Annual Report
Associate Dean of Research, Dr. Amelia Clarke

To the General Assembly of the Faculty of Environment
Covering April 1, 2021 to March 31, 2022 Research Activities

Purpose
The activities of the Associate Dean of Research’s office, including the Associate Dean of Research (ADR), are directed towards advancing and supporting research in the Faculty of Environment at the University of Waterloo. This report offers an overview of the research funding in the Faculty of Environment during the award reporting period of April 1, 2021 to March 31, 2022. Some highlights from the past year and an overview of the key research activities of the ADR’s office are also included. The two tables and a figure are attached at the end of the report.

Faculty Research Funding
Research funding is critical for supporting our research costs, graduate students, and infrastructure needs. Funding totals for the reporting period was $13,163,927, broken down as follows:

- Federal $5,849,619, which includes Tri-Agency funds;
- Provincial $1,226,884;
- Industry $2,246,897; and
- $3,840,526 from other funding sources.

See Table 1 for more details. A large portion of the Federal funding amount ($4,538,202) was obtained from Tri-Council agencies (SSHRC, NSERC, CIHR, NCE and TIPS). See Table 2 for details. The overall total research funding for 2021/2022 is higher than each of the last two years. See Figure 1 for details. Donations related to research are now captured in the Faculty’s research totals.

Per capita, the 88 Faculty of Environment professors (based on Assistant, Associate and Full Professors, but not Lecturers) were awarded an average of $150k (see Table 1 for more details). This is higher than last year’s $142k average. Per capita average funding has increased in GEM and SEED compared to last year. Faculty-wide, 14 faculty members have annual research funding higher than $250k.

New Funding Successes – Selected Highlights
The number of proposals submitted from April 1st to March 31st is 152. Per capita, this averages as 1.7 submissions per professor. This is higher than last year’s 1.5 per professor.

Dr. Kelsey Leonard was awarded a new SSHRC Tier II Canada Research Chair in Indigenous Waters, Climate and Sustainability. In addition, the new Caivan Communities Professor, held by Dr. Marta Berbés-Blázquez, started this year. Currently, there are eight Canada Research Chairs, five University Research Chairs, one University Professor, and one Caivan Communities Professor within the Faculty.

We have had continued success in major Tri-Council award processes with new funding being granted through NSERC Discovery Grants (Drs. Helen Jarvie, Jane Law, Jonathan Li, Merrin Macrae), a SSHRC Insight grant (Dr. Peter Johnson), and SSHRC Partnership Development grants (Drs. Dawn Parker, Sarah Wolfe, Martine August, and Janice Barry). This brings our totals to 16 professors with a NSERC Discovery...
Grant, and 25 with SSHRC Insight or Insight Development funding.

New funds for infrastructure were secured through CFI and the Government of Ontario (Drs. Helen Jarvie, Westley Van Wychen, Kelsey Leonard, and Suzanne Kearns), and through NSERC RTI (Dr. Christine Dow).

Some larger grants were successfully secured this year. Dr. Richard Petrone’s wetlands research received a boost with over $1 million in new funding from Environment & Climate Change Canada and Alberta Environment & Parks. Dr. Heather Hall secured $507,000 in new funding as part of a Tri-Council NFRF – Transformation grant focused on repurposing marine by-products. Dr. Sean Geobey was granted funds for a new project called Investment Readiness Program Evaluation, Mapping & Peer Learning with $570,000 from CCEDNet and Mitacs. In addition, Dr. Martine August was awarded a prestigious Early Researcher Award from the Government of Ontario.

Research Centres – Selected Highlights

The Waterloo Institute for Sustainable Aeronautics (WISA) launched on October 5, 2021, under the leadership of Dr. Suzanne Kearns. New funding successes to support WISA's work include $750,000 from NAVBLUE.

Both the Intact Centre on Climate Adaptation and Partners for Action (P4A) research centre renewed their funding this year. The Intact Centre is led by Dr. Blair Feltmate and supported by Intact Financial Corporation. Partners for Action is directed by Julie Wright and supported by The Co-operators Group Limited and Farm Mutual Re.

The Sustainable Development Solutions Network Canada held a Canada-wide whole-of-society event on implementing the UN Sustainable Development Goals. Over 700 people participated. SDSN Canada is managed by Jon Beale.

University of Waterloo’s Interdisciplinary Centre on Climate Change (IC3) welcomed Dr. Sarah Burch as its new executive director in May 2021.

Award Winners – Selected Highlights

Several Faculty researchers were recognized through prestigious awards:

- Dr. Jonathan Li received two awards: The Geomatica award from the Canadian Institute of Geomatics, and The Roger Hoffer Membership Award from the American Society for Photogrammetry and Remote Sensing. He also became a 2022 Fellow with the Engineering Institute of Canada.
- Dr. Jennifer Clapp was named a University Professor by the University of Waterloo.
- Dr. Dan Scott was recognized as one the world’s most highly cited researchers in his field by Clarivate Analytics.
- Dr. Susan Elliott received the Award for Scholarly Distinction in Geography from the Canadian Association of Geographers.
- Dr. Michelle Rutty was recognized with the Julian M. Szeicz Award for Early Career Achievement by the Canadian Association of Geographers.
- Dr. Suzanne Kearns received the Canada’s Most Powerful Women: Top 100 in the Mercedes-Benz Emerging Leaders category from the Women’s Executive Network.
- Dr. Heather Hall was awarded the 2021 Minister’s Award of Excellence in the category of Everyday Heroes, granted by the Ontario Minister of Colleges and Universities.
Progress on the Faculty of Environment’s Strategic Plan

Goal 2 in our strategic plan is related to research. Specifically, it is to: Achieve increased impact through national and global leadership in environmental and sustainability research. Our commitments, and some related progress include:

1. Be at the forefront of defining and researching emergent environmental and sustainability problems that require an interdisciplinary approach. Progress: Expanded research capacity in climate, water and future cities through new hires; expanded programming through the research centres; and led and/or participated in a number of large interdisciplinary grant applications.
2. Enhance inter-Faculty research collaborations, especially in areas that align with the University’s strategic priorities. Progress: Executive Director and an Associate Director of IC3 and an Associate Director of WISE are from Environment; WISA, led by Environment, was launched; and developing a new Centre for Sustainability & Business.
3. Ensure a faculty and research staff complement that supports interdisciplinarity in research and teaching. Progress: New faculty hires, including the Caivan Professor; CERC nomination from Environment; and NSERC Tier II CRC hire underway.
4. Collaborate with external partners in shaping our research agenda and in co-creating and mobilizing knowledge. Progress: Renewal of Intact Centre and P4A; and numerous research partnerships related to the $2.25 million in industry funding and $3.8 million in ‘other’ funding, including at least 14 professors with active Mitacs grants.
5. Develop and implement an internationalization strategy that prioritizes partnerships and participation that increase the impact of our work. Progress: Strategy for India is under development (which is much broader than research).
6. Contribute meaningfully to the achievement of the United Nations Sustainable Development Goals (SDGs) in Canada and globally. Progress: the University released its SDG report that documents SDG-related research; and SDSN Canada hosted an all-of-society conference.

Key Activities of the Associate Dean of Research (ADR) and the Faculty Research Coordinator (FRC)

Some of the main activities of the ADR and FRC are briefly described below:

Electronic Coversheet: Following up from the last report, the new Electronic Coversheet (EC) has been well received amongst researchers. Phase 2 was also launched with enhanced features. The ADR's office was instrumental in providing input and support to the Office of Research, assisting with the process flow to ensure efficiency, while adhering to the University’s guidelines and policies.

Support and approve research grant applications: The ADR and the FRC ensure research proposals are compliant with respect to academic content and financial budgeting. All applications and funding received are tracked in a database. The FRC supports proposal submissions by faculty members and facilitates discussions with the Office of Research when necessary. Requests for in-kind or cash support for proposals, and related letters of support, are also handled by the ADR's office.

Support for the Research Proposal Process: The FRC supports the research proposal process by providing information to researchers about new funding opportunities through weekly notices. The ADR's office serves as the key contact for all faculty members, responding to research-related questions, and facilitating the research process between the Office of Research and the Faculty. The FRC also manages the Research Funding section on the Faculty's webpage, ensuring guidelines and procedures,
research related information, forms, and relevant web links are always up to date. In addition, the FRC tracks and maintains several research related data spreadsheets to enable monitoring and reporting.

**Representation on University governance committees:** The ADR represents the Faculty of Environment on the Senate Graduate and Research Council, the Research Leaders Council, and the Research Operations Committee. The FRC is the staff representative on the University’s Waterloo Awards Committee (WAC).

**Representation on the Faculty of Environment governance committees:** The ADR participates in the Faculty Council, the Faculty’s Administrative Committee, and the Faculty Leadership Information Exchange. In the last fiscal year, the ADR also chaired the FACA process for the Canada Excellence Research Chair (CERC) nomination and served on the Ad Hoc EDI-J Committee.

**A Note on COVID-19**

It has been over two years since the COVID-19 pandemic started, with considerable impacts on how the Faculty managed research activities, on the capacity of our researchers, and on our research activities. Labs functioned at reduced occupancy, and fieldwork activities were significantly impacted by COVID-19 restrictions. The additional burden of creating safety plans, gaining approvals, and improving safety procedures meant that many professors modified their research and travel plans. The ADR’s office gratefully acknowledges the incredible efforts of the researchers, administrators, and staff during this time. The Faculty processed over 25 lab requests and 102 fieldwork requests since April 2020, the last of which was submitted in February 2022. While research has now resumed, with the exception of some international travel, the impact of the pandemic is ongoing. Many grants have been extended, changing fundraising cycles, impacting amounts of funding for students and research staff, and requiring adjustments to the research itself.

**Acknowledgements**

The ADR would like to thank Dr. Neil Craik for his role as Acting ADR from January to August 2021. Much appreciated! Also, a special thanks to Sandra Ramautarsingh, the Faculty Research Coordinator, who continues to provide valuable administrative and communication support to the ADR and all ENV’s faculty members.

The ADR would also like to acknowledge all professors and other researchers in the Faculty of Environment, and thank them for another successful year despite the challenges of the Covid-19 pandemic. Their ongoing efforts enable the Faculty to engage in impactful research, support meaningful sustainability progress, train HQP, and ensure graduate students receive research funding.

Thanks are also extended to those who have participated in research-related committees. These include Drs. Susan Elliott, Neil Craik, Merrin Macrae, Stephen Murphy, and our staff representative, Sandra Ramautarsingh who serves on the University’s Waterloo Awards Committee (WAC). They also include those who served on ad hoc committees for CFI, CFREF, CERC, etc.

The ADR is also grateful to Dan Beaver, Neil Carnegie, Mary Burden, and Faye Schultz for all their incredible work supporting the resume research functions within the Faculty. Finally, sincere appreciation is extended to all department/school Chairs and Directors, and their administrative staff, who continue to support the research process; from facilitating fundraising, to processing research expenses. We appreciate what you do!
TABLE 1: FACULTY OF ENVIRONMENT- RESEARCH AWARD SUMMARY

| Source: Research Systems and Analytics (award reporting year is from April 1, 2021 to March 31, 2022). |
| *Note, data show the unofficial numbers available on April 27, 2022.* |

<table>
<thead>
<tr>
<th>Source</th>
<th>Federal (excluding Tri-Council)</th>
<th>Federal Tri-Council</th>
<th>Industry</th>
<th>Other</th>
<th>Provincial</th>
<th>Total</th>
<th>Average per professor (per capita)</th>
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<tbody>
<tr>
<td>GEM (Geography &amp; Environmental Management)</td>
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<td>$2,211,813</td>
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<td>-</td>
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<tr>
<td>Total</td>
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<td>$2,246,897</td>
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<td>$1,226,884</td>
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### TABLE 2: FACULTY OF ENVIRONMENT - TRI-AGENCY AWARDS

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<th>NSERC</th>
<th>SSHRC</th>
<th>NCE</th>
<th>TIPS</th>
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<tr>
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<td>-</td>
<td>-</td>
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*Source: Research Systems and Analytics (award reporting year is from April 1, 2021 to March 31, 2022).*

*Note, data show the unofficial numbers available on April 27, 2022.*
Source: Research Systems and Analytics (award reporting year is from April 1, 2021 to March 31, 2022).

* Note, total for 2021/2022 shows the unofficial number available on April 27, 2022. All other data show updated official numbers for past years.