidity of too many programs that require most or even all of students' courses to be taken in the same faculty. This directly discourages interdisciplinary learning. Program reform could allow and encourage more electives in sustainability courses and cross-listed courses between faculties. The long-range plans could routinize succession planning for hiring and retention. Professors and senior leaders we consulted called for a democratic process that fosters prioritization, smooth teaching transitions, and long-term investment in senior academic leaders and academic staff, instructors and contract employees.

One key element of such long-range plans would be for departments to define the topics and interventions in their scholarship that relate to and promote sustainability. Some faculties, such as the Faculty of Rehabilitative Medicine, did not recognize their role in sustainability until a directed discussion on sustainability and their programs highlighted linkages between health and wellness, health care resources, disability studies, and social justice in the broader meaning of sustainability. It was advised that professors and program leaders set aside time to explore what sustainability means for them and their programs. An inclusive, engaging planning process would foster greater long-term investments in program improvements.

Some particular suggestions came from Native Studies faculty, who identified the need for better interdisciplinary course offerings on indigenous orientations to environmental protection and business, such as co-taught courses on cooperative approaches to resource development and Aboriginal business development. Native Studies faculty identified gaps in the curriculum for Environmental Conservation Science and Native Studies students. For example, there is no course offering in these programs on the philosophy and epistemology of science. This further reproduces students' lack of awareness about how traditional knowledge and science can be used together to address sustainability challenges (e.g. habitat protection or water sanitation) in indigenous communities and in other non-Western cultures.

Many people in our consultation process encourage giving sustainability a stronger priority through its recognition by faculty evaluation committees (FECs). For example, annual reports for faculties could ask professors and faculty service officers (FSOs) to indicate which of their research projects

and papers address sustainability on or off campus and which are interdisciplinary. This would have a couple of benefits. First, it would signal to faculty and FSOs that this kind of research is encouraged and recognized as important. Second, it would allow the University of Alberta to encourage using our campus as a “small city” for sustainability learning and to report on this kind of research more readily in the Sustainability Tracking, Assessment & Rating System™ (STARS). STARS is the tool used by the University of Alberta to benchmark our institution’s sustainability performance.

Many faculty members who were consulted saw FEC evaluation processes as disincentives to community-engaged sustainability research and faculty communities of practice in sustainability teaching and research. Community-based research requires time to develop mutual understanding and trusting partnerships both within and outside the university. Therefore, FECs could more fully recognize the value of building partnerships within and outside the university, as well as the time investments required for faculty to do this well. Indeed, if the University of Alberta supports “the public intellectual” as noted in the Institutional Strategic Plan, it will be important for FECs to recognize the relationship building of trust that professors develop with the media and indigenous communities, to speak truth in evidence and truth to power in various ways.

Assistant professors could be encouraged to engage in sustainability teaching and research, and they could be rewarded by FECs when they do so. In some faculties, professors reported undue pressure to obtain grants that fund narrow questions, at the expense of pursuing partnerships and funding to address sustainability issues that are inherently interdisciplinary or transdisciplinary.

Many faculty also recommended that FECs show greater recognition and value of “slow scholarship” or the provision of sufficient time for higher order thinking and writing that is important to address wicked problems, often resulting in books that take several years to write. Additionally, giving equal credit for publishing in interdisciplinary journals as in disciplinary journals would signal to professors that there is support for sustainability scholarship. Professors who co-write sustainability articles in collaboration with staff in professional journals could also be rewarded for making important contributions to sustainability scholarship and practice.

Graduate students and the Kule Institute of Advanced Studies recommended the development of guidelines for “sustainable research”, which would address practical and ideal guidelines to spur positive change for people and the planet. To promote sustainable research, researchers could share and conserve research materials and equipment, share research funding with other university partners and community partners (currently deemed to be very bureaucratically onerous or impossible), reduce carbon footprints due to travel, and assure consistent, three- to four-year funding of research assistants who have developed knowledge and skills in a particular area. Professors could be rewarded for addressing policy, practice and public knowledge sustainability challenges, as this strengthens the university’s long-term relationships with local people and places. There are also enormous needs to preserve and maintain access to data, which some respondents referred to as “data sustainability.”

GOAL 2.3

Support faculty members to integrate sustainability into their teaching

- i. **Strategy:** Develop initiatives to integrate sustainability into curriculum and academic programming

A common suggestion was to prepare faculty to integrate sustainability into their teaching via faculty development workshops, new faculty orientation, and by developing a community of practice. Faculty expressed the desire for more opportunities to interact with each other on the topic of teaching. By discussing course content with each other, faculty can learn how to foster greater critical thinking about sustainability within their degree programs, as well as how to use emerging language (e.g. resilience, anthropocene, transitions, and life-cycle analysis) that allows greater common understanding of sustainability subjects. Nursing and Science faculty in particular emphasize the role of critical thinking as part of teaching sustainability. Nursing faculty also emphasize leadership training, which they assert could be oriented more directly to sustainability issues.

New faculty are in a good position to invest in their teaching, which can yield long-term benefits for themselves, their students, and the university's ability to offer up-to-date academic programs and courses. Efforts to engage new professors in sustainability-related workshops and other sharing and training opportunities could be expanded.

Many of our contacts for this report held that interdisciplinary teaching is a challenge, because most professors were trained within a specific discipline and their programs are built on past disciplinary fundamental content. Greater opportunity for faculty members to co-teach on a sustainability topic can enhance their knowledge and interdisciplinary offerings. Interdisciplinary teaching, and moreover program development, take vision and time to develop, so creating space for faculty to do so through special assignments, teaching relief, or other incentives may better facilitate these developments. Many faculty members held that departments and faculties can be too inward looking and territorial, which inhibits interdisciplinary teaching and scholarship.

Many faculty members would also like to see a reduction in administrative tasks, especially where the delegation of these tasks could be more appropriately assigned. This would provide more time for thoughtful and creative teaching and research and for developing new sustainability initiatives. Greater exchange between Augustana Campus, Campus Saint-Jean, and the University of Alberta north campus with respect to sustainability speakers, workshops, Sustainability Awareness Week events, and so on, could foster greater interdisciplinary faculty and student exchange.

The Alberta School of Business participants called for more faculty members to teach students about a growing business emphasis on sustainability. The Alberta School of Business has a suite of courses on corporate sustainability, social responsibility, and communications. It also has the Canadian Centre for Corporate Social Responsibility, which supports creativity and innovation in business practices that support the quality of life experienced by the communities in which they operate.

Another example of an initiative that integrates sustainability into research is the "After Oil" project, which is a large, international, academic and public research project based at the University of Alberta that operates under the rubric of the Petrocultures Research Group (PRG). The Parkland Institute at the University of Alberta was also awarded a large Social Sciences and Humanities Research Council grant that partners with other organizations across three provinces on "Mapping the Power of the Carbon-Extractive Corporate Resource Sector."

Other initiatives could provide greater support at the University of Alberta in regards to providing start-up funds or small grants for larger grant applications from the Research Services Office, the Faculty of Graduate Studies and Research, and the faculties would be useful. Given that more sustainability research is in the "impact sciences" (which address the social, economic and ecological consequences of human activities) than the "production sciences" (which address the ways to create and expand

the use of natural resources, efficient processes for making things, and useful consumer products), obtaining research funding for sustainability projects is more challenging. Thus, in-house funding to build up sustainability research capacity would be particularly useful. The application requirements for small amounts of money should not be so onerous that they discourage participation.

At a sustainability workshop for the social sciences, arts and humanities in October 2014, professors identified numerous sources of potential funding⁶ for sustainability-related research. Many of these require matching funding that could be provided by the University of Alberta. The Office of Advancement at the University of Alberta could target donors, especially in the resource sector, to donate to an “endorsement fund” that would provide start-up funds for sustainability research related to that sector.

The Kule Institute of Advanced Studies at the University of Alberta funds transformational interdisciplinary and comparative research at the highest standards nationally and internationally, and it has funded a number of sustainability focused and related grant proposals.

The Sustainability Scholars program offers applied research and professional development experience to graduate students through an innovative summer internship program that sponsors graduate students to work on sustainability-related applied research projects. This program, which partners the Office of the Provost, Office of Sustainability, Faculty of Graduate Studies and Research, Facilities and Operations, and the City of Edmonton, is beginning its third year in 2017. The expansion of this program from 6 to 18 scholars serves the University of Alberta’s goals to expand opportunities for graduate students in sustainability-applied research and professional development training.

ii. **Strategy:** Build on existing community-based teaching and research partnerships and internships

The appointed leaders of academic initiatives for sustainability, out of the Office of the Provost, could work closely with the Centre for Teaching and Learning (CTL) to develop a suite of cross-disciplinary case studies or examples that demonstrate how partnered groups (among community members, university staff, faculty and students, non-governmental and civic organizations) have furthered sustainability.

The Community Service-Learning (CSL) office at the University of Alberta offers important opportunities for students to work with community partners on sustainability-related challenges (e.g. watershed management or poverty reduction). CSL also offers interdisciplinary spring courses that engage students with on-the-ground sustainability challenges. For example, a series has been offered on oil development and social and health issues. More CSL courses that explore what sustainability means to different organizations could deepen sustainability education. Graduate students in particular requested more graduate-level interdisciplinary CSL courses on sustainability-related topics.

The Undergraduate Research Initiative (URI), in partnership with the Office of Sustainability and Facilities & Operations, also offers dedicated sustainability research internships on topics of sustainability. All URI research internships support interdisciplinary research undergraduate training.

⁶ Current on-campus funding opportunities exist through the Sustainability Enhancement Fund and Green Grants out of the Office of Sustainability, the Undergraduate Research Initiative, the Teaching and Learning Enhancement Fund, and the Kule Institute of Advanced Studies. Examples of industry funding could include Mountain Equipment Cooperative, Suncor, Syncrude, Save-On Foods, Ag-Funding Consortium, and the Northlands Park Edmonton. Examples of government funding could include the City of Edmonton, Tri-Council federal funding, Networks for Centres of Excellence, the Campus Alberta Innovation Chairs (CAIP). Foundation examples include the Real Estate Fund of Alberta, the Gates Foundation, and the Catherine Donnelly Foundation.

The Faculty of Extension, in particular, is well poised to readily offer specific courses that address sustainability practice and that target continuing professionals. For example, they offer a course for professionals called “Understanding LEED [Leadership in Energy and Environmental Design] for Building Works”. Greater communication and collaboration between the Faculty of Extension and other faculties could expand relevant and timely non-credit course offerings in the Faculty of Extension that could be turned into credit-based undergraduate and graduate courses.

The Office of Sustainability offers several student intern positions each year. Members of the Students’ Union requested more undergraduate internship opportunities in sustainability, similar to the Sustainability Scholars program offered at the graduate level.

iii. **Strategy:** Explore opportunities to regularly assess and report on sustainability literacy

One way to know if our students’ knowledge, attitudes and interests around sustainability is shifting is to create a longitudinal database on sustainability literacy. Ideally, it would be a very short survey that is comparable to other universities and deemed legitimate and relevant to the University of Alberta. It could be administered annually to a representative sample of University of Alberta students. Survey results may reveal areas where students have greater or less knowledge, which could help inform academic programs and the Office of Sustainability’s engagement programs.

Next Steps

The Office of Sustainability is building an implementation plan for the overall University of Alberta Sustainability Plan 2016–2020. Academic initiatives will be added to this plan as they emerge in the coming months and years. The appointed leaders of academic initiatives for sustainability, out of the Office of the Provost, will develop avenues for faculty and students to be engaged in initiatives that emerge and grow from “A Plan for Deepening Sustainability Education and Scholarship at the University of Alberta 2016–2020”.

Final Note

The University of Alberta can become a stronger leader in sustainability, regionally, nationally and internationally, by fostering greater cross-fertilization across the disciplines, connecting to on- and off- campus sustainability professionals, supporting start-up research in emerging areas of importance and areas of strength, and facilitating partnerships for sustainability tests and interventions. Greater university dialogue and consequent common understanding around the complementarity of social goals, such as greater health and wellness, equity, fairness and justice, with inclusive economies and robust and resilient environments can “raise the bar” in the university’s collective ability to convey the importance of sustainability scholarship and education.

This requires assessing our sustainability content and delivery strengths and deciding where we want to build our strengths and impact. It is a challenge to plan across 400 academic programs—this will require more knowledge brokers and bridge builders in the future. A great deal of progress can be made if departments and program leaders evaluate existing programs and courses to identify gaps in sustainability content, remove outdated material, avoid unnecessary repetition, share learning materials (such as curricular repositories), and co-teach across faculties and departments. This plan offers a suite of suggestions and ideas for academic sustainability initiatives, and a roadmap to better planning for the future for the University of Alberta to have a more positive impact on the world.

Appendix A:

Summary of workshops and consultations

A total of 78 individuals, representing 17 Faculties and 24 Departments were engaged in range of conversations and dialogues. Details about these activities are outlined below.

1. October 2014 Vision Workshop

Twenty-two Social Sciences, Arts and Humanities professors gathered at Campus Saint-Jean on October 17, 2014 for a workshop on “Sustainability, Environment and Social Justice in the Social Sciences and Humanities at the University of Alberta”. The workshop was organized by Naomi Krogman, Director of Sustainability Scholarship and Education, Office of the Provost and Professor in the Department of Resource Economics and Environmental Sociology. Workshop assistants were Monica Gruezmacher, Adjunct Faculty in the Faculty of Extension, and Apryl Bergstrom, Research Assistant, Office of the Provost.

Workshop goals:

- Identify strengths and gaps in our theme areas; sustainability, environment and social justice
- Discuss university and faculty-led support that contributes to effective collaboration between Social Sciences, Humanities, and Arts professors in regards to academic programming, course development, supporting a community of practice and identifying funds available for interdisciplinary research.
- Inform the academic portion of the University of Alberta’s Sustainability Plan 2016–2020.
- Encourage the submission of a Cluster Grant letter of intent to the Kule Institute of Advanced Studies.

Workshop Organization

The workshop consisted of three work sessions: 1) Sustainability research, teaching and practice; 2) the University of Alberta’s future in sustainability and interdisciplinary scholarship; and 3) Goals and Strategies for curriculum and research components in the University of Alberta’s Sustainability Plan. The topics and questions discussed during these sessions are outlined in more detail below:

Topics in work session 1: Sustainability research, teaching and practice

- Funding opportunities and challenges
- Content and development of academic programs and courses
- Challenges in creating a community of practice
- Challenges of interdisciplinary research

Interview questions in work session 2: UAlberta’s future in sustainability and interdisciplinary scholarship

- What are sustainability related themes that the U of A should have given the size, rank and sister campuses of our institution?
- What are the strengths in sustainability scholarship for the faculties of Social Sciences, Arts and Humanities? Other faculties?
- What are the gaps in sustainability scholarship for the faculties of Social Sciences, Arts and Humanities? Other faculties?
- What theme areas for academic programs would be ideal for the U of A to offer or in which to invest?

Work session 3: Goals and strategies for curriculum and research components in UAlberta's Sustainability Plan

- Participants individually wrote and then discussed their goals, modifications, additions and strategies regarding curriculum and research in the University of Alberta's Sustainability Plan 2016–2020.

2. Sustainability Plan Workshops

Sustainability Plan workshops from January to April 2015 with two groups:

1. The Office of Sustainability Academic Advisory Committee (OSAAC)⁷
2. A group composed of undergraduate and graduate students, non-academic staff, faculty, professional staff, alumni and community members. Participants were recruited through promotions by the Office of Sustainability. They signed up through an online survey. Additional people were identified as responsible parties in education and research, and they were also invited to attend the workshops.

A group composed of undergraduate and graduate students, non-academic staff, faculty, professional staff, alumni and community members. Participants were recruited through promotions by the Office of Sustainability. They signed up through an online survey. Additional people were identified as responsible parties in education and research, and they were also invited to attend the workshops.

3. Individual Consultations

Consultations with Deans, Associate Deans

The Dean, Associate Dean, Research and Associate Dean, Academic (or their equivalents) were sent the questions below. They were invited to meet with Naomi Krogman to discuss what they would like to see in education and research when it comes to sustainability, both within their faculties and throughout the university. Detailed notes were taken at each of the consultations and sent back to the Deans and Associate Deans for review. Those who were interested in sharing their ideas but were unable to meet were invited to submit written answers instead.

Questions sent to Deans and Associate Deans:

1. What academic areas would you like to enhance in your faculty that relate to sustainability?
2. What sustainability area(s), if any, do you wish to build up in your faculty, in terms of curriculum or strengthened programming, in your faculty? Are there specific program names or course titles you can suggest?
3. What are the key threats, if any, to the current sustainability-related courses and academic programs you have in your faculty?
4. What are key opportunities and barriers for faculty interested in sustainability-related research?

⁷ In spring 2015, the Office of Sustainability Academic Advisory Committee (OSAAC) was renamed the Provost's Academic Advisory Council on Sustainability (PAACS).

5. When it comes to sustainability at the University of Alberta, what do you want to see in curriculum or research in five years?
 - a. What obstacles might stand in the way of achieving this vision?
 - b. What strategies can be used to address these obstacles and achieve our goals?
 - c. What resources or support might be needed to achieve our goals?
6. How could we expand opportunities for undergraduate and graduate students to research and learn about sustainability initiatives on campus, as a living lab? To learn about sustainability more broadly?
7. What are some of the core issues in sustainability in which you would like to see more partnership with other faculties (if any)? With other organizations or institutions?
8. To what extent are faculty members or student (groups) already engaged in teaching or research related to sustainability?
9. Can you identify faculty and students in subjects close to sustainability issues, not yet engaged in sustainability?
10. What can be done to better facilitate collaborations across faculty boundaries on sustainability topics in teaching and research?
11. Are there one or two major sustainability projects that your faculty might wish to pursue?

Consultations with Chairs or Coordinators of sustainability-related programs

The Chairs or Coordinators of programs that were identified as being sustainability-related⁸ were sent the questions below. They were invited to either meet with Naomi Krogman to discuss sustainability in education and research with respect to their programs, or to submit written responses to the questions.

Questions sent to Chairs or Coordinators:

1. What academic areas would you like to enhance in this program that relate to sustainability?
2. What sustainability area(s), if any, do you wish to build up in your faculty, in terms of curriculum or strengthened programming? Are there specific program names or course titles you can suggest?
3. What are the key threats, if any, to this program?
4. When it comes to sustainability at the University of Alberta, what do you want to see in curriculum or research in five years (your suggestions can cross programs, faculties)?
 - a. What obstacles might stand in the way of achieving this vision?
 - b. What strategies can be used to address these obstacles and achieve our goals?
 - c. What resources or support might be needed to achieve our goals?
5. What are some of the core issues in sustainability in which you would like to see more partnership with other programs, faculties, organizations or institutions?

Detailed notes were taken during each of these consultations.

⁸ See Appendix B for a list of academic programs that were identified as being sustainability-related.

4. Luncheon Discussion on Academic Initiatives in Sustainability at the University of Alberta

On February 29, 2016, 21 faculty members, staff and students attended a workshop over lunch to discuss academic initiatives in sustainability at the University of Alberta.

Participants gathered in separate groups to discuss the following four topics:

1. The potential for a sustainability/climate change/public policy institute at the University of Alberta and the kinds of activities it would promote
2. Ways to inform new initiative, “Indigenous issues, cultivating citizenship and sustainability: Transformative learning opportunities”
3. Creating a system to foster better coordination and information sharing across instructors and researchers on sustainability issues
4. How to encourage greater planning for program and curriculum change in light of important sustainability topics, student interest, University of Alberta and branch campus strengths, and other post-secondary institutes in the province

Detailed notes were taken at each of these discussions and were used to inform the draft document, “A Plan for Deepening Sustainability Education and Scholarship at the University of Alberta”.

Appendix B:

People consulted

The goals and strategies in this document originated from several consultations and workshops focused on education and research held between October 2014 and April 2015. The people who participated in these consultations and workshops are listed in the tables below.

1. People consulted during October 2014 Vision Workshop

These were the people who participated in the Vision Workshop on “Sustainability, Environment and Social Justice in the Social Sciences and Humanities at the University of Alberta” on October 17, 2014:

Rhonda Breitreuz, Associate Professor; Agricultural, Life and Environmental Sciences; Human Ecology

Debra Davidson, Professor; Agricultural, Life and Environmental Sciences; Resource Economics & Environmental Sociology

John Parkins, Professor; Agricultural, Life and Environmental Sciences; Resource Economics & Environmental Sociology

Helen Vallianatos, Associate Professor and Associate Dean of Students; Arts, Anthropology

Jennifer Welchman, Professor; Arts; Philosophy

Ken Caine, Assistant Professor; Arts; Sociology

Janet Wesselius, Associate Professor; Augustana Campus

Lars Hallstrom, Professor; Director of Alberta Centre for Sustainable Rural Communities; Augustana Campus and ALES; Resource Economics & Environmental Sociology

Sheena Wilson, Assistant Professor; Campus Saint-Jean

Makere Stewart-Harawira, Professor; Education; Educational Policy Studies

Kristof Van Assche, Associate Professor; Extension

Mary Beckie, Associate Professor; Extension

Cameron Jefferies, Assistant Professor and Borden Ladner Gervais Fellow; Law

Sean Robertson, Assistant Professor; Native Studies

Lisa Dockman, Program Lead; Outreach & Engagement; Office of Sustainability

Howie Harshaw, Assistant Professor; Physical Education & Recreation

Elizabeth Halpenny, Associate Professor; Physical Education & Recreation

Tom Hinch, Associate Dean; Community and International Engagement; Physical Education and Recreation

Jane Springett, Professor and Director; Centre for Health Promotion Studies; School of Public Health

Leith Deacon, Professor; Science; Earth & Atmospheric Sciences

Sandeep Agrawal, Professor and Inaugural Director of Planning Program; Science; Earth & Atmospheric Sciences

Richard Kover, Sessional Instructor; St. Joseph's College

2. People consulted in Sustainability Plan workshops

Sustainability Plan workshops on education and research were held with two different groups: the Office of Sustainability Academic Advisory Committee (OSAAC) and a group composed of undergraduate and graduate students, non-academic staff, faculty, professional staff, alumni and community members.

Office of Sustainability Academic Advisory Committee (OSAAC) Workshops

Eight OSAAC members attended a Vision Workshop on January 30, 2015. Nine OSAAC members attended an Obstacles and Strategies Workshop on March 18, 2015. Participants included:

Mary Beckie, Associate Professor; Extension

Evan Davies, Assistant Professor; Engineering; Civil and Environmental Engineering

Leith Deacon, Assistant Professor; Science; Earth & Atmospheric Sciences

Lars Hallstrom, Associate Professor; Augustana Campus & Agricultural, Life and Environmental; Sciences; Resource Economics and Environmental Sociology

Howie Harshaw, Assistant Professor; Physical Education and Recreation

Trina Innes, Chief Sustainability Officer; Office of Sustainability

Jasmine Lamarre, Graduate Student; Agricultural, Life and Environmental Sciences; Renewable Resources

Kerstyn Lane, Program Manager; Sustain SU

Sandra Shores, Associate University Librarian; Bibliographic and Information Technology Services

Sheena Wilson, Assistant Professor; Campus Saint-Jean

Jiaxin (Sylvia) Xiong, Undergraduate Student

Workshops with non-OSAAC faculty, students, staff and alumni

Two workshops were held with faculty, students, staff and alumni. These workshops were open to everyone. Thirteen participants attended the Vision Workshop on February 6, 2015 and three participants attended the Obstacles and Strategies Workshop on April 8, 2015.

Nathan Binnema, Undergraduate student; Faculty of Science

Lisa Claypool, Associate Professor; Faculty of Arts; Art & Design

Mark Karstad, Manager, Academic Technology; Faculty of Medicine & Dentistry, Office of Education, Academic Technology

Robert Luth, Vice-Provost (Academic Programs and Instruction); Provost's Office

César Montilla, Graduate student; Faculty of Engineering

Kim Peacock, Educational Developer (APO); Faculty of Education

Saeidreza Radpour, Graduate student; Faculty of Engineering

PearlAnn Reichwein, Professor; Faculty of Physical Education and Recreation

Crystal Snyder, Undergraduate Research Coordinator; Undergraduate Research Initiative (URI)

Lisa Stein, Associate Professor; Faculty of Science

Brendan Trayner, Alumni

Neill Walker, Contract Academic Staff; Faculty of Arts; East Asian Studies

Jack Zupko, Professor; Faculty of Arts; Philosophy

3. People consulted in individual consultations

Consultations with Faculty Deans, Assistant Deans or other faculty representatives

From February to April, 2015, Naomi Krogman consulted with the Deans and Assistant Deans of 11 different faculties about teaching and research in the Sustainability Plan.

Stan Blade, Dean; Agricultural, Life and Environmental Sciences

Nat Kav, Associate Dean (Academic); Agricultural, Life and Environmental Sciences

Anne Naeth, Associate Dean (Research & Graduate Studies); Agricultural, Life and Environmental Sciences

Mikael Adolphson, Associate Dean / Teaching & Learning; Arts

Michael O'Driscoll, Associate Dean (Research); Arts

Allen Berger, Dean & Executive Officer; Augustana Campus

Steven Dew, Associate Dean (Research & Planning); Engineering

Amy Dambrowitz, Research Development Officer; Engineering

Bill Connor, Acting Dean; Extension

Christie Schultz, Assistant Dean, Academic; Extension

Michael Splinter, Assistant Dean, Finance & Operations; Extension

Brendan Hokowhitu, Dean; Native Studies

Nathalie Kermaal, Associate Dean (Academic); Native Studies

Frank Tough, Associate Dean (Research); Native Studies

Anita Molzahn, Dean; Nursing

Pauline Paul, Associate Dean, Graduate Studies; Nursing

Carolyn Ross, Associate Dean, Undergraduate Programs; Nursing

Joanne Profetto-McGrath, Professor; Nursing

Sylvia Barton, Associate Professor and Associate Dean, Global Health; Nursing

Derek Sellman, Associate Professor; Nursing

Katherine Trepanier, Director, Undergraduate Programs; Nursing

Linda Youell, Director, Undergraduate Services; Nursing

Sue Crackston, Executive Assistant to the Dean & Vice Dean; Nursing

Janice Causgrove Dunn, Associate Dean/Undergraduate; Physical Education and Recreation

Wendy Rodgers, Vice-Dean; Physical Education and Recreation

Christine Ma, Assistant Dean International Programs; Physical Education and Recreation

Donna Goodwin, Associate Dean Graduate; Physical Education and Recreation

Jason Lafferty, APO/Academic Programs; Physical Education and Recreation

Tammy Hopper, Associate Dean, Graduate Studies & Research; Rehabilitation Medicine

Jonathan Schaeffer, Dean; Science

Glen Loppnow, Associate Dean (Learning & Innovation); Science

David Coltman, Associate Dean, Research; Science

Chris Sprysak, Associate Dean of Research & Faculty Development; Law

Consultations with chairs of sustainability-related academic programs

Invitations to consult about the Sustainability Plan were sent to the Program Chairs, Coordinators or Directors in the following programs, which were identified as being sustainability-related:

Environmental Science / Studies, BSc or BA; Augustana Campus

Environmental Earth Sciences, BSc; Department of Earth and Atmospheric Sciences

Renewable Resources, MSc or PhD; Department of Renewable Resources

Resource Economics and Environmental Sociology, MSc or PhD; Department of Resource Economics and Environmental Sociology

Planning program, BSc or BA; Faculties of Science and Arts

BSc in Agriculture, BSc; Faculty of Agricultural, Life and Environmental Sciences

BSc in Animal Health, BSc; Faculty of Agricultural, Life and Environmental Sciences

BSc in Forestry, BSc; Faculty of Agricultural, Life and Environmental Sciences

BSc in Nutrition and Food Science, BSc; Faculty of Agricultural, Life and Environmental Sciences

Environmental and Conservation Sciences, BSc; Faculty of Agricultural, Life and Environmental Sciences

Environmental Studies, BA; Faculty of Agricultural, Life and Environmental Sciences and Faculty of Arts

Environmental Resource Management, Certificate; Faculty of Extension

MBA in Natural Resources Energy & Environment (NREE), MBA; School of Business

MBA with Sustainability Stream, MBA; School of Business

Program Chairs, Coordinators or Directors who met with Naomi Krogman or submitted written feedback are listed below:

Glen Hvenegaard, Professor; Augustana Campus; Environmental Science/Studies; BSc or BA

Glynnis Hood, Associate Professor; Augustana Campus; Environmental Science/Studies; BSc or BA

Megan Wood-Smith, Environmental Resource Management; Program Coordinator; Faculty of Extension; Environmental Resource Management; Certificate

Dev Jennings, Professor & Director, Canadian Centre for Corporate Sustainability & Social Entrepreneurship; School of Business; MBA with Sustainability Stream; MBA

Consultations with Student Groups

The following students' groups were consulted about education and research in the Sustainability Plan:

- Graduate Student's Association (graduate students): A presentation on sustainability in education and research was given to incoming and outgoing members of the GSA elective on April 17, 2015. Students were invited to discuss their visions, goals, obstacles and strategies concerning education and research at the University of Alberta.
- Students' Council (undergraduate students): a presentation on sustainability in education and research was given to a Students' Council meeting on March 24, 2015. Students were invited to discuss their visions, goals, obstacles and strategies concerning education and research at the University of Alberta.
- Sustainable Food Initiative (SFI): Students were invited to discuss their visions, goals, obstacles and strategies concerning education and research at the University of Alberta during a Sustainability Focus Group session in March 2015.

Additional students' groups were invited to share their ideas about sustainability in education and research but were not able to participate.

4. People consulted during the Luncheon Discussion on Academic Initiatives in Sustainability at the University of Alberta

Mary Beckie, Associate Professor; Faculty of Extension

Lisa Claypool, Associate Professor; Faculty of Arts; Art & Design

Lisa Dockman, Program Lead, Outreach & Engagement; Office of Sustainability

Sarah Ficko, Graduate student; Graduate Student's Association

Monica Gruezmacher, Adjunct Faculty; Faculty of Extension

Tammy Hopper, Associate Dean, Graduate Studies & Research; Faculty of Rehabilitation Medicine

Trina Innes, Chief Sustainability Officer; Office of Sustainability

Dev Jennings, Professor & Director, Canadian Centre for Corporate Sustainability & Social Entrepreneurship
Alberta School of Business

Mark Karstad, Manager, Academic Technology; Faculty of Medicine & Dentistry, Office of Education,
Academic Technology

Richard Kover, Sessional Instructor; St. Joseph's College

PearlAnn Reichwein, Professor; Faculty of Physical Education and Recreation

Sean Robertson, Assistant Professor; Faculty of Native Studies

Christie Schultz, Assistant Dean, Academic; Faculty of Extension

Chris Sprysak, Associate Dean of Research & Faculty Development; Faculty of Law

Lisa Stein, Professor; Faculty of Science; Biological Sciences

Makere Stewart-Harawira, Professor; Faculty of Education; Educational Policy Studies

Frank Tough, Associate Dean (Research); Faculty of Native Studies

Helen Vallianatos, Associate Professor and Associate Dean of Students; Faculty of Arts; Anthropology

Jennifer Welchman, Professor; Faculty of Arts; Philosophy

Janet Wesselius, Associate Professor; Augustana Campus

Sheena Wilson, Assistant Professor; Campus Saint-Jean

Appendix C:

Backgrounders for Sustainability Plan Workshops

The following documents were created for the Sustainability Plan workshops. They provided a “snap shot” of sustainability in each these areas as of January 2015.

SUSTAINABILITY PLAN
2016-2020

Co-Curriculum

December 2014

Selected Activities and Accomplishments Related to Campus Sustainability

Activating Students

30+ student groups

2-4 recent graduates

hired annually to contract terms with the Office of Sustainability

3-6 student interns

working annually with the Office of Sustainability

10+ UAlberta Ambassadors

deliver Sustainability Campus Tours

65-100 Campus Sustainability Volunteers

developing community, capacity and knowledge through their work.

10 in residences

Annual Events

Sustainability Awareness Week

Over 9,000 participants and 50+ events on 4 campuses

Student Sustainability Summit

Brings community leaders to campus to teach and mentor Alberta students

Sustainability Speaker Series

12 world-renowned leaders delivered presentations to 3,000+ people. *Since 2011*

Earth Hour 2014

1,183 Earth Hour pledges

396 lights switched off in flash mob

25,600 kWh saved in Lister residences

Orientation 2014

2,715 new students engaged

1,050 learned about composting

154 One Simple Act on Campus commitments

Green Spaces

Recognising students for integrating sustainability into their work and living spaces

37 residence dorms & apartments certified

28 student-run events certified

Peer-to-Peer Programs

- sustainEXCHANGE
- Bike Library
- Green Wing in Schäffer Hall
- Reusable Dish Program

Funding

Green Grants

- **\$59,453** awarded to 48 recipients since 2010

Sustainability Enhancement Fund

- **\$261,849** awarded to 10 projects since 2011

Communications Outreach

Monthly readers for Office of Sustainability

- **8,200** Sustainability eNews
- **8,350** sustainability.ualberta.ca
- **2,400** Facebook Likes
- **3,200** Twitter Followers



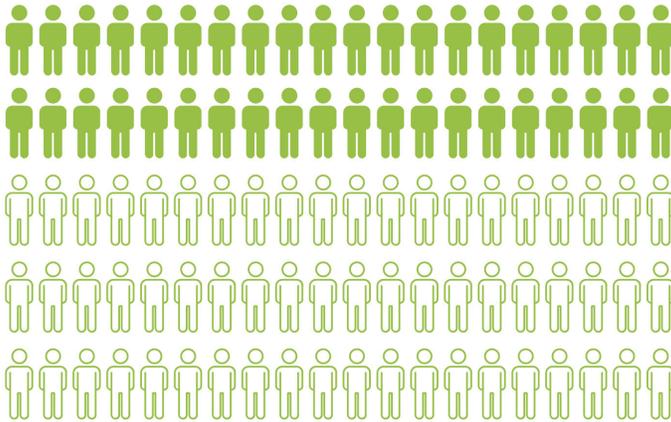
Research

December 2014

Selected Activities and Accomplishments Related to Campus Sustainability

Faculty

40% Faculty engaged in sustainability research



Interdisciplinary Research

Kule Institute for Advanced Study

Supports transformational interdisciplinary and comparative research.



Grants include: Research Cluster Grants, Research Team Grants and Dialogue Grants.



The Centennial Centre for Interdisciplinary Science (CCIS)

embodies an interdisciplinary approach to scientific discovery.

Established scientists interact with a new generation of world-class researchers and outstanding students, sharing sophisticated tools and state-of-the-art facilities.

Departments

64 out of 73 research-focused departments engaged in sustainability research.



Lecture & Seminar Series

- Bentley Lecture in Sustainable Agriculture
- Energy Talks Centre for Applied Business Research in Energy and the Environment
- Eric J. Janson Memorial Lecture Series
- Forest Industry Lecture Series
- Medical Grand Grounds
- Peter Kilburn Memorial Lecture Series
- Renewable Resources Seminar Series
- School of Public Health

Initiatives

Centres and Institutes

More than 50 campus and affiliated groups doing work related to sustainability.

Undergraduate Research Initiative (URI)

Supports students and instructors with instructional design, library resources, undergraduate research portal and funding opportunities.



Sustainability Research

- Canadian Circumpolar Institute's Northern Scientific Training Program and Northern Awards
- Helmholtz-Alberta Initiative's Energy and Environment program
- University of Alberta Water Initiative

Green Grants

\$59,453

awarded to 48 recipients since 2010



Sustainability Enhancement Fund

\$261,849

awarded to 10 projects since 2011

Selected Activities and Accomplishments Related to Campus Sustainability

Programs and Courses

663 courses connected to sustainability



50 out of 74 departments offer sustainability-related courses



Sustainability-focused undergraduate programs

- Environmental Studies
- Environmental Science/Studies (Augustana)
- Environmental and Conservation Sciences
- Agricultural/Food Business Management
- Specialization in Planning
- Forest Business Management
- Native Studies
- Agriculture
- Forestry

Sustainability-focused graduate programs

- Renewable Resources
- Rural (Environmental and Resource) Sociology
- MBA sustainability stream

Faculty Development

February 5 and 6, 2014

"The Craft of Teaching Sustainability" with Dr. Gary Machlis

February 7, 2014

"Broadening Participation in Sustainability Education and Research" with Dr. Gary Machlis

December 4, 2014

"Sustainability through Community Service-Learning and Undergraduate Research"



Festival of Teaching 2013-14

Theme focused on sustainable teaching and learning.

Funding

SSHRC start-up funds secured

to study the future of sustainability sciences and scholarship in Higher Education.

Certificate Program

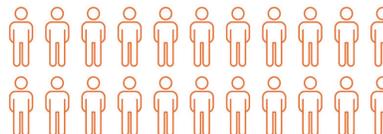
The Certificate in Sustainability

A new embedded certificate available to undergraduates in nine faculties:

ALES, Arts, Augustana, Business, Education, Extension, Native Studies, Physical Education and Recreation and Science.



47 students enrolled in the CIS in the first semester.



Community Service Learning

Engages students to advance sustainability performance by leveraging campus as a living lab.

1,131 CSL students 2013-14



180 CSL community partners 2013-14



Community Service-Learning Partnership Grant

Funds two-year partnerships between university instructors and community organizations in the Edmonton region. The primary focus is on social change projects or community-based research.

Annual CSL summer course

investigates perspectives on oil industry and community



BUILDING A SUSTAINABLE FUTURE

[SUSTAINABILITY.UALBERTA.CA](https://sustainability.ualberta.ca)
