

President's Advisory Committee on the Environment, Climate Change, and Sustainability

ANNUAL REPORT 2020

Embedding Sustainability Across U of T



November 2020

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Message from the President

I am pleased to see the 2020 Annual Report of the President’s Advisory Committee on the Environment, Climate Change, and Sustainability (CECCS). The Committee was established in February 2017 as one of 14 recommendations in my report, [Beyond Divestment: Taking Decisive Action on Climate Change](#). Since then, it has worked to advance sustainability in every aspect of U of T life—in part, by bringing together key stakeholders and others dedicated to combatting climate change and promoting sustainability.

The University of Toronto is steadfast in its commitment to helping to meet the global challenges of climate change by integrating sustainability into our academic and operational activities and in community engagement, both local and global. Our approach is intentionally interdisciplinary and is guided by the United Nations Sustainable Development Goals (SDGs).

Through our active participation in the University Climate Change Coalition (UC3) and the newly created U7+ Alliance, we have taken a leadership role—sharing best practices and encouraging other universities to join us in the fight against climate change. Other activities and accomplishments are well documented in this report.

On behalf of the University of Toronto community, I offer congratulations to the CECCS on the publication of its 2020 Annual Report and I thank Committee members for their hard work and dedication.

Sincerely,

Meric S. Gertler
President

Executive Summary

The President's Advisory Committee on the Environment, Climate Change, and Sustainability (CECCS) was created in 2017 with the following overall goals: to make sustainability a key component of the University of Toronto (U of T) identity, to achieve international leadership in the integration of operational and academic sustainability, and to coordinate disparate sustainability activities across the three campuses. This report discusses the accomplishments of CECCS since the last annual report that was released in June 2019. Where appropriate, a broader context with regard to the developments over the last four years is provided. The theme of this report reflects the overall goal of CECCS to embed sustainability across U of T.

The work of CECCS has been advanced largely through three subcommittees: Campus as a Living Lab (CLL), Agent of Change in the Community (AOC), and Curriculum Innovation (CI).

The CLL subcommittee fosters campus as living lab activities which address operational sustainability issues by connecting students, faculty, staff, and potentially external partners, on CLL projects. Over the past year, CLL worked on the creation of a CLL toolkit, principles, database, and a report on business air travel at U of T. CLL also supported several activities related to the UN Sustainable Development Goals (SDGs), including design of a 17 Tables Event, contributing to the Times Higher Education Impact ranking submissions, and the development of several SDG-related inventories.

The AOC subcommittee supports work with local and international partners on sustainability issues. A continuing partnership with the Centre for Community Partnerships has helped to incorporate sustainability in community-engaged learning (CEL) courses. AOC also supports U of T's engagement with international networks including the University Climate Change Coalition (UC3) and U7+ alliance. An internship program allowed students to conduct comparative research on sustainability at 10 universities. A Better Buildings Boot Camp was held in August 2020 using U of T's planned Data Sciences Centre as a case study for graduate students from U of T, OCAD U, Ryerson U, and York U.

The CI subcommittee works to integrate sustainability learning across the University. It has developed a three-tiered Sustainability U Framework (Citizen, Scholar, and Leader) to inspire students to incorporate sustainability into their curricular and co-curricular learning. The Sustainability Scholar program was launched in 2020 at the Faculty of Architecture, Landscape and Design, and the Faculty of Applied Science & Engineering. The Faculty of Arts & Science, UTM, and UTSC aim to launch in 2021. A range of inventories has been created or updated, supporting the development of the Sustainability U Framework.

At a more general level, CECCS has partnered with U of T Communications to develop a sustainability strategy and outreach plan. The Adams Sustainability Celebration, a four-month virtual event series to deepen campus engagement around sustainability, has invited the U of T Community to attend panel sessions, visit informative exhibits and participate in grant and prize opportunities. We thank our donor, Wendy Adams, for sponsoring this event.

The committee and subcommittee members believe that it is important that the activities undertaken by CECCS should continue. Several options for such continuance have been proposed to the President. A response to the proposal is expected in the coming months.

1. The Foundations: Accomplishments to Date

CECCS was established in February 2017 with a mandate to advance the University's contributions to meeting the challenges of climate change and sustainability. The overall goals were to make sustainability a key component of the University of Toronto (U of T) identity, achieve international leadership in the integration of operational and academic sustainability, and coordinate disparate sustainability activities across the three campuses, in both the academic and operational domains. The particular focus centers on research and innovation, teaching, and University operations.

There are currently 16 members of CECCS: four senior academic or operational staff, nine faculty, two students and an alumna. One senior staff and one student position need to be filled to bring the committee to its full complement. Two of the subcommittees (CLL and AOC) each have two additional members. See Appendix 1 for a list of CECCS and subcommittee members, and Appendix 2 for a list of meetings from 2017-2020.

The CECCS goals have been pursued in the work of the three CECCS subcommittees: Campus as a Living Lab (CLL), University as Agent of Change in the Community (AOC), and Curriculum Innovation (CI). Key strategies of these committees are to promote the integration of operational and academic sustainability (CLL), develop partnerships on sustainability issues with the various communities internally and outside U of T (AOC), and make sustainability curriculum opportunities available to students (CI). Across the activities of these subcommittees, CECCS has aimed to identify, facilitate, support, enable and promote sustainability initiatives across all three campuses by leveraging individual campus identities, fostering a sense of common purpose, and bringing together existing sustainability networks and connections at U of T and in the community.

CECCS has adopted two operating principles to guide its activities. The first is a focus on regenerative sustainability approaches which look for net positive ways to increase both human and environmental wellbeing, instead of simply focusing on reducing environmental damage. The second is to integrate operational and academic sustainability at U of T by looking at ways to combine research, teaching, partnerships and operations.

In adopting the concept of regenerative sustainability, CECCS is also suggesting that sustainability is more than a subject-area or discipline. It is a cross-cutting framework, ethos, and component of the U of T identity, with connections between staff, student bodies, faculty and subject-areas.

1.1 2018 Long-Term Goals

In the 2018 Annual Report, CECCS identified a number of aspirational goals for each subcommittee, and the committee overall. The table below outlines these original goals and their current status.

	Goals	Status	Details
CLL	Engage 1000 students per year on CLL projects on campus ³		Though CECCS has not catalogued all the possible CLL projects, there has been an uptake in the number of operational departments engaging in academic activities, and CECCS continues to enable CLL projects through resources and faculty grants. The development of a CLL database will allow tracking this goal in the future.
	Global leadership in sustainability standards ²		A number of ambitious sustainable operational standards have been created out of the Office of the Chief Operating Officer of U of T, a member of CECCS.
	Signature sustainability projects		See the CLL Database .
AOC	Engage 5000 students per year on AOC projects in the community ^{1,3}		This was achieved and documented in the 2018-2019 CEL course inventory, the next step is to develop other projects with the community that are not directly linked to courses.
	Develop sustainability-oriented community-engaged learning (CEL) principles ¹		See Appendix 3 for a full list of the CEL principles.
	Sustainability a priority in CEL courses ^{1,3}		CECCS has developed an inventory of sustainability-oriented CEL courses, and plans to host a second workshop with the Centre for Community Partnerships on this topic.
CI	Sustainability curriculum pathways for every undergraduate student ³		Launched at 2 of 5 Divisions. The other 3 are aiming for 2021 launch. An expansion to other divisions and graduate or professional programs will be explored.
	Sustainability community of practice for U of T faculty ³		An inaugural event is being designed for 2021 based on the feedback received through a survey of all faculty teaching sustainability-oriented courses.
Overall	Sustainability as key component of U of T identity		Good progress has been made with creating inventories and bringing various sustainability stakeholders together to showcase the breadth of activity at the University, and in embedding sustainability in the various Vice-Presidential portfolios and across the Divisions.
	International leadership in operational and academic sustainability ²		Good progress made and leadership roles played at the international networks such as UC3 and U7+.
	Coordination of disparate sustainability activities		CECCS has brought together and refocused sustainability activities across the three campuses, and developed new cross-cutting programs such as the CLL projects, the Business Air Travel Report, the Sustainability Scholar program, and the Adams Sustainability Celebration.

Completed  Ongoing 

Footnotes in the Goals indicate connections to the following three Presidential Priorities:

- ¹ Leverage our urban location
- ² Strengthen and deepen international partnerships
- ³ Re-imagine and reinvent undergraduate education

In December 2018, in recognition of its accomplishments, the mandate of CECCS was extended to the end of December 2020, and a budget was provided for the committee for the first time. As a result, during the July 2018-June 2019 reporting period, CECCS entered a new stage with the hiring of two full-time staff members and the approval of funding to hire student RAs. This was complemented by funds given to CECCS by a donor to add student interns to further pursue CECCS' mandate and multi-university research. These developments allowed CECCS to begin implementing the approaches and ideas identified in its first 18 months in support of the 2018 goals.

By the end of 2020, CECCS has made significant progress on these long-term goals. Details on this progress are outlined in the following sections of this report.

1.2 New Activities

As the Committee's presence and role grew over the last 4 years, so did the opportunity for it to take on additional projects which were not part of the original goals of the Committee and its three subcommittees. Some span across two or three subcommittee areas, as expected by the cross-cutting nature of sustainability and the interconnection among the three areas. However, for reporting purposes, these new activities are organized under the subcommittee which aligns most closely with its goals.

Campus as a Living Lab

- Several streams of work on the UN Sustainable Development Goals (SDGs), including working with the Office of the VPRI to design a 17 Table event, which will be held in December 2020.
- A report to the President on reducing emissions from business air travel at U of T.

Agent of Change

- Taking a leadership role in international university networks focusing on sustainability networks (University Climate Change Coalition (UC3), U7+ Alliance, Global Research Alliance for Sustainable Finance and Investment (GRASFI).
- The creation of the Adams Sustainability Championship Internship program and research comparing sustainability activities and governance at nine other universities around the world.
- Working in partnership with Sustainable Buildings Canada to create the Better Buildings Boot Camp, a week-long training program for graduate students in sustainable buildings technologies and design.

Curriculum Innovation

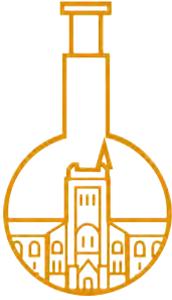
- A set of new inventories of sustainability-oriented grad student theses, student groups and graduate programs.

Overall

- An explicit focus on embedding sustainability activities and orientation in the offices of senior staff in the President's and nine Vice-Presidential Offices at U of T.

- Work on developing a strategic communication strategy on sustainability at U of T, including a sustainability website for U of T.
- The creation of the four month long online Adams Sustainability Celebration to to celebrate successes, inspire new activities, build relationships, and collaboratively deepen campus engagement around sustainability. Funds have been raised to offer the Celebration again in 2021 and 2022.

This report covers the accomplishments and lessons learned since July 2019. Wherever appropriate, context on developments since the beginning of the Committee, in February 2017, has been provided.



1.3 Campus as Living Lab (CLL)

Campus as a Living Lab (CLL) involves addressing operational sustainability issues by connecting students, faculty, staff, and potentially external partners, on CLL projects. CLL works to create opportunities for students to use the campus as a test bed for sustainability by connecting academic and operational activities. CECCS is working to create processes for creating and executing CLL projects, a database to showcase CLL and Community Engaged Learning (CEL) projects, and ways to increase CLL opportunities for U of T students. The subcommittee has approved a set of principles to guide CLL activities. Toolkits and resources have been created and continue to be expanded to foster more CLL opportunities. SDG related activities and the business air travel report are new initiatives in 2020 that have been included under CLL.

1.3.1 Campus as a Living Lab Principles

The concept of a living lab project is used at a number of institutions. To aid in creating a common understanding among different partners in living lab projects, the CLL subcommittee has created and adopted a set of guiding principles which define what a 'living lab' activity is for the University, regardless of the activity's location at the University, the type of client involved, or the student, staff, or faculty involvement. Although CECCS is not involved in all living lab projects and these principles are not exhaustive of the types of activities going on at the University, the purpose of these campus as living lab principles is to develop a path for U of T to become a leader in integrating operations and academic activity around sustainability on all three campuses.

Four defining elements to a Campus as a Living lab project are:

- Integrating core learning and research mission with campus planning and operations,
- involving responsible use of U of T infrastructure for demonstration of and research on leading edge solutions (technical and social),
- engaging researchers, students, faculty, instructors, operations staff, and potentially external partners, and
- having potential for knowledge transfer within and beyond U of T.

The objectives of Campus as a Living Lab projects are to:

- **Create sustainable solutions** that are ecologically and socially sustainable, financially viable, and supportable in the long term by campus operations and the campus community
- **Develop research, innovation, and collaboration opportunities** – develop new technologies, techniques and solutions in partnership with others through internal or external collaborations
- **Look for integrated solutions** – employ a campus-wide perspective, focusing on connections between physical systems (energy, water, material, food) and the well-being of our community
- **Provide learning & engagement opportunities for students, staff and faculty** – involve campus community members from a broad range of disciplines & backgrounds in the innovation process
- **Advance knowledge of possible solutions for a sustainable future** – learn from all projects regardless of the outcomes

- **Be inclusive and contributory** – create mutual & lasting benefit with a broad range of U of T community members and possible external partners

Factors that would make for a successful CLL project:

- high student participation,
- access to resources, as required,
- strong research, teaching & learning outcomes,
- open communication,
- identified operational needs,
- effective project management,
- committed & motivated partners.

CLL Projects and Student Engagement

Student involvement is essential to any CLL project. Students in such projects receive a variety of benefits, including:

- improved technical and group project skills,
- application of knowledge and education to real-life situations applications,
- networking opportunities with academic, operations, and other U of T community members,
- connections to prospective industry professionals, and
- potential engagement with interested external partners.

CLL Projects with External Partners

Universities can work with external partners to develop living lab projects that create research on new technologies and ideas on campus. These CLL projects with external partners must be consistent with the elements and objectives of CLL projects mentioned above and adhere to the following principles:

- be time-limited projects,
- look for innovative, technological solutions,
- have a research dimension,
- provide funding for students in accordance with the University’s guidelines on full cost recovery in research, and
- agree to rights to publish and the university’s standard Intellectual Property (IP) rights

CLL projects with external partners may also extend work “beyond the campus” and into industry. External partners are encouraged to approach possible partners at the university with opportunities for both research and operations.

Where applicable, CLL subcommittee will support the inclusion of both academic and operations in these projects, and suggest inclusion of potential stakeholders.

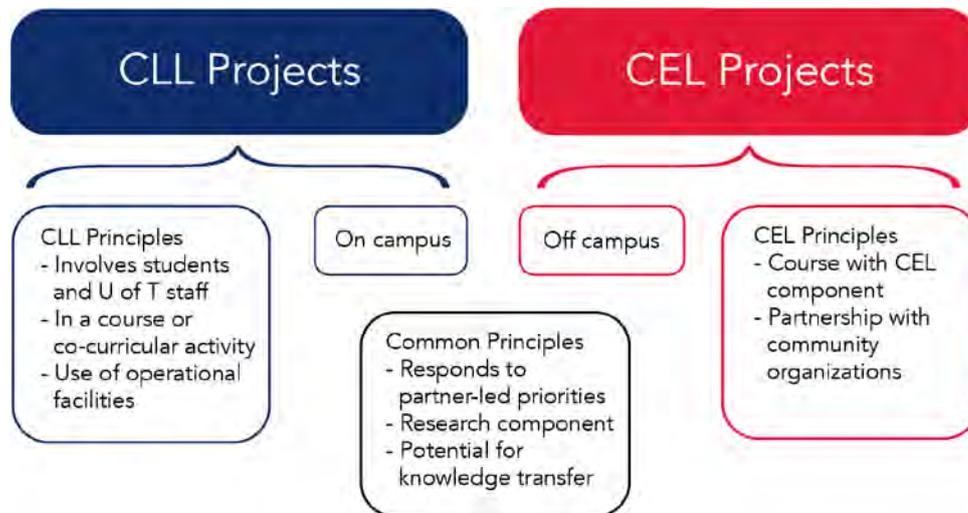
1.3.2 Campus as a Living Lab (CLL) and Community-Engaged Learning Database (CEL)

A Campus as a Living Lab (CLL) and Community-Engaged Learning Database (CEL) database has been created to showcase the range of projects addressing one or more UN SDGs and the work of students on and off campus. There are currently over 200 projects in this database but this is far

from an exhaustive list. Projects are added on an ongoing basis and people can submit projects to CECCS to be added to the database.

View the [CLL and CEL database](#).

The diagram below shows the relationship between CLL and CEL activities. The student engagement methods and learning components remain similar, while the location of the projects differs.



1.3.3 Campus as a Living Lab Course

A Campus as a Living Lab course (ENV461/1103 - The U of T Campus as a Living Lab for Sustainability), offered through the School of the Environment in the Faculty of Arts and Science, embodies the CLL principles and offers students the opportunity to undertake group projects on real-world sustainability topics that are proposed by operational and academic staff at U of T.

The course has been running since 2016, with a total of 29 student projects completed from 2016 to 2020. Since the last annual report, there have been 12 projects in this course ranging in topics and engaging a number of departments and divisions as clients:

2019

- Determining the Human Experience of the Daniels Building
- A Post-Occupancy Evaluation of the Gerald Larkin Building's First and Basement Floors
- Vision for a New Data Sciences Centre
- Pathways to Sustainability: Event Planning Practices at the University of Toronto
- Review of Wellness Practices at other Universities
- Post-Occupancy Evaluation of the Sidney Smith Commons

2020

- Zero in on monitoring systems and how to realize the "living lab" aspect at the Lawson Centre
- Waste to Energy/Fuel: Biodigester Feasibility Study
- Landmark Project – Sustainability Engagement Plan
- Ground-level Container Gardening Towards an Edible Campus
- Comparing University standards to WELL standards
- Academic Wood Tower - lessons learned from case studies

1.3.4 UN Sustainable Development Goals (SDGs) activities

CECCS has centred much of its work around the United Nations Sustainable Development Goals (SDGs). CECCS uses the SDGs to orient our understanding of the many dimensions of sustainability across the campus, in keeping with its conception of regenerative sustainability as including both environmental and human well being. CECCS is collaborating with many parts of U of T to train students and staff, develop solutions, share best practices, and incorporate the SDGs, as illustrated by the following initiatives:

Times Higher Education Impact Rankings

Working with the Planning and Budget Office, CECCS supported U of T's participation in the new Times Higher Education (THE) Impact Rankings first launched in 2019. Participation in these rankings is one facet of a growing emphasis on SDGs at U of T.

The rankings' intent is to assess the impact that universities have on sustainability by measuring the University's performance in working towards the SDGs. CECCS contributed to work on evaluating research contributions to the various SDGs (see section on SDG-Based Research and Funding Inventory below). In addition, CECCS contributed information and evidence for SDG 17 "Partnerships for the Goals," with regard to how U of T initiated and participated in cross-sectoral dialogue about the SDGs and participated in international collaborations.

17 Tables Event

At U of T, the VP, Research & Innovation and the VP, International, in coordination with CECCS, will host an internal "17 Tables" event in December 2020. The goal is for U of T researchers and instructors to develop concrete, innovative ideas to drive solutions towards each SDG at U of T. The 3-day online event will be a combination of synchronous and asynchronous activities as well as partnership building activities. The 17 tables event was inspired by the Rockefeller Foundation and Brookings Institute's 17 Rooms initiative, based on the 17 SDGs, where leaders from various sectors were invited to develop new ideas and collaborations to advance the SDGs and measure progress.

A design for the cross-cutting themes session on day 3 has been developed by CECCS based on the 'Six Transformations' cross-cutting SDG framework (Sachs et al., 2019)¹, which provides a way to cluster the SDGs in a meaningful and practical manner for operationalization. The activities are designed to generate proposals for multidisciplinary or interdisciplinary research projects, community engagement activities to advance the Transformations, and/or courses on how these Transformations can be internalized at U of T.

SDG-Based Research and Funding Inventory

CECCS and the Planning & Budget Office co-developed an inventory of SDG-related research publications and grants. The purposes of the inventory are to: (i) understand the research landscape at U of T; (ii) prepare SDG-specific statistics for submission to the Times Higher Education (THE)'s University Impact Rankings mentioned earlier; and (iii) help develop an invitee list for the 17 Tables event discussed above. In the course of this work it became apparent that some approaches to

¹ Sachs, J.D., Schmidt-Traub, G., Mazzucato, M. *et al.* Six Transformations to achieve the Sustainable Development Goals. *Nature Sustainability* 2, 805–814 (2019)
<https://www.nature.com/articles/s41893-019-0352-9>

research inventories gave rise to an under-representation of humanities and social science in the inventory, and made it difficult to capture the full outputs of those researchers who have recently joined U of T. Work is ongoing to address these issues.

HR Equity Training

At the suggestion of the VP, Human Resources & Equity, CECCS is working with their Inclusion, Equity & Diversity office to explore ways to incorporate SDG 5 (Gender Equality) and SDG 10 (Reduced Inequalities) in U of T's staff training.

1.3.5 Business Air Travel Report

CECCS was approached by various stakeholders from the U of T community regarding U of T's plan to address GHG emissions from business air travel (the biggest component of scope 3 GHG emissions). With the support of the central and divisional administration at U of T, including President Gertler, the Office of the President, the Office of the Chief Financial Officer, the Centre for Research & Innovation Support, the Centre for Teaching Support & Innovation, Facilities and Services, and the Department of Anthropology, CECCS saw the opportunity to develop an approach to measuring and addressing such business air travel emissions. A report on Addressing University of Toronto's Business-Related Scope 3 Air Travel Emissions was submitted to President Gertler in May 2020 and received approval for public release in October 2020. The report had three parts and was compiled with feedback from a number of departments and divisions at the University. View the [Business Air Travel Report](#).

Part 1. Quantifying scope 3 air travel emissions

Using data from the university's general ledger, the university's travel agency and a small survey of university staff and faculty, U of T's air travel emissions, a student project in ENV461/1103 (The U of T Campus as a Living Lab of Sustainability) estimated business air travel emissions to be between twenty-six and fifty-eight thousand tonnes eCO₂ for 2018-2019. This represents between 23-51% of total scope 1 and 2 emissions in 2017-2018.

Based on findings from a literature review of issues related to institutional responsibility for scope 3 emissions, the report suggests that U of T adopt an ambitious approach that aims at accounting for the travel of U of T personnel and visitors whether it is paid by the University or not, which would allow U of T to set a positive example and be an agent of change.

Part 2. Reducing business-related air travel

Reducing the number of flights taken is the most efficient and effective way of mitigating scope 3 emissions. CECCS has focused on virtual conferencing as an alternative to mitigate the need for certain travel. A typology of virtual conferencing approaches was developed, followed by a case study on U of T's lead role on [Distribute2020](#), a biennial semi-virtual anthropology conference for which CECCS will be conducting a life cycle analysis to quantify greenhouse gas (GHG) emissions. CECCS has also established many connections across U of T departments to develop resources, training, and support for event organizers and attendees of virtual events.

Part 3. Developing an emissions mitigation program at U of T

The University has adopted an ambitious carbon pricing scheme that will charge all members of the offices of the President, all Vice Presidents and all Deans a fee for all business-related air travel. This

bespoke Air Travel Emissions Mitigation Initiative (ATEMI), developed by Operations and Real Estate Partnerships (OREP), assesses a travel charge based on destination and class of flight. The pilot applies to designated executive travel for a period of six months, after which it will be evaluated for a decision to extend across the University. The proposed effort would collect funds from participating offices and contribute to new U of T emissions reduction projects that would otherwise not be possible in the near term. While the COVID-19 pandemic means that this program has not yet been applied, it will be in effect when air travel resumes.

Based on the ethical concerns about the use of Carbon Offsets identified through a literature review undertaken by CECCS Research Assistants, recommendations are made for the ATEMI to aim to completely offset unavoidable air travel emissions wherever possible and to set quantified reduction targets.



1.4 Agent of Change (AOC)

University as an Agent of Change is an enabler, convener or agent of empowerment with the objective of supporting the University community to work more actively with private, public and civil society sector partners on sustainability issues, with a particular focus on student engagement. In other words, it aims to build partnerships with both the local and global communities.

1.4.1 Community Engaged Learning (CEL) activities

On the local community front, the AOC subcommittee developed a set of sustainability-oriented CEL principles in February 2020 to aid in creating a common understanding and promoting CEL courses with sustainability content to students, faculty members and community organizations. See Appendix 3 for the full text.

AOC also worked towards increasing sustainability in CEL courses at the University by developing a community of practice on this topic, based in part on the CEL course inventory, the methodology of which is elaborated in section 1.5.2 below. The 2020 CEL inventory includes 94 courses involving about 57 instructors.

A sustainability CEL workshop targeting these CEL course instructors was co-hosted with the Centre for Community partnerships (CCP) in May 2019. As an ongoing effort of community building, AOC is working with CCP to organize a larger, follow-up event and also to incorporate sustainability into CCP's events where appropriate.

1.4.2 U of T Membership in International Networks

Internationally, U of T is part of the following three networks sharing best practices and knowledge in the area of climate change and sustainability.

University Climate Change Coalition (UC3)

In February 2018, U of T joined the University Climate Change Coalition (UC3), a coalition founded by the University of California of leading North American research universities that will prototype a collaborative model designed to help local communities achieve their climate goals and accelerate the transition to a low-carbon future. UC3 has grown to 22 institutions, from 13 when it was launched in February 2018, which are mobilizing their resources and expertise to accelerate local and regional climate action in partnership with businesses, cities and states.

U of T is on the steering committee of UC3 for the next two years taking a leadership role in the development of the five year strategy and to further the integration of academics and operations, through living lab and research.

U7+ Alliance

The U7+ Alliance is an international partnership that brings together 48 leading universities in Europe, North America, Asia, and Africa to tackle the most pressing global challenges of the day. The Alliance was founded by French President, Emmanuel Macron, who hosted the G7 Summit in 2019.

In the first summit, the leaders of the 48 universities discussed a common agenda and established the following set of six collective commitments for universities' action in today's global landscape.

1. Universities as key actors in a global world
2. Training of active and responsible citizens
3. Climate and energy transition
4. Inequality and polarized societies
5. Technological transformations
6. Community engagement and impact

Under Principle 3, U of T is co-champion with Université Paris Sciences et Lettres (PSL) on Action 1 "Promoting Access to Sustainability Courses" with 28 member institutions taking part, and with the University of Edinburgh on Action 2 "Reducing Greenhouse Gas Emissions" with 18 member universities participating. The co-champions developed and implemented a baseline survey for participating universities about their existing policies and programs that contribute to meeting Actions 1 and 2. Based on the survey results, CECCS will propose categories by progress and will facilitate the development of recommendations for engagement within these categories. For Action 1, the categories will range from those who do not yet track a number of courses with climate, biodiversity or sustainability content to those who are developing sustainability curricular pathways. For Action 2, they will range from those who have not yet started measuring the emissions to those who are pursuing ambitious targets for carbon neutrality. The plan is to develop a typology that members can agree to, and find out who is in what level of engagement and what kind of support is needed at each level.

Global Research Alliance for Sustainable Finance and Investment (GRASFI)

The Global Research Alliance for Sustainable Finance and Investment (GRASFI) was founded in 2017 by the University of Oxford and its network of global research universities, including the University of Toronto, in order to promote rigorous and impactful academic research on sustainable finance and investment. U of T is well represented, first by the chair of CECCS, followed by faculty members from Rotman School of Management, of which the lead representative is a CECCS member. Future conferences are in planning, including one to be co-hosted by U of T, Waterloo and Queens.

1.4.3 Adams Sustainability Championship Interns

CECCS received a generous donation in early 2019 for the creation of summer internships. Two interns were hired in the summer of 2019 to travel to, and study, the sustainability activities at Utrecht University in the Netherlands and the University of Edinburgh in the United Kingdom. Subsequently, they have been working on a paper comparing sustainability governance at those two universities and U of T.



2019 Adams Sustainability Champion Interns: Nicolas Côté (left) and Rutu Patel (right).

Given that travel in the summer of 2020 was not possible due to the pandemic, travel cost savings combined with other forms of funding, allowed us to hire seven student interns from May to August 2020. These seven interns worked remotely from around the world and spent half of their time working on CECCS tasks, and the other half of their time on a university sustainability research study. Each student intern was assigned to conduct research on one of the following universities: University of British Columbia in Canada, Arizona State and MIT in the United-States, University of São Paulo in Brazil, University of Cape Town in South Africa, University of Hong Kong, and Monash University in Australia. The final product of this internship is a research paper for journal submission authored by the seven interns and co-authored by members from the selected universities and the chair of CECCS. The research paper highlights governance practices on sustainability embedding at the eight aforementioned universities and presents suggestions to further achieve transformative institutional change on sustainability issues at U of T and beyond. See Appendix 4 and 5 for the 2019 and 2020 Intern Paper processes.



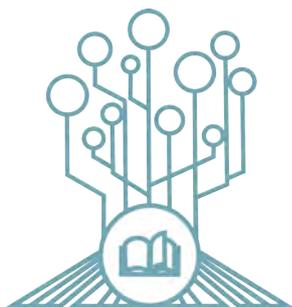
2020 Adams Sustainability Champion Interns and CECCS Secretariat (from left to right starting from the top): John Robinson, Christina Wong, Ana Garza Canales, Grace Ma, Andi Alhakim, Monisha Alam, Ayako Ariga, Kenneth Sergienko, Hoor Tariq, and Dione Dias.

1.4.4 Sustainable Buildings Canada “Better Buildings” Boot Camp

Organized by Sustainable Buildings Canada in partnership with U of T, OCAD University, Ryerson University, and York University (CECCS was the U of T secretariat), this boot camp engaged with over 50 graduate students from the four universities. Students represented a variety of programs from engineering, to architecture, to social sciences, to business. With the collaboration of CECCS member Ron Saporta and CLL subcommittee member Marc Couture, the new Data Sciences Centre at U of T, St. George campus was used as a case study, to give students the opportunity to work on a real world project and to influence the design of this building. The week long virtual boot camp included sessions led by subject matter experts on the following topics:

- Reference & Baseline Energy Models
- Human Factor (Accessibility and Well)
- Opaque assemblies
- Fenestration
- Active Systems
- Building Automation and
- Energy Modelling

See Appendix 6 for the program of the “Better Buildings” boot camp event.

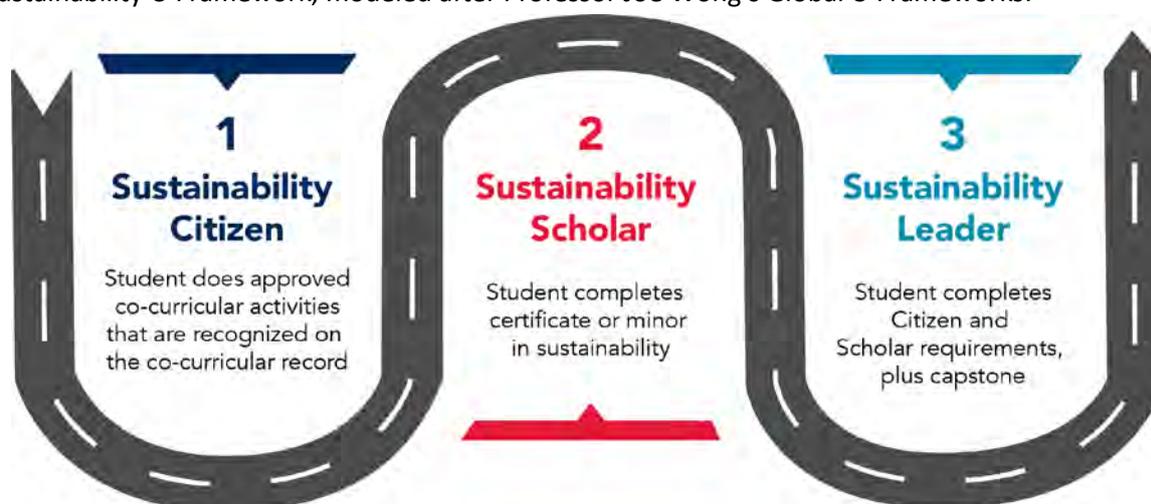


1.5 Curriculum Innovation (CI)

The Curriculum Innovation (CI) subcommittee supports the development of sustainability curricular pathways as its central priority. Pathways are clusters of courses with a common theme of sustainability that allow students to study that theme from various disciplinary and methodological perspectives. Such curricular pathways, offered to all undergraduate students, would provide each student with the opportunity to incorporate sustainability learning into their program, regardless of the program they are enrolled in, to be given community-engaged learning opportunities, and to develop cross-cutting interdisciplinary skills.

1.5.1 Sustainability U Framework

With the sustainability curricular pathways at its core, CECCS has developed a three-tiered Sustainability U Framework, modeled after Professor Joe Wong's Global U Frameworks:



The Framework aims to inspire and encourage students to voluntarily incorporate sustainability learning in their curricular and extracurricular activities with formal recognitions on their transcripts (Sustainability Scholar), Co-Curricular Record (Sustainability Citizen), or both (Sustainability Leader).

Development of the Sustainability Scholar program has been underway across five divisions: Faculty of Applied Science & Engineering; Faculty of Architecture, Landscape and Design; Faculty of Arts & Science; UTM and UTSC. The Faculty of Architecture, Landscape and Design launched their new Certificate in Sustainability of the Built Environment in September 2020, while the Faculty of Applied Science & Engineering designated their Minor in Sustainable Energy and the Minor in Environmental Engineering as part of the Sustainability Scholar program to take effect in September 2020. The Faculty of Arts & Science, UTM and UTSC are in the development process, aiming for a 2021 launch. CECCS members representing the five units spearheaded these initiatives.

CECCS also coordinated the naming convention of the new Sustainability Scholar offerings at these divisions, namely having "U of T Sustainability Scholar" following in parentheses after the name of the certificate or other offering. This was important for branding, communications and coding purposes for the pan-university Sustainability Scholar Program. It indicates that the certificate or a minor program was not an initiative of one faculty but an area of institutional importance.

With regard to the Sustainability Citizen tier, CECCS has been working with the Student Life team in bringing this opportunity for students to actively participate in sustainability-related activities, and to build important skills and knowledge in that area. Recognizing scarce resources, CECCS is exploring leveraging an existing Student Life program model, by validating sustainability-oriented student group leadership positions, designing a student-generated accreditation model, validating our Adams Sustainability Celebration events on CCR, combined with a reflective exercise, among others, along with defining the expected learning outcomes.

Once the first two tiers are in place, CECCS plans to develop the third tier of Sustainability Leader program. The Leader tier will be designed so that the integration and reflection process of a capstone, perhaps incorporating experiential learning, would bring otherwise separate elective elements of the Citizen and Scholar tiers together and guide students onto a leadership career in sustainability.

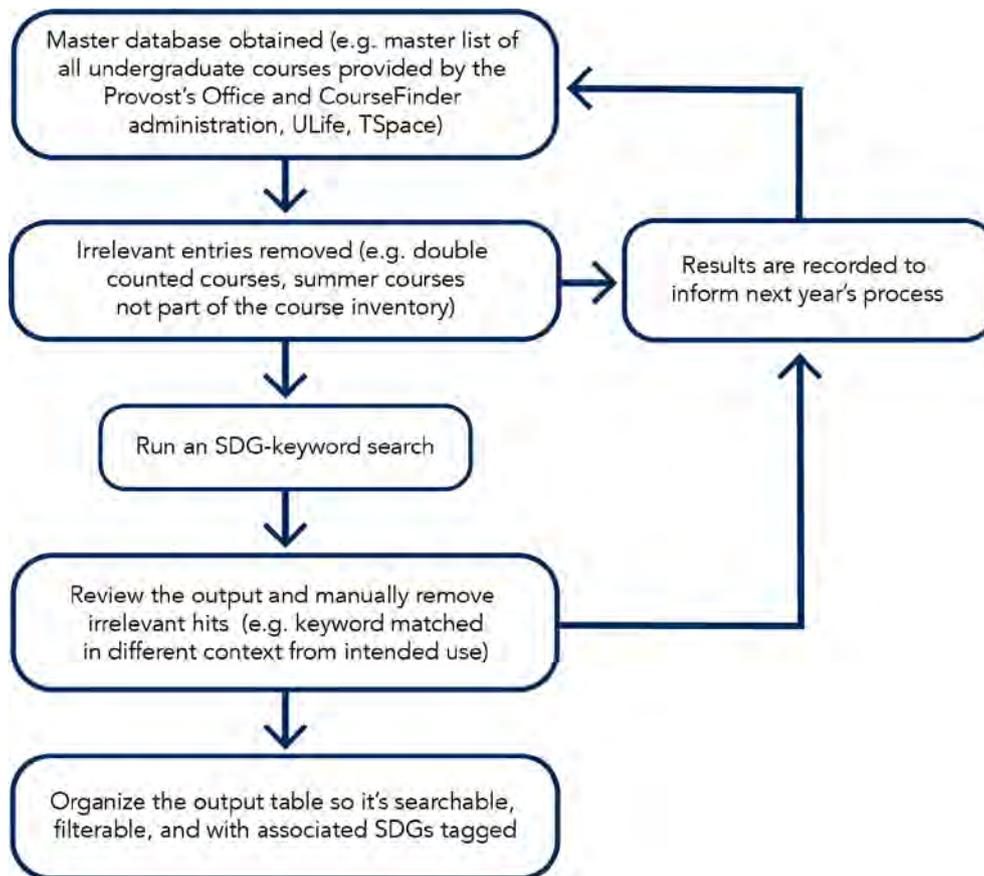
1.5.2 Sustainability Inventories

Crucial to the development of the Sustainability U Framework are the inventories of available courses with sustainability content, community-engaged learning opportunities, student groups and graduate theses with sustainability orientation. The CI subcommittee has overseen the development of the SDG keywords and the inventories originally led by the Expanding Sustainability Education (ESE) group, composed of five undergraduate students, and the subsequent groups of CECCS Research Assistants.

Three inventories were produced using SDG keywords to identify existing sustainability opportunities on campus:

- Undergraduate courses with sustainability content (26% of 8,523 undergraduate courses in 2020-21);
- Undergraduate courses with sustainability focused CEL (94 courses in 2020-21);
- Student groups actively promoting sustainability at the University (a total of 130 sustainability-focused student entities have been identified); and
- Graduate theses with sustainability content (22% of 8,260 Master's theses and 20% of 9,627 doctoral theses).

The flowchart summarizes the process followed to develop these inventories.



Undergraduate Course Inventory

The Sustainability Course Inventory gathers information about all sustainability-related undergraduate courses at U of T. The purpose of this inventory is to increase the visibility of such courses, making it more accessible for students to add sustainability content to their educational experience. It includes 2,233 sustainability-oriented courses, representing 26% of all 8,523 undergraduate courses offered in 2020-21. This year's Inventory includes a column for the instructors who have provided consent via a faculty survey to publish their names in the Sustainability Course Inventory. There are now 587 courses with Instructor names in the Inventory.

View the [2020-2021 Sustainability Course Inventory](#).

Community Engaged Learning Course Inventory

The CEL Sustainability Course Inventory gathers information about all sustainability-related undergraduate courses at U of T with a community engaged learning component (public, civil or private sector). Broadly, CEL describes an experiential learning activity where students partner with a community to address a challenge which is identified by community members, to the mutual benefit and growth of both the community and the student. This CEL Course Inventory was created by running a search with experiential learning-related keywords in the Sustainability Course Inventory, and includes 70 sustainability-oriented CEL courses in 2020-21.

View the [2020-2021 CEL inventory](#).

Student Group Inventory

This year, CECCS worked on a new inventory for student activities. The 2020 Inventory on Sustainability Related Student Entities at U of T consolidates information about U of T student groups, clubs, societies, unions and associations with mandates that align with the United Nations (UN) Sustainable Development Goals (SDGs).

This inventory was created based on the keywords from the UN SDGs. The groups were identified through student group networks, searches from the U of T ULife website, University of Toronto's Environmental Research Network (UTERN) and other university websites and networks.

The list is organized by affiliation or topic, including subject-focused groups, college-based groups, and student unions. The list includes the group name, student contact and email, how the group was identified for the inventory, the school year till the contact has been last updated and the social media accounts of the groups, based on information availability in the sources. A total of 130 sustainability-focused student entities have been identified for this inventory.

View the [2020 Student Group Inventory](#).

Graduate Thesis Inventory

A new inventory was created in 2020 of all Masters theses and PhD dissertations with sustainability content produced over the period from 2009-2020. Thesis metadata was exported by a TSpace administrator and shared with CECCS in July 2020. Using the same SDG keywords as in the Undergraduate Course Inventory, the titles and abstracts of Master's and doctoral theses were searched through. CECCS quality assured the search results by manually removing any entries not deemed to have sustainability content based on the abstract. The following information was documented: Author, Advisor/Supervisor, Title, Department, Date Issued, Abstract, Degree, Subject and the SDG(s) to which the thesis is related. There were 1,797 Master's theses with sustainability content out of a total of 8,260 theses (22%), and 1,921 doctoral dissertations out of a total of 9,677 (20%).

View the [Sustainability Master's Thesis Inventory](#) and the [Sustainability Doctoral Thesis Inventory](#).

Graduate Program Inventory

In Fall 2020, CECCS created another inventory by looking at Masters and Doctorate programs listed on the School of Graduate Studies (SGS) website that include sustainability-related content or focus. Each of 75 graduate programs was reviewed by conducting a word search based on the same United Nations' Sustainable Development Goals (SDGs) keywords used for the above-listed inventories. The 2020 Graduate Programs inventory includes 43 of a total of 76 programs (56%). These programs help students enhance sustainability within their realm of study. They either have sustainability as a focus, or they are related to sustainable practices. Many of the sustainability-oriented programs offered at U of T exist within Engineering but there are themes and focuses present in programs ranging from Sustainability Management to Architecture, Health Sciences, and Social Justice.

View the [Graduate Program Inventory Showcase](#) in the Adams Sustainability Celebration.

1.5.3 Faculty Survey and Sustainability Instructors Community of Practice

In December 2019 and May 2020, a faculty survey was developed and sent to the 1,175 instructors identified in the 2019 Sustainability Course Inventory. The purposes of the survey were to obtain consent to publish the instructor's name in the sustainability course inventory, and to get feedback on the community of practice development and potential ideas. 499 or 42% of the faculty members responded. The Course Inventories for 2019-20 and onwards will include the names of the instructors who consented. Based on the feedback provided in the survey, CECCS will organize a sustainability instructor community of practice event.

1.6 Overall

1.6.1 Communications

Sustainability Strategy and Communication Reports

A sustainability communications strategy is being created by the U of T Communications (UTC). This strategy is currently being reviewed and will go through internal validation with a final strategy due to be completed in early 2021.

UTC has recently created a report to demonstrate how sustainability has been showcased in the media since July 2019. This report consisted of owned and earned media, social media, and communications plans. Some highlights include 71 stories published by U of T News and 61 stories successfully pitched to external media outlets. See Appendix 7 for the full communications report on environment, climate change and sustainability created by U of T Communications.

Sustainability Website

CECCS collaborated with the President's Office in the design and launch of the U of T sustainability website (www.sustainability.utoronto.ca). This site opens with the President's welcome remarks recognizing the universities' crucial and unique role to play in helping to meet the global challenges of sustainability. The site showcases U of T's commitment to the environment, climate change, and sustainability and organizes the content by role such as researcher, educator & learner, operator, citizen, leader, and investor. CECCS' webpage is included within the website.

Homepage of the U of T sustainability website.

President's Welcome

Universities have a crucial and unique role to play in helping to meet the global challenges of sustainability.

Motivated by the United Nations' Sustainable Development Goals

The 2030 Agenda for Sustainable Development was adopted by all members of the United Nations in 2015, placing the seventeen Sustainable Development Goals at the centre of a global sustainability accord. Universities have a crucial role to play in achieving these goals.

The University of Toronto has made major contributions to advancing **research** and **education**, and to informing concrete actions and public policy – not just in the sphere of climate change, but throughout the broad and varied field of sustainability more generally.

Faculty, staff, and students across our three campuses are working on – and learning about – **every aspect of sustainability**, in the sciences, social sciences, humanities, and professional disciplines.

A Low Carbon Action Plan

Moreover, we have dramatically increased the number and scope of **sustainability-focused operational initiatives** on our campuses over the past decades. U of T is now recognized as a leader among our North America peers – in everything from design standards and retrofitting to waste reduction and composting.

An important highlight in this effort is the University's new Low Carbon Action Plan aims to reduce the institution's greenhouse gas emissions by 37 per cent from 1990 levels by the year 2030 and put it on a path to becoming a 'net-zero' institution. It is a remarkable and ambitious initiative.



A global citizen

The University is taking an ever more significant leadership role as an influential local, national, and **global citizen**. Our academic community is contributing to coalitions, partnerships, and collective actions all with the aim of averting or mitigating the catastrophic threats we face from climate change and advancing global sustainability.

Similarly, the University of Toronto Asset Management Corporation (UTAM) has assumed a prominent role in the global investment community incorporating environmental, social, and governance (ESG) factors in its **investment decisions**.

The President's Advisory Committee on the Environment, Climate Change and Sustainability

The **President's Advisory Committee on the Environment, Climate Change and Sustainability (CECCS)**, is helping to lead, catalogue, or coordinate many of these efforts.

This site collects together examples of the University's commitment to the environment, climate change, and sustainability and organizes them around the headings you see at the top of the page. As I hope you will find, the University's is a valuable and effective partner in the global pursuit of sustainability.

Links to key resources

[Committee on the Environment, Climate Change, & Sustainability](#) [Sustainability St. George](#) [Sustainability UTM](#) [Sustainability UTSC](#)

Landing page for the CECCS section of the sustainability website.

The screenshot shows the landing page for the CECCS section of the University of Toronto Sustainability website. At the top left is the University of Toronto logo and the word "Sustainability". At the top right is a search icon and the text "U of T Home". Below the header is a navigation bar with links: "Sustainability Home", "Living Lab", "Agent of Change", "Curriculum Innovation", "Resources & Events", "Opportunities", and "CECCS Contacts".

President's Advisory Committee on the Environment, Climate Change, and Sustainability

The President's Advisory Committee on the Environment, Climate Change and Sustainability (CECCS) was created in early 2017, as one of the actions proposed in the *Beyond Divestment: Taking Decisive Action on Climate Change – Administrative Response to the Report of the President's Advisory Committee on Divestment from Fossil-Fuels* report released by the President in March 2016. The mandate of the CECCS is to advance coordination of the University's contributions and objectives on climate change and sustainability pertaining to research and innovation, academic programs, community engagement, and sustainability initiatives related to our operations.

CECCS operates on the principle that sustainability is more than a subject-area or discipline. It is a cross-cutting framework, ethic, and key component of the University of Toronto identity, that:

- integrates operational and academic activities;
- opens the door to a strong and highly visible campus as living-lab/university-as-agent-of-change agenda;
- builds very strong partnerships with the private, public and civil society sectors;
- engages thousands of students both on and off-campus in research-intensive problem-solving, through both course and internships;
- builds strong links with other universities on sustainability research, teaching and operations; and
- creates a U of T presence and identity in sustainability that has significant positive implications for recruitment of students, faculty and staff, and for fund-raising

The operating principles of the CECCS are a regenerative sustainability approach that focuses on net positive outcomes in human and environmental wellbeing, and the integration of academic and operational sustainability activities at the University.

In support of this agenda, three core areas of activity have been identified: Campus as Living Lab, University as Agent of Change in the Community, and Curriculum Innovation. This framework provides a basis for integrating operational and academic sustainability activities and for connecting disparate sustainability activities across our campuses in a fruitful way. The list below highlights the top priorities of each area of activity.

Campus as a Living Lab

- 1000 students/year on CLL projects on campus
- Global leadership in sustainability standards
- Signature sustainability projects

Agent of Change in the Community

- 5000 students/year on AOC projects in the community
- Develop sustainability-oriented Community Engaged Learning (CEL) principles
- Sustainability a priority in CEL courses

Curriculum Innovation

- Sustainability curriculum pathways for every undergraduate student
- Sustainability community of practice for faculty

University of Toronto

- Sustainability a key component of U of T identity
- Environmental leadership in operational and academic sustainability

On the right side of the page, there is a vertical menu with the following items: "Committee on the Environment, Climate Change, & Sustainability", "Sustainability St. George", "Sustainability UTM", and "Sustainability UTSC".

1.6.2 Embedding Sustainability at U of T

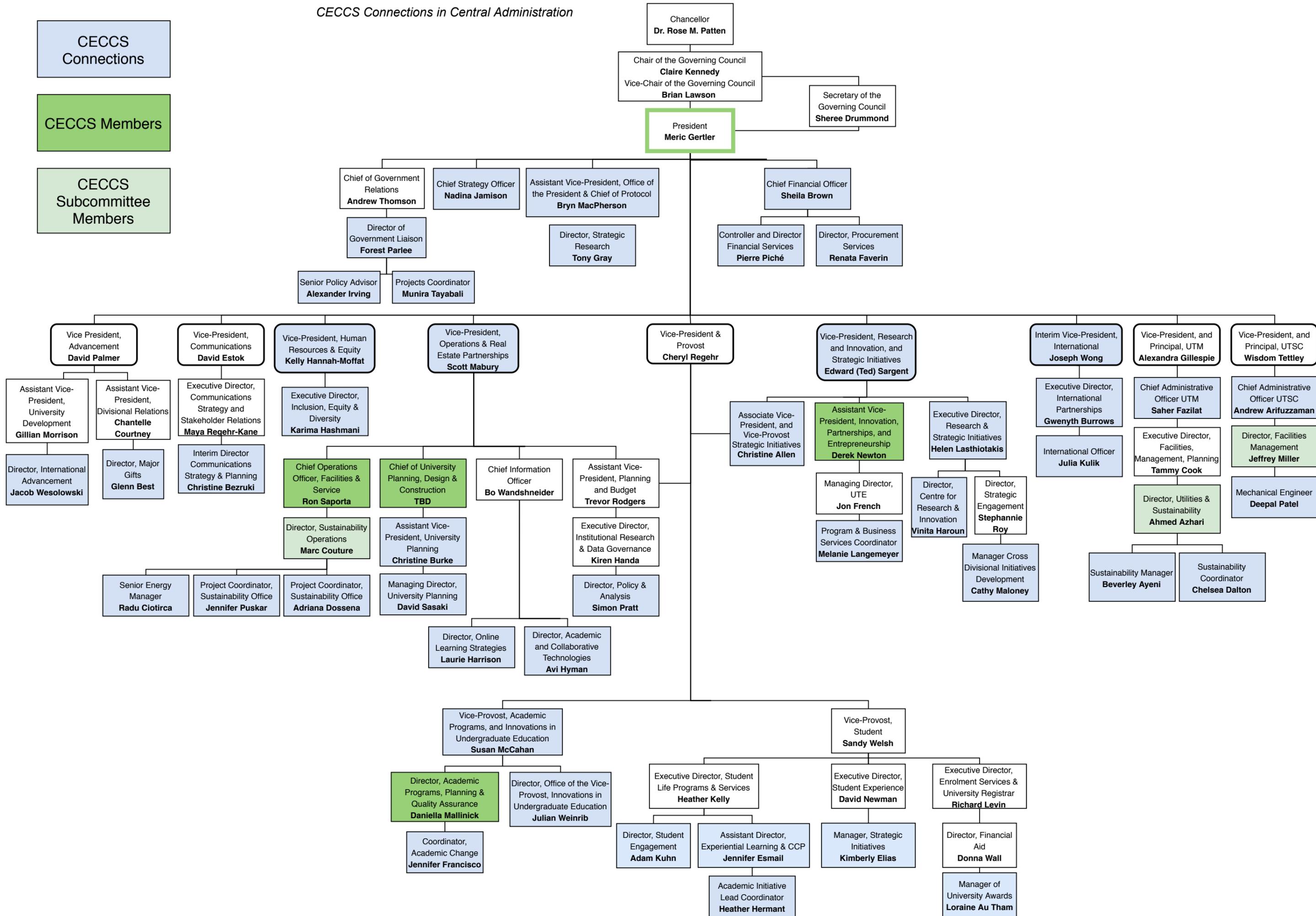
As CECCS continues to implement all aspects of its action plan, a deliberate effort has been made to engage key players in various divisions and central administration. To that end, CECCS has identified and worked actively with senior staff in all 9 Vice-Presidential offices on all three campuses, and in 8 of 18 Divisions in initiatives to promote and coordinate sustainability. See diagram on next page, which shows senior staff in the President's office and in the nine Vice-Presidential offices. Green and light green boxes denote CECCS and CECCS subcommittee members respectively, while the blue cells indicate the key players engaged by CECCS. Such institutional relationships are vital components of a unified and interconnected vision.

CECCS Connections in Central Administration

CECCS
Connections

CECCS Members

CECCS Subcommittee Members



CECCS Connections by Division

Green = CECCS or subcommittee members

Blue = CECCS connections

Faculty of Applied Science & Engineering

- Prof. Bryan Karney, Associate Dean, Cross-Disciplinary Programs
- Prof. Aimy Bazylak, Department of Mechanical & Industrial Engineering
- Prof. D. Grant Allen, Chair, Department of Chemical Engineering and Applied Chemistry
- Prof. Timothy Bender, Department of Chemical Engineering and Applied Chemistry
- Prof. Tamer El-Diraby, Department of Civil & Mineral Engineering
- Prof. Marianne Touchie, Department of Civil & Mineral Engineering
- Prof. Heather MacLean, Department of Civil & Mineral Engineering
- Sharon Brown, Assistant Director, Cross-Disciplinary Programs
- Mel Duhamel, Research Associate, Department of Civil & Mineral Engineering
- Prof. Eric Miller, Department of Civil & Mineral Engineering and Director, U of T Transportation Research Institute

John H. Daniels Faculty of Architecture, Landscape, and Design

- Prof. Liat Margolis, Associate Dean Research
- Robert Levit, Associate Dean Academics
- Andrea McGee, Registrar
- Prof. Alstan Jakubiec

Faculty of Arts and Science

- Prof. John Robinson, Presidential Advisor on the Environment, Climate Change, and Sustainability
- Prof. Steve Easterbrook, Director, School of the Environment
- Prof. Jennifer Murphy, Department of Chemistry

- Ariana Bradford, Executive Director, Munk School of Global Affairs & Public Policy
- Heather Bruce, Global Internships Coordinator, Munk School of Global Affairs & Public Policy
- Prof. Andrea Muehlbach, Department of Anthropology
- Martha Harris, Assistant Director, Governance & Curriculum
- Tamara Jones, Associate Director, Enrolment Service and Records,
- Prof. Paolo Granata, St. Michael's College

Ontario Institute for Studies in Education

- Elisabeth Rees-Jonstone, Executive Director, Continuing & Professional Learning
- Hilary Inwood, Lecturer and Lead, Environmental & Sustainability Education

Rotman School of Management

- Prof. Kenneth Corts, Interim Dean
- Prof. Jan Mahrt-Smith
- Rod Lohin, Executive Director, Michael Lee-Chin Family Institute for Corporate Citizenship, and Senior Lecturer

Faculty of Music

- Prof. Farzaneh Hemmasi

Dalla Lana School of Public Health

- Prof. Fiona Miller, Chair in Health Management Strategies, Institute of Health Policy, Management and Evaluation
- Nicole Simms, Research Officer, Institute of Health Policy, Management and Evaluation

University of Toronto Mississauga

- Prof. Shashi Kant, Director, Master of Science in Sustainability Management Program, Institute for Management & Innovation
- Claire Westgate, Placement & Employer Relations Officer, Master of Science in Sustainability Management Program, Institute for Management & Innovation

University of Toronto Scarborough

- Prof. Jim MacLellan, Director, Environmental Studies Program,

Department of Physical and Environmental Science

No contacts yet

- School of Continuing Studies
- Faculty of Dentistry
- Faculty of Information
- Faculty of Kinesiology and Physical Education
- Faculty of Law
- Faculty of Medicine
- Lawrence S. Bloomberg Faculty of Nursing
- Factor-Inwentash Faculty of Social Work

1.6.3 Adams Sustainability Celebration - Convergence

One of CECCS' goals is to help foster a culture of sustainability that expands thinking and enables broad participation from the entire U of T community. In keeping with this goal, CECCS is currently hosting its inaugural Adams Sustainability Celebration, made possible through a donation from Wendy Adams, who also supported CECCS' Adams Sustainability Champion Internship in the summer of 2019 and 2020, a private donor and a matching contribution from the University's True Blue Fund.

The purpose of the Adams Sustainability Celebration is to bring together U of T students, staff, and faculty to celebrate successes, inspire new activities, build relationships, and collaboratively deepen campus engagement around sustainability.

Though originally planned as a one-day celebratory in-person event, given COVID-19 restrictions, this celebration is being hosted as a virtual event series over 4 months (September 22, 2020 – January 21, 2021). Hosting a virtual alternative to an otherwise conventional in-person celebration has allowed CECCS to bring sustainability to the forefront over a longer period of time and facilitate a productive and continuous communication on the topic². Video addresses from John Robinson, Chair of CECCS, and Meric Gertler, President of U of T, launched the Celebration on September 22nd.

2020 Celebration Calendar



Live Panel Sessions

From October till January, there are six live panel sessions being hosted on a variety of topics:

² See Appendix 8 for a screenshots of the Adams Sustainability Celebration website.

- SDGs Embedding in Courses and Activities,
- Getting to Carbon Neutrality at St. George Campus,
- Post-COVID travel and the CECCS' Business Air Travel Report,
- UTM's Sustainability Strategic Plan: Fostering a Culture of Sustainability,
- UTSC's Sustainability Initiatives: 2020 and Beyond, and
- Investing to Address Climate Change: In Conversation with President Gertler.

Sessions last between 60-90 minutes and are delivered through a custom-designed virtual portal, facilitating a social experience for attendees and a connection and natural rhythm between sessions. Attendees ask questions and share opinions using in-built chat functionality, creating a platform for engaged community discourse on relevant sustainability topics at U of T.

Showcases

Throughout the four-month celebration, there are five virtual showcases available for attendees to visit. These highlight

- CECCS' work on Curriculum Innovation (CI),
- Campus as a Living Lab (CLL),
- SDGs based inventories at U of T, and international networks,
- the work and commitment of U of T's three sustainability offices, and
- a dedicated virtual exhibit of 40 different student groups at U of T with sustainability as part of their mandates.

These showcases are a strong uniting force to collect U of T's many initiatives at the student, faculty, and Administrative levels in one place to highlight their impact.

Adams Sustainability Innovation Competition and grant opportunities

The Celebration provides a total of \$55,500 in grant and prize money to support sustainability initiatives at U of T. Through the Adams Sustainability Innovation prize competition, the Celebration is offering \$25,500 in prizes to recognize, reward, and accelerate the U of T's most innovative sustainability ideas submitted by students. This is the second time this competition is being run. Last year, the sustainability prize competition was organized by the Innovations & Partnerships Office.

In addition to the Innovation Prize, there are grant opportunities for students and faculty. \$30,000 will be awarded for advancing sustainability in courses and across campus. Faculty have the opportunity to fund original ways to incorporate sustainability in their courses, and students have the opportunity to apply this grant towards making a sustainability plan between September 2020 and April 2021 a reality on campus.

The Adams Sustainability Celebration is helping to build a community with top-of-mind sustainability awareness. Over 400 U of T community members are involved with this Celebration as participants, panelists, exhibitors, and organizers. CECCS will conclude the Celebration on January 21, 2021 with a prize competition and award ceremony. The nature of this closing ceremony, whether in-person or virtual, is dependent on COVID-19 gathering regulations at that time.

This Celebration builds on years of sustainability activities by many faculty, staff, and students. It also marks the end of the almost 3-year mandate of the President's Advisory Committee on the

Environment, Climate Change and Sustainability and is an integral part of the journey to make sustainability a core part of the identity of U of T. The theme for this year's Celebration is engagement. Funding has been received by CECCS to host two additional annual celebrations in 2021 and 2022. The focus of the subsequent celebrations will be on inspiration and leadership in sustainability.

2. Beyond 2020

2.1 Principles for Sustainability Governance and Programming

Over the past year CECCS has undertaken a number of activities that address how sustainability might be more deeply institutionalized at the University of Toronto. Twenty-one individual calls were held with CECCS members and two other key individuals at U of T in September 2020, specifically to discuss the future of CECCS and its activities. In addition, as described in more detail above, over the past two years, nine Adams Sustainability Championship Interns have studied the sustainability activities at nine other universities around the world (Arizona State, MIT, Sao Paulo, Edinburgh, Utrecht, Cape Town, Hong Kong, Monash and UBC) with a view to comparing their sustainability programs and practices to each other and to those of U of T, with a particular focus on the governance of sustainability issues on each campus. As a follow-up to this work, two calls were held in Sept 2020 with senior sustainability representatives from each of these universities to discuss barriers to, and opportunities for, more actively pursuing their sustainability agendas. Finally, over the past decade, CECCS chair John Robinson has been asked to visit multiple universities in North America and Europe to give lectures on university sustainability and meet with senior management of those universities³, including an ongoing Adjunct Professorship at Copenhagen Business School, and a Visiting Professorship on Transdisciplinarity at Utrecht University in 2019. From 2012-15, he was the Associate Provost Sustainability at UBC, responsible for creating a university-wide identity for, and set of programs on, sustainability.

These discussions and activities have led to the following conclusions, expressed in the form of a set of principles about the governance of sustainability in universities, and the opportunity to develop world-class activities and leadership in this area.

2.1.1 Creation of a collective, inclusive narrative about institutional sustainability

While universities are by design highly decentralized, and sustainability is itself a multi-faceted concept, it is important that the University adopt a general conception of what it intends to achieve in the area of sustainability. This provides an institutional identity with regard to sustainability, and a framework in terms of which the sustainability programs and activities of the University can be understood, both externally and internally. In that sense, the University's sustainability narrative becomes a powerful way to signal its commitment, focus on action and outcomes, and continuous improvement of a framework through which the University can communicate its activities to all its stakeholders.

A key attribute of such a narrative is a focus that goes beyond environmental sustainability to encompass social, economic and other dimensions, including the values of equity, diversity and inclusion. The UN Sustainable Development Goals are an increasingly prominent way that the broader conception is being expressed. Such an approach allows many university research and teaching activities that are not focused on environmental issues, but do address other dimensions of

³ ASU, U Virginia, U Manitoba, Queen's U, McGill, U Edinburgh, UK Environmental Association of Universities and Colleges, Flanders Commission on Sustainable Higher Education, Université libre de Bruxelles, Vrije Universiteit Brussel, U Luxembourg, KTH.

sustainability, to be brought into the sustainability discussion. It also provides a useful frame for the integration of operational and academic sustainability activities at the University (see principle #3).

2.1.2 Need for Long-term vision

Sustainability is a long-term societal project. It is important for the University to reflect this by providing a stable and predictable institutional home for its sustainability activities, and developing a long-term vision or strategy for its sustainability activities and programming. Such strategies can be powerful motivators for integrated sustainability programming, both academic and operational, and provide a strong signal to the outside world of the University's approach and commitment.

2.1.3 Integration of operational and academic sustainability at the University

A very significant step towards sustainability leadership at universities is to find ways to integrate academic and operational sustainability activities, through campus as living lab projects and related activities. These two worlds are strongly disconnected in most universities, with different reward systems, time frames and organizational cultures. Forging strong connections here can lead to great growth in innovation and creative energy, provide a powerful way to engage students on real world projects, lead to new ideas for the operational sustainability activities of the University, supply new opportunities for applied research and partnership with external stakeholders, and produce a very important story for the University to present to the world.

Integrating academic and operational sustainability means working across the mainly bottom-up world of the academic world and the primarily top-down organizational culture of the operations side. This implies a need for hybrid governance in which the relevant units all work to bridge the operational/academic divide (see also principle #4).

2.1.4 Taking an enabling role to embed sustainability throughout the institution

A defining characteristic of the University research and teaching is its highly distributed nature, characterized by principles of academic freedom. On the operational side, there usually exists well-established lines of authority and accountability. This means that care must be taken to engage faculty, staff and students in ways that respect that academic diversity and those existing operational responsibilities. An enabling role, where the function of university-level sustainability activities is not to direct or control sustainability activities at the University, but instead to enable, facilitate, foster, encourage and support such activities, is likely to be much more successful.

An enabling approach goes hand in hand with an attempt to embed sustainability programming and activities across the wide spectrum of Faculties, offices, units and programs in the University. Considerable effort is required to work with such units to support them taking on such mandates. Only then will such programming and activities become a core part of the University as a whole. A useful distinction is between priority setting, external and internal advocacy and accountability, which can to some extent occur at the centre, and program delivery, which should be distributed widely. The creation of a Sustainability Fellows program for faculty might be one way to operationalize this.

2.1.5 More work needed to embed sustainability in university curricula

Sustainability activities at many universities started in the operational realm, focussing on issues like energy efficiency in buildings, and resulting in the creation of Sustainability Offices located in the operational side of the University. Relatively less attention has been paid to sustainability curriculum, which therefore offers significant potential for new initiatives and activities. Key challenges are how to encourage strong forms of interdisciplinary teaching and courses, which cut across departmental and Faculty lines, and the expansion of experiential or community-engaged learning programs. It is also important to choose the best mix of creating new sustainability-oriented programs or degrees, delivering mandatory sustainability-oriented courses, and creating voluntary sustainability curricular pathways for students.

2.1.6 The importance of collaborative transdisciplinary research

Engaging seriously with the third mission of universities to address societal problems implies a strong focus on transdisciplinary research which is both strongly interdisciplinary and involves partnerships with non-academic participants. This raises important issues of research design and methods with regard to collaboration across disciplines and with societal partners. Thought also needs to be given as to how best to institutionalize and incentivize such work within a predominantly disciplinary academic culture.

2.1.7 Inventories are key

A crucial step in developing sustainability programming is to create inventories of sustainability-oriented courses, research, and student activities. Those reveal the extent of current activity, and important gaps that need to be filled, and also form the essential basis for developing communities of practice and networks of faculty, staff and students who are focussed on sustainability issues, and of communicating the nature and extent of sustainability activities at the University.

2.1.8 Strong focus on students

Students and student groups represent an important resource for sustainability activities at the University, and an important source of political support for strong sustainability actions. They are an essential component of campus as living lab programs, and powerful ambassadors for the University in the various communities in which it operates. It is important to engage actively with students in developing sustainability programming, and, wherever appropriate, to lead with students in sustainability-related activities outside the University.

2.1.9 Community engagement

While injecting sustainability in university research, teaching and operations is critical, so is ethical and inclusive engagement with the various external communities with which it works. Pursuing this “third mission” is both a response to increasing demands from the outside world for universities to engage actively with real-world sustainability issues and also an opportunity for research, teaching and operational activities to be informed by, and themselves inform, sustainability off-campus.

2.1.10 Fundraising opportunities

Increasing societal recognition of the global urgency of sustainability issues offers significant potential for university fundraising. While core functions of the University's sustainability programming should not be dependent on philanthropic revenues, such revenues can be powerful ways of adding capacity to such functions and allowing new initiatives to be both created and evaluated. Fundraising for sustainability at the University needs to become a priority for the University.

2.2 Conclusions

It is imperative that the higher education sector play a role in the increasingly urgent need for a transition to a sustainable society that successfully addresses critical challenges in terms of environmental and human wellbeing. Our students, many of our faculty and staff, and increasingly governments and society at large, are asking universities to play a bigger role in addressing societal problems, a role that has been called the "third mission" of universities, in addition to the two traditional missions of teaching and research.

The opportunity for the higher education sector is to channel our unique circumstances and capabilities in this regard, as:

- Research institutions whose major intellectual capability is the ability to conduct research at a high level, including research on sustainability challenges, outcomes, practices and policies
- Teaching institutions who are equipping the next generation with the tools and capacities needed to address societal challenges, including the pervasive challenges of sustainability
- Single occupiers and managers (and in the case of North American universities at least, owners) of significant capital stock at a critical urban neighbourhood scale
- Mostly public institutions that can accept longer paybacks on investments that meet academic goals, allowing investment in sustainability-oriented infrastructure that cannot be undertaken in the market-place

It is the view of the CECCS that the activities and principles described in this report have laid a strong foundation for a deepening and expansion of sustainability activities at U of T. We have begun the process of turning our three campuses into living labs of sustainability, where we implement, study and teach sustainability in action; of becoming agents of change through partnerships in the communities in which we live and work; and of assuming the role of curriculum innovators, developing the teaching programs needed to equip our graduates with the skills and capabilities required to create a sustainable world.

The opportunity for the University of Toronto is to take a national and global leadership role in sustainability research, education, operations, and community partnerships. U of T has the breadth and depth of research, teaching, and operational expertise, and the links to private, public and civil society partners in Canada's largest and most dynamic city to become a significant global player in the higher education sustainability arena.

Appendices

Appendix 1 - Membership of CECCS

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Appendix 1 - Membership of CECCS

Current CECCS Members

Committee Members

Name	Affiliation	Type
John Robinson	Professor, Presidential Advisor on the Environment, Climate Change, and Sustainability	Chair
Aimy Bazylak	Associate Professor, Faculty of Applied Science & Engineering	Faculty
Steve Easterbrook	Professor and Director, School of the Environment	Faculty
Shashi Kant	Professor and Director, Master of Science in Sustainability Management Program, University of Toronto Mississauga	Faculty
Bryan Karney	Professor and Associate Dean, Cross-Disciplinary Programs, Faculty of Applied Science & Engineering	Faculty
James MacLellan	Assistant Professor and Program Director, Environmental Studies Department of Physical and Environmental Sciences, University of Toronto Scarborough	Faculty
Jan Mahrt-Smith	Associate Professor, Rotman School of Management	Faculty
Liat Margolis	Professor, Associate Dean, Research, and Director, Green Roof Innovation Testing Laboratory, Faculty of Architecture, Landscape, and Design	Faculty
Fiona Miller	Professor and Chair in Health Management Strategies, Institute of Health Policy, Management and Evaluation, Dalla Lana School of Public Health	Faculty
Jennifer Murphy	Professor and Associate Chair, Graduate Studies, Department of Chemistry, Faculty of Arts & Science	Faculty
Lisa DeMarco	Senior Partner, DeMarco Allan LLP	Alumni
TBC	TBC	Undergraduate Student
Aviatar Inbar	Master of Science in Sustainability Management Program Candidate at University of Toronto Mississauga	Graduate Student
TBC	Chief, University Planning, Design & Construction, Office of the Vice-President, Operations and Real Estate Partnerships	Staff
Daniella Mallinick	Director, Academic Programs, Planning & Quality Assurance, Office of the Vice-Provost, Academic Programs	VP Liaison
Derek Newton	Assistant Vice-President, Innovation, Partnerships and Entrepreneurship	VP Liaison
Ron Saporta	Chief Operating Officer, Property Services & Sustainability	VP Liaison

Subcommittee Members

Name	Affiliation	Type
David Roberts	Assistant Professor, Department of Geography & Planning, and Urban Studies Program	Faculty
Ahmed Azhari	Director, Utilities, Sustainability & Grounds, University of Toronto Mississauga	Staff
Marc Couture	Director, Sustainability & Energy Management	Staff
Jeff Miller	Director, Facilities Management, University of Toronto Scarborough	Staff
Claire Westgate	Placement & Employer Relations Officer, MScSM Program, University of Toronto Mississauga	Staff

Past CECCS Members

Committee Members (titles are of the time they were members)

Name	Affiliation	Type
Kenneth Corts	Professor and Vice Dean, Faculty & Research, Rotman School of Management	Faculty
Locke Rowe	Department of Ecology and Evolutionary Biology; Canada Research Chair in Evolutionary Ecology; Dean, School of Graduate Studies and Vice-Provost, Graduate Research & Education	Faculty
Kimberly Strong	Professor, Department of Physics and Director, School of the Environment	Faculty
Maria Banda	Graham Fellow, Faculty of Law	Alumni
Conor Anderson	PhD candidate, University of Toronto Scarborough	Graduate Student
Shamaila Bajwah	Faculty of Arts & Science	Undergraduate Student
Jason Hinde	Undergraduate student, Geology	Undergraduate Student
Gilbert Delgado	Chief, University Planning, Design & Construction, Office of the Vice President, Operations and Real Estate Partnerships	Staff
Tim Lang	Manager, Sustainability Office, University of Toronto Scarborough	Staff
Andy Macdonald	Director of Facilities, Faculty of Kinesiology and Physical Education	Staff
Ron Swail	Chief Operations Officer, Property Services & Sustainability, Facilities and Services	Staff

Past Subcommittee Members

Name	Affiliation	Type
Susannah Bunce	Professor, Department of Human Geography, University of Toronto Scarborough	Faculty
Paul Leitch	Director of Sustainability, Facilities and Services, St. George	Staff

Key

Faculty

Alumni

Student

Staff

CECCS Subcommittees

Campus as a Living Lab Subcommittee	Agent of Change in the Community Subcommittee	Curriculum Innovation Subcommittee
Ahmed Azhari	Lisa DeMarco	Steve Easterbrook
Aimy Bazylak	Aviatar Inbar	Aviatar Inbar
Marc Couture	Fiona Miller	Shashi Kant
Aviatar Inbar	Jennifer Murphy	Bryan Karney
Jan Mahrt-Smith	Derek Newton	James MacLellan
Jeff Miller	Claire Westgate	Liat Margolis
Ron Saporta		Daniella Mallinick
TBC, Chief UPDC		TBC, Undergraduate Student
John Robinson	John Robinson	John Robinson
Dione Dias	Ayako Ariga & Dione Dias	Ayako Ariga

Appendix 2 - CEECS Meetings 2017-2020

Committee on the Environment, Climate Change and Sustainability

- February 27, 2017
- March 29, 2017
- May 8, 2017
- October 3, 2017
- March 2, 2018
- October 1, 2018
- May 6, 2019
- October 23, 2019
- February 21, 2020
- May 27, 2020
- October 22, 2020

Campus as a Living Lab Subcommittee

- May 8, 2017
- July 5, 2017
- September 18, 2017
- January 31, 2018
- April 11, 2018
- November 16, 2018
- April 1, 2019
- January 1, 2020
- July 31, 2020

Agent of Change Subcommittee

- May 10, 2017
- June 14, 2017
- September 18, 2017
- January 18, 2018
- April 10, 2018
- November 21, 2018
- March 29, 2019
- January 24, 2020

Curriculum Innovation Subcommittee

- April 24, 2017
- June 14, 2017
- September 15, 2017
- January 19, 2018
- April 6, 2018
- November 28, 2018
- April 4, 2019
- February 7, 2020
- July 30, 2020

Appendix 3 - CEL Principles

Sustainability CEL Principles - Revised

Co-developed by CECCS and Centre for Community Partnerships (CCP)

We have adopted the definition of the term “Community-Engaged Learning (CEL)” from U of T’s white paper titled “*Rethinking higher Education Curricula*”: CEL broadly refers to activities in which students contribute to meaningful projects within a community for the purpose of addressing the existing needs of individuals, agencies or organizations that are not currently being met, as well as enhancing student learning and development. Combining learning goals and community service, CEL provides students with an opportunity to reflect on their social and civic responsibilities.

The initiative is a Sustainability Community-Engaged Learning (CEL) initiative, if:

1. It is a credit-bearing academic course with full or partial CEL component
2. it takes place in partnership with a community or grassroots, non-profit or for-profit, public or private, or non-governmental organization
3. it responds to partner-led priorities
4. it is reciprocal so both the community partner and the students benefit from the engagement
5. students undertake reflection that connects their community engagement to the learning outcomes of the initiative
6. it works towards one or more of the seventeen United Nations (UN) Sustainable Development Goals (SDGs)

Appendix 4 - 2019 Adams Sustainability Champion Intern Paper - Process

The 2019 Adams Sustainability Champion Interns, Nicolas Côté and Rutu Patel, are working on a three university comparison paper based on their two week visits to University of Edinburgh in the United Kingdom, and Utrecht University in the Netherlands. During their visits they each interviewed over 20 people in various sustainability-related positions at the universities, and compared the information they got from their visits to U of T. A paper was drafted after completing their visits and conducting a thorough literature review. This draft was then reviewed by the CECCS Chair, John Robinson, and sent to representatives of the universities they visited for feedback. This feedback will be incorporated into the paper and finally submitted to an academic journal.

This paper compares sustainability governance at those two universities and U of T. Higher Education Institutions (HEIs) act through four roles in society or fields of activities: education, research, community engagement, and campus operations. Drawing from mixed-method, qualitative case-studies of the University of Edinburgh, Utrecht University, and the University of Toronto, the paper questions how the position of sustainability actors within the institution's hierarchical structure influences the prioritization of certain 'fields of activity' over others in the advancement of sustainability at the university? This research found that, among others, the position of actors appointed by the university's higher management to lead, coordinate, or strategize for the institution-wide advancement of sustainability mattered for the advancement of education, research and operation social roles. The position of these actors was particularly deterministic of the ability to bridge the gap between campus operations and academic work (education and research). The paper observes that when sustainability leadership was hosted within the operational or academic hierarchy, the respective social roles were leveraged over the others. However, when the sustainability leadership was outside of the formal institutional hierarchy, the institution was better able to bridge the academic-administrative divide at the HEI.

Appendix 5 - 2020 Adams Sustainability Champion Intern Paper - Process

The 2020 Adams Sustainability Champion Interns, Monisha Alam, Andi Alhakim, Ana Garza Canales, Grace Ma, Hoor Tariq, Kenneth Sergienko, and Christina Wong, are working on an eight university comparison paper based on virtual interviews conducted with the University of British Columbia in Canada, Arizona State University and MIT in the United States, University of São Paulo in Brazil, University of Cape Town in South Africa, University of Hong Kong, and Monash University in Australia.

Prior to these interviews, a comparative framework informed by a thorough literature review was created. Given the COVID-19-related travel restrictions, the interviews were conducted virtually with people in various sustainability-related positions at the universities, and compared the information they got with their experience at U of T based on the framework. A paper was drafted after completing their interviews including case studies. This draft was then reviewed by the CECCS Chair, John Robinson, and sent to representatives of the universities they visited for feedback. This feedback will be incorporated into the paper and finally submitted to an academic journal.

The research paper evaluates sustainability governance structures at eight universities around the world to determine how those structures facilitate or impede the embedding of sustainability within HEIs. It was found that most universities combined a “centrally coordinated” and a “distributed agency” approach to sustainability embedding. Campus operations was commonly the place where sustainability was most successfully embedded. There were mixed levels of development among the other domains.

Appendix 6 - Program of Better Buildings Boot Camp (August 24-28, 2020)

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
9:00-9:15	SESSION 1: 9-10:15 Welcome (Mike Singleton, Sustainable Buildings Canada) and Keynote Speaker on Integrated Design (Bill Lett, Lett Architects)	SESSION 4: 9-10:00: the Human Factor (Bettina Hoar, Sage Living & Lorene Casiez, Human Scale)	SESSION 7: 9:00 - 9:30 Fenestration cont'd (Nicole Parsons)	SESSION 10: 9:00 - 9:45: Plenary Panel Discussion: the Business of Buildings (Finance, Maintenance & Operations). Jeff Ranson, CaGBC (moderator) David Sasaki & Paul Leitch (U of T), Leona Savoie & Eli Miller (Hullmark), and Sherif Kinawy.	9-1:00 Integrated Design Charrette
9:15-9:30			9:30 - 10 Team Activity		
9:30-9:45					
9:45-10:00					
10:00-10:15		10-10:30 Team Activity	BREAK	10-10:45: Break out sessions* (including Q&A)	Opaque assemblies: Alex Lukachko; Fenestration: Dave Petersen; Mechanical Systems: Cara Sloat; Human Factor: Lorene Casiez; Building Automation: Josh Lewis.
10:15-10:30	BREAK	SESSION 8: 10:15 - 11:15 Mechanical Systems (Cara Sloat, Reinboldt Engineering and Richard Lay)	BREAK		
10:30-10:45	SESSION 2: 10:30 - 11:15 Getting to Know The Building (David Sasaki, U of T) and Initial Energy Model (Sebastian Carrizo & Matthew Hyder, RWDI)				
10:45-11:00	SESSION 5: 10:45 - 11:45 Opaque assemblies aka "walls" (Nicole Parsons and Alex Lukachko)	11:15 - 11:45 Team Activity	BREAK	11 - 11:45 Break Out Sessions* (including Q&A)	
11:00-11:15					BREAK
11:15-11:30	BREAK				
11:30-11:45	SESSION 3: 11:30 - 12:30 High Performance Goal Setting (Michelle Xuereb, Quadrangle)	11:45 - 12:15 Team Activity	BREAK	BREAK	
11:45-12:00					
12:00-12:15					
12:15-12:30	BREAK		SESSION 9: 12:00 - 1:00 Energy Modelling Results (RWDI)	SESSION 11: 12-1 Plenary Panel discussion: How Covid will impact University Campus building decisions in future. Patrick Saavedra (York), Costas Catsaros (UofT), Mark Dettweiler (Ryerson); moderated by Nils Larsson (IISBY)	Energy Model: RWDI
12:30-12:45	12:30 - 1 TEAM ACTIVITY	SESSION 6: 12:30 - 1:00 Fenestration aka "windows" (Dave Petersen, OutsideIn)			End of Boot Camp
12:45-1:00					
			Team Submission of Final Recommendations		

Appendix 7

UNIVERSITY OF TORONTO COMMUNICATIONS: ENVIRONMENT, CLIMATE CHANGE AND SUSTAINABILITY COMMUNICATIONS REPORT

INTRODUCTION

Since July 2019, University of Toronto Communications (UTC) delivered communications support on a wide range of environment, climate change and sustainability initiatives at the University of Toronto. Working with the President's Advisory Committee on Environment, Climate Change and Sustainability (CECCS), the Sustainability Offices and stakeholders across the three campuses, UTC leveraged owned, earned and social channels to shine a light on U of T's actions to address climate change as well as enhance and protect the reputation of the University.

OWNED MEDIA

During this time, U of T News published **71 stories** (see Appendix A), generating a total of **104,317 unique page views**, on a number of environment, climate change and sustainability topics. Of these, **18 stories*** profiled the University's institutional initiatives.

The most popular stories were about the Landmark Project, the Investing to Address Climate Change Charter and the School of the Environment's new Master of Environment & Sustainability degree, all of which received above average page views.¹

EARNED MEDIA

Our media relations team successfully **pitched 61 stories**, resulting in **216 media hits** (see Appendix B), that showcased U of T's latest environmental and climate change research and commitment to sustainable operations. The media relations team also responded to **14 media requests** on a number of sustainability topics, including the climate action strike and divestment from fossil fuels.

SOCIAL MEDIA

All U of T News stories related to sustainability were promoted on social media. The top-performing post, on the Landmark Project, had above average engagement rates² on Facebook (**8.79%**), Twitter **@UofT (13%)** and **@UofTNews (3%)** and a cross-platform total of **102,334 impressions**.

COMMUNICATIONS PLANS

Since July 2019, the communications strategy and planning team developed **4 integrated communications plans** in support of high-profile sustainability announcements and provided communications guidance and issues briefs for a variety of issues. Communications plans included: Landmark, Climate Charter, the Low Carbon Action Plan and the Geo-exchange at Robert Street Field.

¹ A high-performing U of T News story receives more than 1,000 unique page views.

² Recent average engagement rates: Facebook - 5.3% | Twitter @UofT - 4.0% | Twitter @UofTNews - 1.7%



APPENDIX A: U OF T NEWS STORIES

2019

- 07/19/2019, [Is there plastic in our drinking water? Probably – and U of T researchers are studying how concerned we should be](#) (855 unique page views)
- 07/24/2019, [‘An obligation to fill the vacuum’: U of T President Meric Gertler leads climate change discussion at Paris summit](#) (576 unique page views)*
- 07/29/2019, [With students at the forefront, U of T implements ambitious sustainability plan](#) (995 unique page views)*
- 08/07/2019, [U of T researchers aim to lower cost to make lab-grown meat](#) (481 unique page views)
- 08/08/2019, [Contamination-eating microbes developed at U of T to be tested in the field](#) (510 unique page views)
- 08/13/2019, [Forests for the future: U of T researcher seeks to make trees more resilient amid a changing climate](#) (222 unique page views)
- 09/11/2019, [Why don't more Torontonians bike to work? U of T study points to disconnected cycling infrastructure](#) (489 unique page views)
- 09/18/2019, [‘We have a crucial role to play’: U of T commits to leadership role in addressing climate change](#) (2,319 unique page views)*
- 09/19/2019, [U of T Landmark Project to make St. George campus’s historic core greener, more walkable and accessible](#) (8,673 unique page views)*
- 09/24/2019, [University shows flexibility for students who want to attend climate action strike](#) (1,858 unique page views)*
- 09/25/2019, [Prize-winning undergraduate research takes stock of U of T's sustainability-related courses, groups and projects](#) (1,394 unique page views)*
- 09/26/2019, [Climate change could impact omega-3 levels worldwide, U of T researchers find](#) (408 unique page views)
- 09/27/2019, [How can average Canadians slow climate change? Live a low-carbon lifestyle – and tell everyone about it: U of T experts](#) (1,039 unique page views)
- 09/27/2019, [U of T accelerates emissions reduction efforts with new Low-Carbon Action Plan](#) (6,299 unique page views)*
- 10/15/2019, [U of T's proposed geexchange project on Front Campus is one of urban Canada's largest](#) (3,064 unique page views)*
- 10/21/2019, [App that tracks pollution incidents developed by Indigenous-led U of T technoscience lab: Toronto Star](#) (322 unique page views)



- 10/21/2019, U of T study reveals building blocks of coralline algae off the coast of Newfoundland and Labrador (407 unique page views)
- 10/22/2019, Time to act on climate change is now, Suzuki tells U of T sustainability conference (320 unique page views)
- 10/30/2019, National air pollution report highlights rush-hour traffic, diesel truck emissions as major areas of concern (1,185 unique page views)
- 10/31/2019, U of T students who developed AI-powered trash sorting device featured on CBC (636 unique page views)
- 11/12/2019, U of T researchers examine the effect of microfibres in Toronto's wastewater: CityNews (239 unique page views)
- 11/13/2019, Arctic's last refuge for ice-dependent species disappearing as region warms (1,361 unique page views)
- 11/13/2019, U of T's Centre for Sustainable Health Systems to focus on reducing health-care sector's environmental impact (688 unique page views)*
- 11/21/2019, More plastic than fish? Business leader and philanthropist Wendy Schmidt talks ocean health at U of T event (473 unique page views)
- 11/25/2019, Cities need to innovate to improve transportation and reduce emissions: U of T expert (329 unique page views)
- 11/27/2019, U of T and Caltech collaborate on pathway to carbon-neutral plastics (290 unique page views)*
- 11/29/2019, U of T researchers develop early warning system for water pollution using tiny water fleas (599 unique page views)
- 12/03/2019, Road salt is taking its toll on insects in Toronto area, U of T researchers find (543 unique page views)
- 12/12/2019, Halting climate change means a world without fossil fuels – not merely curbing emissions: U of T researchers (518 unique page views)
- 12/16/2019, U of T researchers develop sponge that removes oil from water (2,027 unique page views)
- 12/20/2019, From U of T to UN: Undergraduates attend COP25 climate talks in Madrid (528 unique page views)*



2020

- 01/16/2020, [U of T student creates renewable energy information hub for Canadians](#) (769 unique page views)
- 01/20/2020, [Substances that created hole in ozone may account for half of Arctic warming, U of T researchers find](#) (1,740 unique page views)
- 01/21/2020, [U of T Mississauga recognized as Canadian leader for commitment to fair trade](#) (543 unique page views)*
- 01/27/2020, ['Change agent': U of T alumna helps companies, public sector plug into energy efficiency](#) (201 unique page views)
- 01/28/2020, [Microplastic pollution is everywhere, but scientists are still learning how it harms wildlife: U of T experts](#) (362 unique page views)
- 01/30/2020, [U of T researchers turn McDonald's deep fryer oil into high-end 3D printing resin](#) (8,091 unique page views)
- 02/10/2020, ['Reverse fuel cell' built by U of T researchers converts waste carbon into valuable products](#) (700 unique page views)
- 02/13/2020, [U of T spinoff among 10 winners of Canadian clean energy innovation competition](#) (873 unique page views)
- 02/13/2020, [UTAM to reduce the carbon footprint of its long-term investments by at least 40 per cent by 2030](#) (979 unique page views)*
- 02/19/2020, [The unexpected link between the ozone hole and Arctic warming: U of T expert](#) (305 unique page views)
- 02/21/2020, ['A sustainable life for ourselves and the planet': U of T researcher on religion's role in saving the environment](#) (396 unique page views)
- 03/04/2020, [U of T researcher co-authors global study on tropical forests' diminishing capacity to absorb carbon](#) (365 unique page views)
- 03/11/2020, [U of T's School of the Environment launches first stand-alone graduate degree](#) (1,044 unique page views)*
- 03/11/2020, [Plastic that saves the planet? U of T startup's novel resin helps industry go green](#) (3,067 unique page views)
- 04/13/2020, [Air quality improves by up to 40 per cent in cities that took action on COVID-19, U of T researcher finds](#) (3,482 unique page views)
- 04/15/2020, [What role are emissions playing in the COVID-19 pandemic? U of T researcher examines the evidence](#) (1,101 unique page views)



- 04/16/2020, [U of T startup offers free seeds, indoor-gardening tips to families amid COVID-19 outbreak](#) (2,810 unique page views)
- 04/30/20, ['Be there for our community': How three U of T Mississauga startups adapted to COVID-19](#) (532 unique page views)
- 05/06/2020, ['A silent killer': U of T's Miriam Diamond on what COVID-19 has taught us about climate change](#) (1,931 unique page views)
- 06/08/2020, [U of T researchers model the health benefits of electric cars, find 'large improvement in air quality'](#) (825 unique page views)
- 06/08/2020, [Construction begins on historic U of T campus revitalization project](#) (17,770 unique page views)*
- 06/12/2020, [U of T researchers seek to reduce chemical industry's carbon footprint](#) (979 unique page views)
- 06/18/2020, [Universities sign U of T-led responsible investment charter to help address climate change](#) (2,160 unique page views)*
- 06/22/2020, [U of T recognized as one of Canada's greenest employers in 2020](#) (750 unique page views)
- 06/24/2020, [Astronomers at U of T, other universities propose measures to reduce their carbon footprint](#) (159 unique page views)
- 07/08/2020, [U of T researchers to co-lead national Wildland Fire Research Network](#) (248 unique page views)
- 07/17/2020, [Experimental garden at U of T Mississauga explores how plants will adapt to climate change](#) (830 unique page views)
- 07/20/2020, [Most polar bear populations likely to collapse by end of century if global warming continues](#) (960 unique page views)
- 07/23/2020, ['The problem is going to get worse': U of T Scarborough researcher sounds alarm on invasive species](#) (6,142 unique page views)
- 07/24/2020, [From space to sustainability: U of T alumnus Julius Lindsay helps physics grads navigate career options](#) (196 unique page views)
- 07/29/2020, [Warming Arctic more vulnerable to wildfires like those burning in Siberia: U of T Mississauga climate expert](#) (285 unique page views)
- 08/08/2020, [Project led by U of T researcher to target at-risk fish in lower Great Lakes](#) (578 unique page views)
- 09/14/2020, [On the move: U of T e-scooter startup launches expansion during COVID-19](#) (645 unique page views)



- 09/17/2020, [Predator loss, climate change combine to devastate Alaskan reefs: U of T study](#) (245 unique page views)
- 09/17/2020, ['An unacceptable plastic future': U of T ecologists sound alarm in new study of global waterways](#) (564 unique page views)
- 09/28/2020, [Low-carbon health care: U of T, local hospitals launch Sustainable Health System Community of Practice](#) (294 unique page views)*
- 09/28/2020, [U of T researchers, students travel to high Arctic to conduct atmospheric research](#) (611 unique page views)
- 09/29/2020, [Electric vehicles can fight climate change, but they're not a silver bullet: U of T study](#) (598 unique page views)
- 09/30/2020, [U of T's Ontario Institute for Studies in Education hosts first-ever climate summit, embarks on action plan](#) (175 unique page views)
- 10/19/2020, ['We all have a role': Adams Sustainability Celebration highlights U of T sustainability initiatives](#) (365 unique page views)*



APPENDIX B: EARNED MEDIA COVERAGE

2019

- 07/08/2019, Lindsay Schoenbohm on West coast earthquakes (CBC Radio) (1 hit)
- 07/31/2019, How does a male black widow find a mate? Follow the other guys (New York Times) (1 hit)
- 08/01/2019, Brazilian Canadians rally to save the Amazon from raging fires (Toronto Star) (1 hit)
- 08/23/2019, Kerry Bowman on Amazon fires (*link not available*) (CBC News Network) (1 hit)
- 09/23/2019, The U.N. Climate Summit starts today. Here's what it can and can't achieve (Washington Post) (1 hit)

2020

- 04/05/2020, Air quality has improved during the COVID-19 pandemic and may help people live longer. These satellite images show more (Toronto Star) (1 hit)
- 04/22/2020, Opinion: Nature didn't drop this bomb. We dropped it on nature (Canadian Geographic) (1 hit)
- 05/07/2020, A study proves that the climate does not affect the transmission of COVID-19 (El Obrero) (1 hit)
- 05/07/2020, Summer is coming, but the virus won't be going (New York Times) (1 hit)
- 05/07/2020, Study finds that the weather does not affect the transmission of COVID-19 (La Vanguardia) (1 hit)
- 05/07/2020, Does climate change prevent the transmission of COVID-19? Study clears it up (Milenio) (1 hit)
- 05/07/2020, Study finds that the weather does not affect the transmission of COVID-19 (Diario Libre) (1 hit)
- 05/07/2020, Canadian scientists assure that the climate does not affect the transmission of COVID-19 (multiple Spanish media outlets) (106 hits)
- 05/08/2020, Hotter, humid weather may not halt spread of COVID-19: Study (Indian Express) (1 hit)
- 05/09/2020, What works to flatten the curve and what science says on easing restrictions (CBC) (6 hits)
- 05/10/2020, Research shows warmer weather won't slow transmission of the virus (CTV) (2 hits)
- 05/10/2020, Warm weather won't kill off Coronavirus, study finds (MSN) (2 hits)
- 05/11/2020, For Canada, finding a vaccine will only be part of the equation (New York Times) (1 hit)



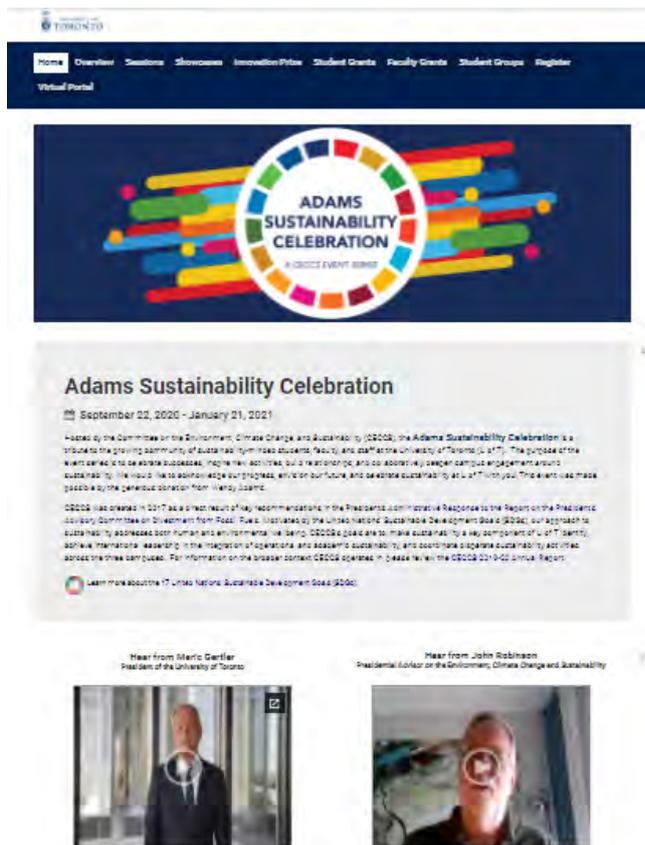
- 05/11/2020, [Peter Juni on warm weather and the spread of COVID-19](#) (CBC Metro Morning) (2 hits)
- 05/12/2020, [Peter Juni's study on climate change and COVID-19](#) (*link not available*) (Hindustan Times) (1 hit)
- 06/10/2020, [U of T breaks ground on revitalization, sustainability construction project](#) (Academica) (1 hit)
- 07/05/2020, [Researchers find microplastics in nearly every sample taken in the Eastern Canadian Arctic](#) (Canadian Geographic) (2 hits)
- 07/20/2020, [Most polar bears to disappear by 2100 , study predicts](#) (The Guardian) (1 hit)
- 07/20/2020, [Global warming is driving polar bears towards extinction, researchers say](#) (New York Times) (1 hit)
- 07/21/2020, [The Energy 202: Minority more likely to have limited access to nature, new report finds](#) (Washington Post) (1 hit)
- 09/02/2020, [Your denim could be destroying some of the world's most precious water bodies, new study finds](#) (Canadian Press) (52 hits)
Additional coverage: [WTAQ-AM Radio](#) (1 hit), [City Toronto](#) (3 hits), [CityNews Edmonton](#) (4 hits), [Newstalk800](#) (2 hits), [AM980](#) (2 hits), [CityNews Winnipeg](#) (2 hits), [CBC Radio](#) (2 hits), [CityNews Calgary](#) (4 hits), [CBC Radio One](#) (2 hits), [Newsweek](#) (1 hit)
- 09/14/2020, [Those smoky skies over Vancouver area glimpse of the future. Here's what experts say we can expect](#) (Toronto Star) (1 hit)
- 10/13/2020, [Opinion: Are we locked into a plastic future?](#) (Toronto Star) (1 hit)



Appendix 8 - Screenshots of the Adams Sustainability Celebration Website

This tri-campus event series hosted by CECCS brings together U of T students, staff, and faculty virtually to deepen campus engagement around sustainability across four months. The Celebration is hosted on a virtual portal allowing for collaboration and networking among presenters and attendees.

Landing Page



Celebration's Virtual Portal

