



**SAN FRANCISCO  
STATE UNIVERSITY**

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To: Carmen Domingo, Dean, College of Science & Engineering  
Lori Beth Way, Dean of Undergraduate Studies and Academic Planning  
Jennifer Summit, Provost  
Academic Program Review Committee

From: Jerry Davis, Chair, Department of Geography & Environment

Re: Response to 7<sup>th</sup> Cycle External Review

As part of the 7<sup>th</sup> Cycle Program Review of the department, two external reviewers – Doug Stow (San Diego State University) and Sergio Rey (UC Riverside) – visited the department and campus 11-12 October 2018 and produced an *External Review Report*, which we received 29 October. After some time for all faculty to review the document, we discussed the review and Dean Carmen Domingo's 12 November response at our 14 November meeting, followed up by a further discussion today (28 November) based upon additional input.

We greatly appreciate the thoughtful external review. Along with our self-study, it will help to guide departmental decisions in the coming years. The reviewers identified our "substantial contributions to the region's economic base, having trained generations of students" and emphasized its importance "in addressing the challenges facing our cities, regions, and planet". The reviewers noted substantial advances in our academic programs since our last review, and described our department as "strong and vital in terms of faculty research, undergraduate education, and its contributions to the College of Science and Engineering and the San Francisco State University." The reviewers observed that in recent years the department has "worked hard to develop high-quality undergraduate and master's degree programs that reflect these priorities, to attract strong students, and to prepare its students for a wide range of professional positions and for graduate study" with good student placement reflected in the alumni survey.

To capitalize on our success and position ourselves for continued excellence, we should consider recommendations for future direction, some of which aimed at building connections and collaborations within the college, university, and our discipline. The reviewers could see that our strengths in physical, environmental and GIScience programs benefit from synergies between these programs. The same could also be said for collaboration externally, including internationally, and here human geographers have also been active, though this was not discussed in the external review. Suggestions to be considered were also reflected in the Dean's letter and most were identified in our self-study. These are presented below along with the results of our discussion.

### External funding for graduate student support

The reviewers and the dean recommended investing greater effort in securing external funding for graduate students, and ongoing economic conditions in the Bay Area have amplified this need. Graduate tuition waivers would help. Applying for external grants and including graduate student support in the budget is the primary way in which we will address this concern. We will also need to continue to support our students through external graduate student research awards and scholarships. While federal funding has become more challenging in recent years, there are significant exceptions in the area of health. Fortunately, State of California funding has actually increased in recent years due to action on climate change. Several faculty have applied this past year for State funds for climate change initiatives, which shows promise for pursuing our goal to better support graduate students, however tuition waivers would be helpful in competing to enroll the most highly qualified students. Promoting research that involves participation of under-represented minorities is a promising area that fits well with our departmental philosophy and is supported well by our university. Overall, the department is working to address recent decreases in graduate students in our program, and some of these efforts are starting to bear fruit. These efforts also relate to the discussion of strategic planning below.

### M.S. in Environmental Science

The reviewers strongly recommended pursuing the M.S. in Environmental Science (MSES). The MSES Program fits well in our department because it aligns with our departmental strengths, would be well positioned in the Bay Area, and could significantly increase the overall numbers in our graduate program. We currently have the resources to support this program, enhanced further by interdisciplinary connections and faculty who have demonstrated substantial support. The arguments for pursuing this new program are very strong. We have just submitted a prospectus which is making its way through the university to the Chancellors Office, and look forward to taking the next step.

### Policy Advisory Committee

The external reviewers noted our efforts at developing bylaws and best practices, and suggested that we consider forming a Policy Advisory Committee to move this forward toward completion. In our department meeting on 14 November 2018, we universally felt that this committee should include all faculty rather than the responsibility of a few faculty members. We are going to make this a regular part of once-a-semester departmental retreats, with the next scheduled for 25 January 2019.

### Develop a 5-year Strategic Plan

The reviewers recommended developing a 5-year strategic plan, and during our 14 November meeting we thought that the best venue for this would also be during our departmental retreats. Areas for consideration in this plan include, but are not limited to, faculty hiring, program planning, space, funding for grad students, increasing diversity & inclusivity, grant planning, sabbatical planning, and alumni outreach. Faculty have identified areas to build on, such as our contributions to Bay Area sustainability, resilience, and climate change research and education. We will begin composing our strategic plan this coming January and plan to update it on an annual basis during each Fall or Spring faculty retreat.

## Advisory Committee & Alumni Outreach

The reviewers recommended development of an advisory committee, and given our strong history of placement in Bay Area agencies and firms, alumni should be an important part of its composition. Our alumni are found throughout the Bay Area and in state agencies in Sacramento, with many in prominent positions. In the geographic information science (GISc) arena, some alumni already participate in the IGISc Advisory Board, and we have reached out to alumni and other specialists in environmental science for both the B.S. Environmental Science development and the current M.S. Environmental Science design. At our 14 November meeting, we considered ways to potentially combine efforts at alumni outreach and advisory help, recognizing that we can only ask so much of the busy schedules of these professionals. Some existing events are more social, such as our annual alumni picnic at Golden Gate Park, while others are focused on contributing to student career paths, such as our twice-annual career panels in our *Senior Seminar for Geography & Environmental Science*. A more formal advisory committee would be valuable for providing input on specific topics such as increasing student opportunities, as well as long-range program planning and other strategic issues. The potential for developing an advisory committee is something that we will consider at our next retreat when we start discussing a 5-year strategic plan.

## Improvements for the Undergraduate Programs

The external reviewers recommend that we enhance our undergraduate program by increasing the number of internship, research, field study, or honors opportunities. In our self-study, we described current efforts at improving our undergraduate programs. We are currently revising our B.A. Geography program to replace Foci with an array of themed electives. We are also making minor updates to the newer B.S. Environmental Science to avoid issues students have discovered that unnecessarily lengthen their time to completion. We have a departmental Curriculum Committee that regularly considers course and program enhancements, with the committee reporting to the department for approvals. We are currently working on addressing "bottleneck" issues for students in our undergraduate programs (160, 205, 500, 603, and 690) and some of these efforts are articulated in the self-study. For the graduate programs, a similar bottleneck effect occurs with under-enrolled graduate seminars that have to be offered less often, and we are working on ways to allow grad students to make long-term plans given less-frequent offerings. Other improvements we have identified are expanded research opportunities for undergraduates, including the use of an undergraduate thesis option.

Paid internships have long been useful for students in our programs, with this being the most common path to careers. Recent efforts to restructure our internship courses to work even better for students and open more doors for URM students have been successful. For example, Leora Nanus is co-coordinator for the SFSU Academic Internship Program with the National Park Service and the Golden Gate National Parks Conservancy, which includes a CSL course developed for a cohort of students. Sara Baguskas is developing a new program with *Nature in the City*. We will need to work with the Institute for Civic and Community Engagement to ensure that all agencies are approved for all student internships, however they are structured.

## Space

One clear need identified by the external reviewers and also noted in the dean's response and our self-study is acquiring additional space. We have been identified as the most space-constrained department in the college, though we have been making considerable efforts to address this need. Successes have included the addition of the environmental science teaching lab in HSS 383, which supports all Geog 160 *Introduction to Environmental Science* lab sections as well as other upper division classes needing its features. Its HSS 383A anteroom doubles as a water quality faculty research lab. Faculty research lab space is mostly shared, with space allocation planned by an ad-hoc committee, considering optimal use of existing as well as new spaces based upon unmet need. A new space in the portables is O3, which serves as a soils and geomorphology lab, doubling as a classroom for majors classes. A repurposed space is the Physical Geography lab (HSS 274) which supports research among 4 faculty members working with electronic and other field instrumentation, including micrometeorological, plant physiological, imaging, and unpiloted aerial system (UAS) equipment. Other existing space enhancements include the map library, where we have removed map cabinets containing maps which are currently better delivered in digital form (e.g. current USGS topographic maps), improving opportunities for student research and meeting space.

## Academic Master Plan

Finally, faculty in the department are participating in the current university Academic Master Plan. Ellen Hines is Co-Chair of Committee #11 of the Academic Master Plan. Jerry Davis is a member of the IT Master Planning Committee, which has just started meeting and will be identifying short- and long-term improvements needed in IT on campus.

## Conclusion

The department looks forward to the opportunities and challenges of educating the next generation of SFSU students and conducting research with important societal impacts. This includes continuing to open doors and support members of our community who are not well represented in the traditional university environment, adapting new teaching methods to our classrooms and in the field, particularly in active and experiential learning techniques. In the area of research, we aim to build on our strengths in integrating physical and human dimensions to an array of research problems, expand collaborations across campus and beyond, enhance external funding, and continue to ask the questions and challenge the assumptions most relevant to the evolution of our discipline. We greatly appreciate the efforts of the external reviewers, the dean, and Academic Resources in helping us identify where we should dedicate our efforts.