School of Environment, Enterprise and Development

ANNUAL REPORT

2021

Faculty of Environment
University of Waterloo
Introduction

This report covers the period from January to December 2021. Notwithstanding the challenges consequent to the global COVID-19 pandemic, the School has enjoyed ongoing success, with several highlights:

- SEED’s research funding from all sources remains strong, totalling approximately $2.7 million.
- SEED welcomed three new faculty members, bringing the total faculty compliment to 25.
- The Bachelor of Sustainability and Finance (BSFM) received Provincial approval and will welcome the first cohort in Fall 2022 (joint SEED-SAF program).
- SDSN-Canada hosted the Together|Ensemble conference, Canada’s national all-of-society gathering on the SDGs, attracting 700+ attendees, with 30+ SDG thought leaders speaking, and partnerships with 30 of Canada’s leading SDGs organizations.
- SDSN-Canada supports SDGs Youth Hubs on 16 member campuses, with 400+ student hub members across the country and a total reach of 3,600+ youth and more than 50 events organized.
- Our students and faculty continue to work closely with a range of stakeholders, locally, nationally and internationally, ensuring SEED’s continued visibility in research, teaching and professional service (see Achievements and Impacts).

SEED Enrollment Trends

At the aggregate level, the School’s enrolments have declined over the past year by approximately four percent; this count includes all students in all cohorts. In the undergraduate programs, International Development and Environment and Business enrolments have together declined by a total of 52 student, accounting for the majority of the overall decline in enrolments (see summary table below).

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<tr>
<th>Year*</th>
<th>Undergraduate</th>
<th>Graduate</th>
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<td>EB</td>
<td>INDEV</td>
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<tr>
<td>2020**</td>
<td>532</td>
<td>66</td>
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<tr>
<td>2021</td>
<td>494</td>
<td>52</td>
</tr>
<tr>
<td>Annual change</td>
<td>-38</td>
<td>-14</td>
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<td>% Annual Change</td>
<td>-7</td>
<td>-21</td>
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*IAP data for Fall 2020 and Fall 2021, respectively. Includes all enrolments in each program (full and part-time)

** Corrected 2020 data

Graduate enrolments are higher than the previous year at 275 across all programs (representing an increase of 6%). In the three professional programs, MEDI has declined (-13%), MDP has increased (39%), and MEB has increased (3%). This represents an overall increase in professional program enrolments in 2021 (total 131) compared to 2020 (total 124). The MES in Sustainability Management has declined by five students (-7%) and the PhD in Sustainability Management has increased enrolment by 13 students (20%; net increase of eight graduate students).
Looking ahead, the new Bachelor of Sustainability and Financial Management is expected to attract at least an additional 300-400 students in total compliment over the next four years, resulting in enrolments well exceeding 1,000 students per annum across all programs.

Faculty

Dr. Tingting Wu and Zachary Folger-Laronde joined SEED in 2021 on a full-time basis, both appointed at the rank of Lecturer. In addition, SEED welcomed Dr. Amr ElAlfy as a part-time Lecturer. These appointments bring SEED’s faculty compliment to 25 members (including one professor who is 0.5 FTE and cross-appointed to Geography and one professor who is 0.6 FTE). In addition, SEED has one Adjunct Professor; one Professor Emeritus; three affiliated faculty members who are appointed at St. Paul’s University College and who teach in the School; four post-doctoral fellows; one project manager; and several sessional instructors.

Staff

At the end of 2021, the School’s administration team comprised Marion Brown (Administrative Manager), Karen Robertson (U/Grad Admin-INDEV), Cheri Oestreich (U/Grad Admin-ENBUS), Tracey Beirness (Grad Admin-MEB, MDP), Jaiden Cotes (Grad Admin–MEDI, SUSM), John Abraham (Lecturer and INDEV and MDP Field Placement Manager-St. Paul’s), Jon Beale (Manager, Sustainable Development Solutions Network (SDSN) Canada), and Sharon Jones (Program Administrator for the Economic Development Program). Graduate Program Administrator Dragana Kostic was on maternity leave.

Faculty Administrative Roles

In 2021, the following faculty members held administrative appointments within the School and the Faculty: SEED Director, Bruce Frayne; Associate Director Undergraduate Studies, Mike Wood; Associate Directors Graduate Studies, Prateep Nayak and Steven Young; Associate Dean, Graduate Studies, Simron Singh; Associate Dean, Research, Amelia Clarke; and Associate Dean, Strategic Initiatives, Paul Parker. Program Academic Directors: Heather Hall (MEDI); Dan Murray (MEB); and Larry Swatuk (MDP).

Program Updates

SEED houses 8 programs, comprising three undergraduate programs (International Development, Environment and Business, and the new Bachelor of Sustainability and Financial Management); three professional graduate programs (Master of Development Practice, Master of Economic Development and Innovation, and Master of Environment and Business); and two graduate research programs in Sustainability Management (MES and PhD). The PhD in Sustainability Management accepted its fourth cohort of students in September 2021.

COVID-19 Pandemic Impacts

The ongoing global COVID-19 pandemic has posed challenges for teaching and experiential education across all programs. However, we have continued to deliver our courses in all programs and have been able to adapt project and placement/internship activities to the online environment. The only cancellation was the INDEV 617 Field Course (Mexico) which would normally have taken place in
February 2021. It is noteworthy that the INDEV 617 Field Course – Chilika, India was successfully delivered in an online format. The hope is to return to in-person field courses in the coming year(s).

**Undergraduate Programs**

**Environment and Business Program**

Now in its 20th year, the Environment and Business Honours co-op program currently has more than 500 students, including students from Nanjing University of Finance and Economics (NUFE) who complete the final two years of their degree at UW through our 2+2 program. The highlight of the program for many students is the eight-month capstone project that they complete in their final year. Students work in teams with ‘real-world’ clients on a specific sustainability issue related to the organization.

**International Development Program**

The INDEV Program continues to place students on eight-month field placements with World University Service of Canada partner organizations in the Global South as part of their Practice Specialization. Students also continue to opt to undertake their thesis research under the INDEV Research Specialization. The Program continues to successfully host the International Development Speakers Series, providing weekly guest lectures in the Winter Term that are open to students, the broader university community and the public. Since 2012, the program has successfully placed some 250 INDEV students with organizations abroad.

An ongoing challenge is the downward trend in INDEV enrolments. The program is currently under consideration as a result. Consultations are underway with students, alumni, professionals in the field, cognate programs at other universities, our placement partner organizations and our St. Paul’s and SEED faculty and staff. A report is expected to be prepared summarizing the findings in the first quarter of 2022.

**Professional Graduate Programs**

**Master of Development Practice Program**

The Master of Development Practice (MDP), a 16-month professional course-based program, is part of the Global Association of MDP Programs that currently has 35 programs in 25 countries. Experiential learning and field placements are an integral component of the MDP program with an ever-growing network of partners available at grass-roots organizations to international institutions. Since 2013, more than 100 MDP students have been placed with partner organizations overseas. As a member of the Global MDP Association, students enrolled in the University of Waterloo MDP program have had the chance to participate in discussions with experts on the future of sustainable development. The MDP cohort for the 2020-2021 year has secured placements with a diverse set of organizations in Canada and abroad.

Importantly, while the MDP remains an in-person course, the School (with agreement from the GSPA) has made provision to offer a hybrid version of the program to accommodate international and other distance learners under the pandemic. For 2021, all core courses may be completed remotely. This is a pilot that will continue to be offered in the hybrid format to the Fall 2022 cohort and is intended to assess the potential of increasing access to the program for international students, who are an
important target. Enrolments have increased by 39% this year, but a full analysis of the dynamics behind this increase is still to be completed.

In 2021, the field course normally held in Chilika, India was successfully delivered in an online format. The resumption of in-person field courses in 2022 will be dependent on public health conditions as the pandemic evolves.

**Master of Environment and Business Program**

The MEB program continues to offer a high-quality online professional course-based master’s degree that can be completed part-time in three years or full-time in one year. With sustainability fully integrated into all courses the program empowers current professionals to integrate sustainability into their own organization to take advantage of strategic opportunities in the space, or to apply business tools and strategies to advance sustainability across broader community contexts. Online, with smaller class sizes and high instructor student ratios, the MEB program offers an accessible opportunity to advance the sustainability knowledge and careers of our students.

The MEB program continues to see an evolution in terms of the students coming into the program and what each hope to achieve from it. The program continues to see a shift towards students from a financial management background. In addition, the graduating cohort of 2021 included the highest number of graduates (20% of the cohort) applying directly to PhD programs. Together, this evolution helps to reinforce the important role the program plays in facilitating the emergence of future leaders in the field of sustainability management.

**Master of Development and Innovation**

MEDI is a three-term program with a strong focus on experiential learning and using the Kitchener-Waterloo region as a living laboratory to understand the innovation ecosystem and the underlying economic development processes that support it. As part of their course work, students worked with community partners to find solutions to economic development challenges faced by those partners.

The MEDI program was one of the few programs that was back in-person in the Fall. We attended and had a booth at the annual Economic Developers Council of Ontario Conference in Toronto where we connected with many of our alumni. Our students also have exciting capstone opportunities including internships with the Ontario Public Service, and municipal governments as well as applied research projects exploring research parks and best practices for service delivery in the Rural and Northern Immigration Pilot (RNIP) program.

**Economic Development Professional Program**

The Economic Development Professional Program completed its 50th year of course deliveries with a total of 12,415 participants. This 50-year partnership with the Economic Developers Association of Canada has enabled us to train people and build capacity in over 500 communities across all of Canada’s provinces and territories. In 2021, all courses were online with 314 attendees to our free COVID related webinars and 342 in the regular courses and seminars. Thirty-eight specialized speakers contributed to 10 training programs.
Research Graduate Programs

COVID-19 Pandemic Impacts

COVID-19 and the consequent restrictions on field and person-to-person research has created significant challenges for graduate students. In all cases, students’ research plans were halted in March 2020. Students and supervisors have been working together to develop new methods for undertaking research under the current pandemic-related restrictions, with some success. However, uncertainty continues with hope of an easing of restrictions in 2022.

Master of Sustainability Management Program

The Masters in Environmental Studies in Sustainability Management continues to attract strong students that gain an applied research education while supporting the School’s research. Student experiences have included research placements with municipalities and companies, as well as providing opportunities for overseas and local field research. The program is supported with scholarships from the University of Waterloo’s Water Institute, SSHRC graduate awards, Mitacs, and with funds provided under professor research grants. Students in the program have published in the popular press, crafted policy papers, delivered conference papers, and some have authored in peer reviewed journals. A number of graduates are continuing studies in Ph.D. programs.

Ph.D. in Sustainability Management

The School welcomed the fourth cohort of students to the new and innovative doctoral program (established in 2018). There remains very strong interest in the program, which indicates the strong demand for a doctoral program in this newly emerging field, which trains students for the professional and academic markets in sustainability management.

Research Activities

SEED faculty have continued to successfully attract research funding (~$2.7 million in 2021) from major granting agencies, government agencies and private funders, including foundations, NGOs and industry. SEED professors and students (often in teams) continue to publish in a variety of high impact outlets, both academic and professional outlets, as well as contributing to industry and other forms of knowledge dissemination.

Achievements and Impact

While it is not possible to summarize all of the outstanding impacts made by our students, staff and faculty over the past year, below is a small selection of highlights as an indication of the local, national and international reach of our School.

Students

Awards and Achievements

- INDEV graduate, Michelle Ford BES 2014 – recently left Red Cross and has accepted a position as Emergency Management Coordinate/ERT site manager in Winnipeg, Manitoba
• INDEV graduate, Stefan Chan BES 2018 – currently living in Kangirsuk, an Inuit community on the Ungava Bay side of Nunavik, Quebec. He is working as a math teacher for Frontier College and a tutor for the Kativik Ilisarniliriniq School Board.

• ENBUS graduate, Cory Schmidt BES – Works as an Environmental Coordinator at Alexco Resource Corporation. Alexco is the owner and operator of the historic Keno Hill Silver District in Canada’s Yukon Territory, one of the highest-grade silver deposits in the world.

• ENBUS student’s interesting Co-op term: James Foote worked in the Response Readiness Team for Western Canada Marine Response Corporation (WCMRC). The WCMRC is a world-class oil spill response organization tasked with mechanically retrieving spilled oil out of Canada’s West Coast waters. When an oil spill occurs WCMRC is the only marine response organization on the west coast mandated by Transport Canada.

• SUSM Master’s student, Aleks Spasevski, is the Sustainability Engagement Coordinator for the Sustainability Office at the University of Waterloo.

• Sisir Pradhan, a Ph.D. candidate in Sustainability Management, is one of five doctoral scholars to receive the prestigious FISH research grant from WorldFish, which recognizes Ph.D. scholars who are interested in the research of fisheries worldwide.

• Truzaar Dordi, a Ph.D. candidate in Sustainability Management, is the recipient of this year’s prestigious Hurst Legacy Award, which recognizes those who give back to their community.

• MES student, Abrina Bandali is one of two graduate students in the Faculty of Environment that was awarded a KEEN Entrance Scholarship in Fall 2021.

• Congratulations to Ph.D. student, Maryam Mohiuddin Ahmed, who received the J. Alan George Leadership Award.

• Congratulations to Bhabishya Khaniya, Master’s student in Sustainability Management, who received the Davis Memorial Scholarship in Ecology.

• Guneet Sandhu, a PhD student in Sustainability Management, has been awarded the Joseph-Armand Bombardier Canada Graduate Scholarship – Doctoral (CGS D) by the Social Sciences and Humanities Research Council of Canada (SSHRC).

• Tobi Oyewole, a first year Masters of Environmental Studies in Sustainability Management (SUSM) won the United Nations Global Compact (UNGC), through its Sustainable Development Goals (SDG) Pioneer program.

• In fall 2020, David Billedeau and Adeboye Oyegunle, both PhD students in Sustainability Management, received Mitacs Accelerate Award with Mantle314: Climate-related disclosure best practices.

• Sohani Withanage, a Sustainability Management PhD student, received a Mitacs Globalink Research Award at Technical University of Denmark: Method development for measuring food waste in Canadian households.

• Muhammad Koya, a Masters student in Sustainability Management, received a Mitacs Accelerate award to explore how youth employment and climate action were considered in COVID-19 responses.

• Nicholas Palaschuk, a PhD student in Sustainability Management, received a Mitacs Accelerate award to pursue research with private industry partners.

• Sarah Berdowski, a fourth-year undergraduate Environment and Business student, and Shenali Madhanaroonoo, a Masters graduate student in Sustainability Management, along with teammates Kent Chin, in Global Business and Digital Arts; and Iris Guo, in Accounting and Financial Management, achieved 2nd place in the Fighting Climate Change with Innovation - Concept competition.

• Naimi Samuel - Moderated side event for United Nations High-level political forum on Sustainable Development (July 2021), and the Cambridge Leverhulme workshop on Global Careers Delivering the United Nations Sustainable Development Goals (May-June 2021)
• Hafij Khan, SEED PhD candidate, spoke on climate loss and damage and climate finance compensation in the Climate Law and Governance Day 2022 during the UNFCCC CoP26 in Glasgow, UK, co-hosted by the University of Glasgow, University of Cambridge, and Strathclyde University, together with the IUCN WCEL, UNEP, CISDL and other partners. He was elected to represent the 48 Least Developed Countries (LDCs) on the Executive of the UNFCCC Warsaw International Mechanism for Loss and Damage – SEED is quietly very proud of him. He also passed his thesis proposal defense, and is starting his field work on loss and damage in Bangladesh and Nepal.

• Blessing Ajayi, SEED PhD candidate, co-moderated the University of Leverhulme lecture and Distinguished Experts Panel on the World Economy, the SDGs and International Law, featuring the Director General of the World Trade Organisation Dr Ngozi-Okonjo-Iweala, the Vice Chancellor of Cambridge University Prof Stephen Toope, as well as other distinguished international experts, sharing insights and identifying new directions for the global economy in the context of pandemic recovery and the global Sustainable Development Goals.

• Adwoa Appiah, SEED PhD candidate, was competitively selected to give a paper to the Climate Law and Public Policy Conference on “Climate Change, the SDGs and the Law” hosted online by the University of Cambridge, University of Glasgow and Strathclyde University, together with CISDL and other partners. She focused on the how the Green Climate Fund could increase its accessibility to African Banks for financing climate resilience projects in Africa, in the session on Corporate Climate Engagement & Regulation: Advancing net-zero corporate, commercial & financial law & policy, winning a conference prize for her paper.

• Tara Dawn Atleo, SEED PhD candidate, passed her thesis proposal defense, and is completing her research on valuation and co-management of indigenous natural resources. She spoke on a British Columbia panel about socio-cultural valuation of natural resources this year, receiving commendations from the hosts, and has guided and supported our SSHRC research project on contributions of First Nations Treaties with Canada and the UN Declaration on the Rights of Indigenous Peoples (UNDIP) to the global Sustainable Development Goals.

• Elaina Cox, SEED masters student, together with Aminah Beg and Prof Marie-Claire Cordonier Segger, were selected to give a presentation on the UNDRIP and Sustainability in International Law online in a symposium on the UN Declaration on the Rights of Indigenous Peoples and Sustainable Development at the University of British Columbia.

• Nesma Hassan’s poster on Climate Governance & Urban Water Management in the Middle East and North Africaalso won a prize in the Climate Law and Public Policy Conference on “Climate Change, the SDGs and the Law” hosted online by the University of Cambridge, University of Glasgow and Strathclyde University, together with CISDL and other partners.

Staff
• Our administrators – for the heroic achievement of surviving another year of the COVID-19 pandemic and keeping SEED operational: THANK YOU.

Faculty
• Heather Hall - co-applicant on a NFRF Transformation Grant - $14.9 million, entitled Marine Biomass Innovation (MBI) and includes ~$500,000 in direct and indirect funding for UW
and support for up to 15 Masters students and two PhD students at UW over the next 6 years.

- Amelia Clarke, Ilona Dougherty and team - The Youth & Innovation Project continued in its fifth year to influence public policy and organizational strategy on a national scale by working closely with five national non-profits, one Federal government department and six foundations, with the aim of supporting and amplifying positive youth-led social and environmental impact.
- Bruce Frayne, Cameron McCordic, John Abraham, and our UW and global team – Awarded the SSHRC Partnership Grant for the international project South-South Migration and Migrant Food Insecurity: Interactions, Impacts and Remedies (MiFood Project).
- Marie-Claire Cordonier Segger - Awarded Fellowship in Royal Society of the Arts of the UK 2021 and elected Vice-President of the International Law Association of Canada.

**SDSN Canada**

Under Jon Beale's leadership as the SDSN Canada Manager:

- Hosted the Together|Ensemble conference, Canada’s national all-of-society gathering on the SDGs.
  - 700+ attendees, 30+ SDG thought leaders speaking, partnerships with 30 of Canada’s leading SDGs organizations
- SDGs Youth Hubs on 16 member campuses, with 400+ student hub members across the country and a total reach of 3,600+ youth and more than 50 events organized.
- Founding of two communities of practice that are rapidly growing:
  - SDGs Localization with the Tamarack Institute (140+ members joined)
  - SDGs Teaching (64 contacts across the country)
- Continued growth of the SDSN Canada community to 60 members

Prof. Bruce Frayne, Director
April 28, 2022