



LOYOLA SUSTAINABILITY RESEARCH CENTRE

Annual Report

2019-2020

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Message from the Co-Directors



LSRC Co-Directors Amy Poteete (continuing) and Jochen Jaeger (outgoing)

What an incredibly dynamic year! For the LSRC, the 2019-2020 academic year was a period of both continuity and change, consolidation and growth.

It was an active year. The LSRC organized nine seminars (including one postponed by the pandemic) and our annual Ignite session. These events brought together students and faculty from across the university, as well as members of the public and guest speakers, in lively exchanges about International environmental agreements, landscape conservation, urban

sprawl, life-cycle assessments, and various aspects of climate change, among other topics. Our graduate student members began to organize peer activities, to foster a sense of community as well as exchange within and across disciplines.

It was also a year of consolidation. Behind the scenes, we developed new governing documents that provide a more solid organizational grounding for the Centre and ensure transparency in its procedures and operations. The new arrangements went into force following their approval by LSRC members and the Faculty of Arts and Sciences in Winter 2020. Members of the LSRC elected Shannon Lloyd, Liz Miller, Katja Neves, and outgoing Co-Director Jochen Jaeger to our new Administrative Board, which also includes LSRC Co-Directors Jim Grant (incoming) and Amy Poteete (continuing), and former LSRC Director, Ray Paquin. It will take up its work in July 2020.

It was a year of growth. We were very happy to welcome 2 new core members, 12 new internal associates, and 21 new student and postdoctoral associates to our Centre in 2019-2020. They will contribute to a lively dialogue and collaboration within the Centre.

And, clearly, it was a year of surprises. When the pandemic forced the closure of the university and the cancellation of all events, we were just days away from our annual Sustainability across Disciplines conference. With the theme of “Sustainability and the Climate Crisis,” the conference was on track to be the largest yet. Over the subsequent months, some elements moved online, including posters, videos, and presentations in the form of a webinar series. The conference has been postponed. It will now take place 17 – 19 March 2021 and will be at least partially online, but we hope that a substantial part of the conference will be in person.

Climate marches around the globe, the global pandemic, and unrest over racial injustices have made larger parts of society than ever aware that the threats to sustainability are enormous and growing. Addressing them will require collaboration across disciplines. Research will need to be more and more problem-oriented, and researchers will need to better understand approaches used in other disciplines than their own and to find better ways to integrate a multitude of insights at multiple scales. The Loyola Sustainability Research Centre’s mission to foster transdisciplinary exchanges about diverse aspects and forms of sustainability is more pertinent than ever. It has been a pleasure to further that mission.

We are looking forward to another year full of collaborative activities in 2020-2021.

-LSRC Co-Directors Jochen Jaeger (outgoing) and Amy Poteete (continuing)

About the LSRC

The Loyola Sustainability Research Centre (LSRC) is a network of researchers at Concordia and beyond working in the general field of sustainability. With the understanding that many of the most pressing sustainability issues of the day cannot be effectively addressed from a single disciplinary perspective in isolation, the mission of the LSRC is to promote a transdisciplinary approach to research and education about relationships among natural, human, and technological systems through basic and applied research, research creation, and art and design. Our understanding of environmental issues and their societal context emphasizes interactions between social and ecological systems from local to global scales, a problem-oriented choice of methods, and solution-oriented integration of results from different perspectives. The LSRC brings faculty members, students, and post-doctoral associates from across the university together to explore the many facets of sustainability and resilience. It was founded in 2012 by Professor Peter Stoett and has since then grown to a membership of 92 researchers. The Centre supports research synthesis and knowledge transfer that are relevant for decision-making, policies and a transition toward a culture of sustainability.

The Loyola Sustainability Research Centre is housed in the Faculty of Arts and Science but, in accordance with its mission of promoting transdisciplinarity, it includes members from all four faculties (see section on Members of the Centre below). Thus, it facilitates the collaboration of members on research projects across the University. With member expertise ranging from science and policy to design and communications, the interdisciplinarity of the Centre is its greatest strength.

The LSRC runs regular events, including a monthly seminar series, an annual Ignite session, and an annual Sustainability across Disciplines conference. These events foster the kind of cross-disciplinary discussion that is crucial to the development of transdisciplinary research projects. Rebecca Tittler, Research Coordinator of the Centre, also offers support for members in the conception of collaborative grant proposals.



Members of the LSRC

There are four categories of membership in the Centre. Core members are university researchers or practitioner researchers/creators/artists who are deeply invested in the research activities and intellectual life at LSRC and for whom LSRC is their primary Concordia research centre association. Internal Associates are university researchers or practitioner researchers/creators/artists based at Concordia whose primary Concordia research centre association is not with the LSRC. This category also includes Concordia-based researchers who hold a part-time or short-term position, as well as retired former Core Members. External Associates are university researchers or practitioner researchers/creators/artists or community-based researchers and artists not based at Concordia whose activities enrich the community of practice of the LSRC. Student and Post-doctoral Associates are affiliated researchers working under the supervision of a Core Member or Internal Associate or whose affiliation is recommended by a Core Member or Internal Associate.

The current membership is as follows:

Core members

1. Matthew Barker, Philosophy
2. Pascale Biron, Geography, Planning and Environment
3. Natasha Blanchet-Cohen, Applied Human Sciences
4. Salvadurai Dayanandan, Biology
5. Emma Despland, Biology¹
6. Dylan Fraser, Biology
7. Matthias Fritsch, Philosophy
8. James Grant, Biology
9. Jochen A. G. Jaeger, Geography, Planning and Environment
10. P.K. Langshaw, Design and Computation Arts
11. Jean-Philippe Lessard, Biology
12. Shannon Lloyd, Management
13. Damon Matthews, Geography, Planning and Environment
14. Elizabeth Miller, Communication Studies
15. Katja Neves, Sociology and Anthropology
16. Raymond Paquin, Management
17. Pedro Peres-Neto, Biology
18. Amy Poteete, Political Science
19. Rajshree Prakash, Management
20. Leonard Sklar, Geography, Planning and Environment
21. Jeannine-Marie St-Jacques, Geography, Planning and Environment
22. Sam Rowan, Political Science¹
23. Rebecca Tittler, Loyola College for Diversity and Sustainability

24. Sarah Turner, Geography, Planning and Environment
25. Robert Weladji, Biology
26. Anya Zilberstein, History

Internal associates

1. Bengi Akbulut, Geography, Planning and Environment
2. Anjali Awasthi, Concordia Institute for Information Systems Engineering¹
3. Michael Bossert, CERC Smart, Sustainable, and Resilient Communities and Cities¹
4. Joel Bothello, Management
5. William Bukowski, Psychology¹
6. Carmela Cucuzzella, Design and Computation Arts¹
7. Ricardo Dal Farra, Music
8. Amélie Daoust-Boisvert, Journalism¹
9. Effrosyni Diamantoudi, Economics
10. Jill Didur, English
11. Ursula Eicker, Building, Civil and Environmental Engineering/ CERC Smart, Sustainable, and Resilient Communities and Cities¹
12. Yves Gelin, Chemistry and Biochemistry
13. Govind Gopakumar, Centre for Engineering in Society
14. Thibaud Henin, Political Science¹
15. Kregg Hetherington, Sociology and Anthropology
16. Angela Kross, Geography, Planning and Environment¹
17. Simon Langlois-Bertrand, Political Science¹

[1] New to the Centre this year

18. Alex Matveev, Geography, Planning and Environment
19. Catherine Mulligan, Building, Civil, and Environmental Engineering
20. Monica Mulrennan, Geography, Planning and Environment
21. Ali Nazemi, Building, Civil, and Environmental Engineering²
22. Ketra Schmitt, Centre for Engineering in Society
23. David Secko, Journalism
24. Stefania Strantzà, Economics²
25. Peter van Wycke, Communication Studies
26. Carly Ziter, Biology²

External associates

1. Eric Abitbol, Environment, Security & Conflict Transformation Practice Leader at Universalis (management consulting)
2. Anna-Liisa Aunio, Sociology, Dawson College
3. Piero Genovesi, Institute for Environmental Protection and Research (Italy)
4. Christopher Gore, Politics and Public Administration, Ryerson University
5. William Kennedy, Office of Accountability at US Overseas Private Investment Corporation
6. Sandy Lamalle, Earth System Governance Workgroup on Environment, Representation and Rights
7. Cristina Romanelli, the World Health Organization
8. Tonia Ruppenthal,
9. Management, Business Administration and Economics, Fulda University of Applied Science (Germany)
10. Laura Shillington,
11. Geography, John Abbott College
12. Peter Stoett, University of Ontario Institute of Technology
13. Owen Temby, Political Science and School of Earth, Environmental, and Marine Science, University of Texas Rio Grande

14. Scott Vaughan, China Council for International Cooperation on Environment and Development
15. Wouter Veening, Institute for Environmental Security (The Hague)

Student and post-doctoral associates

1. Emma Bider, Sociology and Anthropology²
2. Anders Bjorn, Management²
3. Debdeep Chaterjee, Supply Chain and Business Technology²
4. Jonathan Cole, Geography, Planning and Environment²
5. Miguel Del Pino, Mechanical, Industrial, and Aerospace Engineering
6. Elahe Fakoor, Management²
7. Clare Freeman-Cole, Geography, Planning and Environment²
8. Mark Kwakye Frimpong, Political Science
9. Brian Gallagher, Biology²
10. Julia Ginsburg, INDI program²
11. Cheryl Gladu, INDI program
12. Sherif Goubran, INDI program²
13. Maida Hadziosmanovic, Geography, Planning and Environment
14. Kayleigh Hutt-Taylor, Biology²
15. Emily Kroft, Biology²
16. Zachary Masson, Geography, Planning and Environment²
17. Duane Noel, Geography, Planning and Environment²
18. Claire O'Neill Sanger, Geography, Planning and Environment²
19. Alexandre Pace, Geography, Planning and Environment²
20. Kian Rahimi, Mechanical, Industrial and Aerospace Engineering²
21. Keroles Riad, INDI program²
22. Serena Sinno, Biology²
23. Brogan Stewart, Geography, Planning and Environment²
24. Andrée Tremblay, Communication Studies²
25. Zeynab Yousefzadeh, Mechanical, Industrial and Aerospace Engineering²

² New to the Centre this year

Recent Developments

The LSRC approves a new governance structure

The LSRC leadership spent much of this past year developing a new formal governance structure for the Centre. This structure is modelled on that of University-recognized Research Centres like the Centre for Oral History and Digital Storytelling. It includes four categories of membership (see above), It also includes provisions for the creation of an Administrative Board to oversee the strategic direction and administration of the Centre and an Advisory Board to provide general guidance and advice on Centre operations and events and to facilitate information exchange. The new structure was approved by the membership of the LSRC and by the Associate Dean of Research in the Faculty of Arts and Science on behalf of the Dean. It came into effect in March of this year.

LSRC members participate in the drafting of the Sustainability Action Plan for Research of the University

From the fall of 2018 through the winter of 2020, 6 members of the LSRC participated in an 11-member committee appointed by then-Provost Graham Carr to formulate a subplan on research for the draft Sustainability Action Plan of the University. This committee, chaired by David Ward from the Office of Research and coordinated by Rebecca Tittler, coordinator of the LSRC and the Loyola College for Diversity and Sustainability, included faculty members from all four faculties (Ali Nazemi, Shannon Lloyd, Carmela Cucuzzella, pk langshaw, Pedro Peres-Neto, and James Grant), as well as a representative of the Library (Katharine Hall) and of two student organizations, the Sustainability Action Fund (Mark Underwood) and Sustainable Concordia (Vanessa Macri, replaced by Tara McGowan-Ross in January 2019). After countless meetings, two public consultations with the Concordia community, and over 200 hours of work, the Committee formulated a draft plan including 28 strategies to foster “an institutional culture that establishes Concordia as a recognized world leader in (a) sustainability research with meaningful effects on society; and (b) sustainable research practices”³ The draft plan was set to be presented for approval to the President’s Executive Group and the Board of Governors this past spring, but this process has been delayed due to the current pandemic. We look forward to helping this plan to move forward in the coming months.

³ Concordia University, 2019. Sustainability Draft Plan 2019-2024. Available at https://www.concordia.ca/content/dam/concordia/services/sustainability/docs/Hub/2019_SustainabilityPlanDraft.pdf

Some Projects Involving LSRC Members

Using fractal analysis to determine if physical impairment in Japanese macaques (*Macaca fuscata*) alters behavioural movement complexity

Brogan Stewart and Sarah Turner



Photo credit Sarah Turner

Free ranging and wild animals sometimes experience challenges of physical wellbeing and optimal movement ability, but assessing if they are stressed in

these situations can prove difficult. This research focuses on a population of Japanese macaques on Awaji Island, Japan that are born with very high incidences of limb malformations that cause physical impairment. Researchers observe behavioral responses to disabilities and use Fractal Analysis to test the hypothesis that impairment caused by congenital limb malformations will alter the complexity of movement behaviors for disabled monkeys under free-ranging conditions. Studying behaviour in the context of disability can highlight the selective pressures that individuals face and reveal adaptations for behavioural flexibility and environmental tolerances.

Assessing the contribution of public and private green space to urban forest diversity in Montreal

Kayleigh Hutt-Taylor and Carly Ziter

This project focuses on urban forest diversity and how urban tree functional diversity is distributed within Montreal's public and private green



spaces. Drawing links between functional traits and ecosystem functions that are linked to ecosystem services will allow us to ask broader questions about the provision of ecosystem services within the urban landscape and how it

may shift between private and publicly managed spaces.

Supporting the possibilities of urban commoning in Montreal's Champ des possibles

Amy Poteete and Nik Luka



Photo credit Amy Poteete

Urban residents around the world regularly reclaim abandoned industrial sites and refashion them to reflect their own needs and values.

“Commoning”—practices to sustain shared access to, control over, and care for resources and spaces—offers a broadly participatory, inclusive, and flexible alternative to standard urban planning, but is difficult to achieve and sustain. The Champ des possibles, an urban prairie that has emerged on an abandoned railyard in Montreal and exemplifies the challenges associated with urban post-industrial sites. Gentrification and associated transformations threaten widely-held preference for maintaining the Champ as a “wild” green space and prioritizing its recreational, environmental, and artistic potential. In partnership with Les Amis du Champ des possibles, we aim to develop processes to support commoning and limit the exclusion of stakeholders and loss of flexibility so often associated with urban planning.

Montreal 2050: Envisioning urban development considering future generations and intergenerational justice

Jochen Jaeger, William Bukowski, Matthias Fritsch, Craig Townsend, and Rebecca Tittler

The issue of urban development transcends both disciplinary and generational boundaries and is increasingly urgent due to climate change and the links



Photo credit Craig Townsend

between urban development and skyrocketing greenhouse gas emissions from transportation. Transportation emissions in Canada grew by 42% between 1990 and 2016 (Government of Canada, 2020), while emissions from many other activities declined. This project addressed the issue of urban development in Montreal through a trans-disciplinary approach. The overall goal of this project is to propose workable, sustainable urban futures that will minimize the negative effects of urban growth on quality of life and the natural world for current and future generations. As part of the project, the team will be collaborating with community members to develop a set of possible scenarios for the future development of the Montreal Metropolitan Area, involving multiple generations and people speaking on behalf of future generations. The project will explicitly address the issue of intergenerational justice while instigating and facilitating a public conversation on urban development and empowering youth to effect change in the world they are destined to inherit.

Relative influence of local and landscape variables on native bee communities in urban ecosystems

Serena Sinno, Jean-Philippe Lessard, and Carly Ziter



Photo credit Serena Sinno

Urbanization is rapidly changing natural landscapes, with the majority of the world's population living in cities. It is important for those who inhabit these areas to learn how to best promote biodiversity. This project aims to determine which local and landscape factors most contribute to native bee communities, be it floral density, nectar volume-concentration ratios, flower color, floral nativity, or amount of impervious surface in the surrounding area. The goal is to help both civilians and urban planners to best design cities to promote native bee diversity.

What, if anything, is sustainability? Cross-disciplinary conversations in search of solutions

Effrosyni Diamantoudi, Matthias Fritsch, Govind Gopakumar, James Grant, Jochen Jaeger, Monica Mulrennan, Raymond Paquin, Amy Poteete, Jeannine-Marie St-Jacques, Pedro Peres-Neto, and Rebecca Tittler

What is sustainability? The term seems to be everywhere and increasingly is used to mean everything, which of course risks it meaning nothing. This book project embraces the cacophony to explore prominent, alternative, and, at times, provocative perspectives on sustainability. Taking interdisciplinary and Indigenous perspectives throughout, this book will read like a series of thematic conversations around various aspects of sustainability from a number of leading scholars.

Reconstructing environmental variability over the past millennium in southeastern Québec using high-resolution pollen records from a lake in Mont-Orford National Park

Claire O'Neill Sanger, Jeannine-Marie St-Jacques and Matthew Peros.

As pollen is dispersed annually, it can be used as a natural climate proxy. This research uses fossilized pollen from lake-bed sediment to (1) recon-



Photo credit C. O'Neill Sanger

struct decadal to centennial scale forest-vegetation dynamics and climate variability over the last thousand years and (2) investigate the effects of European colonization as well as anthropogenic climate change on sugar-maple hardwood forest ecosystems in southeastern Québec.

Mind, Heart, Mouth. Collective gardening, design, and community care

Andrée Tremblay and Elizabeth Miller



Photo credit Rebecca Tittler

Today, more than half of the world's population lives in urban areas. In the province of Quebec, this number reaches over 80%. While nature connectedness is a strong predictor of pro-environmental behaviours, many people living in cities have limited experience and connection with the natural world and with the ways our food is produced. The mind.heart.mouth. project uses garden-based pedagogy and consumer experience theories to create workshops and spaces designed to increase awareness and greater connections with our natural environments.

Science-based targets for corporate environmental sustainability: The case of organizational Life Cycle Assessment

Anders Bjørn, Shannon Lloyd, and Damon Matthews

This project involves applying Planetary (and regional) boundaries in LCA to allow "absolute environmental sustainability assessment". The goal of an absolute assessment is to evaluate whether environmental impacts of an anthropogenic activity are low enough to be considered environmentally sustainable, and if not, how to set "science-based targets" to achieve this objective. This type of assessment considers climate change, but also other widespread issues, such as land use, water scarcity and perturbations of the natural nitrogen and phosphorous cycles. The project also involves examining the uptake and use of methods for absolute environmental sustainability assessment by business through corporate sustainability disclosure.

Effects of intraspecific diversity and eco-evolutionary feedbacks on potential climate change adaptation in Cape Race brook trout

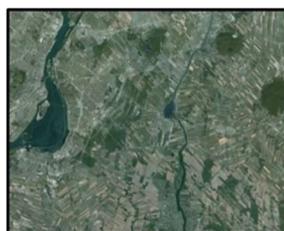
Brian Gallagher, Dylan Fraser, and Pedro Peres-Neto

This project examines how population characteristics and eco evolutionary feedbacks might promote or constrain adaptive responses to climate change across multiple populations of brook trout in Cape Race, Newfoundland. Results may be useful in developing more realistic biological models to simulate climate change responses, which can potentially be applied to other populations of trout and salmon.



Assessing the degree of landscape fragmentation in Canada over the past 50-70 years, to be used as a pressure indicator

Clara Freeman-Cole and Jochen Jaeger

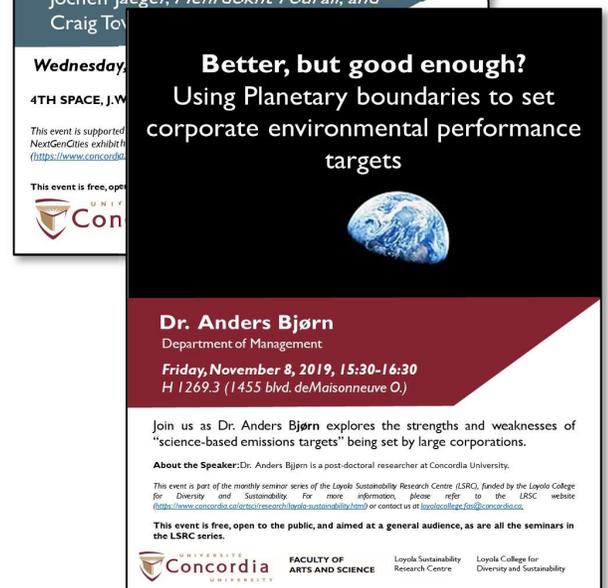
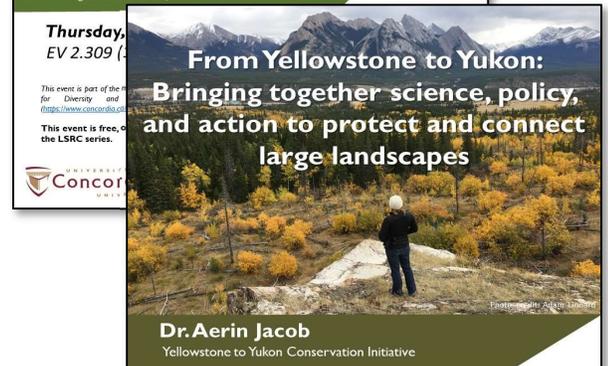
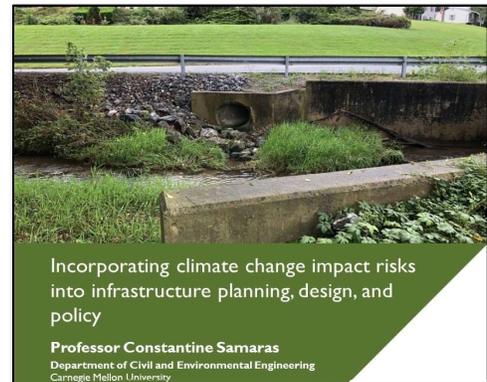


Since it is only after several decades that the extent of effects of fragmentation can be evaluated, a temporal analysis is key. Anthropogenic change of the environment, such as linear fragmentation, is increasing in a number of areas around Canada, and so monitoring these changes will be necessary to inform conservation and land use policies. Through this project, landscape fragmentation will be measured over 50 years using the effective mesh size method to observe the rate of change over the time frame. Results will allow for the identification of fragmentation hotspots and may help predict future landscape fragmentation.

Events

Public Lectures

- Constantine Samaras (Carnegie Mellon)
Incorporating climate change impact risks into infrastructure planning, design, and policy
 August 8, 2019
 In collaboration with the Loyola College for Diversity and Sustainability (LCDS)
- Effrosyni Diamantoudi (Concordia University)
International environmental agreements - A game theoretic perspective
 September 13, 2019
 In collaboration with LCDS
- Aerin Jacob (Yellowstone to Yukon Conservation Initiative)
Bringing together science, policy, and action to protect and connect large landscapes conservation scientist at the Yellowstone to Yukon Conservation Initiative
 October 11, 2019
 In collaboration with LCDS
- Jochen Jaeger, Mehrdokht Pourali, and Craig Townsend (Geography, Planning and Environment, Concordia University)
To sprawl or not to sprawl: A discussion of urban development in Montreal
 November 6, 2019
- Anders Bjørn (Management, Concordia University)
Better, but good enough? Using Planetary boundaries to set corporate environmental performance targets
 November 8, 2019
 In collaboration with LCDS
- Sonja Klinsky (Julie Ann Wrigley Global Institute of Sustainability, Arizona State University)
What does justice have to do with it? Climate policy in an unequal world



November 25, 2019
 In collaboration with LCDS

7. Shannon Lloyd (Management, Concordia University)
Integrating worker health and safety into life-cycle assessment

December 13, 2019
 In collaboration with LCDS

8. Julien Arsenault (Université de Montréal) and Mathilde Jutras (McGill)

The Environmental Footprint of Universities

January 10, 2020
 In collaboration with LCDS

9. Joel Bothello (Management), Emma Despland (Biology), Anjali Awasthi (Concordia Institute for Information Systems Engineering), Andrée Tremblay (Communication Studies), Carly Ziter (Biology), Jochen Jaeger (Geography, Planning and Environment), Emma Bider (Sociology and Anthropology), Shannon Lloyd (Management), Elizabeth Miller (Communication Studies), Brian Gallagher (Biology), and Clara Freeman-Cole (Geography, Planning and Environment, Concordia University)

Third Annual Igniting Sustainability Research Session

February 14, 2020
 In collaboration with LCDS

10. Amy Luers (Future Earth)

Workshop on collaboration across disciplines

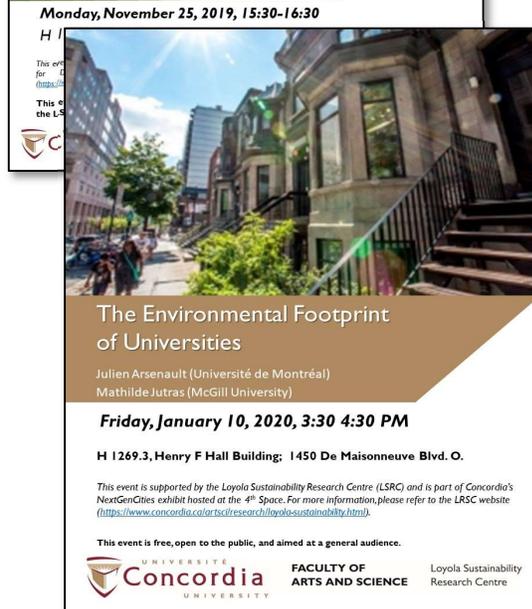
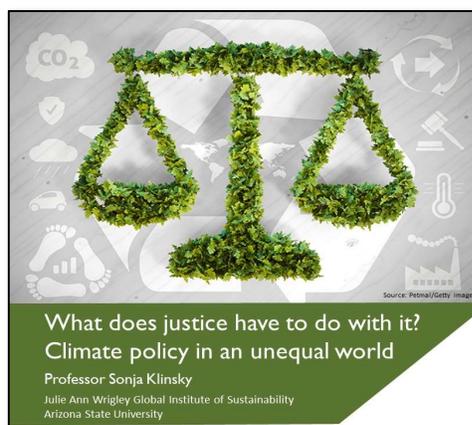
April 10, 2020 POSTPONED DUE TO COVID-19 PANDEMIC
 In collaboration with LCDS

11. Jochen Jaeger (Geography, Planning and Environment), Rebecca Tittler (LCDS), and Carly Ziter (Biology)

Let's talk about urban biodiversity and well-being

May 21, 2020

Organized and sponsored by the CERC Smart, Sustainable and Resilient Communities and Cities and the 4th space



Annual Sustainability Across Disciplines Conference

Sustainability and the Climate Crisis

March 16-18, 2020

Concordia University
Jesuit Hall and Conference Centre (7141 Sherbrooke St. O)
John Molson Building (1450 rue Guy)

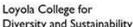
Join us for this cross-disciplinary conference exploring the research being done on sustainability in general and the climate crisis in particular at Concordia University and beyond.

This event is free and open to the public but registration is required.

For more information, contact the Loyola College for Diversity and Sustainability at 514-848-2424 x2125 or loyolacollege.fas@concordia.ca or visit the conference webpage at <https://www.concordia.ca/arts/loyola-college-diversity-sustainability/sustainability-and-the-climate-crisis.html>

This event is hosted by the Loyola College for Diversity and Sustainability and the Loyola Sustainability Research Centre, with generous support from the Faculty of Arts and Science; the Office of Research; the Canada Excellence Research Chair in Smart, Sustainable and Resilient Communities and Cities (Gina Cody School of Engineering and Computer Science); the John Molson School of Business; and the Departments of Political Science; Geography, Planning and Environment; Biology; Communication Studies; Economics; and Management.



Since March 2017, the Loyola Sustainability Research Centre has been co-hosting a Sustainability Across Disciplines Conference in collaboration with the Loyola College for Diversity and Sustainability and with the support of the Office of the Vice-President, Research and Graduate Studies; the Faculty of Arts and Science; the Canada Excellence Research Chair in Smart, Sustainable and Resilient Communities and Cities; the John Molson School of Business; and the Departments of Biology; Communication Studies; Economics; Geography, Planning and Environment; Management; and Political Science at Concordia University. With the theme of Sustainability and the Climate Crisis, this year's conference was scheduled for March 16-18, 2020, on both campuses. Over 100 Concordia undergraduate and graduate students and faculty researchers from across the University were scheduled to present their research, as were two external

Speakers: Yvette Perfecto, (Biology, University of Michigan) and Angela Carter (Political Science, University of Waterloo). Over 310 people had registered to attend the conference over the three days.

Sadly, this year's conference had to be cancelled due to the current pandemic, which required the shut-down of all on-campus University activities from March 16th through the summer. That said, we have already rescheduled the conference for March 17-19, 2021, when we will move forward with a fully online or a blended model, depending on the state of the pandemic. Next year's conference will feature most of the events scheduled for this past year. In the meantime, we have been able to post the student films and posters from this past year's conference online and to run the undergraduate and graduate student poster competitions, as well as the student film competition. In addition, we are collaborating with the Loyola College for Diversity and Sustainability and the 4thSpace to present a webinar series to be run in July 2020 and thus accommodate those students who will not be able to present next March.

For this year, the winners of the undergraduate poster competition (*Sustainability Challenges in Supply Chains*), run online, are as follows:

1st Place: Jack Angliviel de la Beaumelle, Amadeus Collard, Nelly Harb, Alexandre Camus, and Jason Romeo: On a quest to reduce waste: Towards building a circular economy for waste through inter-industry corporate partnerships

2nd Place: Petros Mascia, Chloe Gonzalez, Jeremy-David Deneault, Abdullah Hasan, and Maeve MacLeod: Sustainability energy: How the digital world consumes more than you think.

The winners of the student film festival, also run online, are as follows:

1st Place: Bailie Hutchison, Guillaume Knobloch, and Anne-Marie Quadros: Eco-Consciousness

2nd Place: Kathleen Diaz, Daniel Crétu, and Siam Obregón: It's A Magical Universe

Finally, the winners of the graduate student poster competition (*Current Topics in Sustainability Science*) are as follows:

1st Place: Zeina El Omari: Unsustainable green lawns: Can urban food forests be a sustainable alternative to green lawns in North American urban landscapes?

2nd Place: Michelle Anderson: Assessing the sustainability of restoring wetlands in the Bay of Fundy

A big thank you to the faculty, staff, student, and alumni volunteer judges who made these competitions possible: Suchit Ahuja, Debdeep Chatterjee, Sebastian di Poi, Jochen Jaeger, Matthew Leddy, Fereshteh Mafakheri, Raymond Paquin, Kian Rahimi, Rebecca Tittler, Claudette Torbey, and Lara Wheeler; and also to Shannon Lloyd, Elizabeth Miller, Philip Szporer, and Sarah Turner for facilitating the student contributions and helping to make this happen.

The July student webinar series will be as follows:

July 14, 12-12:30: Zeynab Yousefzadeh: The importance of climate zone and electricity mix in determining the life cycle environmental impacts of pipe freeze protection systems

July 15, 12-12:30: Cedric Yargeau: Privately owned public space: An assessment of Montreal legislation and projects

July 16, 12-12:30: Isaac Eckert: Invasive species, climate change and biodiversity: A focus on Canadian pines in Argentina

July 21, 12-12:30: Mehrdokht Pourali: Measuring and monitoring urban sprawl in Canada from 1991 to 2011

July 22, 12-12:30: Steffy Velosa and Jochen Jaeger: Reducing wildlife mortality on roads and restoring ecological connectivity

July 23, 12-12:30: Charla Patterson: Assessing the inclusion of ecological connectivity in EIA in Canada

More information on the conference can be found on the conference website: <http://www.concordia.ca/artsci/loyola-college-diversity-sustainability/Sustainability-and-the-climate-crisis.html>. The complete conference schedule, as it was planned for March 16-18, 2020, can be found in Appendix I.

Annual Symposium of the Quebec Centre for Biodiversity Science

Since several members of the LSRC are also members of the Quebec Centre for Biodiversity Studies (QCBS), we were very happy to host the 10th Annual QCBS Symposium at the conference centre on the downtown campus this year. Featuring three days of workshops, talks, poster sessions, and exhibits from December 18 to 20, 2019, Concordia graduate and faculty researchers featured among the ~150 presenters. Issues as diverse as landscape connectivity and the foraging strategies of Japanese macaques were addressed. Approximately 200 people were in attendance.

LSRC Junior Associates build community

As well as being heavily involved in all the events described above, this year, the Junior Associates of the LSRC decided to organize a discussion group centered around the graduate student community. This group met every two weeks through much of the winter semester to share their work and provide constructive feedback to each other. Activities were sadly curtailed in March due to the current pandemic, but they plan to resume once the Concordia community returns to campus. The main goal of this community is to share perspectives across disciplines and to provide peer support for students working in sustainability-associated fields. We look forward to continuing the activities of this group when the pandemic has subsided, although most LSRC members will only be able to observe from afar; this community is for graduate students only!

QCBS Symposium 2019

Past event.

18 December 2019, 8:30 AM – 20 December 2019, 4:30 PM.

Montréal, Quebec, Canada



CENTRE DE LA SCIENCE
DE LA BIODIVERSITÉ
DU QUÉBEC

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<https://sites.grenadine.co/sites/csbq/en/qcbs-symposium/>

Budget

Although the LSRC does not have an operating budget, it does have approximately 40% of the time of the Coordinator of the Loyola College for Diversity and Sustainability, Rebecca Tittler. The College co-sponsors most of the events of the LSRC, as noted in the Events section above, providing a small budget (~\$200) for advertising.

In addition, in the summer and fall of 2019, the LSRC raised \$12,991 in funds from the Faculty of Arts and Science and various departments in the Faculty, as well as the Department of Management in the John Molson School of Business and the Canada Excellence Research Chair in Smart, Sustainable, and Resilient Communities and Cities (housed in the Department of Building, Civil, and Environmental Engineering in the Gina Cody School of Engineering and Computer Science) to support the Sustainability and the Climate Crisis conference, which was scheduled for March 2020 (see above). LSRC Co-Director Amy Poteete used these as matching funds to apply for an ARRE (Aid to Research Related Events) grant in the fall of 2019 and was awarded almost \$5000 for the conference. While the contribution from the Faculty and Departments was reabsorbed at the end of the 2019-2020 fiscal year when the conference was cancelled, the Office of Research has provided an extension to allow LSRC to use the \$5000 grant awarded this year towards a conference with the same theme next year. The conference is already scheduled for March 17-19, 2021.

Looking Forward

Despite the uncertainty of the current pandemic, we are gearing up to plan an exciting new academic year at the LSRC! We are currently putting together the seminar program for next year, scheduling the Ignite session, and planning the Sustainability and the Climate Crisis conference, all of which will take place online if it is not possible to hold events in person. On July 1st, Jochen Jaeger will finish his term as Co-Director and be replaced by James Grant. Jochen Jaeger will continue to be involved as a member of the newly-formed Administrative Board of the Centre

We are excited to have the first meeting of our newly-formed Administrative Board in July. The first task of this Board will be to put together the Advisory Board. Both Boards will provide valuable guidance and advice as we continue to build our network across disciplines and faculties at Concordia and provide support for new and exciting research collaborations.

Finally, we look forward to providing support and expertise to our fellow researchers and to the University as the Sustainability Action Plan moves forward.

Appendix I: Schedule of the Annual Sustainability Across Disciplines Conference: Sustainability and the Climate Crisis

Note that, in keeping with the Sustainability theme of the Conference, to save paper, we print two large posters with the conference schedule every day rather than individual programmes.

SUSTAINABILITY and the CLIMATE CRISIS

Monday, March 16, 2020

MB 9th floor

Time	Location	Event
9:00-9:15	MB 9A	Welcome
9:15-10:15	MB 9A	Damon Matthews: Implications of the remaining carbon budget for climate policies and emissions targets
10:15-10:30	MB 9EG	Break (coffee, tea, and snacks provided)
10:30-11:45	MB 9A	Damon Matthews et al.: #PledgeToLead: tracking our carbon footprints to mobilize individual climate action; a workshop
	MB 9B	Panel IA: Food and Agriculture
		10:30: Kasim Ali Tirmizey: <i>A feminist political economy of climate-smart agriculture</i>
		10:45: J. Ibarra-Isassi, I.T. Handa, A. Arenas-Clavijo, S. Escobar-Ramirez, I. Armbrecht & J.-P. Lessard: <i>I drink my coffee in the shade: Multidimensional assessment of two contrasting coffee agroecosystem management practices</i>
		11:00: Andrea Tremblay & Elizabeth Miller: <i>mind.heart.mouth. collective garden and community care</i>
		11:15: Lara Wheeler: <i>A case study: Understanding food waste in a UK chain pub/restaurant</i>
		11:30: Sahar Alinezhad: <i>Community gardens and collective gardens: On neighborhood social sustainability</i>
11:45-12:00	MB 9EG	Break (coffee, tea, and snacks provided)
12:00-12:30	MB 9A	Krista Byers-Heinlein & Pedro Peres-Neto: Sustainable research through open scholarship
	MB 9B	Satoshi Ikeda: Decarbonizing and carbon catching for planet positive futures
12:30-14:00	None	Break for lunch (not provided)
14:00-15:15	MB 9EG	Michael & Ivona Bossert: Concordia campus plays serious: a creative workshop
	MB 9B	Panel IIA: Affecting Change: Policy, Investment, and Activism
		14:00: Cedric Yargeau & Norma Rantisi: <i>Privately owned public space: An assessment of Montreal legislation and projects</i>
		14:15: Paulina Matthews & Luke Maybury: <i>The Sustainable Investment Project</i>
		14:30: Isaiah Haller: <i>The 3 E's of sustainability - Economy, Energy & the Environment</i>
		14:45: Anna-Karina Poronovich, Nalini Mohabir & Sarah Turner: <i>Protest signs at the September 27th climate march: An ecofeminist analysis</i>
		15:00: Daniel Horen Greenford: <i>Informing and organizing a just transition</i>
15:15-15:45	MB 9EG	Poster session: Sustainability Challenges in Supply Chains (coffee, tea, and snacks provided)
15:45-16:45	MB 9EG	Michael & Ivona Bossert: Concordia campus plays serious: a creative workshop (continued)
	MB 9B	Panel IIIA: Climate History and International Environmental Agreements
		15:45: Kayden Schwartz: <i>Reconstructing the Pre-European fire history in the Sugar Maple-Yellow Birch forests of Southern Quebec</i>
		16:00: Claire O'Neill Sanger, Jeannine-Marie St-Jacques, Matthew Peros, & Kayden Schwartz: <i>What can pollen tell us about the past? Reconstructing environmental variability over the last 2000 years using high-resolution pollen records from a small lake in Mont-Orford National Park</i>
		16:15: Alex Pace, Jeannine-Marie St-Jacques, & Duane Noel: <i>Reproducing the conditions of past climate with tree rings in the mountains of the Gaspésie</i>
		16:30: Effrosyni Diamantoudi, Eftichios Sartzetakis, & Stefania Strantza: <i>International Environmental Agreements and Trading Blocks - Can issue linkage enhance cooperation?</i>
16:45-17:00	MB 9EG	Break (coffee, tea, and snacks provided)
17:00-18:15	MB 9A	Panel IVA: Concordia students tackle sustainability through community engagement
		17:00: Michelle Caron-Pawłowsky, Veronica Fiorilli, Victoria Le Piane, & Michelle Malnasi: <i>Concordia thrift: An initiative for clothing waste reduction at Concordia University</i>
		17:15: Laura Hernandez & Varoujan Zilifian: <i>Back-to-school swaps: Degrowth for circular economy</i>
		17:30: Felix Bonnevie & Maria Stawnichy: <i>Lettuce help</i>
		17:45: Layla-Maria Slim: <i>Ban on single use plastics</i>
		18:00: Mattea Mahut, Vanessa Wall, Gideon Peres-Rothberg, Bruno C. Girard, & Paulina Matthews: <i>Project proposal: Greenhouses for community engagement</i>

SUSTAINABILITY and the CLIMATE CRISIS

Tuesday, March 17, 2020

MB 9th floor

Time	Location	Event
9:00-10:00	MB 9A	Ursula Eicker: Next Generation Cities. Now.
10:00-10:15	MB 9EFG	<i>Break (Coffee, tea, and snacks provided)</i>
10:15-12:15	MB 9A	Panel VA: Concordia campus as a living lab 10:15: Ursula Eicker: <i>Destination Next Generation Cities</i> 10:30: Jing Iris Hu: <i>Human settlements – why cities?</i> 10:45: Mohamed Ouf: <i>Buildings for humans or humans for buildings?</i> 11:00: Alice Jarry: <i>Perceive the city – the role of Design and Art</i> 11:15: Carly Ziter: <i>Green spaces and wellbeing</i> 11:30: Chunyan Lai: <i>Sustainable mobility – electrical mobility</i> 11:45: Discussion: <i>How to set up the process of a “Campus as a Living Lab”</i>
MB 9B		Shannon Lloyd: Using Life Cycle Assessment to assess the cradle-to-grave environmental impacts of product systems; a workshop Panel VB: Sustainability and Life Cycle Assessment 11:15: Elahe Fakoor, Annie Levasseur, Shannon Lloyd, & Ben Amor: <i>Prospective LCA of emerging surface engineering technologies</i> 11:30: Anders Bjørn, Damon Matthews, & Shannon Lloyd: <i>A comprehensive evaluation of methods for corporate “science-based” target setting and their use by 317 companies</i> 11:45: Zeynab Yousefzadeh, Milad Rezvani Rad, André McDonald, & Shannon Lloyd: <i>The importance of climate and electricity mix in determining the life cycle environmental impacts of pipe freeze protection systems</i> 12:00: Debdeep Chatterjee, Shannon Lloyd, & Young-Chul Jeong: <i>Life Cycle Assessment: Why aren’t more companies using it?</i>
12:15-13:30		<i>Break for lunch (not provided)</i>
13:30-14:30	MB 9A	Carmela Cucuzzella, Morteza Hazbei, & Sherif Goubran: Designing data as public space experiences - between raising awareness and transformations; a workshop
MB 9B		The Climate Emergency Committee presents Climate Geopardy
MB 9 EFG		Panel VIA: Sustainability and the community 13:30: Jasmine Melançon: <i>The Vermicollective Project at Santropol Roulant</i> 13:45: Caroline Alince: <i>Mapping a sustainable city</i> 14:00: Bailie Hutchison: <i>The Operate with Less project</i> 14:15: Daniel Cretu: <i>Re-imagining community workshops: Flourishing your local farmer's market</i>
14:30-14:45	MB 9EFG	<i>Break (Coffee, tea, and snacks provided)</i>
14:45-15:45	MB 9A	Carmela Cucuzzella, Morteza Hazbei, & Sherif Goubran: Designing data as public space experiences - between raising awareness and transformations; a workshop (continued)
MB 9B		The Climate Emergency Committee presents Climate Geopardy (continued)
MB 9EFG		Student film festival Philip Szporer: Introducing Part I: Ecocide and Dystopias 14:50: Juliette Carman, Sabrina El-Hachem, & Ryme Mouline: <i>Le Cri du Coeur</i> 15:00: Calvin Clarke, Sonora Kogo, & Anna Krupa: <i>Mind Your Own Beeswax</i> 15:05: Kathleen Diaz, Daniel Créto, and Siam Obregón: <i>It's A Magical Universe</i> 15:10: Bailie Hutchison, Guillaume Knobloch, & Anne-Marie Quadros: <i>Eco-Consciousness</i> Elizabeth Miller: Introducing Part II: How to Live Sustainably in a Time of Climate Uncertainty 15:20: Bernard Lansbergen, Dee Edouard-Williams, Laura Boyce, Snigdh Baunthiyal: <i>How to be a ComposStar</i> 15:25: Rahul Gandhi, Catherine Mary Preston, Guy Ettlin, Taliesin Weylin: <i>Save Me a Square</i> 15:30: J. Graham, Lua Demeny, Ola Siebert, Shaina Higgins, & Teffer Adjemian: <i>Sue Sustainable</i> 15:35: Gabrielle Mulholland, Ghazal Mhd Ali, Lucile Ponsolle, & Marie-Anne Louis-Charles: <i>Make it Last</i>
15:45-16:00	MB 9EFG	<i>Break (Coffee, tea, and snacks provided)</i>
16:00-16:45	MB 9A	Panel VIIA: Careers in sustainability 16:00: Faisal Shennib (Concordia University) 1615: Katerina Fragos (PwC) 16:30: Anthony Garoufalis-Auger (Rapid Decarbonization Group)
16:45-17:00	MB 9EFG	<i>Break (Coffee, tea, and snacks provided)</i>
17:00-18:00	MB 9A	Angela Carter: The future of climate policy: Keeping fossil fuels in the ground

SUSTAINABILITY and the CLIMATE CRISIS

Wednesday, March 18, 2020

RF Conference Centre

Time	Location	Event
10:00-11:00	RF 120	Panel VIII A: A landscape perspective on sustainability: Connectivity and landcover 10:00: Clara Freeman-Cole & Jochen Jaeger: <i>Clarifying the relationship between landscape fragmentation and connectivity and assessing the suitability of proposed methods for measuring landscape connectivity</i> 10:15: Charla Patterson & Jochen Jaeger: <i>Assessing the inclusion of ecological connectivity in EIA in Canada</i> 10:30: David Fargey, Angela Kross, Chenwei Xiao: <i>Analyzing ecosystem phenology using PhenoCam and Landsat images and Google Earth Engine: Focus on vegetation maturity stage</i> 10:45: Steffy Velosa & Jochen Jaeger: <i>Road mortality surveys: A useful tool in restoring connectivity between wildlife populations</i>
11:00-11:30	RF 130	Poster session: Current topics in sustainability science (Coffee, tea, and snacks provided)
11:30-12:30	RF 110	Panel IX A: How to communicate about climate change: a cross-disciplinary panel featuring Amélie Daoust-Boisvert, Mia Rabson (Canadian Press), Damon Matthews, and Elizabeth Miller
	RF 120	Panel IX B: The effects of climate change and invasions on biodiversity 11:30: Isaac Eckert & Jean-Philippe Lessard: <i>Invasive species, climate change and biodiversity: A focus on Canadian pines in Argentina</i> 11:45: Emma Despland: <i>Insect outbreaks: One of the ways a changing climate transforms ecosystems</i> 12:00: Brogan M. Stewart, Sarah E. Turner & Damon Matthews: <i>Climate change impacts on nonhuman primate species based on cumulative CO2 emissions</i> 12:15: Pedro Peres-Neto: <i>The challenges of predicting future biodiversity driven by past and ongoing climate change</i>
12:30-13:30	RF 100	Lunch provided
13:30-14:30	RF 110	Panel X A: Roads and urban sprawl 13:30: Ariel G. Spanowicz, Fernanda Zimmermann Teixeira, & Jochen Jaeger: <i>Reducing roadkill based on mortality reduction graphs: Where are wildlife fences needed most urgently?</i> 13:45: Mehrdokht Pourali & Jochen Jaeger: <i>Measuring and monitoring urban sprawl in Canada from 1991 to 2011</i> 14:00: Victoria Davison, Naghmeh Nazarnia, & Jochen Jaeger: <i>Investigating potential drivers of urban sprawl in Montreal</i> 14:15: Jochen Jaeger, Matthias Fritsch, William Bukowski, Craig Townsend, Ryan Persram, & Rebecca Tittler: <i>To sprawl or not to sprawl: Envisioning urban development in Montreal for 2050 considering future generations and intergenerational justice</i>
	RF 120	Panel X B: Sustainability and Aquatic systems 13:30: Duane D. Noel, Jeannine-Marie St-Jacques, & Sunil Gurrappu: <i>The effects of the Pacific Decadal Oscillation on flood maxima and frequency on the North American West Coast</i> 13:45: Brian Gallagher & Dylan Fraser: <i>Climate change adaptation across populations: Insights from brook trout in Cape Race, Newfoundland</i> 14:00: Johnathan Lemay, Pascale Biron, & James Grant: <i>Can the Morphological Quality Index (MQI) be used to quantify fish habitat quality in streams?</i> 14:15: Jacques Simon-Mayer & Angela Kross: <i>Mapping and monitoring surface water chlorophyll using satellite imagery: Investigation of industrial impacts on the Great Lakes' water quality</i>
14:30-14:45	RF 100	Break (Coffee, tea, and snacks provided)
14:45-15:45	RF 110	Panel XI A: Reconciling biodiversity conservation with social and/or economic goals 14:45: Pamela Yataco & Emma Despland: <i>Trends of insect biodiversity in Boreal forests and plantation</i> 15:00: Samantha Rhainds: <i>An overview of the tree diversity on Concordia's Loyola campus</i> 15:15: Ariana Moin Kenary: <i>Gharials</i> 15:30: Megan Clarke, Sabrina El-Hachem, and Majida Jabban: <i>Eliminating food waste at Concordia</i>
	RF 120	Panel XI B: Sustainability and community outreach 14:45: Nicholas Gay: <i>Internship with the World Wildlife Fund</i> 15:00: Nell Perry: <i>Waste Not Want Not</i> 15:15: Isadora Galwey: <i>Îlot 84</i> 15:30: Alana Murphy: <i>Living lab on waste management</i>
15:45-16:00	RF 100	Break (Coffee, tea, and snacks provided)
16:00-17:00	RF 110	Ivette Perfecto: Confronting the climate crisis: Coffee agroforestry and sustainability
17:00-18:00	RF 110	Awards ceremony and reception

