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MEMORANDUM

ATTENTION Senate
FROM Wade Parkhouse, Provost and Vice-
President Academic, and Chair, SCUP
DATE December 7, 2022
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RE: External Review Report for the Department of Geography (SCUP 22-31)

At its meeting on December 7, 2022, SCUP reviewed and approved the Action Plan for the Department of Geography that resulted from its external review.

The Educational Goals Assessment Plan was reviewed and is attached for the information of Senate.

Motion: That Senate approve the Action Plan for the Department of Geography that resulted from its external review.

C: T. Brennand, N. Krogman



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MEMORANDUM

ATTENTION Wade Parkhouse, Chair, SCUP **DATE** November 23, 2022
FROM Kevin Oldknow, Senior Advisor, Academic **PAGES**
Planning
RE: External Review of the Department of Geography

Attached are the External Review Report and the Action Plan for the Department of Geography. The Educational Goals Assessment Plan is included, for information only, with the Action Plan.

Excerpt from the External Review Report:

"The Department of Geography, Simon Fraser University (SFU), is highly rated among similar departments, despite its comparatively modest number of faculty. SFU Geography is consistently rated in the top 51-100 for geography subject matter in the world (QS and Shanghai indices) and is amongst the top 7 departments in Canada. It is the view of the external reviewers that SFU should (continue to) recognize the extraordinary quality of the faculty and the programs of the Department of Geography, and ensure they continue to be nurtured."

Following the site visit, the Report of the External Review Committee* for the Department of Geography was submitted in June 2022. The reviewers made a number of recommendations based on the Terms of Reference that were provided to them. Subsequently, a meeting was held with the dean, Faculty of Environment, the chair of the Department of Geography, and the director of Academic Planning and Quality Assurance (Provost's Office) to consider the recommendations. An Action Plan was prepared taking into consideration the discussion at the meeting and the contents of the External Review Report. The Action Plan has been endorsed by the department and the dean.

Motion:

That SCUP approve and recommend to Senate the Action Plan for the Department of Geography that resulted from its external review.

*External Review Committee:

Joseph R. Desloges, University of Toronto (Chair of External Review Committee)
Monica E. Mulrennan, Concordia University
Claus Rinner, Toronto Metropolitan University (formerly Ryerson University)
David Green (internal), Simon Fraser University

Attachments:

1. External Review Report (June 2022)
2. Department of Geography Action Plan
3. Department of Geography Educational Goals Assessment Plan
4. Feedback on Educational Goals Assessment Plan

cc Naomi Krogman, Dean, Faculty of Environment
Tracy Brennand, Chair, Department of Geography

Review of the Department of Geography, Faculty of the Environment, Simon Fraser University, BC

June 2, 2022

Reviewers' names and affiliation:

Professor Joseph R. Desloges

Department of Geography and Planning
Department of Earth Sciences
University of Toronto

Professor Monica E. Mulrennan

Department of Geography, Planning and Environment
Associate Vice-President Research
Concordia University

Professor Claus Rinner

Department of Geography and Environmental Studies
Toronto Metropolitan University (formerly Ryerson University)

The external reviewers would like to sincerely thank Professor David Green, Department of Biology, Simon Fraser University, for input and collaboration before and during our site visit.

1. Review Summary

The Department of Geography, Simon Fraser University (SFU), is highly rated among similar departments, despite its comparatively modest number of faculty. SFU Geography is consistently rated in the top 51-100 for geography subject matter in the world (QS and Shanghai indices) and is amongst the top 7 departments in Canada. It is the view of the external reviewers that SFU should (continue to) recognize the extraordinary quality of the faculty and the programs of the Department of Geography, and ensure they continue to be nurtured.

Sections 2 to 7 below contain detailed recommendations around academic programs, research, administration/governance/space and future plans. The summary here is a high level synopsis of those recommendations.

In all aspects of teaching, research and complement planning in SFU Geography, the Review Committee recognizes and encourages a systematic approach that engages Indigenous and racialized communities in the mission of the department. An Indigenous hire is one aspect of this approach and should remain a top priority. We applaud the full range of curriculum that is

offered in undergraduate and graduate programs across Human Geography, Physical Geography and GIS, and new program innovations in Urban Change and Climate and Society. We judge undergraduate course and program enrolment to be good and found support for this opinion. Should enrolment concerns persist or resurface, the Department should proceed with targeted recruitment at the feeder colleges, development and promotion of its minor offerings, and/or designating additional courses as breadth requirement for students in other majors across SFU. Virtual course offerings in some areas may be popular but we heard these should be limited. Geography has made considerable accomplishments in educational goal assessment. We believe this is one factor in the very positive commentary we heard from selected undergraduates. We recommend on-going curriculum mapping and goal alignment especially with the arrival of new faculty.

A range of positive comments was received on the mentorship model of graduate teaching and supervision. A standalone graduate course on Theory/Methods would better support the preparation and cohort development of Human Geography students. If there is undergraduate enrolment pressure, the Department is encouraged to explore the option of cross-listing or coupling senior undergraduate courses with graduate level courses. The Department would benefit from a strategy on how a modest growth in graduate programs will be achieved across the three programs. We believe there is the need to closely monitor rates of completion at the Master's level. We strongly recommend that the Department review their TA workload and work with the Faculty and SFU to develop an institutional commitment to a minimum funding policy for graduate students, with dedicated funding packages to students from equity seeking groups.

The committee was impressed by the extent of the engagement of research by faculty and students at all levels. We agree with the idea of better articulating and communicating research strengths to internal and external (world) communities. The Department is encouraged to carefully support the establishment of early career researchers, including, for example, as part of any strategy to grow graduate programs. An Indigenous hire could ideally be part of a strategic cluster hire within the Faculty. We recommend that the proposals to create a Climate Futures Institute and a City Institute continue to be explored but also carefully assessed to ensure they respond to, and are measured against, clearly defined objectives.

Access to technical support in the discipline of Geography is critical to the success of teaching and research programs. The Department should continue to clearly articulate its technical needs in terms of both technical competence and staffing time and advocate for its share either within the Department or as part of an equitable shared services model in FENV. We recommend that the Geography Department move towards regularizing administrative staff positions to full time (1.0 FTE).

The Review Committee corroborates the Department's need for safe, inviting, and functional GIS lab space and computer hardware. Specifically, there needs to be a budgeting process for periodic (every 3-4 years) hardware upgrades. The current renovations to teaching, lab and technical staff space (FENV positions) are welcomed. We recommend that investments

continue and that the Department use every possible means to plan for equipment replacement, lab renewal and other high priority initiatives. Funding for the planned improved social spaces should continue to be pursued and supported. One strategy is shared functioning space. There needs to be a Faculty and institutional commitment towards innovative renovation approaches in older academic buildings.

The Department needs access to an open and transparent governance structure within FENV that facilitates collaboration rather than competition with other units. We recommend that Chairs/Directors perhaps meet alone on selected occasions to work out some of the inter-unit specific issues related to curriculum planning, research initiatives and complement planning. We recommend that cross-appointed faculty continue to maintain equitable involvement across all their units that benefits not only teaching and research success, but also serves student interests well under the umbrella of “environment”. A more robust approach to establishing an alumni committee that has a significant volunteer base might prove fruitful.

The Review Committee notes that the Department has a very good approach to carefully considering its future plans around academic programs, research, student recruitment, faculty complement planning and space. We are in full support of the stated goal that “contemplate(s) research synergies rather than disciplinary breadth [that sets] the Department on course to become a leader at the nexus of climate and environmental change and society, and in the areas of urban change and racialization”. We understand the trajectory to be one of pivoting to build synergistic strengths in research clusters and increased depth in key areas in addition to securing a generalized goal to teach the breadth of the discipline. We were encouraged that the faculty renewal plan identifies, for each planned position, numerous potential synergies with other hires and intended hires as well as with units elsewhere within SFU while also addressing many of SFU’s strategic research priorities.

As of March 2022 we note Geography has 21.75 FTE and 24 headcount faculty contributing to departmental programs and research. As with many academic units, the “context” of new faculty positions is articulated primarily as a deficit narrative. The Review Committee is familiar with the challenges of faculty loss, transfers, secondments, and so on. Assuming that all units in the FENV (and SFU in general) face the same challenges, we see working closely and collaboratively with the Dean of FENV and other FENV units as important to make strategic gains both within the Department and in collaboration with other units. Future plans around any changes in cross appointments carry potential benefits and risks. Each situation benefits from an atmosphere of collaboration and coordination, and from taking pride in established strengths and achievements and leveraging them to create further opportunities and strategic gains.

The Review Committee agrees that Advancement/Alumni relations in Geography departments (e.g., establishing endowments for scholarships, chairs, etc.) can be challenging. It is important to cultivate and be prepared for opportunities in Geography. This should be an important initiative (for the Strategic Planning Committee?) and not relegated to an occasional activity. Finally,

the Review Committee recognizes the importance of strong leadership in advancing the interests of the Department within FENV, within SFU and in the national/international landscape of Geography. We applaud the successes of leadership over the last several years and recognize that the involvement of a range of faculty in all those efforts bodes well in terms of leadership succession.

2. Undergraduate Programs

The Department of Geography at SFU offers a range of undergraduate and graduate programs. Core undergraduate majors include Human Geography (BA), Physical Geography (BSc) and Global Environmental Systems (BEnv), each with an honours option. The program structure and content are appropriate and of high quality. In addition, the Department is involved in a joint BSc in Geographic Information Science housed in the School of Computing Science and a joint BA or BBA in Business and Geography with the Beedie School of Business. Students enrolled across the **spectrum of geography** have appropriate course requirements spanning the breadth of the discipline. The integration of natural and social sciences along with geospatial methods and techniques in teaching and research is a core feature of successful Geography departments and SFU Geography is an admirable example.

The **number of students** in the core programs has fluctuated between a low of just over 350 in 2009/10 to a high just below 500 in 2013/14 and was on a slight downward trend since then. In the last two years captured in the self-study addendum, a marked increase in program registrations back to over 500 was noted, owing to a steady increase in the BEnv and a jump in the BSc. The Review Committee considers these to be healthy program enrolments in line with comparable departments in Canada (and much higher than most US Geography departments). With an average **completion time** of about 13 terms in 2018/19, Geography's BA students are in line with the university metric while the BSc graduates are almost two terms faster.

Two recent **student surveys** yielded satisfactory results across all program aspects, with only limited concerns regarding course offerings, access, and scheduling. Students look to Geography to secure employment, gain general knowledge, and prepare for life. An excellent "85% would recommend SFU Geography to their friends and relatives, with another 11% yet undecided" (Appendix 21, page 515). According to the 2019 student survey, almost one half (46%) of Geography students transferred from one of the BC "feeder colleges" rather than entering SFU directly. This provides opportunities for targeted recruitment efforts if enrolments were not satisfactory, yet it also creates a reversed student "population pyramid" with disproportionate demand for smaller upper-division classes at the expense of more economical lower-division classes.

The BSc program has enjoyed recent program growth with about 70 majors. This has not been the trend in **Physical Geography** programs elsewhere in Canada so the Department at SFU has done well. We suspect the mix of research and teaching stream faculty has been a significant factor in this positive outcome. The BSc program requirements serve not only as essential

physical geography curriculum/learning outcomes but also meet the knowledge requirements for the P.Geo designation. Courses in Geography, Environmental Science, Earth Sciences and other sciences serve to complete the program requirements. Geography has done well in navigating arrangements both within FENV and with other Faculties to ensure enrolment space for its BSc students. Our understanding is that this is reciprocal. This is partly facilitated by cross-appointments of Geography faculty with other units – an approach that is utilized at other Canadian universities. While the goal of teaching (and research) expertise across all sub-areas of Physical Geography is laudable (climatology, hydrology, geomorphology, remote sensing, soils, biogeography), the Department may need to consider focusing on key strengths and complement program teaching needs via partnerships within FENV and other units (e.g., Earth Sciences, Biology). The Dean’s office should continue to help Geography facilitate this through transparent research/teaching plans across all FENV units and inter Faculty negotiations. The extra department-based costs of offering lab and field science teaching-learning needs to be supported and recognized through Faculty and University funding models.

Geography courses provide numerous opportunities for **experiential learning**. The self-study highlights a range of experiences from campus outings to field trips, along with class projects, physical and computer lab work, and guest speakers. Field trips were highlighted by undergraduate students as important. The development of an endowment fund to make student access to field activities more equitable is commendable. It is noteworthy that Geography is supportive of an international field school. Arranging safe and productive international experiences, especially in a post-pandemic environment, takes considerable resources and expertise. We recommend that the Department make arrangements for Geography-specific opportunities through the existing SFU study abroad office.

Geography students also participate in SFU’s Science and Environment **Co-op Program** managed by a staff coordinator at the FENV level, where the Geography majors occupy between approximately 30% and 45% of all FENV student placements. A variety of employers and job titles were reported with a focus on public-sector placements in the lower mainland. Geography should continue to encourage its students to pursue the co-op program and explore placements across sectors and geographic locations. From a student survey, it appears that career night events suffer from low attendance but this is consistent with the Review Committee members’ experience and might improve with growing interest in virtual or hybrid events.

Geography offers a very successful 6-course GIScience **certificate** with the number of declared enrolments doubled during the original reporting period and further increased in the last two years, to 134 students, as well as an 8-course Urban Studies certificate with registrations fluctuating between 30 and 40. The Committee’s understanding is that certificates at SFU are primarily offered to Geography’s own majors. Thus, certificates provide a valuable transcript notation for students but do not add course enrolments or program registrations for the Department.

In contrast, **minor programs** provide an alternative access path to Geography and can increase demand for Geography offerings. The existing minors in Geography and Physical Geography experienced a moderate increase from near 40 to around 50 students over the last eight years. In 2021, Geography started a GIScience minor that has the potential for significant success with students from a variety of majors within FENV and across campus. The addendum self-study also reports the approval of a multidisciplinary minor in Climate Change & Society with required and elective courses drawn from Geography and other FENV units. Given the doubling of minor programs from two to four, we recommend a measured, organic approach to additional initiatives such as the envisioned minors in food security, water security, and Quaternary science as well as new programming at the Surrey campus. We also note that current and future curriculum initiatives will require a collaborative rather than competitive environment within FENV and between Faculties.

The two **joint majors** were highlighted in the self-study report and discussed during the site visit with respect to their unsustainably low registrations. The BSc in Geographic Information Science jointly offered with the School of Computing Science is a demanding, well-conceived 4-year degree, yet the lack of student interest suggests pursuing alternative options internal to Geography. Already, the GIS minor should be attractive to students majoring in computing science while the GIScience certificate encourages students within Geography to take computing-heavy electives. Similarly, the existing Geosystems & GIScience stream in the BSc program could be emulated in the BA and BEnv programs, and the proposal for a stand-alone BEnv in Spatial and Geographic Information Science from 2014 be revived with the full GIScience faculty complement on board. A similar picture emerges regarding the BA/BBA in Business and Geography. Despite excellent career prospects, the program seems not to be viable in the present form. A reconfiguration that is envisioned in the addendum report should clearly define the learning outcomes and career pathways for graduates along with firm commitments from the collaborating schools and their deans.

Geography has developed a Notice of Intent (NoI) for a **BA in Urban Change (major and minor)**, which was approved by SFU's Senate Committee on University Priorities on 5 January 2022. An issue arose from the simultaneous discussion of an NoI for a BA in Urban Communities and Society to be housed in the Urban Studies Program within the Faculty of Arts and Social Sciences. The programs were viewed as sufficiently different and complementary to an Urban Studies program in development at the University of British Columbia. Therefore, the committee encourages the Department of Geography and FENV to proceed with the development of a full proposal at their earliest convenience.

Another initiative we expect in the near future concerns the integration of Indigenous elements within the Geography curricula, in concert with SFU's and FENV's approaches to decolonization and **Indigenization**. Starting with the educational goals, Geography needs to articulate how the aim to educate students "to be informed global citizens who are sensitive to issues of reconciliation, equity, diversity and inclusion" will be achieved within each of its programs. Include details of how and where within the curriculum students will be able to demonstrate this achievement. A curriculum mapping exercise may help to track Indigenous content across

all programs. The requirement that all majors take at least one course with an Indigenous focus, while students in the Human Geography BA and Global Environmental Systems BEnv will have the option of taking more elective courses with Indigenous content, is a positive development. To support this process of decolonizing the curriculum, particularly in the absence of Indigenous faculty members, the unit may need to engage an Indigenous consultant with expertise in Indigenous methodologies and curriculum development.

Concerns about **low course enrolments** seem to have been overcome with a recent boost in headcounts noted in the addendum to the self-study report. Should enrolment concerns persist or resurface, Geography has a variety of options to strategically market its programs, including targeted recruitment at the feeder colleges (including international students), further development and promotion of its Minor offerings, and designating additional courses as breadth requirement for students in other majors across SFU. Many Geography departments historically had to adjust the balance between program course offerings and service teaching in one direction or the other.

Recommendations derived from the above observations:

- 2.1** The committee applauds SFU Geography for maintaining and integrating research and teaching competence across the spectrum of Human Geography, Physical Geography, and Geographic Information Science, and encourages them to continue advocating for the necessary resources and conditions to sustain a viable Geography department.
- 2.2** The Department is encouraged to monitor the breadth and depth requirements for its Physical Geography degree in conjunction with the P.Geo designation, and secure partnerships within FENV to support this goal.
- 2.3** The committee recommends critically reviewing the BSc in Geographic Information Science and instead developing/strengthening alternative offerings within the Department such as the existing GIS minor and GIScience certificate.
- 2.4** If proceeding with the envisioned reconfiguration of the BA/BBA in Business and Geography, the Department should clearly define the learning outcomes and career pathways for graduates along with firm commitments from the collaborating units and their Faculty deans.
- 2.5** The committee encourages the Department of Geography and Faculty of Environment to proceed with the development of a full proposal for the BA in Urban Change (major and minor) at their earliest convenience.
- 2.6** The Department is encouraged to take a systematic approach that engages Indigenous expertise to integrating Indigenous elements throughout its curricula.
- 2.7** Should enrolment concerns persist or resurface, the Department should proceed with targeted recruitment at the feeder colleges, development and promotion of its Minor

offerings, and/or designating additional courses as breadth requirement for students in other majors across SFU.

- 2.8** As with all academia in a post-pandemic world, Geography now has the opportunity to self-determine and consider if some virtual or hybrid course offerings might continue. Goals of accessibility and quality/integrity are essential but also, to some degree, are enrolment targets. We encourage the Department to plan strategically, in the context of any FENV or SFU guidelines taking into account student preferences. We heard concerns from undergraduate students about too many online courses.
- 2.9** Geography has achieved considerable accomplishments in educational goals assessment. We recommend on-going curriculum mapping and goal alignment especially with the arrival of new faculty.

3. Graduate Programs

The Department of Geography offers three research-centered graduate degrees, two at the master's level (MA, MSc) and one doctoral program. All three take a mentorship-based approach with **minimal coursework requirements** for Master's degrees and none for PhDs. The publication success of graduate students is no doubt a positive outcome of this approach. The SWOC analysis, based on the Townhall feedback exercise, identifies their mentorship/apprenticeship model, supervisory support, and the limited course requirements as strengths, but "few/not enough standalone graduate courses" as a weakness. Our meeting with graduate students confirmed that the minimal course requirements were favourably received by most students, with the exception of Human Geography students who expressed a strong desire for a standalone Theory and Methods course. Beyond the pedagogical value of the course itself, this course was regarded as essential to cohort development, a need that is perhaps more readily met for students in Physical Geography and Geographic and/or Spatial Information Science through their access to research labs. Indeed, this was confirmed by the Townhall feedback exercise, which identified "research lab culture" as a strength, linked explicitly to "excellent support and cohort experience for grad students".

We have read and heard that a barrier to offering more graduate level courses is pressure for continued growth of undergraduate enrolment. As considered above in our assessment of undergraduate programs and enrolment, we did not see evidence for significant pressure. Even when such pressure exists, a common strategy to enable more graduate level offerings is to couple graduate course sections with 400-level undergraduate courses. While we are not necessarily recommending that in this case, and indeed this approach may already be in use, it is a strategy used by many Geography programs in Canada. The challenge is maintaining a distinctive graduate level component of such coupled courses. We also observed a disconnect between the Department's understanding of the expectations of senior administration regarding the pressure to grow their undergraduate enrolment and what we heard from senior administration. Our conversations with senior administrators suggested no major concern

about growth of student numbers in Geography. There was, however, an acknowledgement that a shared understanding of the current funding model for undergraduate and graduate students was lacking.

We commend the Department for developing **educational goals** for each of its programs. We would, however, see added benefit to articulating goals that go beyond the very high level goals currently applied to each of the three programs. Furthermore, given the broadening of career paths available to graduate students over the past decade, programs need to go beyond conventional goals to take account of opportunities for additional training in professional skills (both technical and soft). The availability of professional workshops was acknowledged in the Townhall feedback, however, the integration of this training into the educational goals of their academic programs would allow students to appreciate its value and relevance more fully. There are additional educational goals, such as those related to graduate student exposure to teaching opportunities and their participation in interdisciplinary research collaborations, that could also be recognized and supported. We note that students were positive about the quality of career advising they had access to, including on non-academic career paths – but there seems to be a demand to make this advising and opportunities for professional development more regular and less ad hoc.

A total of 59 graduate students are currently registered, 25 of whom are masters level and 34 PhD level. The **size of the graduate program** has been relatively stable over recent years. One notable change has been the shift in the relative size of the MA versus MSc programs; before 2009 there were higher admissions to the MA, but since then, with a couple of exceptions including 2019-20, the MSc has had higher admissions. There are currently twice as many MSc students in the program as MA students. We share the Department's optimism about the likely growth in the MA program as new faculty members in Human Geography get established.

With respect to **diversity**, the Department has a great international mix of students; 39% of current students are international and originate from 14 different countries. Our understanding is that there are no differential tuition fees for this cohort. Unfortunately, we didn't get a sense of the type of supports available at the institutional or Faculty level to international students but we expect restrictions related to the COVID-19 pandemic have been particularly isolating for these students. The mentorship model with minimal course requirements may also contribute to limited opportunities to foster connections with others. To address this, we strongly urge the Department to find ways to mount more graduate seminars as well as to support other opportunities for students to come together. We share the Department's concern about the low percentage of female students in the PhD but are encouraged that 80% of students admitted to PhD in 2021 are female. An additional consideration, related to diversity, should be the extent to which the Department attracts (and retains) students who are representative of the diversity of the population of the Metro Vancouver Region.

The Department's aspiration to **grow the size of the graduate program** to 70 students seems feasible; this would involve an increase from a current average of 2.6 students per research-active faculty member to 3 students per research-active faculty. Given the high calibre of

faculty members in the Department, the ability to attract and retain greater numbers of students is unlikely a limiting factor to growth. We respect the Department's commitment to a mentorship model of graduate education and their desire to improve the quality of the student experience through greater cohesion. Since most thesis-based graduate programs involve a mentorship model, it would be useful (for both faculty and students) to clarify what their particular approach involves and how it is distinctive. It might also be worth considering where the modest growth in the size of the graduate program should occur (i.e., targets for each of the 3 programs) to ensure optimal benefits/value for faculty members and each program. For example, should the number of PhD students be increased from just over 50% of the graduate program or would the expected recovery of admissions to the MA program absorb most of the growth?

Degree completion times since 2002 are 8.8 (2.9 years) for Master's and 16.5 (5.5 years) for PhD students. While the PhD rates are relatively steady, the Master's rate has varied from a low of 6.6 (2.2 years) in 2012/13 to a high of 12.4 (4.1 years) in 2018/19. We were surprised that this was not underscored in the self-assessment report. Greater acknowledgement of a problem with the rate of completion at the Master's level is needed to help target an appropriate response. Greater clarification on a policy and method by which graduate students can apply for extensions to their degree program owing to COVID-related and other delays is also recommended.

We are satisfied with the Department's view that their doctoral milestones are appropriate. At the same time, we fully support their efforts to offer greater flexibility to qualifying examination options to accommodate the needs of graduate students. Additional measures that would offer more flexibility and support, particularly to students with caregiving responsibilities, medical conditions or other special circumstances, should be identified and given serious consideration.

Related to degree completion time is the issue of **graduate student funding**. We were astonished, particularly given the high cost of living in the Metro Vancouver Region, that a base level funding package is not available to students and that funding offers range from \$9000 to \$36,000, with potentially staggering equity implications. While students seem to have good success receiving scholarships, the overall funding model is very broad with no guaranteed minimum; indeed, the rising cost of living means that even those who are on federal scholarships must struggle to make ends meet. Furthermore, the TA hour commitments seem very high at up to 420 hours per year. Combined with these excessive TA hours, we can only imagine how many students must have to take part-time jobs, particularly those with funding offers as low as \$9k per year (none in 3rd year of master program?). It seems very surprising then that funding was not mentioned as a weakness in the Townhall exercise; on the contrary, improved funding for graduate students was identified as a strength! We assume this optimism was triggered by the introduction of BC Government scholarships funding in 2019. It also raised for us a potential equity issue about the extent to which parental support, in the absence of other supports, becomes an essential pre-requisite for successful and timely completion of a graduate degree (perhaps an undergraduate one too!). We fully acknowledge that the problem of adequate graduate student funding is not unique to SFU Geography. Graduate funding is a

joint exercise between Departments, Faculty and the university, informed by the availability of provincial and federal scholarships. Notwithstanding this, we strongly urge SFU to make an institutional commitment to offer guaranteed minimum funding for all graduate students. We also recommend that dedicated funding packages be made available to equity seeking groups, particularly Indigenous and Black students.

In response to the previous departmental review, a proposal for a premium-fee “Graduate Certificate in GeoInformation (or Spatial & Geographic Information Science)” was drafted in 2014 but never implemented due to limits in corresponding faculty complement. While it may be a good time to revisit this proposal with its potential to lead to a professional Master’s degree in SIS/GIS, we caution the department to secure tenure-track faculty buy-in to support the academic quality of such a program; clarify the budget model under which premium-fee offerings would run within FENV and SFU; and examine the intended career preparation in comparison to the department’s existing curriculum.

Recommendations derived from the above observations:

- 3.1** The committee applauds SFU Geography for the success of the research/mentorship approach they have taken in their graduate programs and recommends that they maintain their commitment to the quality of these programs.
- 3.2** The Department is strongly encouraged to create a standalone graduate course on Theory/Methods to better support the preparation and cohort development of Human Geography students.
- 3.3** The Department is encouraged to explore the option of cross-listing or coupling senior undergraduate courses with graduate level courses to address a need/desire for more course offerings at the graduate level.
- 3.4** We recommend that the Department further develop their educational goals to encourage and take account of the broader opportunities for learning and experience available to students.
- 3.5** We recommend that the Department maintain its commitment to enhancing the diversity of their student population and seek opportunities to engage the diversity of knowledge, experience and perspectives reflected within it as well as measures to ensure SFU Geography is an equitable and inclusive environment for all graduate students.
- 3.6** We suggest that the Department provide faculty and graduate students with clearer guidelines and expectations related to mentorship.
- 3.7** We recommend that a strategy be developed for how a modest growth in graduate programs will be achieved across the three programs, with special consideration given to supporting career advancement of early career faculty members.

- 3.8** We recommend that the Department closely monitor rates of completion at the Master's level and develop targeted measures to improve them, with carefully attention to potential impacts on equity and accessibility. Greater clarification on a policy and method by which graduate students can apply for extensions to their degree program owing to COVID-related and other delays is also recommended.
- 3.9** We strongly recommend that the Department review their TA workload and work with the Faculty and SFU to develop an institutional commitment to a minimum funding policy for graduate students, with dedicated funding packages to students from equity seeking groups.

4. Faculty and Research

Research is accurately described within the Self-Study Report (2020, page 38) as “a vibrant enterprise”. In addition to the active research profiles of faculty members (and post-doctoral fellows), this includes undergraduate participation in research linked to research awards and work study opportunities, graduate student involvement in research through fieldwork, RA-work and opportunities and encouragement to publish, and teaching faculty who are committed to research, including pedagogic research. This whole of Department engagement in research has clearly supported the development of **a strong culture of research**.

In terms of research interests, the Department has identified **six research clusters** as part of a recent effort to rebrand the Department. We strongly support this approach, in principle (see Section 7 for discussion on how to leverage the approach more), as it lends visibility to the Department's core research strengths at the same time as serving as a framework for strengthening interdisciplinary collaborations and informing academic curriculum. As with the whole of Department engagement in research, we see this integration and alignment of the Department's research strengths with their undergraduate and graduate programs they offer as a sound strategic approach.

The Department's research align with four of the six research opportunities (challenges) and two of the four research clusters highlighted in the university's **2016-2022 Strategic Research Plan**. Not surprisingly, all but one of the Department's own research clusters contribute to the university's environment & sustainability priority (Challenge 1). In addition, several Departmental research clusters contribute to each of the human health (Challenge 3), civil society (Challenge 4), and technology (Challenge 5) priorities. In fact, one could argue that Geography also enriches Challenge 2, when it comes to measuring and predicting natural phenomena as well as cultural heritage, and Challenge 6, as documented in the unit's innovative technology training and student involvement in community-based learning and research. Furthermore, the Geography participates in the Strategic Research Plan's big data and community-based research clusters.

We agree with the Department's self-assessment of its **research funding** as "healthy". We were particularly impressed that the percentage of tenure track faculty with grants is above 80%. We also note that funding has been across the full range of grant sources, with good success, at Tri-Council. We are not concerned about the dip in research funding in recent years and agree that recovery is likely as new and recent hires get established. The early career researchers we spoke with expressed satisfaction with the level of support available to assist them in grant writing process.

With respect to **research output**, we agree that productivity has remained high overall and are not concerned by a slight stall in quantitative output. We also found quantitative differences in output across the Department to be consistent with trends elsewhere and share the Department's assessment that projections for the next 7 years look positive. We also agree that faculty publish well, with regular contributions to some of the most highly ranked, competitive journals in the discipline and in cognate fields.

While the assessment of **research impact** is a nebulous exercise, fraught with limitations, we are in full agreement with the Department's self-assessment (and the data that informs it) "that SFU Geography is punching above its weight in terms of research impact" (2020, page 42). Their strong performance, as measured using conventional analytics, such as the Hirsch or H-index, is all the more impressive in the context of their excellent service record (e.g., editorship and editorial boards) and their sustained commitment to community engagement.

In terms of **strategic priorities**, we encourage the Department to persist in their efforts to secure research chairs. We note the recent success of two Tier II CRC's. While the practice of awarding CRCs to external candidates poses challenges for recruitment, it also offers opportunities for recruitment of top researchers, particularly given the Department's excellent research reputation (not to mention its collegiality and other strengths). A fairly glaring gap currently, and one that is fully acknowledged in the self-assessment report (2020: page 49), is the urgent need to hire a research chair or faculty Indigenous scholar. Indeed, given the challenges of creating the conditions for Indigenous (and other racialized faculty) to thrive we would strongly recommend that this hire be part of a strategic cluster hire within the Faculty (ideally) but if not across the university. With respect to the development of research centres or institutes, while neither the report nor our conversations offered an opportunity to clarify what the value of these are within the SFU context, the proposal to create a Climate Future Institute and a City Institute strike us as nicely aligned with the broad rationale informing the creation of research clusters.

Recommendations derived from the above observations:

- 4.1** The committee was impressed by the extent of the engagement of research by faculty and students at all levels and recommends that the Department continue its efforts to sustain a strong culture of research that attends to research quality, impact and engagement.

- 4.2 The committee agrees with the Department's assessment that they could do a better job articulating and communicating their research strengths to the external world. We recommend that the Department take well-deserved pride in their successes and achievements and communicate them more effectively to the Faculty and SFU community and beyond.
- 4.3 While the committee is not concerned by a recent dip in research funding success, it is recommended that careful consideration be given to measures to support the establishment of early career researchers, including, for example, any strategy to grow graduate programs.
- 4.4 Given the excellent and growing reputation SFU Geography has, we recommend that the Department continue to work closely with the Faculty and university to secure CRC positions.
- 4.5 The committee strongly recommends that the hire of a research chair or faculty Indigenous scholar within SFU Geography be prioritized, ideally as part of a strategic cluster hire within the Faculty.
- 4.6 We recommend that the proposals to create a Climate Futures Institute and a City Institute continue to be explored but also carefully assessed to ensure they respond to, and are measured against, clearly defined objectives (e.g. graduate recruitment, faculty retention).

5. Participation, Administration and Facilities

The reviewers agree with the opinion expressed by all whom we met with, and in the materials we reviewed in the self-study, that there is ample opportunity for faculty and staff to participate in the administration of the Department. Formal participation occurs within an appropriate range of new and ongoing committees (e.g., Strategic Planning Committee; undergraduate and graduate program committees; Communication and Events; Equity, Diversity and Inclusion Committee, etc.). Some of these committees were created following recommendations from the last review. The Department should be commended for pursuing action on many of those recommendations. Participation and feedback from faculty and student committee members are encouraged and valued. The involvement of pre-tenure faculty members in core committees was noted as another characteristic of a functional, collegial unit.

Administrative leadership (chair, program chairs, etc.) appear to strongly embrace input and dialogue. The same is true for administrative staff who are engaged in departmental discussions and policies. We note they have taken the lead on office sustainability working towards Silver Sustainable Spaces Certification. There is strong mutual appreciation between administrative staff and the Manager, Academic and Administrative Services around shared responsibilities, accomplishments and collegiality. There was strong agreement that pivoting to pandemic

modes of Department business was well supported and that certain structures, such as digital file access, were already in place. There was significant appreciation that no one had to “hide” home activity in order to continue working effectively.

The main challenges expressed by administrative staff revolve around response times and interpretations of policy from units outside the Department both within the Faculty and University. More effective co-ordination was called for. The centralizing of technical staff by the FENV, some of whom were previously in the Department, has also created significant adjustment challenges. Advising students is a key role of some administrative staff who noted some challenges over the last two years.

There is an effective complement of administrative staff that number 5 by headcount. FTE is less given that some positions appear to be less than 1.0 FTE. The self-study indicates a number of upward and downward shifts in FTE proportions amongst administrative staff over the last few years. The organization of administrative positions seems appropriate and effective for a unit of this size.

As recently as 2020 there were 4 technical staff positions in the Geography base budget. None remain at the time of our review. It is unclear how the EFSDL (Fluid and Sed lab) position is supported. Some technical staff have shifted to newly created positions in the Dean’s Office. A shared technical services model for the faculty appears to be the goal. Maintaining technical staff that are both generic (e.g., IT) and specialized (GIS, analytical, physical/chemical labs) is a challenge facing geography departments across Canada. The shared services model for IT has been prevalent in many faculties but less so for specialized services. While this model may provide efficiencies at the Faculty level, it is of utmost importance that the qualifications required to support the Geography Department be preserved in the new job descriptions and future hiring practices beyond the current incumbents. We understand that the Strategic Planning Committee is working on formulating needs that address technical teaching and research needs ranked by priority. This is important work. We know teaching and research IT, GIScience and Physical Geography labs are often at the top of such priority lists.

Geography at SFU has maintained its focus on the core discipline. The size of the Department (faculty and students) very much reflects this with complement split between human geography, geographic information science and physical geography. Some larger departments in North America have undertaken (or merged with) Planning and Resources/Environment programs resulting in a more diverse academic portfolio. These approaches are very much in the context of institutional specific structures. As a leading unit in FENV, Geography is well placed to be the leader in urban, health, social, spatial and physical geography aspects of the environment.

The Review Committee had the opportunity to tour facilities in-person and virtually. We judged the space in terms of what existed during our visit and what previous reviews have noted (challenges in terms of the quality and functionality of the space, the amount of space and physical location in relation to the other units in FENV). Facilities in older academic buildings

that were not purpose built for flexibility in future teaching/research demands are always a challenge. This is especially true in the discipline of geography that requires the full range of social science commons/data lab space, GIS (computing/virtual) and physical geography (dirty/wet/chemical labs). Short of advocating for longer term plans where all of the FENV departments are in closer (synergistic) proximity (advocacy for which should continue at the departmental and FENV levels), short-term and medium-term plans require creativity and funding to overcome challenges. We note that there has been some substantial success on this front since the last review (and even in the last 2 years). However, significant space quality challenges continue (asbestos, water damage, pests, etc.) in some Geography spaces of Robert C. Brown Hall (RCB). To help counter this significant investment in renovations that are underway in lab space to accommodate physical geography teaching (RCB 7108 and 7110) and RCB's 6000-level for faculty labs and technical staff operations. These are much needed and welcomed and need to continue.

GIScience education and training are in high demand within Geography and other programs in FENV and other faculties. With a large and strong GIScience research group and a commitment to career-oriented undergraduate and graduate education, the Department relies heavily on its three GIS labs, which were plagued by various physical-space issues during the reporting period. We toured two of the GIS lab spaces where there was some flooding in the fall of 2019. There are a large number of workstations in each room. Without knowing the HVAC conditions of each room, they appear to be functional but bunker-like and over crowded. More than one half of students surveyed in 2019 are not satisfied with the GIS labs, citing a "very hot, crowded, dark, windowless, [and] smelly" environment.

The self-study indicates that there is no fixed capital replacement approach for GIS teaching labs (as would be on a lease cycle for example) but rather a replace as needed/able approach. We note that the latter approach is not uncommon across Canadian Geography departments. However, we stress that Geography based GIScience teaching and research serves not only all of the discipline but is also an incredibly attractive employment skill sought by students in other programs throughout SFU (see growth in Certificates). It is important that the Department, FENV and SFU recognize and be creative/innovative on how to support high functioning labs. The Review Committee therefore corroborates the Department's need for safe, inviting, and functional GIS lab space and computer hardware. Specifically, there needs to be a budgeting process for periodic (every 3-4 years) hardware upgrades.

License costs for geospatial data and GIS software are carried by the SFU Library and were not raised as a concern during the review. The Committee commends SFU for their approach to maintaining these licenses and reminds all decision-makers to keep these costs in mind as a required investment in successful Geography instruction and research.

During the site visit, the question of shifting GIS instruction to virtual labs came up. A temporary shift happened during the pandemic and Geography departments across Canada are assessing the successes and failures of this shift. On the one hand, commercial software vendors offer cloud-based solutions suitable for introductory GIS training and virtual desktop

access that can replace in-person GIS use for advanced applications. In a changing labour market, practicing work-from-home also contributes to student preparation for the workplace. On the other hand, remote work faces bottlenecks when large geospatial datasets are processed, e.g. in remote sensing applications. Furthermore, key benefits of in-person education, such as direct interaction with the instructor as well as peer support and networking are all but lost, and students at the reviewers' institutions have reported feeling helpless and unsupported with their GIS lab assignments. The Committee therefore recommends exercising great caution with any move towards online GIScience education; options involving the use of the physical GIS labs should always remain available to students.

Recommendations derived from the above observations:

- 5.1** Access to technical support in the discipline of Geography is critical to the success of teaching and research programs. We recommend that Geography clearly articulate its needs in terms of both technical competence and staffing time given the current teaching and research programs and what the needs are given short- and medium-term strategic planning goals. It should take into account new faculty hires and success in major grants. It would be ideal if these needs are articulated in the context of a transparent FENV wide shared services planning exercise that examines requirements and demand across all FENV units. There is most likely considerable synergy across the environmental disciplines for some shared services but also the need to fulfill Geography Department specific needs. Access to sufficient technical support, shared or otherwise, is important for the discipline of Geography.
- 5.2** We recommend that the Geography Department move towards regularizing administrative staff positions to full time (as was recently done for advising capacity) and avoid the frequent up and down pro-rating of FTE staff positions. We fully understand that these movements are often driven by program/department demands, staff needs and limitations on academic budgets, however, there are many advantages to having administrative staff dedicated and focussed to only one unit on a full time basis.
- 5.3** In terms of improving response times to policy interpretation and feedback from other units we can only recommend that chairs and deans clearly understand where the pinch points are and advocate. We recommend a few possible priorities for further engaging/recognition administrative staff: i. nomination of staff for awards (FENV, University, other – or creating new awards if few exist); ii. profiling staff duties and accomplishments in newsletters; iii. develop clear plans on recruitment/outreach goals and what Department staff responsibilities are versus FENV or SFU in general and v. continue to implement the range of communication goals articulated at the staff and faculty retreats (Appendix 1 and 2 of self study).
- 5.4** The Review Committee corroborates the Department's need for safe, inviting, and functional GIS lab space and computer hardware. Specifically, there needs to be a

budgeting process for periodic (every 3-4 years) hardware upgrades.

- 5.5 The Committee recommends exercising great caution with any move towards online GIScience education; options involving the use of the physical GIS labs should always remain available to students.
- 5.6 The current renovations to teaching, lab and technical staff space (FENV positions) are welcomed. We recommend that investments continue and that the Department use every possible means to plan for equipment replacement, lab renewal and other high priority initiatives. Sources of funds are typically department savings/carry forward (if they exist), FENV, SFU, CFI leveraging, other grants, partnering with other units (e.g. shared computing or lab bench facilities), donations from alumni/friends (very challenging), etc.
- 5.7 While teaching and research space are often the top priorities, social/meeting space can encourage even greater departmental synergy. Funding for the planned improved social spaces (Appendix 17) should continue to be pursued and supported. While dedicated space is always a preference, one strategy is to have multi-function space that serves teaching needs for part of the time and social interaction space at other times. This should be considered as an option to perhaps expedite access to resources. We understand from our visit that there are examples in older SFU buildings of innovative renovation approaches.

6. Work Place Environment and Relationships

Our impression of the Department is that it is a collegial and respectful working environment. There appears to be considerable success at de-siloing sub-disciplinary areas. However, we heard numerous comments from faculty, staff and students about limited opportunities, even prior to the pandemic, for social interaction. This was explained as a product of the location of the campus, and the poor quality of the physical space and facilities. The limited number of social spaces is also a challenge (see Section 5 above). The recent conversion of the computer lounge to much needed social and networking space for graduate students seems to have helped but the Department common room is small and limited in amenities and the closure of the roof-top patio was identified by several people as a significant loss.

We are aware, through the Self Study Report and our conversations with the Department, of their numerous efforts to enhance social interactions and build a stronger sense of community. These includes a speaker series, brown bag lunch events, pub nights, etc. We strongly recommend persistence in these efforts, particularly in a post-pandemic context. The Communication and Events Committee (which should be comprised of faculty, staff and students) assists with social/academic events. These need to be regular and well-timed events (with food, etc. as an added enticement at evening events) that supports the establishment of expectations and ultimately traditions around certain events/activities. A majority of these events should also be exclusive to the Department to support strengthening of the internal

community. Others could be shared events, perhaps with FENV partner departments to support the building of a stronger sense of FENV community and identity.

The relationship between the Department and FENV appears to be somewhat strained. While we heard acknowledgements of recent improvements in relations, we also heard complaints of a general lack of clarity, transparency, communication, and respect for the Department by FENV, compounded by the Department being physically distant from the Faculty. We believe relations would benefit from an overhaul of current governance structures in support of team building, improved communication, and stronger allegiance to FENV between department Chairs/Directors within FENV. Greater representation of faculty members on FENV level committees might also have a positive impact, in addition to increased consultation and communication between the Department and FENV more generally. Formal mechanisms to support this should be agreed upon. This approach is particularly important in working out collaborative and/or complimentary areas of teaching and research. For example, we heard that there was some debate about where expertise in “water” should sit in the faculty. It is important that Geography work collaboratively with other units in outlining collective Departmental goals and as other units should with Geography. Every effort should be made to work this out at the Chair/Director level. As has happened at other institutions, FENV might have to make the call as to where certain expertise resides and how that expertise is to be shared across units either informally or formally via cross-appointments. We are encouraged by the comment in the self study that Geography “remain(s) committed to working with the Dean’s office to ensure open, transparent and consultative decision making moving forward”.

There are ongoing ties with Faculties elsewhere at SFU most notably in the area of urban-social in FASS and in biogeosciences in Earth Sciences and Biological Sciences. We observe that, despite some conflict over new program development such as Urban Change, that there has been considerable success in securing seats for Geography students in courses elsewhere and that reciprocal arrangements exist. Interdivisional teaching can create challenges at both the departmental and Faculty levels. We note a number of cross-appointments between Geography and other units at various FTE percentage levels. We echo the recommendation of the last review that these need to be leveraged as best as possible. Particular strategies are ensuring that faculty who teach courses across units remain equally committed to their two home departments (e.g., in terms of student recruitment) and that dialogue regarding curriculum changes and development across units be offered in a transparent and collegial manner.

We were encouraged by Departmental outreach to alumni (newsletter, career seminars, etc.). However, we believe that there is much more to consider both in terms of what the Department itself can do on its own and what might be done with the support of Development Officers within FENV and/or SFU. Establishing a high functioning alumni committee led by dedicated alumni has been an approach used by some Geography departments. A small investment in supporting such a committee can do much more in terms of raising profile. For example, the recent 50th anniversary of the Department would have been a good opportunity to bring accomplished alumni closer to the Department. While the main objective of supporting an active alumni committee is about alumni engagement in the discipline and bringing career

expertise into the Department programs, the longer-term benefit may be the ability to establish (additional) scholarships that support the academic life of students and the discipline.

One particular aspect of the work place and working environment is ensuring proper mentorship of new and junior faculty. The traditional approach has been to ask senior faculty to act as mentors. We heard that a model that perhaps does more to support peer-to-peer mentoring can be equally important. For example, understanding the meaning of, and how to effectively adjust to, student course evaluations is important for both annual faculty evaluations and for eventual promotions. Given the complications associated with pandemic modes of course delivery (e.g., online teaching, open-book assessments, low response rates on course evaluations, etc.) Geography is encouraged to be creative in how it supports new and junior faculty in interpreting these data. This should extend to assisting faculty in the best way possible to pivot to (or back to) pre-pandemic modes of research and teaching.

Geography has established a teaching load for tenure and teaching stream that includes an “equivalent” teaching work load component. The self-study indicates that FENV and SFU policies are aligned with this. However, we heard that the definition of what constitutes an “equivalent” load component could be even further clarified and communicated, especially for new faculty.

A number of positive comments were made, particularly by students, of the pedagogic and community building value of field trip experiences. Whether in the form of a retreat, a formal field course/exercise, continued support of the well received co-op option or other approaches, the Department is encouraged to maintain its progress in this area.

Recognizing postdoctoral fellows are often based in the Department for a short period (e.g., months to 2 years), and with very specific goals of research and publication within a specific research group, there are a few strategies that may assist in closer engagement with the Department. The Department has identified some confusion around pay and benefits information and the lack of conference funding as issues. We encourage continuing work on these fronts. An incoming welcoming session to all PDF's, both continuing and new, can help break down barriers. Inviting PDF's and their partners/family to faculty functions can help elevate profile and engagement with the Department. PDF's could take on a “very light” mentorship role for one or two senior PhD students contemplating applying for PDF's. Other options that the Department has already highlighted include guest lectures, giving dept seminars, voluntary seat on selected committee (e.g. Equity Committee), etc.

Recruiting and retaining high quality faculty is a goal of all academic departments. Considerable effort goes into recruiting faculty through the extensive selection process and candidates spend considerable time in the application process. Our first comment is that the most successful faculty will always be competitive and that there may be outside opportunities that are more closely aligned with their research and teaching goals. The occasional loss of faculty to units outside of SFU might be expected. SFU being based in the Greater Vancouver region means that housing and transportation costs will be high. Recruitment and retention is a joint effort by the

University, Faculty and Department. We did not explore what the institution has done to help offset the initial costs of locating to the GVR and getting established, but we hope SFU has been as creative as possible by showcasing support and opportunities that can be accessed by potential and incoming new faculty (e.g. job searching for a partner or family members). A critical part of the interview process is of course candidates speaking with faculty who have been recently recruited and what their successes and challenges are. The more upfront information that is shared, the better the yield on recruitment and retention. For faculty who have, or are seeking, to move around FENV or around SFU, it is critical to understand, and have full transparency around, push and pull factors. There should be open dialogue facilitated by Chairs/Directors and by Deans that highlight opportunities and constraints.

Recommendations derived from the above observations:

- 6.1** Social programming along with securing/configuring appropriate space should remain a priority. This has been shown to help significantly in drawing together the sub-disciplines of Geography
- 6.2** We encourage that student/PDF input continue to be an important part of Communication and Events planning.
- 6.3** Geography needs to be able to work in an open and transparent governance structure within FENV that facilitates collaboration rather than competition with other units. We recommend that Chairs/Directors perhaps meet on selected occasions alone to work out some of the inter-unit specific issues related to curriculum planning, research initiatives and complement planning.
- 6.4** Interdivisional relations appear to be working well (with FASS, FSCI, etc.) with some occasional concerns about curriculum autonomy (e.g. “urban”). We urge that there be open channels of communication not only at the decanal level but directly between departments within other Faculties. It is not clear the NOI pathway is sufficient by itself.
- 6.5** Cross-appointments of faculty between Geography and other units within FENV and with other SFU Faculties can have both benefits and challenges. We recommend that cross-appointed faculty continue to maintain equitable involvement across all their units that benefits not only teaching and research success, but also serves student interest under the umbrella of “environment”.
- 6.6** We recommend the Department develop a more robust alumni committee that has a Chair and a significant volunteer base.

- 6.7** Expanding junior faculty mentoring to include peer-to-peer opportunities should be pursued. Important topics for discussion are workload, assessing course evaluations data, supervision, and so on.
- 6.8** Recruiting and retaining faculty is a shared responsibility of the Department, FENV and SFU. The Department should continue to access every possible support mechanism there is to offer and have open discussions about successes and challenges that can be shared with candidates.

7. Future Plans

The self-study sets some clear goals for Geography to “contemplate(s) research synergies rather than disciplinary breadth [that sets] the Department on course to become a leader at the nexus of climate and environmental change and society, and in the areas of urban change and racialization”. We understand the trajectory to be one of pivoting to build synergistic strengths in research clusters and increased depth in key areas in addition to securing a generalized goal to teach the breadth of the discipline.

According to the self-study (page 8), “In recent years, our Geography Department has rebranded its research identity to move away from the traditional three silos of Human Geography, Physical Geography (Earth System Dynamics) and Spatial and Geographic Information Science to embrace more interdisciplinary research clusters around 1) global environmental change, 2) geographical political economies, 3) water sciences, 4) the city, 5) spatial health and 6) spatial information theory. These clusters now inform our faculty renewal plan and academic curriculum.” We note that despite this rebranding, the Department web page identifies these three silos as its primary research areas, associated with six research groups with no mention of clusters.

We encourage the Department to be more intentional and strategic in their use of research clusters (and related hires) to ensure the resulting research synergies support the long-term collective interest and coherence of the Department. This would involve clearly articulating for each cluster how and why certain synergies should be cultivated. This requires leadership and engagement as well as a commitment to the Department as a unit. We encourage developing evidence/indicators that can be used to track the impact of this pivot over time.

The Faculty Renewal Plan of the self-study (Appendix 11) identifies, for each planned position, numerous potential synergies with other hires and intended hires as well as with units elsewhere within SFU (SES, REM, EASC, BISC, FHS). It also addresses the majority of SFU’s strategic research priorities and contributes to its multi-disciplinary research clusters. The Review Committee has a number of questions around how these plans were developed.

- How were synergies defined/identified? Were synergies within FENV given stronger weighting than synergies beyond FENV?
- Under what conditions might some synergies become less mutually beneficial, harmonious, and collaborative? (e.g., do synergistic alignments result in less breadth of program offerings and greater potential for competition, duplication and cannibalism!)
- Why the preference for research synergies? What risks and trade-offs have been considered in this pivot? (e.g., could the new Urban Change major and minor be combined with the new Cities Institute and greater presence of Urban faculty on the downtown campus contribute to enhanced synergies between Urban Geography and perhaps other units within FASS at the cost of undermining of synergies within Geography and within FENV. Are there potential implications for faculty retention?

We pose these questions as points of discussion for the Strategic Planning Committee specifically and the Department in general. There may already be some clear answers to these within the Department, but from the perspective of the Review Committee they are useful to consider in ongoing discussions of future plans. As of March 2022 we note Geography has 21.75 FTE and 24 headcount faculty contributing to departmental programs and research. We are in agreement with the priorities of “faculty renewal, retention and network strengthening with strategic targets of climate- and urban-related positions to build and promote research and teaching capacity in these domains”.

Throughout the self-study, and in our deliberations during the site visit, there was expression of a continuing commitment to Indigenize research and teaching programs that includes making the hire of an Indigenous scholar a priority. Proposals for a CRC and for Development opportunities appear to have revolved around a Climate Change and Indigenous Knowledge expert. While targeting key research areas and gaps left by retirements should be a continuing priority, the Department should be prepared to be opportunistic in making such a hire that fits broadly under the Geography/Environment umbrella. The Review Committee sees this as a very important near-term priority. In some Geography departments across Canada these hires have been strategic “net new” additions to complement via institution-wide funding priorities.

As with many academic units, the “context” of new faculty positions is articulated primarily as a deficit narrative. We note for example in Appendix 11 that the faculty complement is described as having “shrunk below critical mass conducive to faculty retention”. The Review Committee is familiar with the challenges of faculty loss, transfers, secondments, and so on. Assuming that all units in the FENV (and SFU in general) face the same challenges, we see working closely and collaboratively with the Dean of FENV and other FENV units as important to make strategic gains both within the Department and in collaboration with other units. These will always be dictated by the degrees of freedom of budgets and creativity in increasing resources. There is a lot of sensitivity and awareness of the high profile and importance of environmental change – a lens that intersects all of what Geography has to offer. So opportunities clearly exist for the Department and FENV that can be leveraged in strategic ways.

There has been considerable discussion in the Department around priorities of future faculty hires. The open and transparent discussions of the Strategic Planning Committee have helped facilitate this. We have no specific recommendations around the ranked list of hiring priorities assuming that indeed these discussions have been open (Climate Scientist – Climate Change and Extreme Events; Disturbance Landscape Ecologist; Human Geographer – Social Dimensions of Climate Change; LECT Urban Planning (0.5 to support the SEE program); Geography of Urban Futures and Geographies of Human Migration). We do note that hiring priorities can shift quickly depending on retirements and departures. Geography will need the same flexibility that other Geography departments face. We want to re-emphasize the importance of Indigenous and racialized community hires that may cover any of the priority areas above and that indicate a deep commitment to reconciliation.

Future plans around any changes in cross appointments carry potential benefits and risks. Each situation benefits from an atmosphere of collaboration and coordination. From the perspective of students, it is the quality of teaching, research expertise and accessibility that matter the most. From the perspective of cross-appointed faculty there are some benefits of being engaged across an even greater breadth of academic interests but also the challenge of contributing equitably to both units. Every effort should be made to avoid confusion amongst students and to foster a commitment to the overall goals of the Department and the Faculty.

We have noted in Section 2 that “pressure” to increase undergraduate enrolment was perceived as persistent. We do not share this impression. However, the Department has been creative in looking for opportunities to develop new programs that are both relevant and attractive to the changing landscape of Geography curriculum and research. We recommend that the proposed new programs (Urban Change; Climate and Society) be nurtured before moving ahead with other ideas. If essential, the “stream” option within existing programs could be used to test additional specializations (e.g. food security).

If a shared technical services model is the prescribed future direction of FENV, then we emphasize here again that Departmental needs under such a model should be carefully articulated and transparently compared with other FENV units.

The Review Committee agrees that Development successes (e.g., raising scholarships, endowed chairs, visiting scholar and field trip endowments, etc.) for Geography departments have sometimes been most successful in professional program areas (e.g., Planning, GIScience certificates, etc.), and for departments with a very long history of alumni/friends, and through multi-disciplinary Institutes or Centres. That said, it is important to cultivate and be prepared for opportunities in Geography. This should be an important initiative (for the Strategic Planning Committee?) and not relegated to an occasional activity. We encourage the Department to be even more creative in collaborations and initiatives around raising funds.

Finally, our Review Committee recognizes the importance of strong leadership in advancing the interests of the Department within FENV, within SFU and in the national/international landscape of Geography. We applaud the successes of leadership over the last several years

and recognize that the involvement of a range of faculty in all those efforts bodes well in terms of leadership succession.

Sincerely

A handwritten signature in black ink, appearing to read "Joe Desloges". The signature is stylized with a large, sweeping initial "J" and "D".

Joe Desloges
University of Toronto

A handwritten signature in black ink, appearing to read "Monica Mulrennan". The signature is written in a cursive style.

Monica Mulrennan
Concordia University

A handwritten signature in black ink, appearing to read "Claus Rinner". The signature is written in a cursive style.

Claus Rinner
Toronto Metropolitan University
(formerly Ryerson University)

EXTERNAL REVIEW – ACTION PLAN

Section 1 – To be completed by the Responsible Unit Person e.g. Chair or Director			
Unit under review	Date of Review Site visit	Responsible Unit person	Faculty Dean
Geography	9-11 March 2022	Tracy Brennand, Chair	Naomi Krogman
<p>Notes</p> <ol style="list-style-type: none"> 1. It is not expected that every recommendation made by the External Review Committee be covered by this Action Plan. The major thrusts of the Report should be identified and some consolidation of the recommendations may be possible while other recommendations of lesser importance may be excluded. 2. Attach the required plan to assess the success of the Educational Goals as a separate document (Senate 2013). 3. Should any additional response be warranted, it should be attached as a separate document. 			
1. PROGRAMMING			
<p>1.1 Action/s (description what is going to be done)</p> <p>1.1.1 UNDERGRADUATE</p> <p><u>New initiatives</u></p> <ul style="list-style-type: none"> • Physical Geography: Weighing heavily on our minds is the sustainability of our lauded and growing Physical Geography Program. An additional faculty transfer (-0.5 FTE) since the review, leaves just 4.25 FTE research faculty and 1.0 FTE teaching faculty servicing several majors, minors and certificates. Physical geography research faculty hires will be necessary to service this growing program that was highlighted as a national success by the reviewers (<i>section 2</i>). • Program development: <ol style="list-style-type: none"> a. GIScience major: Following consultation with Computing Science, we are critically reviewing the BSc in GIScience with a view to strengthen/develop alternative major options within FENV. b. Globalization: We are exploring ways to increase exposure to global cultures and ways of thinking and being in our courses, including considering regularization of an annual international field school while limiting our carbon footprint. c. Indigenization: We look forward to incorporating land-based and Indigenous-led learning once we secure an Indigenous Geographies research faculty member (<i>section 2</i>). • Educational goals: <ol style="list-style-type: none"> a. JEDI: We will expand our integration and assessment of goals around educating students “to be informed global citizens who are sensitive to issues of reconciliation, equity, diversity and inclusion”. b. Revision: With the arrival of new human geography faculty, new courses (especially in the areas of urban change and racialization) are being integrated into our program goals. 			

- **Enrolment:** Enrolments are currently strong. To ensure they remain strong or grow we will take the following actions:
 - a. Employ an **iterative approach to exploring optimal modes of course delivery** by assessing student demand at every change. In the academic year 2022-23, we have 7 online, 3 blended and 53 face to face offerings.
 - b. Advocate for **more smart classrooms** to facilitate our highly visual discipline.
 - c. Advocate for **improved IT support and capacity for large online courses** (e.g., current support has required us to cap enrolments in our Digital Earth course to 270 when we have demand for enrolments as large as 450).
 - d. Encourage more **college level recruitment support** from the Dean's Office and **advocate for a growth budget** to facilitate strategic courses to be offered (CTBO) planning (to date we have received additional funding to accommodate wait lists once budget is depleted, but this only allows us to increase enrolment in scheduled online courses).

Continuing work

- **Program development:**
 - a. We are very encouraged to see that the Review Committee has recognized the importance and value of our efforts to maintain and integrate the technical competence necessary to sustain a full-spectrum teaching program that spans all the important facets of Geography (Human Geography, Physical Geography, GIScience). **We are vigorously pursuing the necessary resources to appropriately sustain our lauded programs.**
 - b. **GEOG-BUS Joint Major:** We are working with Beedie to re-envision this joint major as a degree that leverages the spatial analytics and social justice strengths of Geography to enhance the training of Business students
 - c. **Urban BA:** We are working with FASS to co-develop an Urban BA (major and minor) with distinctive FENV and FASS streams.
 - d. **Decolonization and Indigenization of curricula:** the work of decolonizing our curricula is ongoing; decolonization and Indigenization would be greatly facilitated by an **Indigenous consultant** with expertise in Indigenous methodologies and curriculum development.
 - e. **Experiential learning:** While many of our courses already include experiential learning (>50% of regularly offered courses), we are looking for additional opportunities to include experiential learning in more courses (e.g., blended offering of new Geography of Wine course).
- **Professional Accreditation:** We continuously monitor Physical Geography degree course requirements and work with the Professional Associations to ensure they continue to meet the knowledge requirements for Professional designation as **Professional Agrologists** and **Professional Geoscientists**.
- **Educational goals — Standardization:** Lower division course educational goals are being standardized to ensure consistency in courses taught by multiple instructors (faculty and sessionals) and to ensure prerequisite alignment to upper division course needs.

1.1.2 GRADUATE

New initiatives

- **Graduate student funding:** We will need Institutional support to provide funding levels that are competitive and commensurate to the high cost of living in Metro Vancouver. We will advocate thus. We understand VPRI has this as a priority.
- **Graduate courses:** We will offer more stand-alone graduate courses in human geography by transferring teaching resources from the undergraduate program to the graduate program. To increase the enrollment base for these courses, we are pursuing the opportunity of recruiting more students into accelerated Master's degrees by making this option more visible to undergraduate students in our programs.
- **Educational goals and curricula:** We will re-assess the educational goals of our graduate programs and explore integration of **professional development** and **broader learning opportunities** (decolonization, indigenization) into program-level educational goals and curricula.
- **Research "lab" culture:** We have reorganized student office allocation into research groups to emulate the research lab culture of our STEM subdisciplines and support cohort-building.
- **Mentorship model:** We will initiate conversation amongst faculty regarding how they understand and practice mentorship to ensure equal access to mentorship by all graduate students. We will also explore mentorship-related resources provided by SFU.
- **Enrolment growth:** We intend any growth in our graduate program to be organic, reflecting faculty research program needs and funding.
- **Master's level completion rates:** We will drill down in the data on graduate completion rates to assess the factors impacting completion rates and explore solutions to any issues that emerge.

Continuing work

- **Educational goals:** We are working on providing regular **professional development** opportunities for graduate students. We hope to pursue a **Faculty-level approach** that will leverage Faculty-level synergies and efficiencies and help strengthen Faculty-level graduate cohort experience.
- **Courses:** We already have a stand-alone theory/methods course for human geographers (GEOG 603) and STEM geographers (GEOG 606) as well as cohort experiences in GEOG 600 and 601. In addition, we have coupled undergraduate and graduate level courses in physical geography and GIScience. We are currently working on more regular offerings of stand-alone graduate courses (e.g., Relational Geographies of Conquest and Liberation, Spring 2022) and a greater clarity of graduate-undergraduate level course couplings in human geography.
- **Graduate student funding:** With funding being the limiting factor in graduate program growth and a factor in longer completion rates 1) we set minimum first year funding offers at \$22k in 2022 and plan to continue to adjust the minimum funding level to the rising cost of living; 2) we established a dedicated BIPOC scholarship from our BASS funding (\$8k in 2022) and will continue to advocate for funding opportunities for equity-seeking groups; 3) we encourage and facilitate student scholarship, fellowship and

research grant funding applications and 4) we will continue to work with advancement to create new graduate student funding opportunities.

- **Mentorship model:** We remain committed to a high-quality mentorship model of graduate education. We have updated our website and clarified guidelines and expectations related to mentorship in the Fall 2022 iteration of our Graduate Student Handbook (<http://www.sfu.ca/geography/current-students/current-graduates.html>).
- **Diversity of the student body:** We continue to monitor graduate cohort diversity and take actions to reduce barriers to recruitment. For example, we plan to revise our online application process to provide space for applicants to address any JEDI issues, and we will provide more clarity around the application process on our website. To our knowledge we have not experienced diversity-related retention issues. Graduate students have membership and voice on our EDI standing-committee as well as our Graduate Studies Committee, Communications and Events Committee and Department Meeting. We continue with annual graduate townhalls to encourage dialogue aimed at improving graduate programs and student life (co-curricular and extra-curricular activities).

1.2 Resource implications (if any)

- **Faculty hires** are vital to allow us to pursue Indigenous-led and land-based learning and to allow us to sustain the Physical Geography program and continue to offer the courses required to meet the knowledge requirements for Professional designation as Professional Agrolgists and Professional Geoscientists (*section 2*).
- An **Indigenous consultant** with expertise in Indigenous methodologies and curriculum development is vital to facilitate decolonization across our curriculum and not overburden our Indigenous Geographies research faculty member with this task.
- **Professional Development Workshops:** FENV unit buy-in would be ideal to facilitate more regular offerings of graduate-level professional development workshops.
- **FENV support:** We will work with the Dean's Office and FENV Advancement to ensure viable resourcing and staff support for contemporary programming across Human geography, Physical Geography and GIScience, namely
 - a. field and lab equipment and technical support for Physical Geography
 - b. high end computers, peripherals and dedicated software and technical support for GIScience
 - c. a robust honoraria program for experiential learning across Geography
 - d. endowments to reduce costs and increase accessibility for students to experiential learning across Geography.
- **Institutional support:** Program health would benefit from access to
 - a. more **smart classrooms**
 - b. improved **IT support** for large online courses
 - c. a **robust honoraria program** to support experiential learning
 - d. more **graduate student funding**, especially for equity seeking groups and international students.

1.3 Expected completion date/s

- 2023-2024: changes to educational goals and curricula.

2. RESEARCH

2.1 Action/s (what is going to be done)

New initiatives

- **Faculty hires:** The reviewers are in full support of our stated goal that “*contemplate(s) research synergies rather than disciplinary breadth [that sets] the Department on course to be-come a leader at the nexus of climate and environmental change and society, and in the areas of urban change and racialization*”. To this end we urgently require the following faculty hires:
 - a. **Indigenous Geographies research faculty hire:** A research faculty Indigenous scholar or CRC has long been a Departmental priority in our FRP (rank 1). This position has been recently approved by the Dean; the search will begin Fall 2022.
 - b. With further reduction in **Physical Geography research faculty** since the review (additional 0.5 FTE transfer, leaving just 4.25 FTE research faculty (3 full-time and 2 cross-appointed; 4 of which have administrative course releases) and 1.0 FTE teaching faculty), the need for Physical Geography research faculty hires to provide research synergy at the nexus of climate and environmental change and to support growth in our enviable BSci and BEnv programs and associated graduate programs is all the more urgent. We are in conversation to re-vision a renewed faculty complement to sustain our research and teaching programs in Physical Geography. A **limited term lecturer** will be necessary to sustain this program in the short-term (2023-24) when our senior lecturer goes on study leave.
- **Research labs:** As part of an ongoing renovation, funded by the Capital Budget Committee, VPA and FENV, we have been able to renew three wet labs and create safe equipment maintenance and storage space (as well as renovated space for FENV tech staff and student study space). Once complete this will create an inequity in safe, functional and inviting research labs which will impact our STEM graduate program and faculty recruitment and retention potential. We urgently need to renovate the remaining STEM research labs and will work with the Dean’s Office to find funding to do that once our ongoing renovation is complete (*section 4*).
- **Research communication:** We have attempted to address communications through a Communications and Events standing committee. While we have an implementation plan, we have lacked strategy, expertise and person-power to carry out the plan effectively. For example, we have installed digital screens, but have struggled to generate materials to populate them. Effective and consistent research (and teaching, events etc) communication requires a communication strategy and staff support.
 - a. **Strategy:** The Strategic Planning Committee will work with the Department to develop a communications strategy (key messages) aligned with existing FENV and SFU campaigns and Department vision. As part of this work, spurred by the arrival of new faculty, we will assess whether our current **research clusters** need revision to better serve departmental aspirations.

b. **Implementation:** The Dean has approved a **1.0 FTE advisor/communications position** to be hired soon (*section 3*). This position will carry the expertise and person-power to assist the Communications and Events Committee in implementing the communications strategy, nudge faculty to participate, co-ordinate with the Dean's Office and SFU communicators and measure plan success.

- **Postdoctoral fellows:** We will advocate for an Institutional post-doctoral fellowship program and post-doctoral funding to attend professional meetings.

Continuing work

- **Research Chairs:** The Department has been very active in exploring any and every opportunity for opportunistic hires that fit our Departmental vision. We will continue to work with the Dean's Office, VPRI's office and Advancement to leverage our excellent and growing reputation to secure additional research chairs.
- **Institutes and Centres:** We agree that Institutes and Centres should have clearly defined objectives, but their creation is also tied to external funding opportunities given that SFU requires them to be self-supporting. We will continue to explore creation of Institutes or Centres (e.g., Climate Futures, City, GIScience) that can benefit SFU and/or FENV only as funding opportunities become available.

2.2 Resource implications (if any)

- **Research faculty hires and interim limited term lecturer position**
- **Additional 0.2 FTE staff position** dedicated to communications (*section 3*)
- **Institutional postdoctoral fellowship program and funding for post-docs to attend professional meetings.**

2.3 Expected completion date/s

- 2023: revision of research clusters and development of communications strategy; LTL hire
- 2023-25: research faculty hires

3. ADMINISTRATION

3.1 Action/s (what is going to be done)

New initiatives

- **Administrative Staff — Communication:** With the recent resignation of a job share part time advisor/communicator (0.8 FTE), we have the support of the Dean's office to reduce our current advisor position to 0.4 FTE in line with the incumbents wishes and create a new 1.0 FTE advisor/communications position—a net gain of 0.2 FTE.

Continuing work

- **Governance:** We remain committed to work with the Dean's Office and other units in FENV and elsewhere to ensure open, transparent, and consultative decision-making and sustainable workloads.

3.2 Resource implications (if any)

- **Full-time advisor/communications position** (0.2 FTE increase)
- **Creation of a FENV Lab Manager position** (1.0 FTE increase shared across FENV)

3.3 Expected completion date/s

- 2022-23: staff position changes

4. WORKING ENVIRONMENT

4.1 Action/s (what is going to be done)

4.1.1 FACILITIES

New initiatives

- **Research labs:** We are extremely grateful to FENV and the VPAs office for the recent (almost complete) renovation to three wet labs, storage, tech staff and student space in RCB. However, the remaining labs in RCB are not fit for purpose, so to address recruitment and retention we urgently need to renovate the remaining STEM research labs. We will make the Dean's office aware of these needs and work with them to secure funds for these renovations.
- **Social space/commons:** The department lacks functional social space/commons, which the review highlighted as extremely important for Department health. We will make the Dean's Office aware of these needs and work with them to secure funds for these renovations.
- **Student space:** The renovation underway will provide a welcoming if small study space for students to use lab materials after lab hours. However, there is an urgent need to centralize and make more visible the Geography Student Union and general undergraduate student study space. We will make the Dean's Office aware of these needs and work with them to secure funds for these renovations.

Continuing work

- **GIScience teaching labs:** We are extremely grateful to the Dean's Office for funding most of the recent renewal of our GIScience hardware and software (ENVI). We agree with the reviewers that our need for safe, functional and inviting GIScience teaching labs is urgent, as is a budget plan for hardware renewal and software leasing moving forward. We have been working with the Dean's Office for several years to address these matters and will continue to do so.
 - a. **Space:** So far, we have been unable to secure an appropriate new space.
 - b. **Hardware:** Recently, the Dean's Office facilitated hardware renewal; we will look to regularize a 3-4 year renewal plan moving forward.
 - c. **Software:** Software leasing has been more challenging. While some software is under university lease agreements (e.g., ArcGIS), others (e.g., remote sensing software such as ENVI and eCognition) are considered more specialized yet are necessary if students are to gain skills and knowledge in image manipulation and deep learning increasingly required by employers and are increasingly used by many SFU researchers. Students from across SFU are enrolled in our GIScience courses. These software exceed our budget but creative solutions leveraging economies of scale with partnerships across interested units (e.g., library, big data hub, FSci, FENV) present opportunities and we will continue to support the Dean's office in pursuing these opportunities. Central software leasing would be our preferred solution.
- **FENV building:** We will continue to support the Dean's Office in advocating for a green FENV building to house all FENV units and improve faculty cohesion and reduce our environmental footprint.

4.1.2 DEPARTMENT LIFE

New initiatives

- **Digital screens:** Our newly install screens will 1) highlight the research strengths of all faculty, postdocs and graduate students, 2) provide a snapshot of Departmental history, 3) highlight alumni distribution and profiles, 4) profile staff duties and 5) advertise events and changes to programs and courses.
- **Extra-curricular initiatives:** We have several extra-curricular initiatives in the works: a Fall welcome event for faculty, staff and graduate students (potluck organized by staff in Fall 2022 garnered ~40 participants); weekly geocoffee (in Department meeting room and facilitated by a faculty and staff roster) and a monthly pub evening (on campus after the department meeting) in addition to continuing travelogues, speaker series' and alumni events organized by the Communications and Events Committee (that has faculty, staff and student members).
- **Student-led initiatives:** Meetings are scheduled with graduate and undergraduate student bodies to hear from them how we can best facilitate co-curricular (e.g., brown bags) and extra-curricular initiatives they would like to lead.
- **Alumni:** Having established an alumni LinkedIn presence, we will try again to establish a high-level alumni committee with a Chair and significant volunteer base with a view to enhance alumni engagement in the discipline, bringing career expertise to students, and (longer-term) establish (additional) scholarships that support the academic life of students and the discipline.
- **Early career researchers:** We will continue our flexible and collegial faculty mentorship program and explore the idea of monthly brown bags to discuss career issues of interest to faculty.
- **Post-doctoral fellows:** We will continue to invite postdocs to all Departmental events and provide opportunities to give guest lectures and sit on departmental and academic committees if they wish.

4.2 Resource implications (if any):

- New space for GIScience labs
- Capital budget for departmental renovations
- Additional funding for extra-curricular, co-curricular and alumni events

4.3 Expected completion date/s:

- 2023-27 facility renovations
- 2023-2024 regularized GIScience hardware renewal and software licensing plan

The above action plan has been considered by the Unit under review and has been discussed and agreed to by the Dean.

Unit Leader (signed) 		Date 12 October 2022	
Name	Tracy Brennand	Title	Department Chair

Section 2 - Dean's comments and endorsement of the Action Plan:

I am overall very pleased with Geography's external review and want to commend the Department for the high engagement of its Department Chair and faculty to bring forth excellent teaching, research, and service contributions. The Department is highly responsive to the priorities of President Johnson, including Reconciliation, Equity, Diversity and Inclusivity, and improving student experience. Geography has many impressive initiatives underway. I would recommend that the Department prioritize these initiatives and work on them in a staged manner so that service work is distributed across their faculty members in a way that is manageable for them and realistic for the number of asks mentioned for more resources.

I support the programming goals of Geography, particularly the reworking of the GEOG-BUS Joint Major with Beedie to incorporate spatial analytics and social justice content. I am hopeful that the Urban BA with FASS to co-develop an Urban BA (major and minor) with distinctive FENV and FASS streams will be sorted out by July 2023. I appreciate the leadership in GEOG to work on decolonizing and Indigenizing the curricula. I can work with the department to provide expertise in Indigenous methodologies and curriculum development, as this is squarely a part of the Sea to Sky Initiative in FENV to enrich the Indigenous-led and -partnered teaching and research. I continue to explore ways to deepen experiential learning for our FENV students (especially with Indigenous foci and for international opportunities) and applaud the idea of a blended offering of the new Geography of Wine course.

In terms of graduate programming, we will continue to approve new Faculty hires as our budget permits, with a possible future hire to support the Physical Geography program. I am mindful that this is necessary for the unit to continue to offer the courses required to meet accreditation requirements for the designation of Professional Agrologists and Professional Geoscientists and that some new teaching capacity may be required. I would, however, offer some caution about redirecting teaching resources from the undergraduate program to the graduate program given there has historically been an overreliance on temporary instruction. One of the Faculty's financial and teaching goals is to reduce the reliance on temporary instruction, so a balance must be struck for how many resources to put into the graduate programming. As part of our FENV Research Strategy, the Associate Dean of Research and our FENV Research facilitator will work with GEOG to expand professional development opportunities for our graduate students.

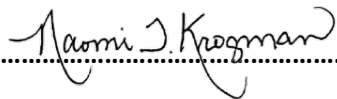
Every five years the FENV Dean's office has planned for the renewal of new high-end computers and reviewed software needs for the GIS courses offered in Geography. The GIS labs are a very expensive undertaking in a small faculty so we will work with IT Services to explore ways to cost-share the hardware and software and will continue to encourage GIS professors to expand course offerings that serve a broader student audience. We will also work with IT services to suggest GEOG-used classrooms that could be enhanced with smart classroom technology. Where fund-raising success allows, we will look for ways to provide honoraria for key informants/practitioners to

participate in classes, and costs to be lessened for students seeking to take experiential courses that have additional fees. I will continue to work with the Dean of the Faculty of Graduate Studies, the Office of the Vice President, Research and International, the Provost, and Advancement to work toward stipend minimums of 22K/year for Master's students and 30K/year for PhD students. I am keen to increase needs-based support (not only merit-based) for graduate students. I encourage the department to develop its own strategic enrollment plan with an Award Strategy (that would address private awards that students can apply to, as well as ways to support students to apply for Tri-Council Awards) that they could work on with our Associate Dean of Graduate Programs and Research Facilitator.

I am pleased that GEOG will soon have 3 newly renovated wet labs spaces in addition to contemporary storage and staff support space. It is useful to note that the scope of renovations for this space was heavily influenced by Campus Planning and not initially part of the Faculty's long term renovation plans. An initial \$400K investment was stretched to \$1.2M to deal with deferred maintenance issues as well as to provide a larger, more efficient, envelope of space for Facilities to work with. This investment is exceptional and should not be seen as the catalyst for dissatisfaction around spaces that need to be renovated in the future. We will continue to prioritize all renovations within the Faculty by looking to opportunities including CFI Innovation funds, capital funds where deferred maintenance is needed, and savings accrued in the Faculty budget. I also recognize the continued need to find better space for a GIS lab, and for undergraduate students having their own designated space.

Finally, we intend to hire a Lab Support Manager as part of FENV Shared Services, if our 2023-24 budget allows. The Shared Services group will continue to provide excellent service to our units while also supporting training to foster greater self-sufficiency at the Departmental level.

Faculty Dean


.....

Date

November 22, 2022
.....

Educational Goals Assessment Plan Template

Unit/Program: Department of Geography

Contact name: Tara Holland

Date: September 21, 2022

This template is designed to help units implement assessment of Educational Goals after receiving feedback from their External Review. Units are not expected to assess every Educational Goal every year. *(Textboxes will expand as you type)*

1) Who were the members of your Educational Goals Assessment team? Outline who has worked on the assessment.

The assessment will be carried out by the Department of Geography Undergraduate Studies Committee, led by Tara Holland, who is the Faculty of Environment Teaching Fellow and has expertise in curriculum mapping. This assessment plan was created in consultation with Janet Pivnik (Educational Developer in the Curriculum and Instruction Division, CEE) and Alice Campbell (Program Assessment Specialist, LEAP). Alice will continue to consult through the duration of the assessment.

2) Are your program's Educational Goals current, or do any of them need to be revised?

In some cases, Educational Goals may need to be revised to keep pace with changes in the discipline or in the program's course offerings, or to ensure they continue to align with a unit's mission and values. Feedback from the External Review may inform revision of Educational Goals.

As of September 2022, we have current Educational Goals for all of our programs.

3) Is your program's curriculum map up to date?

A curriculum map may need to be updated to reflect any major changes to the program's course offerings (i.e. new or substantially revised courses, courses that have been removed).

We have up-to-date curriculum maps for all of our programs as of September 2022. As new courses are articulated, we will ensure that they are mapped to the relevant program Educational Goals.

4) Assessment Plan

We propose to assess a subset of the knowledge, skills, and attitudes-based Educational Goals that span our programs. In our assessment, we will focus on collecting data from:

- courses in our programs for which Instructors have indicated on our curriculum map that the Educational Goal is assessed in that course; and
- graduating student perspectives of their attainment of the goals.
- In-course student perceptions of attainment of goals in select courses.

The subset of goals was chosen based on analysis of graduating student exit surveys that we have run every semester since Summer 2021. These surveys have highlighted areas in which students feel strongly that they have achieved the Educational Goal, and areas in which they feel less confident. The chosen goals represent both ends of this spectrum, to understand and build upon where we are hitting the mark in our undergraduate programming and course delivery, and where we can improve. For goals that involve collection of individual course data, we plan to build the data collection into select courses from the outset. The courses listed here will not all be used for data collection; at this early stage they are just examples of potential courses.

Educational Goal 1: Analyze social and geographic change			
Description of Assessment Methods: <ul style="list-style-type: none"> • Graduating student exit survey • Student performance on coursework from particular course(s) that explicitly assess the Educational Goal, e.g. GEOG 100; GEOG 104; GEOG 221; GEOG 352; GEOG 333 • Instructor-developed SETC question for a particular course that asks students whether they feel they have achieved the goal 	What would indicate that students had met the EG? <ul style="list-style-type: none"> • Majority of students responding “Extremely prepared” or “Very prepared” on exit survey, with respect to meeting the goal • High scores on a particular aspect of student work with respect to achievement of goal, e.g. scores on a rubric criterion • Majority of students indicating that they think they have achieved the goal in the particular course 	Is this direct or indirect? Both	When do you plan to collect the data? Between Spring 2023 and Summer 2024
Educational Goal 2: Use Earth systems knowledge to inform evidence-based thinking about environmental issues			
Description of Assessment Methods: <ul style="list-style-type: none"> • Graduating student exit survey • Student performance on coursework from particular course(s) that explicitly assess the Educational Goal, e.g. GEOG 111; GEOG 104; GEOG 312; GEOG 389W • Instructor-developed SETC question for a particular course that asks students whether they feel they have achieved the goal 	<ul style="list-style-type: none"> • Majority of students responding “Extremely prepared” or “Very prepared” on exit survey, with respect to meeting the goal • High scores on a particular aspect of student work with respect to achievement of goal, e.g. scores on a rubric criterion • Majority of students indicating that they think they have achieved the goal in the particular course 	Is this direct or indirect? Both	When do you plan to collect the data? Between Spring 2023 and Summer 2024

Educational Goal 3: Use and apply analytical reasoning			
Description of Assessment Methods: <ul style="list-style-type: none"> • Graduating student exit survey • Student performance on coursework from particular course(s) that explicitly assess the Educational Goal, e.g. GEOG 314; GEOG 351 • Instructor-developed SETC question for a particular course that asks students whether they feel they have achieved the goal 	What would indicate that students had met the EG? <ul style="list-style-type: none"> • Majority of students responding “Extremely prepared” or “Very prepared” on exit survey, with respect to meeting the goal • High scores on a particular aspect of student work with respect to achievement of goal, e.g. scores on a rubric criterion • Majority of students indicating that they think they have achieved the goal in the particular course 	Is this direct or indirect? Both	When do you plan to collect the data? Between Spring 2023 and Summer 2024
Educational Goal 4: Communicate results of individual and collaborative research			
Description of Assessment Methods: <ul style="list-style-type: none"> • Graduating student exit survey • Student performance on coursework from particular course(s) that explicitly assess the Educational Goal, e.g. GEOG 214; GEOG 255; GEOG 352 • Instructor-developed SETC question for a particular course that asks students whether they feel they have achieved the goal 	What would indicate that students had met the EG? <ul style="list-style-type: none"> • Majority of students responding “Extremely prepared” or “Very prepared” on exit survey, with respect to meeting the goal • High scores on a particular aspect of student work with respect to achievement of goal, e.g. scores on a rubric criterion • Majority of students indicating that they think they have achieved the goal in the particular course 	Is this direct or indirect? Both	When do you plan to collect the data? Between Spring 2023 and Summer 2024
Educational Goal 5: Engage in discussions and decision-making processes			
Description of Assessment Methods: <ul style="list-style-type: none"> • Graduating student exit survey • Student performance on coursework from particular course(s) that explicitly assess the Educational Goal, e.g. GEOG 104; GEOG 100; GEOG 251; GEOG 321 • Instructor-developed SETC question for a particular course that asks students whether they feel they have achieved the goal 	What would indicate that students had met the EG? <ul style="list-style-type: none"> • Majority of students responding “Extremely prepared” or “Very prepared” on exit survey, with respect to meeting the goal • High scores on a particular aspect of student work with respect to achievement of goal, e.g. scores on a rubric criterion • Majority of students indicating that they think they have achieved the goal in the particular course 	Is this direct or indirect? Both	When do you plan to collect the data? Between Spring 2023 and Summer 2024
Educational Goal 6: Envision and evaluate alternative futures			
Description of Assessment Methods: <ul style="list-style-type: none"> • Graduating student exit survey • Student performance on coursework from particular course(s) that explicitly assess the Educational Goal, e.g. GEOG 104; GEOG 333; GEOG 351 • Instructor-developed SETC question for a particular course that asks students whether they feel they have achieved the goal 	What would indicate that students had met the EG? <ul style="list-style-type: none"> • Majority of students responding “Extremely prepared” or “Very prepared” on exit survey, with respect to meeting the goal • High scores on a particular aspect of student work with respect to achievement of goal, e.g., scores on a rubric criterion • Majority of students indicating that they think they have achieved the goal in the particular course 	Is this direct or indirect? Both	When do you plan to collect the data? Between Spring 2023 and Summer 2024

Educational Goal 7: Prepare to enter a career in your field

Description of Assessment Methods:	What would indicate that students had met the EG?	Is this direct or indirect?	When do you plan to collect the data?
<ul style="list-style-type: none"> • Graduating student exit survey • Student performance on coursework from particular course(s) that explicitly assess the Educational Goal, e.g. GEOG 266W • Instructor-developed SETC question for a particular course that asks students whether they feel they have achieved the goal 	<ul style="list-style-type: none"> • Majority of students responding “Extremely prepared” or “Very prepared” on exit survey, with respect to meeting the goal • High scores on a particular aspect of student work with respect to achievement of goal, e.g. scores on a rubric criterion • Majority of students indicating that they think they have achieved the goal in the particular course 	Both	Between Spring 2023 and Summer 2024

5) How do you plan on sharing your findings within your unit?

- | |
|--|
| <ul style="list-style-type: none"> • Department meeting • Summary document |
|--|

6) Assessment Timeline

Next Mid-cycle Review: 2026

Next External Review: 2029

Educational Goals Assessment Plan Template

Unit/Program: Geography

Contact name: Kirsten Zickfeld & Tara Holland

Date: 1 October 2022

This template is designed to help units implement assessment of Educational Goals after receiving feedback from their External Review. Units are not expected to assess every Educational Goal every year. *(Textboxes will expand as you type)*

1) Who were the members of your Educational Goals Assessment team? Outline who has worked on the assessment.

This assessment will be carried out by the Department of Geography Graduate Studies Committee, led by Kirsten Zickfeld. This assessment plan was created in consultation with Tara Holland, who is the Faculty of Environment Teaching Fellow and has expertise in curriculum mapping. Through the duration of the assessment we will also consult with experts at CEE.

2) Are your program's Educational Goals current, or do any of them need to be revised?

In some cases, Educational Goals may need to be revised to keep pace with changes in the discipline or in the program's course offerings, or to ensure they continue to align with a unit's mission and values. Feedback from the External Review may inform revision of Educational Goals.

In response to feedback from the external review we are planning to revise the Educational Goals of our graduate programs to reflect broader learning opportunities (communications skills, knowledge translation, Indigenization, decolonization).

3) Is your program's curriculum map up to date?

A curriculum map may need to be updated to reflect any major changes to the program's course offerings (i.e. new or substantially revised courses, courses that have been removed).

The curriculum map will need to be updated following revision of our programs' Educational Goals.

4) Assessment Plan

For each Educational Goal, outline what data you will use to assess student learning. Indicate what direct evidence you will draw on - which key courses you will sample from and, if possible, the course-based assessments you plan to use. These can be described in general terms (e.g. research paper, final exam questions targeting a particular Educational Goal). Indicate also whether or not you plan to gather indirect evidence (e.g. surveys, focus groups, interviews, etc.). The same indirect evidence method (e.g. a survey) can be used for multiple Educational Goals. Describe what would indicate to you that students had met the Educational Goal. Add or delete rows as needed.

Educational Goal 1: Apply theoretical and methodological tools relevant to their chosen field within Geography			
Description of Assessment Methods: (e.g. Term paper from Course X, will randomly sample 20% of student work; exit survey of graduating students)	What would indicate that students had met the EG?	Is this direct or indirect?	When do you plan to collect the data?
<ul style="list-style-type: none"> • Student performance on coursework from particular course(s) that explicitly assess the Educational Goal, e.g. GEOG 603, GEOG 606 • Submission and defence of research proposal • Submission and defence of Master's or PhD thesis 	<ul style="list-style-type: none"> • Satisfactory score on a particular aspect of student coursework with respect to achievement of goal • Research proposal defence passed • Thesis defence passed 	Direct	Yearly
Educational Goal 2 (Master's programs): have developed an area of specialization within their discipline			
Description of Assessment Methods: (e.g. Term paper from Course X, will randomly sample 20% of student work; exit survey of graduating students)	What would indicate that students had met the EG?	Is this direct or indirect?	When do you plan to collect the data?
<ul style="list-style-type: none"> • Student performance on coursework from particular course(s) that explicitly assess the Educational Goal • Submission and defence of research proposal • Submission and defence of Master's or PhD thesis 	<ul style="list-style-type: none"> • Satisfactory score on a particular aspect of student coursework with respect to achievement of goal • Research proposal defence passed • Thesis defence passed 	Direct	Yearly
Educational Goal 3 (PhD program): Comprehend and apply three substantive knowledge domains within their chosen research field			
Description of Assessment Methods: (e.g. Term paper from Course X, will randomly sample 20% of student work; exit survey of graduating students)	What would indicate that students had met the EG?	Is this direct or indirect?	When do you plan to collect the data?
<ul style="list-style-type: none"> • Student performance on qualifying exams 	<ul style="list-style-type: none"> • Written and oral component of qualifying exam passed 	Direct	Yearly

Educational Goal 4: Apply persuasive scholarly communication skills			
<p>Description of Assessment Methods: (e.g. Term paper from Course X, will randomly sample 20% of student work; exit survey of graduating students)</p> <ul style="list-style-type: none"> • Student performance on coursework from particular course(s) that explicitly assess the Educational Goal, e.g. GEOG 600, GEOG 603 • Submission and defence of research proposal • Submission and defence of Master’s or PhD thesis • Student participation in scholarly activity, e.g. delivery of conference presentations, authorship of peer-reviewed publications • Presentation of thesis research at Graduate Research Day (Master’s programs only) 	<p>What would indicate that students had met the EG?</p> <ul style="list-style-type: none"> • Satisfactory score on a particular aspect of student coursework with respect to achievement of goal • Research proposal defence passed • Thesis defence passed • Satisfactory evaluation of scholarly activity in annual progress report • Delivery of research presentation 	<p>Is this direct or indirect? Direct</p>	<p>When do you plan to collect the data? Yearly</p>
Educational Goal 5: Propose and execute a rigorous, independent and original research project that addresses geographic questions			
<p>Description of Assessment Methods: (e.g. Term paper from Course X, will randomly sample 20% of student work; exit survey of graduating students)</p> <ul style="list-style-type: none"> • Student performance on coursework from particular course(s) that explicitly assess the Educational Goal, e.g. GEOG 600, GEOG 603 • Submission and defence of research proposal • Submission and defence of Master’s or PhD thesis 	<p>What would indicate that students had met the EG?</p> <ul style="list-style-type: none"> • Satisfactory score on a particular aspect of student coursework with respect to achievement of goal • Research proposal defence passed • Thesis defence passed 	<p>Is this direct or indirect? Direct</p>	<p>When do you plan to collect the data? Yearly</p>

5) How do you plan on sharing your findings within your unit?

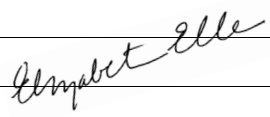
<ul style="list-style-type: none"> • Department meeting • Summary document
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6) Assessment Timeline

Next Mid-cycle Review: 2026

Next External Review: 2029

MEMORANDUM

ATTENTION:	SCUP
FROM:	Elizabeth Elle, Vice-Provost, Learning & Teaching 
RE:	External Review of Geography, and Educational Goals
DATE:	November 1, 2022

In 2022, Geography underwent their external review. As part of this process, the unit has submitted an assessment plan for Educational Goals (EGs) for both their undergraduate and their graduate programs.

Geography has been thoughtful about leveraging EGs to improve their programs. For example, their action plan highlights an interest in thoughtfully applying a JEDI approach to their undergraduate EGs, and including professional development as a goal for graduate students. Their EG assessment plan includes a combination of direct and indirect assessments, ranging from course- or dissertation-embedded assessment to surveys of students to capture whether they believe they have achieved a particular goal in a particular course. The latter follows a commendable tradition of graduating student exit surveys, which have provided insight into areas of the Geography program that are “hitting the mark” and those that aren’t quite doing so.

The Geography plan at the undergraduate level will focus on a subset of the EGs that the unit identified as of greatest interest for their own learning and improvement. This is a great strategy. A number of courses have been identified as a likely focus for assessment, with an acknowledgement that the exact courses assessed may shift as the project rolls out. A standing committee and a teaching fellow have been identified as the leads of the work, and Geography has taken advantage of staff in CEE and LEAP to plan what is a very robust and thoughtful approach to EG assessment.

Overall, Geography has designed a plan that is well designed, and likely to result in useful information to be used in curriculum improvement. I look forward to reviewing their mid-cycle findings.