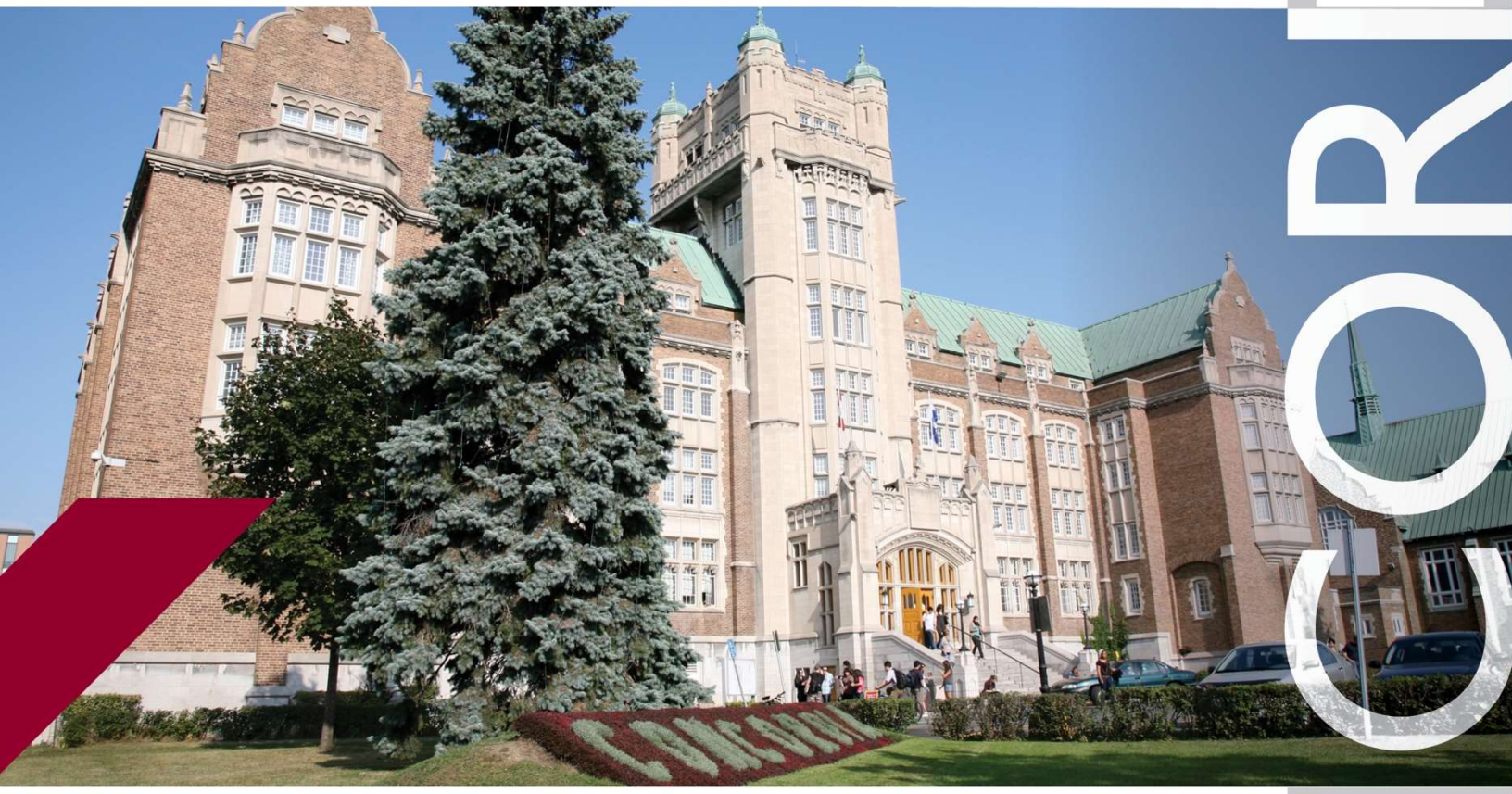
Université Concordia University



LOYOLA SUSTAINABILITY RESEARCH CENTRE

ANNUAL REPORT

2021- 2022

CONCORDIA

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1. Vision Statement

The Loyola Sustainability Research Centre (LSRC) promotes 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. The LSRC supports research synthesis and knowledge transfer relevant to decision-making, policy, and a transition toward a culture of sustainability.

2. Members

2.1. Core members

1. Matthew Barker (Philosophy / Loyola College for Diversity and Sustainability)
2. Pascale Biron (Geography, Planning and Environment / Science College)
3. Natasha Blanchet-Cohen (Applied Human Sciences)
4. Selvadurai Dayanandan (Biology)
5. Emma Despland (Biology / Science College / Loyola College for Diversity and Sustainability)
6. Rebecca Dziedzic (Building, Civil, and Environmental Engineering)
7. Dylan Fraser (Biology)
8. Matthias Fritsch (Philosophy)
9. **James Grant (Biology / Loyola College for Diversity and Sustainability / Science College)* Co-director of the LSRC in 2021-2022**
10. Jochen Jaeger (Geography, Planning and Environment / Loyola College for Diversity and Sustainability)
11. Philippa K. Langshaw (Design and Computation Arts / Loyola College for Diversity and Sustainability)
12. Jean-Philippe Lessard (Biology)
13. Shannon Lloyd (Management / Loyola College for Diversity and Sustainability)
14. Damon Matthews (Geography, Planning and Environment)
15. **Elizabeth Miller (Communication Studies / Loyola College for Diversity and Sustainability) * Co-director of the LSRC in 2021-2022**
16. Katja Neves (Sociology and Anthropology / Loyola College for Diversity and Sustainability)
17. Raymond Paquin (Management / Loyola College for Diversity and Sustainability)
18. Pedro Peres-Neto (Biology)
19. Eric Pederson (Biology)
20. Amy Poteete (Political Science)
21. Rajshree Prakash (Management)
22. Sam Rowan (Political Science)

23. Jeannine Marie St-Jacques (Geography, Planning and Environment)
24. Craig Townsend (Geography, Planning and Environment)
25. Sarah Turner (Geography, Planning and Environment)
26. Robert Weladji (Biology)
27. Anya Zilberstein (History)

2.2. Associate Members (Internal Associates)

1. Bengi Akbulut (Geography, Planning and Environment)
2. Anjali Awasthi (Concordia Institute for Information Systems Engineering)
3. Michael Bossert (CERC Smart, Sustainable, and Resilient Communities and Cities)
4. Joel Bothello (Management)
5. William Bukowski (Psychology / Loyola College for Diversity and Sustainability)
6. Carmela Cucuzzella (Design and Computation Arts)
7. Ricardo Dal Farra (Music)
8. Amelie Daoust-Boisvert (Journalism / Loyola College for Diversity and Sustainability)
9. Effrosyni Diamantoudi (Economics)
10. Jill Didur (English)
11. Ursula Eicker (Building, Civil, and Environmental Engineering)
12. Yves Gelinas (Chemistry and Biochemistry)
13. Govind Gopakumar (Centre for Engineering in Society)
14. Thibaud Henin (Political Science)
15. Kregg Hetherington (Sociology and Anthropology)
16. Angela Kross (Geography, Planning and Environment)
17. Simon Langlois-Bertrand (Political Science)
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 Engineering)
22. Ketra Schmitt (Centre for Engineering in Society)
23. David Secko (Journalism)
24. Stefania Strantza (Economics)
25. Rebecca Tittler (Loyola College for Diversity and Sustainability / Geography, Planning and Environment)
26. Peter van Wyck (Communication Studies)
27. Carly Ziter (Biology / Loyola College for Diversity and Sustainability)

2.3. Junior Associate Members (graduate students and post-docs)

1. Anders Bjørn (Postdoctoral Fellow)
2. Isabelle Boucher (PhD Student; Communications Studies)
3. Debdeep Chaterjee (PhD Student; Management)
4. Jonathan Cole (PhD Student; Geography, Planning and Environment)
5. Arun Dayanandan (MSc; Biology; conferred in spring 2022)

6. Miguel Ángel Del Pino (MASc Student; Mechanical, Industrial, and Aerospace Engineering)
7. Stephanie Eccles (PhD Student; Geography, Planning and Environment)
8. Elahe Fakoor (PhD Student; Construction Engineering at the École de Technologie Supérieure)
9. Kyleisha Foote (PhD Student; Geography, Planning and Environment & Biology)
10. Clara Freeman-Cole (MSc Students; Geography, Planning and Environment)
11. Marie Gagné (Post-doctoral Fellow; Political Science)
12. Brian Gallagher (PhD Student; Biology)
13. Julia Ginsburg (PhD Student; INDI program)
14. Maida Hadziosmanovic (PhD Student; Geography, Planning and Environment)
15. Olha Hnatyshyn (PhD Student; Economics)
16. Kayleigh Hutt-Taylor (MSc; Biology; conferred in spring 2022)
17. Kyle Krumsick (Postdoctoral Fellow; Biology)
18. Mark Kwakye Frimpong (PhD Student; Political Science)
19. Caroline Lesage (MSc Student; Geography, Planning and Environment)
20. Rubens Lima Moraes (PhD Student; Political Science)
21. Alexander Pace (PhD Student; Geography, Planning and Environment)
22. Parnian Pourtaherian (MSc; Geography, Planning and Environment; spring 2022)
23. Kian Rahimi (PhD Student; Mechanical, Industrial, and Aerospace Engineering)
24. Keroles Riad (PhD; INDI program; conferred in winter 2021)
25. Faisal Shennib (PhD Student; INDI program)
26. Serena Sinno (MSc; Biology; conferred in spring 2022)
27. Brogan Stewart (PhD Student; Geography, Planning and Environment)
28. Andrée Tremblay (PhD Student; Communication Studies)
29. Zeynab Yousefzadeh (MASc; Mechanical, Industrial, and Aerospace Engineering; conferred in fall 2021)
30. Larissa Zemke (MFA Student; Design and Computation Arts)

2.4. External Associate Members

1. Eric Abitbol (Universalia)
2. Anna-Liisa Aunio (Dawson College)
3. Piero Genovesi (IUCN Invasive Species Specialist Group
4. Christopher Gore (Ryerson University)
5. William V. Kennedy (UNEP)
6. Sandy Lamalle (Earth Systems Governance Representations of and Rights for the Environment Workgroup)
7. Cristina Romanelli (World Health Organization)
8. Tonia Ruppenthal (Hochschule Fulda University of Applied Sciences)
9. Laura Shillington (John Abbot College)
10. Peter Stoett (Ontario Tech University)
11. Owen Temby (University of Texas Rio Grande Valley)
12. Scott Vaughan (International Institute for Sustainable Development)

2.5. Advisory Board Members

1. Jason Ens - Executive Director, Academic Policy, Planning, and Strategic Initiatives, Office of the Provost and Vice-President, Academic Affairs
2. James Grant - Co-Director of the Loyola Sustainability Research Centre / Principal of the Loyola College for Diversity and Sustainability / Department of Biology, Faculty of Arts and Science
3. Patrick Leroux / Aaron Johnson - Associate Dean Research, Faculty of Arts and Science
4. Elizabeth Miller - Co-Director of the Loyola Sustainability Research Centre / Department of Communication Studies, Faculty of Arts and Science
5. Rebecca Tittler - Coordinator of the Loyola Sustainability Research Center / Loyola College for Diversity and Sustainability
6. André Tremblay - Ph.D. Student and Student Associate Member of the Loyola Sustainability Research Centre / Department of Communication Studies, Faculty of Arts and Science
7. Manon Tremblay - Senior Director, Indigenous Directions, Office of the Provost and Vice-President, Academic Affairs

2.6. Administrative Board Members

1. Natasha Blanchet-Cohen - Department of Applied Human Sciences, Faculty of Arts and Science
2. James Grant - Co-Director of the Loyola Sustainability Research Centre / Principal of the Loyola College for Diversity and Sustainability / Department of Biology, Faculty of Arts and Science
3. Shannon Lloyd - Department of Management, John Molson School of Business / Loyola College for Diversity and Sustainability, Faculty of Arts and Science
4. Elizabeth Miller - Department of Communication Studies / Loyola College for Diversity and Sustainability, Faculty of Arts and Science
5. Katja Neves - Department of Sociology and Anthropology / Loyola College for Diversity and Sustainability, Faculty of Arts and Science
6. Raymond Paquin - Department of Management, John Molson School of Business / Loyola College for Diversity and Sustainability, Faculty of Arts and Science
7. Sarah Turner - Department of Geography, Planning and Environment, Faculty of Arts and Science

2.7. Collaborators

LSRC members collaborated with more than 125 researchers in other institutions across the world this year.

2.8. Partner Organizations[1]

(Non-University e.g., Industry; NGOs; governmental; community)

1. Canada Space Agency
2. Canadian Coalition for the Rights of Children (Toronto, ON)
3. Casa da Criança e do Adolescente (Brazil)
4. Child Rights Connect (Switzerland)
5. Child Welfare Political Action Committee Canada (Toronto, ON)
6. Children's Parliament (United Kingdom)
7. Compute Canada
8. Concordia University (Montréal, QC)
9. Corridor Appalachien
10. Éco-corridors Laurentiens
11. Environment and Climate Change Canada
12. Equal Education (South Africa)
13. Equitas: International Centre for Human Rights Education (Montréal, QC)
14. Eurochild (Belgium)
15. Families Canada (Ottawa, ON)
16. Fisheries and Oceans Canada
17. Future Earth / Sustainability in the Digital Age
18. Genome Canada
19. Government of New Brunswick (Fredericton, NB)
20. Hydro Quebec
21. International Center for Research and Policy on Childhood (Brazil)
22. International Child Protection Network of Canada (Mississauga, ON)
23. International Institute for Child Rights and Development (Victoria, BC)
24. Learning for Well-being Foundation (The Netherlands)
25. Leibniz Institute for Ecological Spatial Development (IOER)
26. Les amis des Champs de Possibles (Montreal)
27. McGill University (Montréal, QC)
28. Mila (Quebec)
29. Ministère de l'environnement et de la lutte contre les changements climatiques (Quebec)
30. Ministère des Forêts, de la Faune et des Parcs (Québec)
31. Ministry of Public Safety (Quebec)
32. Ministry of Transportation (Quebec)
33. National Film Board of Canada
34. Natural Resources Canada
35. Observatoire International sur les Impacts Sociétaux de l'IA et du Numérique (Quebec)
36. Ouranos Research Consortium (Quebec)
37. Parks Canada
38. People for Education (Toronto, ON)
39. Plan Canada (Toronto, ON)
40. Public Health Agency of Canada (Ottawa, ON)

[1] Note that this list is not exhaustive.

41. Reimagine AI
42. Sauvons la Falaise (Montreal)
43. Save the Children Canada (Toronto, ON)
44. SHERPA (Montréal, QC)
45. Southern Cross University (Australia)
46. Swiss Federal Institute for Forests, Snow, and Landscapes (WSL)
47. Terre des hommes (Switzerland)
48. The Transition Accelerator
49. United Nations (Italy)
50. United Nations (South Africa)
51. University of Cape Town (South Africa)
52. University of Dundee (United Kingdom)
53. University of Edinburgh (United Kingdom)
54. UrbaNature (Montreal)
55. World Vision (Monrovia, CA)

2.9. Other Concordia University Partners

The LSRC has an official partnership with the Next-Generation Cities Institute. However, the LSRC also has associations with Milieux; the Indigenous Futures Research Centre; the Concordia Institute for Water, Energy, and Sustainable Systems; and the Centre for Oral History and Digital Storytelling.

2.10. Networks

LSRC members are affiliated with the following networks:

- NSERC Create LEADS (Leadership in Environmental and Digital Innovation for Sustainability)
- The Quebec Centre for Biodiversity Research
- The Centre for Forest Research
- The Network for Sustainable Agriculture
- Le Groupe de recherche interuniversitaire en limnologie
- Future Earth

2.11. Staff

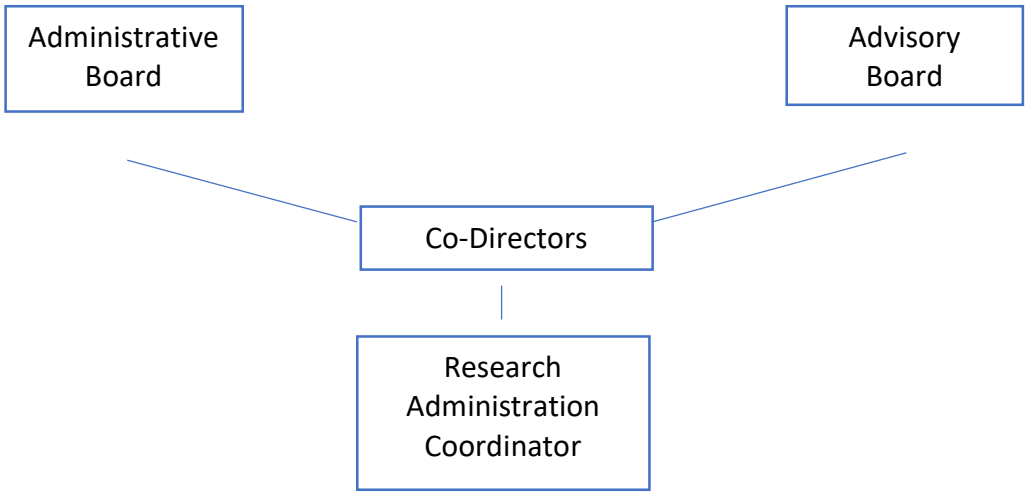
Rebecca Tittler is the only staff member of the Loyola Sustainability Research Centre. Her official title is Research Administration Coordinator. In addition to providing support for the LSRC, Rebecca is the academic advisor for all the students of the Loyola College for Diversity and Sustainability, where she also provides the only administrative support for the unit and is responsible for coordinating and running the internship program, managing the budget, scheduling classes, organizing the part-time and TA hiring processes, liaising with student organizations on campus, and much more. She is also involved in all curriculum development at

the College. In addition, this year, she co-chaired the Future Concordia Student Experience working group, which was charged with providing a vision to the University for the student experience over the next five years. Although her LCDS/LSRC position is full-time, the College portfolio requires upwards of 60% of her time.

3. GOVERNANCE STRUCTURE

3.1. Organization Chart

The administrative structure of LSRC consists of two Co-Directors or a Director, the Administrative Board, the Advisory Board, the Annual Assembly, and Special Assemblies.



3.2. Co-Directors / Director: Responsibilities and Selection

As a research centre recognized by the Faculty of Arts and Sciences, the LSRC is led by two Co-Directors or, if this is not possible, by one Director. These positions report to the Dean or Associate Dean of Research in the Faculty of Arts and Science. The responsibilities of these positions are as follows:

- overseeing the scientific direction and administration of the research unit

- overseeing the coordination of LSRC activities, including outreach, special events, and management of communications both within the unit and externally to partner institutions, external members, funding agencies, and the community.

- managing the day-to-day staff operations of the unit

-ensuring that the unit conforms to the relevant Collective Agreements and policies in effect within Concordia University

- managing or overseeing the management of the budget of the unit

- preparing or overseeing the preparation of the annual report, which includes reporting on budget, human resources, internal relations with other Concordia units such as departments and faculties, and inter-institutional affiliations

- reviewing material for renewal of the recognition status

- developing and revising plans for securing external and internal funding for the unit's operations and research activities.

These positions are elected for three years and may be re-elected for a second three-year term without re-nomination. An outgoing Co-Director or Director can be re-nominated for a third term following the procedure outlined below. When there are Co-Directors, their terms are staggered.

The nomination and election procedure for Co-Directors and Directors is as follows: A call for nominations is sent out to Core Members[2] by the second week of the last winter semester of an outgoing Co-Director or Director's term. Ten working days are allowed for nominations. Nominees must be Core Members. Self-nominations are not allowed. Following the nomination process, the Coordinator circulates the CVs of the nominees to Core Members, who are then given ten working days to vote. A non-vote is treated as an abstention. The nominee with the majority of the votes cast is appointed to the position, subject to the approval of the Dean or Associate Dean of Research in the Faculty of Arts and Science. In the event that this process is unsuccessful in filling at least one Director's position, it is repeated. The directorship term runs June 1-May 31. When there is a single Director, a call for nominations for a Co-Director occurs the second week of January every year until the position is filled.

Upon approval of the current document, the sitting Co-Directors will complete the terms to which they have already been elected. Their replacements will be elected according to the procedures detailed above.

3.3. Administrative Board (AB)

This seven-member body oversees the strategic direction and administration of LSRC. The AB is responsible for determining the Centre's policies and procedures, advising on operations and activities, and selecting the members of the Advisory Board. In addition to the two Co-Directors, the AB consists of the Principal of the Loyola College for Diversity and Sustainability, one previous Director or Co-Director of the LSRC, and three other Core Members. The Coordinator of the LSRC serves as the recording secretary. The Coordinator does not have voting rights unless elected as one of the representative Core Members on this body. The Core Members and the previous LSRC Director/Co-director (if there is more than one interested) are elected to serve two-year terms. The election procedure is the same as for the Co-Directors (see 2a) except that self-nominations are allowed. There are at least two meetings each year.

Upon approval of the current document, the administrative board will be formed in accordance with the procedures detailed above.

[2] Core members are internal Concordia researchers from any faculty whose primary internal research affiliation is with the LSRC. Note that this does not include postdoctoral fellows. See 3 and 4 for details on membership.

3.4. Advisory Board (AdvB)

This seven-member body is responsible for providing general guidance and advice on LSRC operations and events and serves to facilitate information exchange. In addition to the two Co-Directors / Director, the AdvB consists of the Dean or Associate Dean of Research of the Faculty of Arts and Science, the Coordinator of the LSRC, two to three Concordia representatives who are not affiliates of the LSRC (two if there are Co-Directors, three if there is a Director), and one current Concordia student. The three Concordia representatives and the student are appointed by the AB, the former for a two-year and the latter for a one-year term. There is at least one meeting each year.

Upon approval of the current document, the advisory board will be reconstituted in accordance with the procedures detailed above.

3.5. Membership, participation, and reporting

All affiliates of the LSRC are expected to be active in the intellectual life of the LSRC, attending seminars and/or workshops whenever possible. Affiliates are encouraged to participate via web conference when they are not local to reduce carbon costs of travel. Anyone wishing to become an affiliated member of LSRC must have a clear link to the LSRC mission. Those applying for Core Membership, Internal or External Associate, or Visiting Associate status must submit a *curriculum vitae* and/or bio. New applications will be vetted by the Centre's Coordinator and, except for potential Student and Post-doctoral Associates, by its Co-Directors. Where a person is applying to become a Core Member, Internal Associate, or External Associate of the LSRC, their *curriculum vitae* and/or bio will be circulated to all Core Members, who will then have ten business days to vote on their inclusion. A failure to vote within this timeframe will be taken as an abstention. New Core Members, Internal Associates, and External Associates will be accepted based on a majority of Core Member votes in favour. Affiliates are expected to acknowledge the contribution of LSRC in their work when appropriate.

The Loyola Sustainability Research Centre subscribes to the Statement on Equity, Diversity and Inclusion (EDI) set forth by the Tri-Council funding agencies of the Government of Canada and to that set forth by Concordia University. It is committed to

- Supporting equitable access to funding opportunities for all researchers and trainees;
- Promoting the integration of equity, diversity and inclusion-related considerations in research design and practices; and
- Increasing equitable and inclusive participation in the research system, including on research teams.

The LSRC will work to develop the inclusive culture needed for research excellence and to achieve outcomes that are rigorous, relevant and accessible to diverse populations.

3.6. Categories of affiliation

LSRC has the following five broad categories of affiliation:

3.6.1. Core Members

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. The Coordinator, hired by the Faculty of Arts and Sciences, will be a researcher or practitioner researcher and thus a Core Member. As individuals whose connection to LSRC is substantial and long-standing, Core Members advise the Administrative Board in setting the Centre's strategic direction through their participation in Annual Assemblies and Special Assemblies.

3.6.2. Internal Associates

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 those who are at Concordia but have neither a permanent nor a tenure-track position, as well as retired former Core Members. LSRC Internal Associates are still expected to significantly advance the mission and outreach of LSRC through regular collaboration and attendance at LSRC events but will not be expected to take on an unpaid administrative load.

3.6.3. External Associates

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. External Associates are still expected to significantly advance the mission and outreach of LSRC through collaboration and, if possible, attendance at LSRC events, but will not be expected to take on an unpaid administrative load.

3.6.4. Student and Post-doctoral Associates

Affiliated researchers who are working under the supervision of a Core Member or Internal Associate or whose affiliation is recommended by a Core Member or Internal Associate. Student and Post-doctoral Associates will have the option to be profiled on the LSRC website and will be invited, whenever possible, to participate in LSRC events.

3.6.5. Visiting Associates

Visiting researchers who have applied to be affiliated with LSRC during their stay in Montreal. The duration of these residencies is a maximum of one year, renewable.

4. Research Objectives and Program

4.1. Mission in relationship to Concordia and the Faculty strategic plan and to the landscape of other similar research units, provincially and nationally

The mission of the Loyola Sustainability Research Centre (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. This mission is relevant to several of the 9 Strategic Directions of the University, including

Double our Research, Mix it Up, Experiment Boldly, and Get your Hands Dirty. This mission is also in line with the Sustainability Action Plan of the University. Specifically, the LSRC supports inter-disciplinary networking, collaboration, and research in sustainability and provides grant application support for interdisciplinary sustainability researchers. It also runs conferences and events that increase the visibility of sustainability research at Concordia and this year, it helped develop and piloted the Concordia Sustainable Events certification for online events.

The mission of the LSRC is complementary to that of several other research units at Concordia and within the province, filling an important gap. Within Concordia, several members and affiliates are also associated with the Next Generations Cities Institute (NGCI); Milieux; the Indigenous Futures Research Centre (IFRC); the Concordia Institute for Water, Energy, and Sustainable Systems (CIWESS); and the Centre for Oral History and Digital Storytelling (COHDS). Provincially, members are also associated with the Quebec Centre for Biodiversity Research (QCBS), the Centre for Forest Research (CFR), and the Groupe de recherche interuniversitaire en limnologie. However, it is the only research unit that explicitly supports transdisciplinary sustainability research writ large; most other units are more specifically devoted to particular aspects of sustainability, for example, as it pertains to biodiversity (QCBS), forests (CFR), cities (NGCI), etc. It is also the only sustainability-focussed research unit housed within the Faculty of Arts and Science.

Nationally and internationally, several members are associated with Future Earth. Future Earth is a global network of sustainability researchers across disciplines. In some ways, the missions of the LSRC and of Future Earth are similar, although they function at different scales. The LSRC focusses on developing collaborations across disciplines within Concordia, whereas Future Earth has a global focus. Here again, though, the two are complementary; 7 of the 8 Concordia researchers who are part of the NSERC CREATE LEADS (Leadership in Environmental and Digital innovation for Sustainability) program are members of the LSRC. In addition, Future Earth does not host events (seminars, conference, Ignite sessions) to foster conversation across disciplines in the same way that the LSRC does.

4.2. Overarching goal of centre / institute

Recognizing that many of the wicked sustainability problems of the day cannot be effectively addressed from a single disciplinary perspective, the overarching goal of the LSRC is to foster the conversation and support the development of impactful sustainability research at Concordia, with a particular focus on discussion and research across disciplines.

4.3. Research activities in the previous year

In addition to all of the research projects outlined in the Funding, Scholarly Output, and Training of Highly Qualified Personnel sections below, the LSRC runs a seminar series, an annual Ignite session, and an annual Sustainability across Disciplines conference. In 2021-2022, these activities were all run online due to the pandemic.

This year's seminar series was a bit different from those of past years in that, for the online format, we focussed more on shorter presentations and more discussion than traditionally. In addition, we focussed a bit more on internal discussions to maintain community within the research centre in the second year of the pandemic. Hosted by 4th Space throughout the year, the seminar series kicked off in May with a discussion of bias in biodiversity science featuring Mark Vellend (Université de Sherbrooke, Biology) and our own Carly Ziter and Matthew Barker (~75 attendees online and 123 views of the recording on YouTube). That same month, Carly Ziter, Emma Despland, and Rebecca Tittler presented an online panel with 4th Space and the Loyola College for Diversity and Sustainability entitled Urban biodiversity in Montreal: Why should we care? (~40 attendees online at the time and almost 300 views of the recording on YouTube and Facebook). In June, the LSRC supported the CIREQ Interdisciplinary PhD Student Symposium on Climate Change. On the first of October, the LSRC hosted the launch of a new interactive web-map of urban sprawl featuring Jochen Jaeger and students Mirja Reid, Sepideh Mosharafiandehkordi, and Parnian Pourtaherian as part of the Urban Sprawl research project described below (~35 attendees online). Later that month, the LSRC hosted an online discussion exploring the benefits and drawbacks of online vs in-person research events, featuring Professor Arseli Dokumaci (Department of Communication Studies) and Anna Waclawek (4th Space), as well as LSRC members Emma Despland and Alex Pace (junior associate member) (~20 attendees online and 36 views of the recording on YouTube). In November, we explored the world of fish with bestselling author Paul Greenberg, LSRC co-directors Liz Miller and James Grant and junior associate member Brian Gallagher (Biology) (~35 attendees online and in person and 80 views of the recording on YouTube). December brought a discussion of COP 26, featuring LSRC members Carmela Cucuzzella, Ursula Eicker, and Matthias Fritsch who were all in attendance at the COP 26 in Glasgow in November (~50 attendees online and in person and over 300 views on YouTube). All events were hosted online or both online and in person, freely open and available to the public.

Also in the fall, the LSRC hosted a series of in-person WasteScapes tours, run by Liz Miller in collaboration with MJ Thompson (Art Education) and the Centre for Oral History and Digital Storytelling. These cycling/walking tours highlighted the Wastescapes APP developed by Liz and MJ**.** The four tours in September and October were open to the Concordia community and the larger public for free and had over 50 participants.

In addition, in collaboration with the Loyola College for Diversity and Sustainability, the LSRC also hosted a weekly seminar series on the Sustainable Development Goals (SDGs) in the fall of 2021. Hosted online by 4th Space and in person on the Loyola campus, this series covered all 17 SDGs and featured several members of the LSRC, including Joel Bothello, Ursula Eicker, Govind Gopakumar, James Grant, Shannon Lloyd, Damon Matthews, Katja Neves, Eric Pedersen, and Rebecca Tittler. Each seminar was attended by approximately 40 people in person and online and most of the recordings have been viewed over 100 times on YouTube.

As we do every year, instead of a seminar in February, the LSRC hosted a closed Ignite session to foster collaboration among members. So as to maximize conversation among and participation of LSRC members, this two-hour event is split into 20-minute blocks of presentations interspersed with 20-minute blocks of discussion. With 35 LSRC members participating in the discussion, this year's presenters were junior associate members Larissa Zemke, Andrée Tremblay, Alex Pace,

Kian Rahimi, Isabelle Boucher, and Janna Frenzel, as well as faculty LSRC members pk langshaw, Emma Despland, James Grant, Carmela Cucuzzella, Angela Kross, and Eric Pederson. As usual, the presentations fostered exciting conversations and mutual learning.

In March, the LSRC teamed up with the Loyola College for Diversity and Sustainability (LCDS) to host its annual Sustainability across Disciplines conference, this year with the theme of Celebrating Indigenous Expertise in Sustainability. Hosted online by Concordia's 4TH Space, the conference featured a series of panels, discussions, workshops, and presentations focussed around the theme. Of particular note were keynote addresses given by Concordia's own Professor Nicolas Renaud (School of Community and Public Affairs), as well as international Indigenous legal experts Danika Billie Littlechild (Carleton University) and Deborah McGregor (York University) and Indigenous fisheries biologist Andrea Reid (University of British Columbia). Over 240 people attended the conference synchronously on Zoom and hundreds more have viewed the recordings posted on YouTube. This conference opened up a commitment to build and grow new relationships with local Indigenous communities in particular, especially through the Indigenous Youth Perspectives on Climate Policy panel (co-hosted by the Youth Network Chair).

In addition, this year, the LSRC Co-Directors (James Grant and Liz Miller), staff (Rebecca Tittler), and several members (Shannon Lloyd, Damon Matthews, and Catherine Mulligan), in collaboration with Andreas Athienitis (from the Centre for Zero Energy Building Studies) and Monica Mulrennan (Associate Member of the LSRC and Associate VP Research) were tasked with developing a proposal for a Concordia Incubator for Sustainability Research to fulfill one of the key strategies of the University's Sustainability Action Plan. The proposal was written by Rebecca Tittler, Shannon Lloyd, Liz Miller, and James Grant. The proposed Incubator would support the work of the LSRC and other sustainability-oriented research units and researchers by hosting ideation sessions and providing support and seed funding for the development of impactful, cross-disciplinary sustainability research projects, thus supporting the ongoing work of LSRC and other sustainability researchers across the University. The proposal is currently under consideration at the Office of Research. Note that the Incubator would support, not replace the LSRC.

Also this year, several members of the LSRC participated in the hiring process of a Canada Research Chair Tier II in Sustainability of Ecological Systems. Pedro Peres-Neto and James Grant sat on the hiring committee, while Rebecca Tittler also provided feedback on the candidates throughout the process. This position will contribute significantly to the sustainability research community here at Concordia.

Finally, Rebecca Tittler (Research Administration Coordinator of the LSRC) participated this year in the development of the Living Labs model for the University. The goals of this model include forming partnerships with researchers interested in using the campus as a testing ground for solutions to sustainability problems. As the only research unit member actively involved in the development of this model, Rebecca's role in this work is to ensure that the interests of researchers are represented and that they are properly consulted in the development of this potentially very impactful campus model. A test model of the Living Labs is already running through the Sustainability Action Plan but could better incorporate faculty-level researchers. This

project is currently in the consultation phase, under the ultimate supervision of Michael di Grappa (VP Services and Sustainability).

4.4. Future research activities for the next year: workshops, symposia, conferences, summer schools

In the 2022-2023 academic year, the LSRC will again host a monthly seminar series in the fall, a conference tentatively entitled *Research that matters: Sustainability, biodiversity, and justice in a time of crisis* in March, and an Ignite session in February. Plans are currently in development but some of the issues we are planning on focussing on through these events include engaging local communities, pursuing the pedagogical and research implications of the insights that came out of last year's, addressing eco-anxiety, and focussing on the outcomes of the December Biodiversity UN COP 15, and examining links between health and sustainability.

In addition, the LSRC will collaborate with the Centre for Teaching and Learning to support the incorporation of sustainability into courses across the University, as called for by the 2019 Sustainability Action Plan of the University.

The LSRC will also participate in the In.Site Symposium hosted by the Faculty of Fine Arts in September. Specifically, Co-Director Liz Miller will run a guided tour of Ile St Helene entitled *Scales of Waste: An island, an archipelago, and a river,* and Rebecca Tittler will participate in at least one panel on sustainability at Concordia.

4.5. Future long-term objectives: Plans for joint publications, collaborative grants, recruitment of faculty, students, or partner organizations.

Moving forward, the LSRC will continue to support current collaborations and develop new ones, as well as the hiring of sustainability researchers and recruitment of HQP. The LSRC will also continue to support the development of a cross-disciplinary graduate student community. A particular focus in our recruitment is outreach to BIPOC researchers and deepening of relationships with local Indigenous groups and other BIPOC communities.

New collaborations that will be supported in applying for external funding in the coming year include the following:

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

This project involves LSRC members Jochen Jaeger, William Bukowksi, Matthias Fritsch, Craig Townsend, and Rebecca Tittler in addressing the issue of urban development and urban sprawl in Montreal. 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.

In 2020, as part of this project, the research team conducted a survey of Concordia students and their attitudes towards sprawl. The survey results are now available for visualization through this interactive web map, which was launched a tan event hosted by the LSRC in October of 2021 (see above) as an undergraduate research project with Mirja Reid (BA, Urban Planning). In addition, a manuscript describing the results of this part of the project is currently under peer review (Reid et al. in review; see section 4.5.3.). Another manuscript is in preparation in collaboration with MA student Danielle Douez (Philosophy).

Another part of this project is examining the drivers and correlates of urban sprawl in Montreal. Mehrdokht Pourali (MSc, Geography, Urban and Environmental Studies) completed her MSc on this topic this year, quantifying urban sprawl in the various census units of Montreal. A joint publication has already resulted from this work (Pourali et al. 2022; see section 7.2.1.). Navid Forouhar (MSc, Geography, Urban and Environmental Studies) will continue this work in the coming years.

MSc student Parnian Pourteharian also completed work on the use of greenbelts to limit urban sprawl as part of this project. A manuscript on this topic is in review at *Landsacpe and Urban Planning*.

In the coming year, the LSRC will support this research team in applying for external funding and developing community partnerships and further collaborations both internally and externally. Several more students have been recruited to continue the work. As well as Navid Forouhar, these include Sepideh Mosharafiandehkordi (MSc, Geography, Urban and Environmental Studies), who will look at potential future scenarios for Montreal.

4.5.2. Enhancing biodiversity, social inclusion, and climate resilience through informal urban green spaces

This project involves LSRC members Amy Poteete, Emma Despland, Liz Miller, Carly Ziter, and Rebecca Tittler and has just received funding for a pilot year from the Sustainable Transitions Team Research Initiative program from the Office of Research, as well by the Canada Summer Jobs program through a partnership with UrbaNature. In the coming year, the research team will (1) pilot methods to evaluate the contributions of informal urban green spaces to biodiversity (SDG 15), social inclusion (SDG 11), and climate resilience (SDG 13); (2) assess the applicability of these methods across four informal green spaces in Montreal with diverse socio-ecological characteristics (Falaise St. Jacques, Technoparc, Champ des Possibles, Boisé Vimont); and (3) engage urban residents in collaborative learning and reflection in collaboration with community partners. The pilot study will lay the foundation to seek external funding to pursue the longer term objectives of (1) evaluating the contributions of informal urban green spaces to biodiversity, social inclusion, and climate resilience; (2) analyzing relationships among various ecological, social, and climate buffering traits of these site; (3) raising awareness of the social as well as

ecological values, of these spaces; and (4) identifying ways to enhance their contributions to socio-ecological sustainability.

In the first months of this study, the research team is focusing on stengthening and deepening community partnerships and collecting preliminary biodiversity and social data from a subset of the sites. So far, five undergraduate students were hired through the Canada Summer Jobs program collaboration with UrbaNature to census birds, butterflies, bees, and trees in some of the sites in the summer of 2022, for example. In addition, observational work is ongoing in the Champs des Possibles and a Communications students is working to produce a short public education documentary. Finally, discussion with community partners (UrbaNature, Les amies de la Falaise, Les amis du Champs des possibles, etc.) are ongoing so that meaningful partnerships can be developed for the benefit of all.

Several other students will be taken on to work on this project this year.

4.5.3. Joint publications submitted[3]

Collaborations continue through the following submitted joint publications:

1. **Barker, M.** & **Fraser, D.J.** How conservation research misrelates empirical matters and matters of value: the unraveled rope problem, and what to do about it. *Biological Conservation*, resubmitted.
2. Clarke, S., McCracken, G., Ruzzante, D.E., **Grant, J.W.A.**, & **Fraser, D.J.** Demographic resilience of brook trout populations subjected to experimental size-selective harvesting. *Evolutionary Applications,* resubmitted.
3. **Cole, J.R., Kross, A.**, & **Jaeger, J.A.G.** Changes in landscape structure in the Adirondack to Laurentians (A2L) transboundary wildlife linkage from 1992-2018: A call for stronger local conservation and restoration measures. *Landscape Ecology*, under review.
4. Matte JM, **Fraser DJ**, **Grant JWA.** Stock-recruitment relationships among populations of a stream salmonid: comparisons with classic case studies. *Journal of Fish Biology,* submitted.
5. **Prakash, R.**, Kwon, W., & **Paquin R**. A playground without rules – exploring the Indian CSR mandate. *Business and Society,* under review.
6. **Prakash, R.**, Kwon, W., & **Paquin R**. Seeing beyond the taken for granted: Understanding the role of reflexivity in institutional work'. *Organization Studies,* under review.
7. Reid, M., **Fritsch, M., Tittler, R., Townsend, C., Bukowski, W.**, Persram, R., **Jaeger, J.A.G.** Sharing cities with the future: How concerned are Montrealers today about the implications of their residential choices for future generations? *Cities*, under review.

[3] Note that this list is not exhaustive.

8. **Turner, S.E.**, Fedigan, L.M., Joyce, M.M., **Matthews, H.D.**, Moriarity, R.J., Nobuhara, H., Nobuhara, T., Stewart, B.M., Shimizu, K. Mothers of disabled infants and lower ranking females had higher fecal cortisol levels in a freeranging group of Japanese macaques (Macaca fuscata). *Hormones and Behavior,* under review.
9. Velosa S.D., **Turner, S.E., Jaeger, J.A.G**. Death by a thousand cars: Identifying roadkill hotpots at multiple scales and comparing wildlife mortality to underpass use along a high-traffic highway. *Journal of Environmental Management*, under review.

4.5.4. Ongoing collaborations with external funding

In addition, the following collaborations are already externally funded and will continue into the next year(s):

- Damon Matthews (PI), Pedro Peres-Neto, Jeannine-Marie St-Jacques, Sarah Turner, Carly Ziter, Pascale Biron, Bengi Akbulut, and 25 others from other institutions: NSERC CREATE (Science Leadership for Global Sustainability or LEADS). $1,650,000, 2020-2026.
- Dylan Fraser (PI), Monica Mulrennan and 32 other co-investigators and collaborators from other institutions: Genome Canada Large Scale Applied Research Program FISHES (Fostering Indigenous Small-scale fisheries for Health, Economy + food Security). $14,415,415; 2019-2023.
- Selvadurai Dayanandan, Emma Despland, Dylan Fraser, James Grant, Jochen Jaeger, Jean-Philippe Lessard, Katja Neves, Eric Pedersen, Pedro Peres-Neto, Sarah Turner, Robert Weladji, Carly Ziter and 91 from other universities across Quebec (PI Andrew Gonzalez from McGill): Fonds Québécois de la Recherche sur la Nature et les Technologies (FQRNT) Regroupement Stratégique (Québec Centre for Biodiversity Science). $3,000,000 total (1% per LSRC researcher); 2021-2026.
- Emma Despland, Jeannine-Marie St-Jacques, and 72 others (PI Pierre Drapeau, Université du Québec à Montréal): Fonds Québécois de la Recherche sur la Nature et les Technologies (FQRNT) Regroupement Stratégique (Centre for Forest Research). $3,300,000 (2% per LSRC researcher); 2019-2024.
- Govind Gopakumar (PI), Craig Townsend and 3 others from other institutions: SSHRC Insight. $280,995; 2020-2024.

5. Research Infrastructure and Resources

The LSRC operates out of the Loyola College for Diversity and Sustainability on the Loyola Campus. Although members do sometimes share equipment, the Centre itself has no infrastructure or physical resources.

6. Funding

Note that only funding involving core members is listed here.

6.1. Funding for which core members are Principal Investigators

LSRC PIs brought in more than $2.5 million / year in 2021-2022. This included grants from NSERC and SSHRC but also funding from FQRSC, Parks Canada, Genome Canada, SERG

International, Environment and Climate Change Canada, the Ministry of Transport of Quebec, and more.

6.1.2. Funding for which core members are co-investigators or collaborators

In addition to the above, LSRC members were involved in funds totalling more than $4 million / year in 2021-2022. This included grants from FQRNT, NSERC, SSHRC, and various government departments, ministries, and agencies, both federal and provincial.

7. Scholarly Output and Dissemination of Research

7.1. Main Projects

See Sections 4.5 and 5.

7.2. Scholarly publications

7.2.1. Journal Articles & Manuscripts Accepted and Published

1. Anderson, J. L., & **Zilberstein, A.** (2021). Empowering Appetites: The Political Economy and Culture of Food in the Early Atlantic World. *Early American Studies: An Interdisciplinary Journal*, *19*(2), 195-214.
2. Andrasi, B., **Jaeger, J. A. G.**, Heinicke, S., Metcalfe, K., & Hockings, K. J. Quantifying the road-effect zone for a critically endangered primate. (2021). *Conservation Letters*, e12839.
3. Arranz, I., Fournier, B., Lester, N. P., Shuter, B. J., & **Peres-Neto, P. R.** (2022). Species compositions mediate biomass conservation: The case of lake fish communities. *Ecology*, *103*(3), e3608.
4. Balzani, P., Vizzini, S., Frizzi, F., Masoni, A., **Lessard, J. P.,** Bernasconi, C., ... & Santini, G. (2021). Plasticity in the trophic niche of an invasive ant explains establishment success and long-term coexistence. *Oikos*, *130*(5), 691-696.
5. Bansal, M., Morley, R. J., Nagaraju, S. K., Dutta, S., Mishra, A. K., Selveraj, J., ... **Dayanandan, S.** … & Prasad, V. (2022). Southeast Asian Dipterocarp origin and diversification driven by Africa-India floristic interchange. *Science*, *375*(6579), 455-460.
6. Barbhuiya, A. R., Khan, M. L., & **Dayanandan, S.** (2022). Molecular Phylogeny of Citrus species in the Eastern Himalayan Region of Northeast India Based on Chloroplast and Nuclear DNA Sequence Data. In *Molecular Genetics and Genomics Tools in Biodiversity Conservation* (pp. 185-201). Springer, Singapore.
7. Beaulieu, J., Trépanier-Leroux, D., Fischer, J. M., Olson, M. H., Thibodeau, S., Humphries, S., **Fraser, D.J.** & Derry, A. M. (2021). Rotenone for exotic trout eradication: Nontarget impacts on aquatic communities in a mountain lake. *Lake and Reservoir Management*, *37*(3), 323-338.
8. Bellemin-Noël, B., Bourassa, S., **Despland, E.**, De Grandpré, L., & Pureswaran, D. S. (2021). Improved performance of the eastern spruce budworm on black spruce as warming temperatures disrupt phenological defences. *Global Change Biology*, *27*(14), 3358-3366.

9. Benito, X., Luethje, M., Schneider, T., Fritz, S. C., Baker, P. A., **Pedersen, E. J**., ... & Ruhi, A. (2022). Ecological resilience in tropical Andean lakes: A paleolimnological perspective. *Limnology and Oceanography*, *67*, S23-S37.
10. Bernos, T. A., Travouck, C., Ramasinoro, N., **Fraser, D. J.**, & Mathevon, B. (2021). What can be learned from fishers' perceptions for fishery management planning? Case study insights from Sainte-Marie, Madagascar. *PloS one*, *16*(11), e0259792.
11. Bessar, M.A., Choné, G., Lavoie, A., Buffin-Bélanger, T., **Biron, P.M.,** Matte, P., Anctil, F. (2021). Comparative analysis of local and large-scale approaches to floodplain mapping. A case study of the Chaudière River. Canadian Water Resources Journal. 46(4): 194-206.
12. **Bjørn, A**., **Lloyd, S. M.**, Brander, M., & **Matthews, H. D.** (2022). Renewable energy certificates allow companies to overstate their emission reductions. *Nature Climate Change*, 1-2.
13. **Bjørn, A.**, **Lloyd, S., & Matthews, H. D.** (2021). From the Paris Agreement to corporate climate commitments: evaluation of seven methods for setting 'science-based'emission targets. *Environmental Research Letters*, *16*(5), 054019.
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15. **Bjørn, A.**, **Lloyd, S.**, Brander, M., & **Matthews, H. D.** (2022). Renewable energy certificates threaten the integrity of corporate science-based targets. *Nature Climate Change*, 1-8.
16. **Bjørn, A.**, Tilsted, J. P., Addas, A., & **Lloyd, S. M.** (2022). Can science-based targets make the private sector Paris-aligned? A review of the emerging evidence. *Current Climate Change Reports*, 1-17.
17. Blanchet-Cohen, N., & Grégoire-Labrecque, G. (2022). The Transformative Potential of Human Rights Education for Youth Engagement in the Community. *The International Journal of Children's Rights*, *30*(2), 356-377.
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19. **Blanchet-Cohen, N**., Drouin, M.E., Bellefleur, D. (accepté). Favoriser le *menuinniun* : La voix des élèves innus sur l'identité et la réussite éducative à l'école québécoise. *Revue enfance en difficulté*.
20. **Blanchet-Cohen, N.,** Drouin, ME., Dufour, E., & Picard, V., (accepté). Jeunesses autochtones : se réapproprier la recherche pour mieux se représenter soi-même, *Études autochtones au Québec*.
21. **Blanchet-Cohen, N**., Robert-Careau, F., Levevre-Radelli, L. et Talbot, C. (accepté). Cheminer vers la sécurisation culturelle en milieu scolaire pour les Innus. *Revue des sciences de l'éducation*, 48.
22. Bowles, E., Marin, K., Jeon, H.-B., MacLeod, P., & **Fraser, D.J.** (2022) Freshwater fisheries monitoring in northern ecosystems using Indigenous Knowledge, genomics and life history: insights for community decision-making. *FACETS* accepted.
23. Bowles, E., Marin, K., Mogensen, S., MacLeod, P., & **Fraser, D.J.** (2021) A three-pronged approach that leans on Indigenous Knowledge for northern fish monitoring and

conservation. *Evolutionary Applications* 14: 653-657. (rebuttal of a critique on our publication). *(5)*

24. Brookes, B., Jeon, H.B., Post, J.R., Rogers, S.M., Derry, A.M., & **Fraser, D.J.** (2022) Pooled sequencing reveals that neutral drivers of genomic change outpace adaptation in introduced alpine brook trout populations. *Ecology and Evolution* accepted.
25. Camacho, L.F., **Lessard J.P.**, & Avilés, L. (2022) Partner supply and demand mediate elevational gradients in the outcome of ant-hemipteran mutualistic associations. *Journal of Biogeography* (accepted).
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7.2.2. Books / Chapters / Proceedings / Reports

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28. Fan, B; **Dziedzic, R.** Application of multi-criteria decision-making in sustainable construction a literature review. *Canadian Society for Civil Engineering Conference* (Accepted)

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51. **Poteete, A. R.,** Luka, N., Trost, K., Samoylenko, V., Boulet-Garuk, D., & Forest, C. (2021). Supporting the Possibilities of Urban Commoning in Montréal's Champ des Possibles. Progress report – Technical Appendix.
52. Spanowicz, A.G., Teixeira, F.Z., **Jaeger, J.A.G.** (2021): Roadkill-hotspot analysis can help save wildlife from getting killed on roads by prioritizing road sections for fencing. Cooke, S. (Ed), *TransportEcology.info.*
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59. Ziyuan, C., **Dziedzic, R.,** & Li, S. (2022) Calibration of water distribution network model using genetic algorithms. *Canadian Society for Civil Engineering Conference* (Accepted).

7.3. Other dissemination

7.3.1. Presentations and Seminars[4]

1. Amon, L., Hargan, K., Sachse, D., Whyte, C.M., Peros, M. & **St-Jacques, J.-M**. (2021, May). Environnement tardiglaciaire et postglaciaire à la tourbière de Scotstown, Sud du Québec, à l'aide d'indicateurs multiples [Conference Presentation]. 88^{e} Congrès annuel de l'Acfas, Sherbrooke, Québec.
2. **Barker, M.** (2021, April). Commentary on Values and Science by Elliott Sober [Invited speaker]. Leblanc Lectures, Université du Quebéc à Montréal, Montreal.

[4] Note that this list is not exhaustive.

3. **Barker, M.** (2021, July). Are bacterial lineages feedback systems? From cynical pluralism to meta-pluralism about bacterial species [Conference Presentation]. Biennial Meeting of the International Society for the History, Philosophy and Social Science of Biology (ISHPSSB), Cold Spring Harbor (virtual), New York.
4. **Barker, M.** (2021, May). Commentary on a paper by Mark Vellend, at Do the values of biodiversity scientists bias biodiversity science [Invited speaker]. Seminar series of the Loyola Sustainability Research Centre, Concordia University, Montreal.
5. **Barker, M.** (2022) Diversity, science, and values, guest presentation and workshop for a course called Overcoming Barriers to Science, Science College, Concordia University, Montreal.
6. **Biron, P.M.** & Duguay, J. (2021, May). Improving our understanding of turbulent flow structures in rivers with large-scale PIV [Invited Speaker]. International Surface Velocimetry Workshop (online), Hull, United Kingdom.
7. **Biron, P.M**. & Thomas, I. (2021, April). Mieux vivre avec l'eau [Conference Presentation]. Congrès annuel de l'AARQ (Association des Aménagistes régionaux du Québec) (online), Montreal.
8. **Biron, P.M.** (2021). Reconnaître les projets à risque de pertes de qualité de l'habitat du poisson. Conférences thématiques de la faune - Ministère des Forêts, de la faune et des parcs du Québec, Montreal.
9. **Biron, P.M.,** Buffin-Bélanger, T., & Larocque, M. (2021, July & August). Freedom space for rivers: an approach increasingly accepted for passive river restoration in Quebec (Canada) [Conference Presentation]. National Conference on Ecosystem Restoration (NCER) - Online, Gainesville (University of Florida), United States.
10. **Biron, P.M.,** Buffin-Bélanger, T., Larocque, M., & Trudel, M. (2021). Flood mapping [Invited Speaker]. Natural Resources Canada flood map training days, Montreal.
11. **Blanchet-Cohen, N.** (2022, March). Indigenous youth perspectives on climate justice with Julie Teiokeráthe Delisle, Karahkwinetha Ohontsakéhte Montour, Carlee Kawinehta Loft. Celebrating Indigenous Expertise [Invited Facilitator]. Celebrating Indigenous Expertise in Sustainability, a Sustainability across Disciplines conference (online) hosted by the LSRC, Montreal.
12. Bolduc, V., Warnock-Juteau, K., & **Jaeger, J.A.G. (**2021, April). How does human activity affect wildlife use of existing highway crossing structures? Northeast Natural History Conference (online).
13. Botrel, M, Heffernan, J.B., Hudon, C., **Biron, P.M.**, & Maranger, R. (2021, May). Variations interannuelles de la rétention de l'azote dans les herbiers aquatiques au Lac Saint-Pierre. 88^{e} Congrès annuel de l'Acfas, Sherbrooke, Québec.
14. Deku, J., Donnini, J., **Jaeger, J.A.G.** (2021, April) Monitoring the use of culverts by animals in the Appalachian region of Quebec. Northeast Natural History Conference (online).

15. **Despland, E.** (2021) Overcoming plant defenses as a driver of group-living in herbivorous insects. Sociable Insects Symposium, International Union for the Study of Social Insects.
16. **Despland, E.** (2021). Insect outbreaks: One of the ways a changing climate transforms ecosystem. Symposium on Insects: Indicators and agents of global change? Sustainability and the Climate Crisis: A week of discussion, hosted b the LSRC and LCDS.
17. **Despland, E.** (2021, June). Leaf litter and soil biodiversity. CU Compost Fireside Chat.
18. **Despland, E.** (2021, November). Changement ontogénique de stratégie anti-prédateur chez un criquet tropical. Societé Québecoise de l'étude biologique du comportement.
19. **Despland, E.** (2021, November). Conifer leaf toughness as a defense against herbivorous insects? 148ième Réunion annuelle de la Société d'entomologie du Québec, Canada
20. **Despland, E.,** Dokumaci, A., **Miller, E., Pace, A.,** & Waclawek, A. (2021, October). Sustainability in research: What have we learned from a year of online research events? LSRC seminar series, Montreal (4th Space, online).
21. **Despland, E., Tittler, R., & Ziter, C.** (2021, May). Urban Biodiversity in Montreal: Why should we care? WWF Living Planet @ Campus, hosted by the LSRC and LCDS, Montreal (4th Space, online).
22. Duguay, J., **Biron, P.M**. (2021, April). Study of turbulent mixing processes at a mesoscale confluence through aerial drone imagery and eddy-resolved modelling. European Geophysical Union (EGU) - online, Vienna, Austria.
23. Duguay, J., **Biron, P.M.,** Lacey, J. (2022, November). Laboratory investigation of density-driven streamwise vortices in the mixing interface of a symmetric confluence. River Flow 2022, Kingston and Ottawa.
24. Duguay, J., **Biron, P.M.,** Lacey, J. (2022, November). Observations and numerical modelling of density-driven streamwise vortices at a river confluence. River Flow 2022, Kingston and Ottawa.
25. **Dziedzic, R.** (2021, May). Smart management of construction waste workshop moderator. Concordia University Center for Innovation and Construction and Infrastructure Engineering and Management, hosted by 4th Space, Concordia.
26. **Dziedzic, R.** (2021, October). Smart cities: A solution for infrastructure longevity? Workshop moderator. MTL Connect, hosted by 4th Space, Concordia.
27. **Fakoor, E.**, Levasseur, A., **Lloyd, S**., & Amor B. (2022, May). Prospective LCA model for surface engineering technologies. End-of-Life, Green-SEAM Annual Network Meeting, Montreal.
28. **Fraser, D.J.** (2021) Adaptation or extirpation? Will small populations persist in the face of environmental change? Laval University, Quebec City (online).
29. **Fraser, D.J.** (2021). Adaptation or extirpation? Will small populations persist in the face of environmental change? Guest seminar, Maurice Lamontagne Institute, Rimouski (online).

30. **Fraser, D.J.,** MacLeod, P., **Mulrennan, M.,** Schott, S., & Bernatchez, L. (2022, March). Co-developing knowledge with Indigenous communities to facilitate sustainable fisheries management: a 'FISHES' perspective. Celebrating Indigenous Expertise in Sustainability, a Sustainability across Disciplines conference (online) hosted by the LSRC, Montreal.
31. **Fraser, D.J.**, Marin, K., Jeon, H.-B., Michailides, S., Won, H., Bouchard, R., & Bernatchez, L. (2022, March). Co-developing knowledge with Indigenous communities to facilitate sustainable fisheries management: a 'FISHES' perspective. American Fisheries Society Ontario Chapter Annual Conference, ON (online).
32. **Fritsch, M.** (2021, July). Natal alienation and future people. North American Levinas Society Annual Meeting (online).
33. **Fritsch, M.** (2021, June). Antigone in the Anthropocene tragedy and philosophy conference, Goldsmiths University London (online)
34. **Fritsch, M.** (2021, March). Democratic representation, environmental justice, and future people. Celebrating Indigenous Expertise in Sustainability, a Sustainability across Disciplines conference (online) hosted by the LSRC, Montreal.
35. **Fritsch, M.** (2021, May). Antigone in the Anthropocene. A reading of Sophocles' play in view of environmental and intergenerational relations. Philosophy and Social Sciences conference, Prague (online).
36. **Fritsch, M.** (2021, October). Intergenerational turn-taking and the geo-kinetic view of Earth. Centre for Culture and Ecology, Durham University, UK.
37. **Fritsch, M.** (2021, September). On geokinetic revolutions and intergenerational humans History of Philosophy Society Annual Meeting (online).
38. **Fritsch, M.** (2021, September). Ontological disclosure and normative critique in Heidegger. Society for Phenomenology and Existential Philosophy Annual Meeting (online).
39. **Fritsch, M**. (2022, February). Indigenous responses to the climate emergency and reciprocity among generations. Sant'Anna School of Advanced Studies, Pisa, Italy.
40. **Fritsch, M.** (2022, March). Democratic short-termism and climate destabilization. Climate Change and Ethics: Where are we? Illinois Institute of Technology (online).
41. **Fritsch, M.** (October 2022). Intergenerational turn-taking and the counter-Copernican revolution. Climate Change and Future Generations/Public Ethics & Labont Seminars, Sant'Anna School of Advanced Studies, Pisa, Italy
42. Fugère, V., Beisner, B., Martin, G., St-Pierre, A., Velghe, K., **Biron, P.M.,** del Giorgio, P., Huot, Y., Lapierre, J.-F., Lavoie, I., Rodríguez, M., Turgeon, K., Walsh, D. (2021, February). FisHab: Toward new ecosystem indicators of fish habitat in Canadian inland waters. Canadian Conference for Fisheries Research - Society of Canadian Limnologists (online - Acadia University), Wolfville, Canada.

43. Ginath, Y., **Turner, S.E.,** & **Matthews, H.D.** (2022, March). Recent decline in suitable large mammal habitats within the Dzangha Sangha Protected Areas, Central African Republic. Celebrating Indigenous Expertise in Sustainability, a Sustainability across Disciplines conference (online) hosted by the LSRC, Montreal.

44. Gurrapu, S., **St-Jacques**, **J.-M.**, Sauchyn, D.J. & Hodder, K.A. (2021, May-June). Assessment of the standardized precipitation-evapotranspiration index in relation to streamflow prediction in the watersheds of western Canada. Canadian Water Resources Association National Conference (online).

45. **Jaeger, J.A.G.** & **Pourtaherian, P. (**2021, November)**.** Vom Messen und Maßhalten in der Raumplanung: Können Grüngürtel und Grenzwerte helfen, die Zersiedelung zu verringern? (On measurement and moderation in regional planning: Can greenbelts and limits help reduce urban sprawl?). – Oral presentation at the IÖR-Forum at the Institute for Ecological Urban and Regional Planning (IÖR) in Dresden, Germany (online).

46. **Jaeger, J.A.G.** (2021, June). Roads, urban sprawl, and ecological connectivity: What is our vision for the future future? – Invited oral presentation at Webinaire 4: Connectivité écologique & peri-urban areas (banlieue), hosted by the Sierra Club Québec, QC (online).

47. **Jaeger, J.A.G.** (2022, March)**.** Road ecology in times of rapid road construction and urban sprawl: Growing challenges and current advances in research and impact mitigation. Invited research seminar presentation at the Swiss Federal Research Institute for Forest, Snow and Landscape WSL, organized by WSL, Birmensdorf, Switzerland (hybrid: in person and online).

48. **Jaeger, J.A.G.,** & Re, S. (2021, September). Wildlife fencing, the FLOMS trade-off, and the fence-end effect: How long is long enough? International Conference on Ecology and Transportation (ICOET) at the University of California in Davis, CA (online).

49. **Jaeger, J.A.G..** (2021, June). Zielwerte und Grenzwerte für die Zersiedelung (Targets and limits for urban sprawl). – Invited oral presentation at the Dresdner Flächennutzungssymposium (DFNS), Dresden, Germany (online).

50. Joyce, M.M, Teichroeb, J.A., **Turner, S.E.** (2022, January). Spatial movement foraging strategies among free-ranging Japanese macaques (Macaca fuscata) at the Awajishima Monkey Center, Japan. Joint Meeting of the International Primatological Society and the Latin American Society of Primatology, Quito, Ecuador.

51. Lachance, A., Peros, M., & **St-Jacques, J. M.** (2022, May). Peatbogs to the rescue! Opportunities and challenges in using ombrotrophic peat cores for a reconstruction of paleo-storms during the Holocene in eastern Canada. EGU General Assembly 2022, Vienna, Austria.

52. Lachance, A., Peros, M., & **St-Jacques, J.-M.** (2021, May). Établir la chronologie des paléo-tempêtes durant l'Holocène aux Iles-de-la-Madeleine, à l'aide de carottes de tourbe. 88^{e} Congrès annuel de l'Acfas, Sherbrooke, Québec. (poster).

53. Lachance, A., Peros, M., & **St-Jacques, J.-M.** (2021, October). Establishing the chronology of paleo-storms during the Holocene on the Magdalen Islands, eastern Canada, using peat

cores. New England and the St Lawrence Valley (NESTVAL) Connect, (onlineposter). Best Graduate Poster Award.

54. Lachance, A., Peros, M., & **St-Jacques, J.-M.** (2022, April)**.** Peatbogs to the rescue! Opportunities and challenges in using ombrotrophic peat cores for a proxy-based reconstruction of paleo-storms during the Holocene in eastern Canada. European Geophysical General Assembly, Vienna, Austria.
55. Lachance, A., Peros, M., & **St-Jacques, J.-M.** (2022, March). Tourbières à la rescousse ! Opportunités et défis liés à l'utilisation de carottes de tourbe ombrotrophes pour une reconstruction des paléotempêtes de l'Holocène dans l'est du Canada. GEOTOP Student Meeting (online)
56. Lemay, L., **Biron, P.M.,** Boivin, M. (2021, May-June). Can the Morphological Quality Index (MQI) be used to determine ecological status of agricultural streams? Canadian Water Resource Association National Conference, Quebec City (online).
57. **Lesage, C.L., Stewart, B.M.,** Lazure, L., & **Turner, S.E.** (2021, October) Social grooming and alopecia in a group of captive Japanese macaques (Macaca fuscata). CAPA-ACAP – Canadian Association for Physical Anthropology 49th Annual Meeting, Hamilton ON.
58. **Lloyd, S**. & **Bjorn, A.** (2021, May). From the Paris Agreement to corporate climate commitments: Evaluation of seven methods for setting science-based emission targets, Microsoft Corporation (online).
59. **Lloyd, S**. & **Rahimi, K.** (2021, November). Reducing supply chain emissions: Are current calculations methods up to the task? Le Centre international de référence sur le cycle de vie des produits, procédés et services (CIRAIG) Workshop on Carbon Neutrality (online).
60. **Lloyd, S.** (2022, April 8). Social enterprise. What is it? How does it relate to private practice. Therapeutic Recreation Ontario (online).
61. Luka, N., **Poteete, A.R**., Trost, K., & Boulet, D. (2021, May-June). From obsolete to common(ing): Collective care, emergence, and contestation in designing futures for Montréal's Champ des Possibles. 46th Annual Conference of the Society for the Study of Architecture in Canada (online).
62. Marchand, J.-P., **Biron, P.M.,** Buffin-Bélanger, T, Larocque, M. (2021, June). Exploring groundwater-surface water interactions within channelized lowland headwater streams as a mean to promote new restoration approaches. 9th World Conference on Ecological Restoration. Society for Ecological Restoration, Montreal (online).
63. Marchand, J.-P., **Biron, P.M**., Buffin-Bélanger, T. (2021, May-June). Explorer les interactions eau souterraine-eau de surface dans les cours d'eau linéarisés de milieu agricole comme moyen de promouvoir de nouvelles approches de restauration. Canadian Water Resource Association National Conference, Quebec City (online).
64. Marin, K., MacLeod, P., & **Fraser, D.J.** (2021, May). Long-standing, collaborative knowledge leads to community-based conservation: Mistassini fisheries. Session on bridging knowledge systems between indigenous and nonindigenous communities,

International Association of Great Lakes Research, Michigan Technical University (online).

65. Mirzaei, Y., & **Gelinas, Y.** (2022, May). Exploring the bacterial preference for terrestrial or marine organic matter in estuarine sediments using compound specific stable carbon isotope ratios: A degradation kinetics study. EGU General Assembly 2022, Vienna, Austria.
66. **Mruczek, S.**, Peros, M. & **St-Jacques, J.-M.** (2021, May). Reconstitution sédimentologique des récentes inondations d'un bras mort près de la rivière Coaticook, Sud du Québec, Canada. 88e Congrès annuel de l'Acfas, Sherbrooke, Québec (poster).
67. **Noel, D.D.**, **St-Jacques, J.M.**, & Gurrapu, S. (2021, December). Assessing the influence of the Pacific Decadal Oscillation and Atlantic Multidecadal Oscillation on flood risk in western North American rivers. American Geophysical Union Fall Meeting, New Orleans, Louisiana.
68. **Noel, D.D.**, **St-Jacques, J.M.**, & Gurrapu, S. (2021, May-June). Assessing the influence of the Pacific Decadal Oscillation and Atlantic Multidecadal Oscillation on flood risk in western North American rivers. Canadian Water Resources Association National Conference (online).
69. **Noel, D.D.**, **St-Jacques, J.M.**, & Gurrapu, S. (2021, October). The effects of the Pacific Decadal Oscillation and Atlantic Multidecadal Oscillation on flood risk in the North American west coast. New England and the St Lawrence Valley (NESTVAL) Connect (online).
70. **O'Neill Sanger, C., St-Jacques, J.-M.,** Peros, M. & Schwartz, K. (2021, May). Reconstructing environmental variability over the last 2000 years using high-resolution pollen records from a small lake in Mont-Orford National Park. 14e Colloque du Centre d'étude de la forêt, Sherbrooke, Québec.
71. **O'Neill Sanger, C., St-Jacques, J.-M.,** Peros, M. & Schwartz, K. (2021, May). Reconstruction forestière au cours des deux derniers millénaires dans le Parc national du Mont-Orford en utilisant des données de pollen à haute résolution. 88e Congrès annuel de l'Acfas, Sherbrooke, Québec.
72. **Pace, A**., Arsenault, D., and **St.-Jacques, J.-M.** (2022, March). Underwater trees and pre-colonial forests of Gaspe'gewa'gi. Celebrating Indigenous Expertise in Sustainability, a Sustainability across Disciplines conference (online) hosted by the LSRC, Montreal.
73. **Pace, A.V.**, **St-Jacques, J.-M., & Noel, D.** (2021, May). Une connaissance de la disponibilité en eau des 200 dernières années pour les montagnes de la Gaspésie basée sur les cernes d'arbres. 88e Congrès annuel de l'Acfas, Sherbrooke, Québec.
74. **Pace, A.V.**, **St-Jacques, J.-M., & Noel, D.** (2021, May). Une reconstitution hydrologique de plus que 200 ans pour les montagnes Chic-Choc et McGerrigle de l'intérieur de la Gaspésie. 14e Colloque du Centre d'étude de la forêt, Sherbrooke, Québec.

75. **Pace, A.V.**, **St-Jacques, J.-M., & Noel, D.**, & Fortin, G. (2021, October). A moisture reconstruction of the last 211 years for the mountains of Gaspésie based on tree rings. New England and the St Lawrence Valley (NESTVAL) Connect (online poster).
76. Pain, G, & **Paquin, R.** (2022, June). Different yet the same: the evolution of disclosed strategic schemas on sustainability. 8th Cross-Sector Interactions Symposium, The Netherlands.
77. Pain, G, **Paquin, R.** & Tilleman, S. (2021, June). Dictionaries of environmental terms to capture the three steps of ecological interpretation – scanning, understanding, and responding – and methodology for their development. Administrative Sciences Association of Canada 2021 Conference (online).
78. Pain, G., **Paquin, R**. & Tilleman, S. (2021, June). Organizations as interpretation systems: A study of the relationship between environmental interpretation and environmental performance. Administrative Sciences Association of Canada 2021 Conference (online).
79. **Paquin, R.** (2021) Organizational perspectives on industrial symbiosis. Yale University, School of the Environment, Connecticut.
80. **Paquin, R.** (2021) Organizations as interpretive systems. University of St. Gallen, Switzerland.
81. **Paquin, R.** (2021, July) Sustainability Now: Some thoughts for our changing world. Keynote Speaker. 8th International Conference on Sustainability, Indian Institute of Management Shillong, India.
82. **Pedersen, E.J.** (2021, December). The Northern Shrimp Spatial Surplus Production Model (SSPM): modelling spatiotemporal drivers of shrimp productivity. Presentation to DFO Scotian Shelf Northern Shrimp Stock Assessment.
83. **Pedersen, E.J.** (2021, July). Fish communities on the move in the North Atlantic. Institute for Journalism & Natural Resources, Special Workshop on Climate Change in the North Atlantic Ocean (online).
84. **Pedersen, E.J.** (2021, July). Hierarchical generalized additive model approaches for modelling the distribution of ecological communities. Ecological Statistics: Opportunities and Challenges, Statistics 2021 Conference, Montreal.
85. **Pedersen, E.J.** (2021, November). Assessing spatial patterns of stock vulnerability to biotic and abiotic change with sur-plus production models. NAVHub talk series on North Atlantic Vulnerability assessments (online).
86. **Pedersen, E.J.** (2021, November). The Northern Shrimp Spatial Surplus Production model: A Tier II model of spatiotemporal drivers of shrimp productivity. Northwest Atlantic Fisheries Organization (NAFO) Working Group on Ecosystem Science and Assessment (online).
87. **Pedersen, E.J.** (2022, February). Patterns and drivers of abrupt change in diverse communities. Université du Québec à Montreal Department of Biology seminar series, Montreal.

88. **Pedersen, E.J.** (2022, May). From movement models to metapopulations: using step-selection functions to large-scale patch structure. European Tracking Network Annual Meeting, Ceske Budejovice, Czech Republic.

89. **Poteete, A. R.,** Luka, N., Badra, C., & Samoylenka, V. (2021, May). Occupying, caring for, and commoning urban public space in Montréal's Champ des Possibles. International Association for the Study of the Commons 2021 Urban Commons Virtual Conference (online).

90. **Prakash, R., Paquin, R**., Elizabeth, C. (2021, June). People like us: Now what? Case Track, Administrative Sciences Association of Canada 2021 Conference (online).

91. **Rowan, S.** (2021, April). Extreme weather and climate policy. International Studies Association, Las Vegas, NV (online).

92. **Rowan, S.** (2021, April). The new terrain of global governance: Mapping membership and fragmentation across formal and informal IOs. International Studies Association, Las Vegas, NV (online).

93. **Rowan, S.** (2021, November). Enforcing cooperation using issue linkage: Theory from the intersection of climate change and trade. Climate Pipeline Project, Harvard University, Cambridge, MA (online).

94. **Rowan, S.** (2021, October). Enforcing cooperation using issue linkage: Theory from the intersection of climate change and trade. Centre for International Peace and Security Studies, McGill University, Montreal.

95. **Rowan, S.** (2022, March-April). Enforcing cooperation using issue linkage: Theory from the intersection of climate change and trade. International Studies Association, Nashville, TN.

96. Stampfli, N., & **Biron, P.M.** (2021, May-June). Évolution de la morphologie de petits cours d'eau agricoles des bassesterres du Saint-Laurent en lien avec les activités d'entretien de cours d'eau. Canadian Water Resource Association National Conference, Quebec City (online).

97. Starratt, S., Rodysill, J. R., Caballero, M., & **St-Jacques, J. M.** (2021, December). Lakes past, present, and future: Archives of climate variability, paleoenvironment, geohazards, and economic resources AGU Fall Meeting, New Orleans (online).

98. **Stewart, B.M., Turner, S.E.,** & **Matthews, H.D.** (2022, January). Climate change impacts on potential future ranges of non-human primate species based on cumulative CO2 emissions and the resulting surface temperature increase. Joint Meeting of the International Primatological and the Latin American Society of Primatology, Quito, Ecuador.

99. Talarico, B.M., Joyce, M.M., Wilson, K.J., & **Turner, S.E.** (2021, May). Monkeying around: Exploratory behaviour of disabled infants in a free-ranging group of Japanese macaques (Macaca fuscata). CASCA 2021: the Canadian Anthropology Society/la Société Canadienne d'Anthropologie, University of Guelph, Guelph, Ontario (online poster).

100. **Turner, S.E.** (2021, May). Interdisciplinary research, collaboration and co-authorship: Opportunities and challenges. CASCA 2021 Roundtable. Canadian Anthropology Society/La Société Canadienne d'Anthropologie (CASCA) Conference: Engagements and Entanglements, University of Guelph, Guelph, Ontario (online).

101. **Turner, S.E**. (2021, October). Research in the primatology and interdisciplinary environmental studies Lab. LEADS CREATE Hybrid Launch Event, 4th Space, Concordia University, Montreal.

102. **Turner, S.E.**, Espitia Contreras, J.P., Fedigan, L.M., Kotler, A., Moriarity, R.J., Nakamichi, M., Nobuhara, H., Nobuhara, T., Pellietier, A., & Reader, S.M. (2022, January). Behavioural flexibility mitigates disability for free-ranging monkeys with congenital manual impairments. Joint Meeting of the International Primatological Society and the Latin American Society of Primatologists, Quito, Ecuador (hybrid).

103. **Turner, S.E.**, Pellietier, A., Fedigan, L.M., Moriarity, R.J., Kotler, A., Reader, S.M. (2021, October). Feeding efficiency and disability in a provision-fed group of Japanese macaques. CAPA-ACAP – Canadian Association for Physical Anthropology, 49th Annual Meeting, Hamilton, Ontario.

104. Whyte, C.M., Amon, L., Peros, M. & **St-Jacques, J.-M.** (2021, May) Histoire des incendies de forêt à la tourbière de Scotstown, Sud du Québec, à l'aide du microcharbon de sédiments lacustres. 88^{e} Congrès annuel de l'Acfas, Sherbrooke (online poster).

105. Whyte, C.M., Amon, L., Peros, M. & **St-Jacques, J.-M.** (2021, October). A deglaciation and early Holocene fire record from Scotstown Bog, Eastern Townships, Québec, Canada. New England and the St Lawrence Valley (NESTVAL) Connect (onlne poster).

106. **Yousefzadeh, Z.** & **Lloyd, S.** (2021, May). Life cycle comparison of emerging pulse water jet and existing alkaline electrochemical cleaning technologies for removing hard chromium. Green-SEAM Annual Network Meeting, Montreal (online).

107. **Yousefzadeh, Z.** & **Lloyd, S.** (2022, May). Comparative life cycle assessment of alkaline electrochemical and pulse water jet removal of hard chromium. Green-SEAM Annual Network Meeting, Montreal.

108. **Zilberstein, A.** (2021, April). Provisioning people and other animals since the eighteenth century. Critical Animals Studies and Law Series, Harvard University.

7.3.2. Training and Instruction[5]

1. **Fraser, D.J.** (2022) Population monitoring of fishes using size, age and catch data. For the Professional Development & Training Program in Sciences for Cree Wildlife Officers along the James Bay Coast, Eeyou Marine Region Wildlife Board, Eastmain, QC (virtual)

[5] Note that the Training and Instruction section does not include courses taught at Concordia. It also may not include all other activities of LSRC members.

2. **Grant, J.** (2021, October 15). SDG 12 Responsible consumption. Guest lecture for LOYC 398-03 and 4th Space / LCDS / LSRC seminar series Perspectives on the United Nations Sustainable Development Goals, Concordia University.
3. **Jaeger, J.A.G**, & **Pourtaherian, P.** (2021, May 31-June 4). Urban sprawl analysis with GIS. Invited guest lecture in the Applied Geographic Information System Certificate Program at Concordia University (online).
4. **Lloyd, S**. (2021, November 8). A Workshop on measuring the social and environmental impacts of a business. CEED (Community. Empowerment. Education. Development.) Concordia Youth Social Entrepreneurship Program (online).
5. **Lloyd, S**. (2021, November 12). SDG 12 Responsible consumption. Guest lecture for LOYC 398-03 and 4th Space / LCDS / LSRC seminar series Perspectives on the United Nations Sustainable Development Goals, Concordia University.
6. **Matthews, H.D.** (2021, October 22). Implications of the remaining carbon budget for SDG 13 – Climate Action. Guest lecture for LOYC 398-03 and 4th Space / LCDS / LSRC seminar series Perspectives on the United Nations Sustainable Development Goals, Concordia University.
7. **Paquin**, **R.L.,** Calvert, H., & **Prakash, R.** (2021). Kombi Sports, Inc: Staying ahead of the curve – Teaching Note. Ivey case 8B21M063.
8. **Pedersen, E.J.** (2021, November 26). SDG 14: Life below water. Guest lecture for LOYC 398-03 and 4th Space / LCDS / LSRC seminar series Perspectives on the United Nations Sustainable Development Goals, Concordia University.
9. **Pedersen, E.J.** (2021, October): Online 3-day workshop: Generalized Additive Models. Audience: BIOS2 CREATE Grant Students (30 participants). Instructor.
10. **Turner, S.E.** (2021, May 5). Environmental change and behavioural plasticity: Japanese monkeys and disability on Awaji Island, Japan. ANTH 311, Dept of Anthropology, University of San Diego, San Diego CA (online).
11. **Turner, S.E.** (2021, November 23). Sex, gender and evolution. BIOL 436: Biology and Society, Dept of Biology, McGill University, Montreal QC (online).

7.3.3. Media Appearances and Popular Press[6]

1. **Biron, P** (2021, October 18). Large-scale flood modelling newly published paper, Let's Go, CBC radio (Montreal, 88.5FM).
2. **Biron, P.** (2021, July 12). Sediment accumulation at the confluence of the Du Loup River and Lake St. Pierre, News (Mauricie - Centre du Québec). Radio-Canada.
3. **Blanchet-Cohen, N.** (2021, October 26). Youth involvement at COP 26, Radio Canada.

[6] Note that this list is not complete.

4. **Blanchet-Cohen, N.** (2021, September 16) Soutenir la voix des jeunes autochtones à l'ère de la réconciliation. Fonds de recherche du Québec (FRQ).

5. **Despland, E.** (2021, July 2). Emergence monstre de criquets au Québec? Nouvelles locales, TVA Trois-Rivières

6. **Despland, E.** (2021, June 23). Est-ce que les insectes suent? Moteur de Recherche. Radio-Canada

7. **Despland, E.** (2021, November 24). Ou les bibittes passent l'hiver? Moteur de Recherche, Radio-Canada.

8. **Despland, E.** (2021, October 20). C'est quoi la punaise de l'érable négundo? Moteur de Recherche, Radio-Canada

9. **Despland, E.** (2021, September 1). Est-ce que les fleurs sauvages sont plus nourrissantes pour les insectes butineurs? Moteur de Recherche, Radio-Canada

10. **Despland, E**. (2022, April 20). Pourquoi on ne voit pas d'insectes géants? Moteur de Recherche, Radio-Canada.

11. **Fraser, D.J.** (2022). Relevance of biodiversity for society, in and out of urban areas. Concordia Magazine.

12. **Fraser, D.J.** (2022, January 28) Two Concordia researchers join a national project to understand and protect northern fisheries. Concordia Now & Aboriginal Peoples Television Network.

13. **Fritsch, M.** (2021, December 6). Why Indigenous voices are particularly important for Canada at UN climate change negotiations. The Hill Times.

14. **Lessard, J.P.** (2022, April 18) Have you spotted an opossum in your area? CBC Montreal (Daybreak).

15. **Lloyd, S.** (2021, July 12). Concordia professor examines which industry practices really work to advance global sustainability goals. Concordia University News.

16. **Lloyd, S.** (2021, July 26). The truth behind corporate climate pledges. The Guardian.

17. **Lloyd, S.** (2021, June 22). Companies are increasingly setting emission goals in line with Paris Agreement objectives, but new research shows more transparency is needed. Concordia University News.

18. **Lloyd, S.** (2022, April 26). Greenwashing. Radio Noon Quebec with Shawn Apel, CBC Radio One Montreal.

19. **Lloyd, S.** (2022, March 11). CUcompost Fireside Chat #13: Sustainability in business education. Enuf 9live-streamed on Facebook, LinkedIn and twitter).

20. **Matthews, H.D.** & Peters G. (2021, November 4). Climate clock reset shows the world is one year closer to 1.5 C warming threshold. The Conversation.

21. **Matthews, H.D.** (2021, May 18). One of the world's most influential climate scientists is a Concordian. Concordia News.

22. **Matthews, H.D.,** Luers, A., and Zickfield, K. (2022, March 30). Planting trees can help the climate, but only if we also stop burning fossil fuels. The Conversation.
23. **Rowan, S.** (2021, November 6) Five ways to sort substance from spin in climate politics. CBC News.
24. **St. Jacques, J.M.** (2021, August 13). Interview with Ben Powless on release of IPCC AR6 Report Climate Change 2021 – The Physical Science Basis. Cree Nation News.
25. **St. Jacques, J.M.** (2021, August 9). Interview with Eric Dicaire on release of IPCC AR6 Report. Climate Change 2021 – The Physical Science Basis. CBC News Montreal.

7.3.4. Other Knowledge Transfer[7]

1. Botrel, M., Hudon, C., Heffernan, J.B., **Biron, P.M.,** Maranger, R. (2022). Climate-driven variations in nitrogen retention from a riverine submerged aquatic vegetation meadow. Water Resources Research. Earth and Space Science Open Archive (preprint).
2. Calvert, H., **Paquin, R., Prakash, R.** (2021): Kombi Sports Inc.: Staying Ahead of the Curve. Ivey & JMSB ID 9B21M063 (Case study)
3. **Despland, E.** (2021-2022) Ecologist, Community Engagement Group/Organization/Business Serviced: UrbaNature Target Stakeholder: Private Not-for-Profit Organization Outcome / Deliverable: Development of programming on urban ecology for nature education organization UrbaNature, recruitment of student interns to conduct public education activities.
4. **Despland, E.** (2022) Ecologist, Community Engagement Group/Organization/Business Serviced: Coalition for Green & Quiet Neighborhoods, Sauvons la Falaise, Technoparc Oiseaux Target Stakeholder: Private Not-for-Profit Organization Outcome / Deliverable: initiating and building protocols for monitoring butterflies, bumblebees, fireflies and bats in informal urban greenspaces, ecological science outreach about insects and soil invertebrates in urban environments.
5. Duguay, J., **Biron, P.,** & Lacey, J. (2022). Impact of density gradients on secondary flow structure at a river confluence. Earth and Space Science Open Archive (preprint).
6. Gálvez, Á., **Peres-Neto, P. R**., Castillo-Escrivà, A., Bonilla, F., Camacho, A., García-Roger, E. M., ... & Mesquita-Joanes, F. (2021). Metacommunities from bacteria to birds: stronger environmental selection in mediterranean than in tropical ponds. bioRxiv (preprint).
7. Lawrence, E. R., & **Fraser, D. J.** (2021). Macrogenetics reveals multifaceted influences of environmental variation on vertebrate population genetic diversity across the Americas. bioRxiv (preprint).
8. **Miller, E.** (2020-2021), The Shore Line Installation, on Display at The Museum, Downtown Kitchener, "Responding to Our Climate Emergency" in Agents for Change, Facing theAnthropocene, Curated by Nina Czegledy and Jane Tingley.

[7] Note that this is a small subset of other knowledge transfer.

9. **Rowan, S.** (2022) Vanier Talks: Environment and Environmental Challenge. Annual social science festival for local high school students. Vanier College, Montreal.

8. Training of Highly Qualified Personnel

In 2021-2022, LSRC members supervised over 180 honours, masters, and PhD students.

9. Awards and Recognitions[8]

- Dayanandan, S. 2022. Mary E. Elliott Award, the highest recognition for meritorious service to the Canadian Botanical Association
- Rowan, S. 2022. American Political Science Association, International Collaboration Section 2022 Best Article Award, for Does institutional proliferation undermine cooperation?*International Studies Quarterly* (2021).
- Peres-Neto, P. 2021. Fellow of the Ecological Society of America.
- Gatt, M., Deslaurier, M., & Paquin, R. *Legacy Development Group*. Administrative Sciences Association of Canada 2022 Conference, Case Division, Best Paper
- Lloyd, S. 2021 Concordia Newsmakers of the Month for July

10. Partnerships and Collaborators

Apart from research grants held by members, the LSRC raised $11,765 internally to support the *Celebrating Indigenous Expertise in Sustainability Conference.* This conference was initially planned for in-person or hybrid, but in the end, due to the public health situation, it ended up being hosted entirely online. Thus, much of the money raised was not spent. The contributors were 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 Youth Network Chair; the School of Community and Public Affairs and First Peoples Studies, the Science College, and the Departments of Applied Human Sciences; Biology; Communication Studies; Geography, Planning and Environment; History; Political Science and Sociology and Anthropology at Concordia University.

[8] Note that this list is not exhaustive.