1. **Preamble**

Like every public university and college in the nation, UH Manoa and SOEST are in worse shape today than one year ago, as a result of the coronavirus pandemic and the accompanying economic recession. Already, SOEST has had 10 staff positions and 9 faculty positions indiscriminately swept by the Legislature (because they happened to be vacant at the time – even if only just vacated or about to be filled). In addition, UH has “centralized” all Colleges cash reserves ($1.5M in our case). We’ve had further retirements of faculty and staff, but all positions are frozen and no recruiting/replacements are permitted. We await implementation of a School budget cut that may be ~$4M, not knowing how payroll may be reduced in order to meet it. Together, this has hamstrung our ability to implement any changes related to strategic repositioning of budget and personnel, including those recommended by the WIS, and we now have new unfillable functional gaps ranging from Department Secretary, to Building Maintenance, to Institutional Support for State budget/positions, to Analytical Equipment Specialist.

Next month will see the arrival of our last faculty member recruited pre-freeze. Since July 2019 this will total 12 new tenure-track faculty, 5 of them women. Research has continued unabated through the pandemic, with one exception: shipboard science. FY20 saw $103M in extramural awards to SOEST, a recent record. DRVO Anita Lopez put in place risk mitigation measures such that, after the UNOLS restriction on ship operations was lifted on July 1st, R/V Kilo Moana has conducted three successful research cruises COVID free. Necessitated by social distancing and work-from-home, our faculty rapidly and successfully transitioned to on-line teaching for the second half of the spring semester, and we expect a majority of classes to be delivered likewise in the fall. In May we held our first virtual commencement, with the address coming live from Sir David King in Cambridge, UK. Administrative burden has been decreased by nearly all paperwork being signed digitally. Our faculty and students continue to make us proud with their national recognition: Dr. Bo Qiu has been notified that he will receive the 2021 Henry Stommel Research Medal, the highest award that the American Meteorological Society can bestow upon an oceanographer. Led by students from the Department of Ocean and Resources Engineering, a UH team placed first nationally in the Department of Energy’s Marine Energy Collegiate Competition, with the winning design and presentation of a floating/drifting wave energy converter feeding power via a docking station to an underwater vehicle. Thanks to a “bumper crop” of freshman, our numbers of fall undergraduate majors are up 14% on last year!
2. School-wide Issues

The review committee identified three broad critical issues that the School must face in the coming years, issues that are pertinent to most, or all universities. The continued success of SOEST rests in addressing these problems head-on, progressively, creatively, and with the full partnership of the University and the State.

a. Budget Stresses  Serial cuts have left SOEST increasingly stretched for resources, with little ability to address rising concerns. The committee must also note that budget stresses and persistent erosion of funds appear to have driven the SOEST leadership into a triage mentality. The informal sentiment amongst a number of faculty is that new ideas, requests or initiatives are typically met with an automatic “no” or “that’s impossible”.

I. Recommendation Leadership should encourage ideas and initiatives on their merit, rather than shoot them down simply because they represent an additional burden.

   1)  Response Leadership have taken this advise to heart and marked improvement has been noted.

II. Recommendation SOEST must continue to find ways to support its programs beyond state/university funds.

   1)  Response SOEST continues to lead the UH System in external grants from agencies at all levels of government as well as corporate and nonprofit sources.

b. Mentoring  Departments do not have a consistent set of standards about:

I. Recommendation The review of progress for graduate students.

   1)  Response All Departments are adopting the highly successful individualized annual meetings with faculty that has been in operation in Earth Sciences for decades. The logistics of scheduling are formidable. The newly formed Academic Committee is resolving this with a scheduling tool that matches faculty and students to meet for 30 minute sessions and review status and exchange ideas. The launch was expected for Spring 2020 but was put off by the COVID crisis and is now rescheduled for Spring ‘21.

II. Recommendation Post-docs need employment status better than stipends, consistent mentoring that is not only focused on 1 advisor, better assimilation into department and school culture, and more resources such as a website, handbook, and specific guidance on myriad issues centered on being successful at UHM.

   1)  Response SOEST has put in place a policy, effective on July 2019, that all PIs should budget for and use official employment opportunities to engage postdoctoral scholars, including fringe benefits and overhead, and cease using non-employee stipends for this purpose. Only those individuals personally receiving a postdoctoral fellowship award are allowed to be on a stipend. However, the school requires that these fellows also receive a “non-compensated BOR appointment” that provides them with access to the UH facilities open to faculty members. The dean’s office has worked with the individual departments and units to develop onboarding procedures for postdoctoral scholars and to hold regular welcoming events to introduce them to others in the unit. The school is developing a website with general information on postdoctoral researchers, including contact information for their peers in an effort to develop more of a sense of community.
III. **Recommendation** Pre-tenure faculty need more consistent mentoring, help in negotiated start-up packages and salaries, less pressure to teach-serve-advising at burdensome levels, training in grants and paper writing, and improved administrative assistance.

1) **Response** The SOEST Research Council is developing a series of career development activities designed to help graduate students, postdoctoral researchers and pre-tenure faculty develop skills that are not commonly taught in graduate school. Topics that have been identified as a high priority include, how to mentor a graduate student or post-doc, how to write a successful NSF proposal, how to negotiate a better start-up package. Some activities would be training lectures, others would be round table discussions or a group brainstorming sessions. We were able to hold a successful training session for graduate students on career opportunities in academia versus the federal government during the Spring semester. The research council was working with Na Kama Kai (Oceanography Graduate Student Organization) to develop another graduate student activity when the COVID19 lockdown hit and all activity was put on hold. We hope to reinvigorate these activities with virtual sessions beginning in the fall.

c. **Workplace Climate** – Of all the interviews run by the visiting committee, none was more striking than the meeting with the Women in SOEST (WiS) group, who had provided a document – signed by more than 70 individuals – listing concerns regarding gender inequity and the workplace environment at SOEST. This issue is pervasive across all universities and is a national problem, hence the growth in scope of Title IX over the last decade.

I. **Recommendation** Establish a regular university-wide mechanism to educate faculty, researchers, staff and students with formal training in topics such as Title IX regulations, standards of conduct and civility, the existence, forms and impact of implicit bias, and methods of establishing and securing a safe work environment including bystander training.

1) **Response** Training of this type has become more frequent, but there is never enough. Bystander, hiring practices, and implicit bias training has become more frequent but is not yet entrenched as a regular practice for all employees. Implicit bias training is required of all search committees. Since the review, Deans Office personnel have taken face to face training in Ethics, Title IX, Trauma Informed Care, Implicit Bias, LGBTQ+ Safe Zone, and Bystander Education. Title IX training is required of all SOEST employees and associated professionals. For 2020 we are approaching a 100% compliance level with collaboration between department heads and the Deans Office in Title IX training.

II. **Recommendation** Establish a high-level administrative position (Associate Dean level) within SOEST, in coordination with appropriate University offices (Title IX, Graduate Division), to oversee climate, diversity, equity and cultural sensitivity.

1) **Response** The Diversity Equity and Inclusion Council (DEIC) was established at the recommendations of the external review. The Council represents individuals from all of SOEST’s units to include staff, students, faculty as well as members from the LBGTQ+ and Hawaiian communities, and other individuals of diverse race and gender representative of the SOEST community as a whole. The top three objectives of the Council are to: 1) establish a school wide code of conduct, 2) conduct a SOEST-wide climate survey with actionable recommendations to improve climate within the school, and 3) update the SOEST mission and vision statement. Seven DEIC meetings were held over eleven months from the first inaugural meeting in July 2019. Four sub-committees were formed to focus on survey, code
of conduct, mission and vision, and fund raising. The Council has accomplished the following:

a) Created and established a DEIC charter agreement,

b) Established of a University of Hawai‘i Foundation SOEST Diversity, Equity, and Inclusion fund,

c) Drafted a SOEST code of conduct, and distributed it throughout SOEST for review and comment, and

d) Reviewed potential SOEST community survey templates and quotes to determine which are best suited for our particular community.

Additionally, the Interim Director under the advisement of the DEIC conducted fourteen group and 22 one on one confidential listening session of focus groups throughout the SOEST community. Over 120 people or 12% of the community population including a WIS inclusive session was held over the course of 6 months with additional sessions planned yet cancelled due to the onset of the pandemic shutdown. These focus groups provided community members an opportunity to raise issues, concerns, and challenges facing each group within the school. Each group was told these data would be used to provide a baseline of a climate survey of the SOEST community unique to our school. Initial data was analyzed and thematic trends were grouped into four categories; social services, culture/education/mentoring, behaviors/social interactions, and space issues. A summary of the initial data was briefed out to both EXCOM and the DEIC. On May 28, 2020 the survey sub-committee provided a recommendation to proceed with a third-party survey company with local assistance pending fund availability. SOEST also co-sponsored the Search Advocate Workshop held February 2020 with funding through the newly established UH Foundation account.

The Interim Director extended an opportunity for the UHM Marine BIPOC collective group to start a dialog with the DEIC. On July 28, 2020 they were very grateful and thankful for the invitation however before expanding the conversation, they wished to give their intended audience a chance to respond to their demands. They further added that after they receive a response from the Oceanography faculty, they will revisit whether we shall accept or decline the invitation. EXCOM was provided with University of Hawaii Manoa and Title IX data on sexual harassment and assault, and other federally required data.

III. Recommendation Provide a safe reporting structure that guarantees confidentiality and absolutely prohibits any form of retaliation or retribution.

1) Response SOEST Deans Office receives regular reports of harassment, workplace aggression, and sexual violence. These are dealt with systematically and immediately using the following steps: 1) Coordination with either HR or Title IX. 2) Meeting with complaintant to document event and history. 3) Fact finding by Deans Office. 4) Meeting with respondent in which issue is discussed, executive policies reviewed including workplace violence, retribution, and others. 5) Memo generated as official record in which discussion is recorded, corrective action described, and signed by both parties. Because of confidentiality, the Deans office cannot reveal details of corrective action as a public communication, but will meet with groups to verbally let them know of actions taken.

IV. Recommendation Develop standards of conduct by which anyone found guilty of abuse or harassment should be punished appropriately (e.g., suspensions or release of employment),
removed from the environment in which the abuse occurred, and mandated to undergo training or therapy. The response must be more than a slap on the wrist and/or a lateral promotion out of “harm’s way”.

1) **Response** SOEST Deans office and the Executive Committee (EXCOM) is committed to an inclusive and equitable workplace where all students, staff, faculty, and visitors, whatever their gender, race, ethnicity, national origin, age, sexual orientation or identity, education or disability, feel safe, valued and respected. Committed to providing a professional workplace where learning and research can be conducted in a safe environment free of unwanted attention. Respecting and valuing diverse life experiences and all heritages including our Hawaiian native culture and ensuring that all voices are understood, valued, and heard. Members of one unit within SOEST (Earth Sciences) spent more than one year, including a retreat, to translate these values into a workplace code of conduct which was recently implemented. Following their lead, a subcommittee of the SOEST Diversity, Equity and Inclusion Council (DEIC) has spent months drafting a “code of conduct” that may serve School-wide standards of conduct. Using this document and that of Earth Sciences, the Deans Office has directed each unit head to convene meetings of their faculty, staff, students and postdocs to consider the issues associated with refining a shared code of conduct. This is as much about the process as the product. The Deans Office recognizes that affirming/living such a policy will only come about as we each develop self-awareness/responsibility, as well as bystander awareness/responsibility, in how we interact with one another - and codify that accordingly. The goal is a unified code of conduct for SOEST by year end, though it is expected that each unit may add their own unique standards beyond the core code.

### 3. Atmospheric Sciences

**I. Recommendation** SOEST and the department need to strongly support development of junior faculty research. Recognizing the value of service and outreach conducted by junior faculty, the senior faculty should step in and shoulder more of this work or make allowance for it in the distribution of teaching assignments to be sure junior faculty are not overloaded. A committee should recommend teaching assignments after carefully assessing the teaching and service loads borne by each faculty member.

1) **Response** Since the review, Jennifer Griswold has done a fantastic job as associate chair. Christina Karamperidou has passed tenure review with flying colors and been promoted to associate professor. Alison Nugent has received a Regents Medal for Teaching from the Board of Regents and has made excellent progress in both publishing and grantsmanship. Similarly, Giuseppe Torri has also excelled in teaching and grantsmanship. These achievements are proof that they are receiving the support and guidance to succeed in SOEST.

**II. Recommendation** At the level of the Dean’s office, care should be taken to ensure startup packages are adequate to efficiently launch the research programs of new faculty. This reviewer was quite surprised to learn that it is apparently unusual to get support for one graduate-student RA in such packages. Other programs typically offer such support, and it can be done economically in the form of a backstop, where the first year of support is paid automatically, and second year will be provided if the new faculty member applies for a grant with student support and is declined. The backstop might also be extended for a third year if a second grant
application is also submitted by the new faculty member and it is also declined. This is a very cost-effective way to help get a new professor’s research off the ground, and it grows the graduate student population.

1) Response The Dean has seen the light and has adopted these suggestions.

III. Recommendation The reviewer met with an impressive group of undergrads who represented a significant fraction of the department’s current majors. The reviewer recommends attempting to address all the following suggestions. There is strong interest in an introductory PYTHON-based coding course. Such a course could conceivably serve several different units in SOEST.

1) Response Python has been introduced in a number of our undergraduate and graduate classes. In addition, we have an undergraduate Python class that is being coordinated across SOEST.

IV. Recommendation There is a strong desire to replace part of the material in Physics 272 ( Electricity and Magnetism) with subjects more relevant to geophysics. The emphasis on circuits in the lab portion of course was deemed particularly excessive. Such a revised course might be of interest to students in other SOEST programs.

1) Response ATMO disagrees with this suggestion, which stems from students’ lack of understanding of the field. This subject is important for understanding atmospheric electricity and is useful for meteorological instrumentation.

V. Recommendation The students had trouble getting reliable advice about course scheduling. This is a serious issue because many important ATMO courses are offered only every other year due to the small size of the program. Central SOEST advising was not always aware of the specific years when particular courses are offered.

1) Response We have developed and posted online a 5-year plan that is updated every semester. The plan has and will be made available to all students and their advisors.

VI. Recommendation The undergrads are interested in serving as peer mentors for lower division majors, to help the department attract and retain freshmen and sophomores.

1) Response Senior undergraduate students have initiated, with faculty support, a peer mentoring activity. This has been very popular and effective.

VII. Recommendation The classroom computers available to the students are not loaded with a uniform set of software.

1) Response Jenifer Griswold and Steven Businger coauthored an equipment proposal to Unidata that has been funded. The new hardware, for which we have quotes, will resolve previous problems with software. The Dean has authorized the cost match for our lab computer hardware upgrade.

VIII. Recommendation This seems like a particularly good group of students to begin serving as peer mentors, and it would be good to give that a try while they are still around.

1) Response See response under VI. above.

IX. Recommendation Students and faculty both complained about the decrepit state of the HIG building. Building maintenance is often a challenge in times of tight budgets, but some of the problems really cry out for repair. Fix a large hole in the ceiling of one of the men’s bathrooms. It has apparently been there for years and been reported several times. As is, it makes a pointed statement about UH to a wide cross-section of male visitors.
1) **Response** We do need a new building. HIG may be beyond remodeling. But, the hole in the men’s bathroom has been fixed.

X. **Recommendation** The graduate students voiced concerns about uneven teaching quality and unclear responsibilities for the two teaching assistants. Even experienced, accomplished professors can occasionally benefit from a fresh look at their course materials and presentations styles. They should make an effort to keep their techniques/skills up to date using University resources such as the Center for Teaching Excellence’s teaching assessment services and the Assessment Office’s consultation services for program-level curriculum development. The responsibilities of the TAs should be clarified and held consistent from year to year.

1) **Response** The level of teaching is improving in the department with the hire of young and enthusiastic junior faculty. Some of the older faculty have strong accents that throw the students off at first, but with a bit of exposure most students adjust and thrive, because the level of instruction is excellent. We have installed white boards and smart screens in our classrooms, which has made it easier for faculty to teach effectively. We have encouraged our faculty to take advantage of University resources such as the Center for Teaching Excellence’s teaching assessment services and the Assessment Office’s consultation services. The comment regarding TA responsibilities was a temporary bump that has been resolved. We strive to have a more experienced TA available to help mentor the incoming TA, in addition to instruction and mentoring from the overseeing faculty.

4. **Earth Sciences 1-Year Response to the SOEST Program Review**

Earth Sciences (EARTH) The external review committee provided a series of thoughtful recommendations. Here is a one-year status update on the progress of the Department of Earth Sciences addressing these recommendations. Because the Earth Science department has been unusually progressive in addressing many of the broader recommendation, some before they were made, we start with a general report on larger-scale, cross-SOEST concerns within the purview of the department followed by more targeted responses to the committee’s specific recommendations.

Following the external review, in April 2019 the Earth Sciences Department held a two-day retreat off-campus for all faculty, with representation from staff, emeritus faculty, the Dean’s office, faculty representatives from other SOEST units (HIGP, OCE) and graduate students. The overarching goal of the retreat was to take a deep-dive into the many challenges that the department will face in the coming year, some of which the external review also identified. We arranged for free kid-activities so all career couples could fully engage on the issues. We discussed all aspects of the department’s footprint, especially in light of the findings of the external review. Prior to the retreat all faculty took a DISC personality test and staff from UHM HR conducted a workplace behavior workshop where we shared and discussed the results. This exercise was done to increase self-awareness and build understanding of our work behavioral tendencies so we may improve collegiality in the department and by extension in the school. We ran sections on building a new curriculum (including a discussion of assessment led by the UH assessment office), revitalizing our research infrastructure, and strengthening the graduate program, our digital infrastructure, and community building. Follow-up work has been ongoing on all these fronts.

At the end of 2019, we adopted the first Faculty Code of Conduct on the UHM campus, which is currently being used as a model for a SOEST-wide code of conduct. In addition, all Earth regular faculty have recently completed Title IX training. As part of community building, we have reconnected with our
alumni. We had our inaugural Alumni Days event in late Spring 2019 and were planning the follow-on when Covid-19 put those plans on hold.

As for mentoring of junior scientists: We are currently working with our graduate students to develop clear guidelines on graduate student expectations and modes/frequency of communication at each committee meeting and have adopted a pre-tenure faculty mentoring program who are now assigned a formal senior faculty mentor. We also put time, energy, and funds into modernizing our teaching spaces for more interactive learning, as many rooms had not changed since we moved into the POST building in 1997. A community cleaning and renewal drive involving the entire department (faculty, staff, students) were planned but now delayed by Covid-19. While most department paperwork was already in a secure Google Docs folder, our faculty committees now use Trello to keep track of tasks, and during Covid-19 we have experimented with Slack for rapid information distribution. There is much to do and we cannot wait to resume our initiatives once they are safe.

Below are our specific responses to the specific recommendations (paraphrased with reference to item number in the report).

I. **Recommendation** The Department should compose a strategic plan for future directions.

   1) **Response** The Department discussed its strategic plan in light of the external report and made some adjustments, then proceeded to recruit for three open positions in the Fall of 2019. Because of COVID-19, all searches was first frozen in April 2020 and in July 2020 the Hawaii Legislature swept all the positions (for more see next response).

II. **Recommendation** The Department should not shift so hard toward environmental issues that it loses its eminence in core research areas.

   1) **Response** It is a delicate balance. The Department spent considerable time building a strategy for identifying our critical and immediate needs and in preparation for three planned faculty searches in coastal studies, tectonophysics/geophysics, and structural geology/tectonics. These fields, specifically ocean and Earth hazards, not only cover exciting science opportunities, but also meet critical societal needs. As an Earth Sciences department at a public university we cannot ignore the natural hazards challenges our State and Oceania is facing. Our three searches were in various stages of completion but had identified several diverse, highly qualified young candidates when Covid-19 hit and all UH searches were frozen, and now these very positions might be swept. Another faculty member retired this summer, and our search to replace our retired office manager has shared the fate of all other searches, with no relief in sight.

III. **Recommendation** TA-ships rebalancing, return of tuition revenue to the department.

   1) **Response** While the campus has not increased tuition revenue to the department following our large increase in student semester hours (SSH), the Dean has, internally in SOEST, distributed some of the tuition revenue according to SSH, which we believe is a good incentive. It is unclear if this practice can continue unless SOEST sees a similar increase from the campus. As for TA rebalancing we have nothing to report but note the anticipated growth in our Environmental Earth Science BA degree is likely to put even larger pressure on this issue.

IV. **Recommendation** Support the research mission, especially analytical facilities.

   1) **Response** We agree our labs are critical to our research mission. Following the retreat, Earth Sciences faculty voted to give support of our analytical facilities high priority. We successfully hired an excellent mid-career Specialist for the Isotope Laboratory, but have
struggled to hire one for the Microprobe facility. That half-time position was also being recruited when all searches were frozen. Financial support that the Chair had identified for the laboratories is now in jeopardy by imminent State (and hence UHM) budget cuts. Meanwhile, faculty increased submission of research proposals, which is something that is completely under our control and can greatly affect our budget and operational flexibility. NSF funding for a new mass spectrometer was recently approved; the biggest challenge remains to attract qualified specialists to run our labs.

V. **Recommendation** Formalizing a thesis for the undergraduate degree program.

1) **Response** Our undergraduate program is growing, especially our Environmental Earth Science BA. Our long-term efforts to expand our online presence continue to bear fruit, and we were thus well positioned when all courses had to move online mid-Spring. We continue our work to integrate program assessment of student learning into our degrees, and the 2020-21 academic year will see a top-to-bottom review and revision of our entire undergraduate program (both our BA and BS) in order to offer relevant degrees of interest to students. One of several aspects to be examined is the deep integration of research in undergraduate education and it that goal is best served by a senior thesis or other means. Recently, we secured funds to develop virtual field trips; another stalled activity due to Covid-19.

VI. **Recommendation** Graduate students and cultural sensitivity.

1) **Response** The faculty/graduate student climate in Earth has been partly addressed by the year-long work of developing the code of conduct. However, we expect this work to continue. The department has been a leader in these areas will continue push the school to arrange for more workshops and training (e.g., bystander training) for all faculty, staff, and students, as a culture change is not accomplished after a single retreat. Orientation for new incoming graduate students has a presentation by native/local students on cultural sensitivity and procedures when working in the field. Our planned hiring was also meant to help address the diversity of the department. Furthermore, before Fall 2019 semester started all graduate faculty took a workshop in LGBTQ+ Safety and Inclusion, thus providing faculty with updated skill sets to navigate a changing student population. While an important first step, these trainings should be school-wide, recurring, and inclusive.

5. **Marine Biology Graduate Program**

I. **Recommendation** In concert with seeking permanent status for the MBGP, the faculty should identify its unifying core principles and strengthen its curriculum. A first-year sequence of rigorous core courses, followed by flexible trajectories through routinely offered advanced courses, would make MBGP more competitive for a training grant. The MBGP faculty should hold a retreat to discuss and chart the next phase of the program’s development.

1) **Response** We thank the review committee for their insightful comments and suggestions throughout this review process. The comments made in the area of curriculum are timely and important.

The initial MBGP proposal included a 2-semester core curriculum, which was in place for the first two years of the program, but could not be sustained without faculty teaching loads assigned specifically to MBIO courses. In later years, students also faced challenges, as available course offerings in CNS and SOEST changed associated with a number of departures / retirements by
key faculty. As the committee noted, our current MBGP curriculum is now comprised of two 1-unit courses on career skills and current topics. Students then select courses from a curated list of existing courses, primarily in SOEST and CNS, for additional content depth and breadth. But, reliance on courses from other units for content was not the original vision for the MBGP. Over time, because MBGP has no influence over the course offerings of other programs, our curriculum shifted from flexible to haphazard.

In response to the committee’s recommendation, the MBGP held a well-attended retreat in January 2020. The faculty were supportive of the development of a new core curriculum and considered a range of alternatives for the structure and content of the new core curriculum, including non-traditional options of intensive courses offered in the weeks before the start of the academic term, field and lab courses offered at key off-campus facilities (e.g., HIMB), and a mix of in-person and remote learning options to better integrate students and faculty in our program who are based on campus at UHM, at UHM off-campus facilities, at other UH campuses, and at federal offices. In April 2020, we established an Adhoc Committee on Core Curriculum to work with the standing Curriculum Committee to develop a proposal for the core curriculum. While this effort has been slowed with the campus-wide response to COVID-19, we expect the proposal of the new curriculum in the 2020-2021 academic year for adoption in Fall 2021.

II. Recommendation

The MBGP has far less capacity to staff and to offer regularly its core and advanced graduate courses than might be expected from its large faculty, because faculty from CNS and SOEST have teaching obligations in their respective units, not in MBGP per se. That UHM faculty can be tenured in an ORU offers one potential solution to this problem: An increase in MBGP faculty with graduate teaching loads dedicated to the MBGP curriculum could come from hires (underway, planned, and new) in ORUs, such as HIMB and PBRC. The program’s request to hire four new faculty seems reasonable, especially if it coincides with replacing positions in ORUs, and on a scale that could make a big difference in the program’s curriculum. Hiring someone in fisheries science should be a high priority, since training professionals for state and federal regulatory agencies is one of the program’s most visible value propositions.

1) Response

The MBGP gains its strength by the participation of marine biologists from units across UHM; we serve as a locus for cross-disciplinary marine biological research and education across campus. It is unique at UHM in the program’s joint administration by CNS and SOEST. However, this administrative structure – all MBGP faculty have primary appointments in other units on campus -- means that the Co-Directors of the MBGP are not in a position to assign teaching to MBGP faculty, and any instructional duties must be allocated by the Deans of SOEST and CNS. In the past two years, the MBGP has made significant progress addressing the concerns of the review committee on the availability of instructional resources to the program.

Prior to 2017, academic hires at HIMB (SOEST) were Research (R) appointments without formal instructional duties. Having identified this as a problem for the MBGP, SOEST Dean B. Taylor has hired the five most recent positions at HIMB (L. Bedjer, J. Madin, E. Madin, J. Jacobsen, and L. McManus) as 25% Instructional and 75% Research, creating a new opportunity to support a core curriculum in the MBGP. In addition, Mahdi Belcaid was recently hired into a joint appointed between the Information and Computer Sciences in CNS and HIMB in SOEST and is developing courses in data analytics specifically relevant to our students.
Given that the MBGP is jointly supported by CNS and SOEST, we expected that additional instructional resources would come from two new hires in the CNS School of Life Sciences in marine biology and global change that were underway in early 2020. Unfortunately, these positions were frozen as part of the COVID-19 retrenchment. As we undertake planning for the new MBGP Core Curriculum, we have requested participation from CNS Associate Dean Sherwood to help identify and assign instructional resources from CNS to the MBGP.

III. Recommendation MBGP should have a charter to formalize its relationships to the supporting schools and a succession plan for its Co-Directors.

1) **Response** The MBGP, which was in provisional status at the time of the review, was granted permanent status by the Board of Regents on May 21, 2020. As part of the application for permanent status, the program documented the resources contributed by SOEST and CNS to the program during its provisional phase. While this documents the precedence of support from each school, it does not commit support going forward. Particularly as we respond to the COVID-19 retrenchment, we agree with the review committee that formalizing this commitment with SOEST and CNS is critical to the long-term success of the MBGP going forward.

With the new permanent status of the MBGP, we are revising the draft MBGP Faculty Handbook, which formalizes the expectations of MBGP faculty participation in the program. We also plan to recommend a length of time for the Co-Director’s term, the timing/staggering of departures of the Co-Directors to avoid continuity gaps in leadership, and the process by which new Co-Directors are recommended to the CNS or SOEST Dean for approval. To date, the succession of Co-Directors has occurred by recommendation of the outgoing CNS or SOEST Co-Director for approval by the CNS or SOEST Dean, respectively.

IV. Recommendation CNS and SOEST, together, should remove the inequity of RA/TA pay for MBGP students.

1) **Response** The MBGP Co-Directors are in strong support of the equity of pay for GA positions for MBGP students, regardless of their advisor’s home unit. This is a significant concern campus wide, but it particularly egregious in the MBGP, where we have students working side by side and receiving quite different levels of compensation.

SOEST adopted and periodically updates minimum salaries for graduate assistants, which is currently set at Step 15 - 18 (depending on highest degree completed) for all TA and RA positions within the school. In CNS, TAs are hired at Step 8, and there is no minimum salary for supporting graduate assistants from extramural funds.

The MBGP Co-Directors will continue to advocate for increases in TA salary support in CNS. We will also put before our faculty a proposal for a minimum salary for all MBGP students supported on extramural funds controlled by MBGP faculty that matches the minimum salaries adopted by SOEST.

V. **Recommendation** Currently, MBGP has a majority of white students (57% vs. 26% in the State of Hawai‘i). There is a tremendous opportunity to entrain more Native Hawaiian and Pacific Islanders into MBGP, by coordinating with the various SOEST programs working on the STEM pipeline for underserved minorities.

1) **Response** As noted by the review committee, the MBGP has a significant opportunity to recruit and train a far more diverse group of students in marine biology, and we have a particular opportunity and responsibility to recruit and train Native Hawaiian and Pacific
Islander scientists. A critical piece of recruiting underrepresented students is to create a program where students from diverse perspectives and backgrounds feel welcomed and included. There are several avenues by which the MBGP is working to diversify our program and create a place of aloha for underrepresented students:

a) In addition, we work with Kulana Noʻiʻi training as another step in building a diverse program.

b) A Hawaiian sense of place in our curriculum: as we undertake a major curriculum revision, we are expanding content on working with local communities in Hawaiʻi, the co-generation of knowledge with community partners, and an introduction to a Hawaiian sense of place. The lack of this perspective in our current curriculum perpetuates a colonialist mentality in our discipline and creates an exclusionary environment, particularly for our Native Hawaiian and Pacific Islander students. In spring 2020, we initiated one effort to expand this training for our first-year cohort with the Kulana Noʻiʻi curriculum led by MBGP faculty Dr. Rosie Alegado (unfortunately, delayed due to COVID-19).

c) Place-based activities: Many of our faculty are deeply engaged in research with Native Hawaiian and Pacific Islander communities. One locus of engagement is the recently established Heʻeia National Estuarine Research Reserve in Kāneʻohe Bay. As we undertake our curriculum revision, we are engaging our faculty from the Heʻeia NERR to develop key place-based activities for our students.

d) Student support: the Hauʻoli Mau Loa Fellowship, which has now supported five MBGP students, has been a key avenue for recruitment and financial support of Native Hawaiian students in the MBGP.

e) Recruitment events: the MBGP Coordinator and/or Co-Directors participate in recruitment events targeting underrepresented students, including the recent SACNAS meeting held in Honolulu and presentations to the NOAA Hollings Scholars, NOAA interns, and other opportunities to encourage local and minority students.

f) Opportunities for student feedback: the MBGP has established a new standing Student Success Committee who will be revising our annual review of student progress to provide more opportunities for graduate student feedback to shape the program and to identify student concerns about program culture and content.

6. Department of Oceanography

1. **Recommendation** Efforts should be made to address budget stresses, many of which are common across all departments within SOEST so are detailed under the SOEST-wide programs and issues section of this report.

   1) **Response** The Oceanography faculty recognize that in the past, there has been a constant squeezing of funds and cutting of services that are preventing the faculty from tapping into their full potential. In response to the dwindling funds and to the upcoming impact of the COVID19, SARS-CoV2 pandemic the Department of Oceanography has:
a) Reviewed historical budgets in detail. Special attention was given to any potential savings that had not been applied to the budget from: retirement, faculty leave without pay, 12-month sabbaticals. In addition, each faculty member was asked to review their annual RTRF accounts to ensure that each grant was accounted for and the proper distribution of RTRF had occurred. Further, discussions took place about historical distributions of RTRF. This additional work needed to be done because accounting in the budget is not transparent. The Department of Oceanography believes the SOEST budget and budget policies should all be available online in one accessible place to assure transparency.

b) To keep the Department of Oceanography and our research groups fiscally strong, oceanography faculty were/are being encouraged to take advantage of any potential stimulus package. Those who were in the field in 2009 recalled the American Recovery and Reinvestment Act of 2009 (ARRA) in response to the 2008 financial crisis. The ARRA increased the numbers of proposals that were funded very close to the time the ARRA was signed. There was not an advanced call for this money, those who had spoken to their program managers and/or had proposals submitted at the right time, had a higher funding success rate. Faculty were reminded that even without a stimulus package, increasing the grantspersonship of the department has the potential to improve our fiscal health. Faculty were/are being encouraged to: write proposals and talk to their program managers during this crisis.

c) The Department of Oceanography is also moving its larger courses online, not only for the short term effect of the pandemic in the fall, but also for the long-term. Online courses tend to draw more students, and if the present distribution of funds continues, more students mean more revenue coming back to the school and department.

d) In June of 2020 the Department of Oceanography established a fundraising committee with three faculty members; Professor Dave Karl, Professor Niklas Schneider, and Associate Professor Rosie Alegado. These well-established faculty have decades of experience between them with fundraising from public and private sources.

e) In spring of 2020, using the Chairwoman’s funds, a graphic artist was hired to help the Department with branding and communication. This money is not coming from the Department, but rather from the Chairwoman’s funds.

f) In spring of 2020, Oceanography Office staff began a redesign for a new Department of Oceanography website. Once this website is complete, we plan to re-establish contact with private foundation and foreign donors.

We have made significant progress; however, these are stop gap measures that put more pressure on the faculty and chair to keep the Department solvent. Ultimately, the flow of funds from the state to the university to the school and subsequently to the department needs to improve significantly for the Department of Oceanography to retain its excellent faculty and maintain its high international standing. In the past, the Department of Oceanography has lost highly-productive, well-respected faculty (for example: Merrifield, Timmerman, Church, Johnson, Rouxel and others) who have sought positions at universities and research centers where they are properly supported. The reality is that this ‘brain drain’ will accelerate in the years following the COVID-19 SARS-CoV2 pandemic, if the faculty are not properly supported. In time, the loss of highly-productive faculty will lead to a significant decrease in revenue (RTRF) to the university.
II. **Recommendation** An effort should be made to reinstate the student cruise or other avenues for providing time at sea to graduate students who are required to carry out 30 days of field work including 3 days at sea.

1) **Response:** SOEST operates the University of Hawai‘i Marine Center with the R/V *Kilo Moana* as its premiere vessel. Until 2018, SOEST also had a second ocean-going research vessel, R/V *Ka‘imikai-O-Kanaloa*; however, this vessel has been retired.

The department requires students to participate in a total 30 days of “field experience” with work aboard research vessels. Many of our students fulfil their ship-time requirement by participating in one of the monthly, 5 day, Hawai‘i Ocean Time-series (HOT) cruises to Station Aloha. This is a wonderful resource; however, it is not a training cruise that allows for student experiments or time for training across all aspects of ship operations and research.

In 2010, the Dean of SOEST solicited small proposals from the school for ship-time on the *Kilo Moana*, and a number of Oceanography students led proposals that were awarded ship-time to conduct research over the course of a number of days. Three groups of students were awarded a cumulative 11 days to utilize the ship, which occurred in Feb., 2011. These three student groups were self-organized and conducted a number of very interesting research projects with the ship during their time. This is program should be offered again, and with regularity by the dean’s office.

As part of the UNOLS fleet, the R/V *Kilo Moana*, is funded primarily by NSF; however, those grants explicitly reserve only 85% of the NSF-funded time for UNOLS activity. The Department of Oceanography requests that some of the remaining 15% time should be put to use for an annual teaching cruise in 2021. In addition, state-funds for the R/V *Kilo Moana* are allocated for student teaching and activity, and these should be honored.

By comparison, students that enrol in the Massachusetts Institute of Technology (MIT) - Woods Hole Oceanographic Institution (WHOI) Joint Program in Oceanography/Applied Ocean Science and Engineering are required to take part in the Jake Peirson Summer Cruise. This is a 10-day teaching cruise where students of all disciplines work together to collect a variety of data across each discipline, learn how to conduct research at sea, serve as temporary crew-members to learn ship operations, learn navigation, and build a camaraderie amongst the incoming graduate student cohort. This program has been active for decades, and students who experienced this cruise reminisce fondly about the experience and what they learned.

III. **Recommendation** Guidelines should be developed for mentoring of junior faculty through tenure. Planning should be done that anticipates retirements to allow efficient rejuvenation of faculty.

1) **Response** In the spring of 2020, the Oceanography Chair initiated mentoring lunches that include 3 senior faculty and all (4) pre-tenure faculty. These lunches provide an opportunity for junior faculty to interact with senior faculty, raise questions or concerns in an informal venue, and benefit from the experience and wisdom of the senior cohort. The Chair received very positive feedback after the first mentoring lunch. These lunches will be scheduled every 6 months ongoingly. Consideration will be given as to whether specific topics for discussion will be targeted at each lunch.
Each year, new tenure and promotion materials are received by the Department Office. At that time, the Departmental Personnel Committee (DPC) Chair will meet with pre-tenure faculty, who have not yet reviewed this information, to explain and answer questions about the process.

We have made sure that the policies and procedure for tenure and promotion in the Department of Oceanography are readily accessible on the departments policies and procedures webpage (https://www.soest.hawaii.edu/oceanography/policies.html) (https://www.soest.hawaii.edu/oceanography/policies/Ocn_TenurePromotionGuidelinesAPROVED-10-07-2015.pdf).

While the Departmental Personnel Committee is only required to review pre-tenure faculty every two-years. The DPC has offered each pre-tenure faculty an opportunity to be reviewed on an annual basis. This provides the pre-tenure faculty member with feedback and guidance on their standing regarding research, teaching and service annually, on their pathway to tenure.

IV. **Recommendation**

GES explore securing ABET Environmental Science Accreditation for a track in the degree program

1) **Response**

The Global Environmental Science (GES) undergraduate program within the Department of Oceanography has reached out to ABET to determine the pathway to program accreditation. The first step is a self-study requiring the program's curriculum, program educational objectives, and the student outcomes. Once these are compiled, they are sent to ABET's Applied and Natural Science Accreditation Commission for review by their executive committee. This ensures that the GES Program falls under their general program accreditation criteria and is expected to be pro forma as environmental science programs generally tend to have the baseline requirements for accreditation. This initial review by ABET costs nothing other than the GES program's time to compile. If all goes well, the next step is a Readiness Review Self Study, which is a much deeper and involved study that the department/program conducts on its academic program. This deep dive is where the effort gets much more serious and detailed. GES Chair Dr. Guidry was slated to begin this effort in the summer of 2020, but the impacts of the pandemic have shifted workload priorities to student and course-related matters indefinitely.

V. **Recommendation**

Formalized recruiting into the Department of Oceanography outside of Hawai‘i.

1) **Response**

Suggestions have been put forth to explore how to improve and formalize the recruiting outside of Hawai‘i, especially to help address diversity, equity, and inclusion efforts for graduate students and postdoctoral researchers. They are:

a) Yearly departmental attendance and presence at SACNAS. SACNAS stands for the Society for Advancement of Chicanos/Hispanics & Native Americans in Science and the yearly conference is the largest multidisciplinary and multicultural STEM diversity event in the country. This three-day gathering brings together over 5,000 people including many underrepresented undergraduate and graduate students that present their ongoing research. As such, it provides a unique opportunity to regularly interact with, and potentially recruit, underrepresented students for graduate school and postdoc positions. It also provides the opportunity to scientifically connect and collaborate with minority serving institutions and their faculty. The next event is in October held at Long
Beach, California and while the pandemic may prohibit attendance, there will be online opportunities to participate

b) Public statement supporting diversity, equity, and inclusion: Over the past few months, department staff, consulting with the Chairwoman, have been working to create a new website for the Department of Oceanography. The department will have a clear statement supporting diversity, equity and inclusion on the front page of the department’s new webpage. A newly established Interim Diversity, Equity and Inclusion committee and the Marine Black, Indigenous, and People of Color (BIPOC) team in the department are being asked to approve of the department’s statement before it is placed on the website.

c) Creating pathways: As we look for effective mechanisms to increase diversity in the oceanography department, we can reflect upon the actions of our undergraduate Global Environmental Sciences (GES) program. The GES chair and steering committee actively strive to recruit students from under-represented groups. A major accomplishment of GES has been to establish *Halau Ola Honua, Our Living World* as part of a statewide collaborative NSF proposal with Windward Community College, Honolulu Community College and Kauai Community College. The objectives of *Halau Ola Honua* are to increase recruitment of Native Hawaiian and other underrepresented high school students in Science, Technology, Engineering and Math (STEM) fields at University of Hawai‘i Community Colleges, increase retention, and facilitate the transition of these students to programs like GES. Many of the students from underrepresented groups in our graduate oceanography program are graduates of the GES program and more recently of *Halau Ola Honua*. These students are innovators; they are making requests for a better future for themselves and for all who will follow. We commend them, and all members of the Marine BIPOC team for bringing these inequalities into the light. Members of the Department of Oceanography will strive to write proposals to support opportunities like *Halau Ola Honua* to continue to make our environment more representative of the communities we serve.

VI. **Recommendation** Rejuvenation of faculty offers an excellent opportunity to review and update course curricula. Annual schedules of courses, and particularly of graduate courses, should be created that are predictable, with sequences that allow low enrollment courses to be taught biannually.

1) **Response** All graduate students in the department are required to take the four core courses (physical, biological, chemical and geological), and additional requirements are determined by individual divisions (physical oceanography, biological oceanography, marine geology and geochemistry). Because of this, there are significant differences in requirements for students depending on the focus of their studies.

The last major departmental review of the curriculum occurred in 2014 when a committee was formed to consolidate the core courses into a cohesive, two-semester program to cover the ocean system in its totality. Around the same time, the three individual divisions began both formal and informal discussions about potential curriculum revisions for their students once the core curriculum was updated. The effort of the common core course, did not garner full support from the department, however individual divisions did update their curriculum.
Although individual courses remain highly relevant and up-to-date, the time has come for the Department and its Divisions to begin an extensive review of its curriculum. In 2010, a comparison was made with our peers, and it was found at the time that we had nearly twice as many required courses compared to our peer institutions. While this has the advantage of all students having a similar experience, it prevents students and advisors from building a selection of courses most relevant to the student’s research.

To remedy the situation, the department will revive the discussion of integrated core courses; each division will begin a review their own curriculum with new faculty taking lead of the review.

VII. Recommendation Faculty should be encouraged to include travel for graduate students to attend more than one meeting within grants, and information about funding opportunities for students should be posted where it can be readily accessed when needed.

1) Response Several steps forward were made following this request:

a) Scholarship information for graduate students was moved to a more accessible and centralized location on the Oceanography Webpage https://www.soest.hawaii.edu/oceanography/scholarships.html Also added to this page was a link to scholarships and fellowships listed by Graduate Division. http://www.manoa.hawaii.edu/graduate/content/fellowships-scholarships The hope is that if this information is in one centralized location, the graduate students will be able to access information on the fellowships and scholarships to apply easily.

b) An announcement will be made in the first faculty meeting of the fall to remind faculty to include travel funds for their students and postdoctoral researchers in their grants. Faculty will also be asked to encourage advisors to talk to their students about the benefits of seeking outside/scholarship support for their travel, including entries of successful scholarship –getting by students; practice writing proposals, honing CVs, etc.

c) In spring of 2020, the University of Hawaii Graduate Division announced a potential change in policy regarding the Cost of Education Allowance (CoE) for NSF Graduate Research Fellows (GRFs “Fellows”). The University of Hawaii Graduate Division was considering retaining GRF Fellows CoE money internally for the 2020-2021 academic year. Led by the Department of Oceanography; the director of SOEST Maile Mentoring Bridge Program, the Acting Chair, Dept. of Atmospheric Sciences, the Chair, Dept. of Ocean & Resources Engineering and the Chair of the Department of Earth Sciences cosigned a letter to graduate division protesting this potential change. The Chairwoman of the Department of Oceanography was also a co-signature on a separate letter from the GRFs Fellows and their supporters to the graduate division.

VIII. Recommendation Efforts should be made to consolidate and list all graduate student resources in the Department of Oceanography Graduate Student Handbook.

1) Response A new Oceanography Graduate Student Handbook committee is being formed and over the coming academic year, a revision of the Oceanography Graduate Student Handbook will be completed that addresses several points raised during academic review. Specific points to be addressed include:

a) Several links to other campus resources will be embedded within the Handout, in order to centralize information for incoming and current graduate students. These include:
1. UHM Graduate Division, with online resources regarding enrollment, degree and thesis filing requirements; remuneration, and rules and regulations regarding graduate assistants; formal processes for addressing graduate student grievances; and eligibility and nomination for graduate student awards in research and teaching.

2. The Graduate Student Organization (GSO), that promotes & supports graduate student research excellence through grants and awards (for research, training, and conference travel). We also will consider whether to create a document that articulates the expectations for students on being a successful mentee during their graduate studies.

b) Content presented regarding sexual harassment and bullying, and the procedures for filing informal and formal complaints, will be fully reviewed, and we will ensure their accuracy and completeness (last updated in 2013). As noted we will also ensure that this document points to the Graduate Division, as another avenue for addressing graduate student grievances.

c) Content presented regarding the purpose and intent of graduate students’ advisory, MS, and PhD thesis committees will be expanded to articulate the intended function and support role of faculty members, rather than simply the mechanics of their composition.

d) General update by Division Heads on overall research strengths and foci within each research division (Biological Oceanography, Marine Geology and Geochemistry, Physical Oceanography), as well as SOEST/Oceanography Facilities listed in this document.

e) A statement supporting diversity, equity, and inclusion explicitly standing against racism in its implied and overt forms approved by the departments Interim Diversity Equity and Inclusion committee and the Marine BIPOC team will be part of the Graduate Student Handbook.

IX. Recommendation Review and consider graduate student suggestions listed in the report

1) Response During program review, graduate advising/mentoring was a major area of concern, in particular regarding disparity across students and advisors in the frequency and extent of interactions, absence of clear expectations, and availability of impartial faculty to assist with resolving conflicts. During the coming academic year, we will implement several changes to address these concerns.

a) Graduate student survey: A survey is being developed to be given to students annually regarding level of satisfaction with the mentoring they are receiving, as well as other aspects of departmental life. The SOEST Earth Sciences Department (ERTH) conducts such a survey, and our Department Chairwoman is working with our Graduate Student Club (Na Kama Kai) to use the ERTH survey as a basis for creating one that is specifically customized for students in our department. Survey feedback will be used to identify existing areas that need attention or intervention, and/or potential problems that may be on the horizon that can be preempted by taking action.

b) Student-advisor contract: A team of some of our senior graduate students is putting together a Student-Advisor Contract that would function to ensure both parties, Advisor and the Graduate Student, have shared expectations about their professional relationship. Such a contract is presently under consideration for adoption by the SOEST Earth Sciences Department. This contract would also be shared with the student’s thesis committee so that expectations for mentoring are clearly understood within the wider circle of the committee. It seems clear that the more transparent and
public expectations are for behavior and performance, and the more widely known, the higher the probability that individuals will strive to meet expectations.

X. **Recommendation** Put in place a mechanism to ensure that all graduate student advisors are aware of best mentoring and advising practices.

1) **Response** Establishment of a healthy, respectful and productive relationship between advisors and the students they mentor is critical to achieving success in one of the most important functions of our department: providing a graduate experience for our students that allows them to thrive while in graduate school, and that launches them off successfully to the next stages of their career. While our faculty members are trained to be excellent researchers and scientists, very few receive training in how to be an excellent mentor. We thus are pursuing several lines of effort to raise the quality of mentorship that our graduate students (and postdocs) receive. Additionally, we have identified other avenues to pursue that could enhance this effort. Our efforts are intended to go well beyond making sure that our faculty are aware of best mentoring and advising practices, but to create a climate in which faculty and students are clear on what it means to be an excellent mentor, to provide tools to faculty so that they can achieve excellence in mentoring, and to provide mechanisms for students to address situations in which mentoring does not meet the standard of excellence we aim to set.

**NOTE:** While this point calls out the important issue of mentoring of graduate students by advisors, this relationship is sometimes complicated by the fact that mentors sometimes also function as supervisors. In the latter category, faculty supervisors oversee the pay for their students on research awards, and thus must ensure deliverables are met and students meet work obligations. This is distinct from the role of an advisor in mentoring the student. When these two roles are not explicitly defined, and expectations for the two distinct relationships unclear, the consequences can be detrimental to both the student and the faculty member. Activities Underway:

a) Develop and implement a Departmental Code of Conduct. SOEST is in the process of developing a school-wide Code of Conduct (CoC). The Department of Oceanography will implement this document, and include any amendments that may be specific to our department. The Code of Conduct will be used as an active tool to convey to all members of the department those things that are required to establish a safe, positive, and productive working environment. The Chair has invited Associate Dean Anita Lopez to the first oceanography faculty meeting of the fall 2020. AD Lopez will introduce the SOEST CoC to the department faculty. This will be followed by a workshop with all members of the oceanography department (faculty, staff, students, postdoctoral researchers) to customize the SOEST CoC for the Department of Oceanography.

b) Please also see response to recommendation 9.

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7. **Department of Ocean and Resources Engineering**

Ocean and Resource Engineering (ORE) The Department of Ocean and Resources Engineering appreciates the practical and constructive suggestions provided by the EAR team. Specific recommendations and our responses:

I. **Recommendation** ORE needs proper facilities and staff support, and particularly to be provided with adequate pre and post-award grant services, and a streamlining of paperwork in general.
1) **Response** Several positive steps have been made to improve the support structure for ORE:

   a) ORE has brought a part-time administrative support staff person onboard to partially fill in for our permanent administrative support person (who is on extended sick leave)

   b) The SOEST fiscal office has taken (ongoing) initiative to streamline, document, and train staff and faculty to address these issues across the school. An ORE junior faculty member is actively participating in helping write the guidelines for incoming faculty.

   c) ORE acknowledges and appreciates help and support from the SOEST Dean’s and Fiscal offices to address our needs, and we are hopeful that this positive progress will move us into a long-term future of stability, support and structure.

II. **Recommendation** ORE faculty, staff, and students would greatly benefit from consolidating their activities and offices within the same building, rather than being spread-out on campus, as is currently the case.

   1) **Response** We wholeheartedly agree with this recommendation and continue to work with School and UHM administration to realize our goal of consolidated space for our people and programs. An exciting potential space (ideal for Ocean Engineering, including high-bay space and access) was identified by the UH Manoa Space Recommendation Committee, and progress is being made toward assessing the feasibility of ORE’s use of the space.

III. **Recommendation** In view of their hiring plan and the potential implementation of an undergraduate (UG) program, ORE will clearly need more quality laboratory space.

   1) **Response** We wholeheartedly agree with this recommendation and continue to work with School and UHM administration to realize our goal of sufficient space for our people and programs. The new space being considered (in Point 2) could fully meet this need for undergraduate (and graduate) teaching lab space.

IV. **Recommendation** ORE’s plan to implement an UG program is viewed by the review team as a strong opportunity for growth, both within ORE and SOEST.

   1) **Response** Agreed. ORE has been working steadily to put the necessary pieces in place to ensure a successful UG program before launching into it. These include: A full faculty body (now secure, with 8 faculty members), sufficient laboratory space and administrative support (in progress), and established relationships and common goals with colleagues in the College of Engineering (CoE, established). We are working with CoE and plan to roll out the program in Fall 2021.

V. **Recommendation** The review team also strongly support ORE’s plan to more actively recruit new MS students, who are professionals in the local ocean industry and could be part time students and to better help accepted student applicants find fellowships and scholarships.

   1) **Response** Agreed. Student recruitment and support are currently a top priority for ORE. The ORE program has been modified to accommodate professional and part-time students. Several internships with local companies have been revived or newly established. The admissions committee will be forming and implement marketing, targeting, and recruitment strategies.

VI. **Recommendation** New faculty hiring will be important for ORE to further increase their research impact and visibility, and achieve adequate critical mass to offer important classes.
1) **Response** Done. ORE extends many thanks for sustained support from SOEST and from UHM administration in our hiring and recruitment efforts. We have successfully hired 3 new faculty members since the 2019 Academic Review, bringing us up to a strong and vibrant group of 8 regular faculty members. We have also brought 2 new cooperating faculty members and 1 adjunct faculty member onboard, all of whom are highly active and supportive of ORE research and programs.

**VII. Recommendation** New faculty should be hired with competitive start-up packages that will ensure their success and integration in ORE’s research culture.

1) **Response** ORE is grateful for relatively competitive start-up packages across SOEST while recognizing budgetary limitations. While ORE’s budget is limited so that we cannot supplement start-up packages directly, we were able to offer 1 year of student support to all our new hires. Start-up packages were sufficient to attract new faculty.

**VIII. Recommendation** A strong mentoring system should also be implemented for new hires.

1) **Response** This is being addressed on a SOEST-level (see response to School-wide issues above). As a small and cohesive unit, mentoring within ORE can be addressed more easily and directly on an individual level than is possible in larger units.

**IX. Recommendation** To free faculty time for writing more proposals and papers and performing more research, the school and university should streamline paperwork.

1) **Response** Agreed. See response to point 1 above.

**X. Recommendation** Train staff to help faculty with proposal preparation (such as Fastlane and Grant.gov).

1) **Response** Agreed. See response to point 1 above.

**XI. Recommendation** Make arrangements with CoE to ensure that ORE graduate students can take the CoE undergraduate classes required to satisfy ORE pre-program requirements.

1) **Response** Done. This has been arranged on a chair-to-chair level between ORE and ME and CEE. We acknowledge and appreciate the collegiality and support from CoE chairs and faculty on this matter.

**XII. Recommendation** Establish a more collegial relationship between the CoE and SOEST.

1) **Response** Done (and ongoing). Relationships have been (and continue to be) built one by one via a positive attitude and air of cooperation from individuals on both sides. Practical steps include: Several CoE faculty have been brought on and actively participate as ORE cooperating graduate faculty; we hold joint seminars; ORE faculty are invited to serve of CoE committees and vice versa; ORE faculty support CoE students and vice versa; department chairs meet and talk on a regular basis; ORE students are encourage to engage in CoE courses and projects, and vice versa; ORE and CoE faculty write joint proposals and contribute to joint projects; faculty mentoring includes introductions to faculty across units; CoE faculty are invited to ORE social events and vice versa; ORE and CoE students form groups for various contests and projects; revival of the Marine Technology Society Hawaii student chapter brings ORE and CoE students together; and so on.
Women in SOEST (WiS) and their student counterpart SOEST Academic and Social Support (SASS) are a dedicated group of female faculty, staff, postdoctoral researchers and students who are working to improve the SOEST workplace climate so that everyone can thrive. We are committed to a healthy, safe, equitable and productive climate in SOEST in which all employees and students treat each other with dignity and respect. Although WiS is focused on gender equity, we recognize that many of our concerns and challenges are shared by other underrepresented groups and particularly by those with overlapping underrepresented identities.

Background For over a decade, WiS has been at the forefront of a grassroots movement to bring about much-needed change in SOEST, largely through training and consciousness-raising, with little or no support from SOEST leadership. For the SOEST External Academic Review, held Feb 2019, WiS prepared a document and delivered a well-attended presentation sharing serious concerns regarding gender inequity and workplace climate. In response, the External Academic Review Committee report included a key recommendation that:

I. **Recommendation** SOEST immediately establish a high level administrative position (Associate Dean level) within SOEST, in coordination with appropriate University offices (Title IX, Graduate Division), to: 1) Oversee climate, diversity, equity and cultural sensitivity, 2) Provide a safe reporting structure that guarantees confidentiality and absolutely prohibits and precludes any form of retaliation or retribution, 3) Develop substantive responses to infractions consistent with zero tolerance, and 4) Provide regular reports on the number of incidents of sexual harassment, the nature of the infractions, the remedial action taken, and the outcome; redaction of names and other specific identifying information can avoid infringing on individuals’ privacy rights. It is extremely important that such an effort be initiated immediately, not postponed because of budget issues or the bureaucracy of creating a new position. To address the latter, the existing Associate Dean for Academic Affairs could act as interim, with some of the current duties of that position shifted to others. Swift action would send a powerful message and begin the process of addressing this important issue.

1) **Response** UH and SOEST Fail to Meaningfully Act on External Review Recommendations. On April 12, 2019, the SOEST Dean’s office announced the establishment of a new Director of Diversity, Equity, and Inclusion (DEI) position to be filled by Rear Admiral (Ret.) Anita L. Lopez via email. What was not announced was the fact that this position was only allotted a 10% FTE, or 4 hours a week. Instead of establishing a new high level, full-time administrative position, which we believe was implicit in the External Review recommendation, SOEST and UH simply reallocated a small portion of Rear Admiral (Ret.) Lopez’s existing position (“Director of Research Vessel Operations” or DRVO) and gave her an additional title. Not surprisingly, with a four hour per week Director, little progress is being made. For example:

a) DEI Council meetings regularly get cancelled, often at the last minute.

b) The DEI Council has not organized a single training, nor does it report out to the SOEST community

c) There have been no reports releasing sexual harassment data, despite repeated requests.

d) If a budget has been provided for DEI, that has not been made public.
This is not intended to be a criticism of Rear Admiral (Ret.) Lopez, but rather of the failure of UH and SOEST to create a position with adequate time commitment and other resources to ensure success.

Similarly, SOEST leadership has been remiss in acting upon the External Academic Review recommendation to improve mentoring of junior scientists (graduate students through pre-tenure faculty). Any such efforts are being led by individual volunteers on an ad hoc basis, with little or no institutional support. In the absence of any schoolwide, systematic mentoring and professional development, junior scientists have inconsistent experiences, largely dependent on their research advisor. Of particular concern to Women in SOEST is the lack of systematic mentoring of postdoctoral scientists, as women often “leak” out of the geoscience workforce pipeline at this critical career stage.

**Letter from Black, Indigenous & People of Color.** A recent (July 2020) letter by a group who self-identified as Black, Indigenous and People of Color staff, students & post-docs within a SOEST department issued a strongly worded rebuke: “The inaction of the council exemplifies the system that upholds white supremacy within the department, which excludes and thus silences Black, Indigenous, & People of Color (BIPOC) voices on matters of diversity.”

This letter demanded the creation of a permanent position within SOEST to oversee real progress on issues of justice, diversity, equity, and inclusion: “We demand a full-time staff position designated to serve in our department....The SOEST external review also recommended the immediate procurement of a full-time position, whereas currently, only a part-time position is filled. We are fully aware that financial resources are scarce, and that the COVID-19 pandemic has further limited potential avenues of funding; however, we do not see this as an excuse to avoid demands for justice....Our aforementioned demands will be delegated to this full-time staff position, and they will see to it that our concerns are addressed and solutions are perpetually carried out.”

**Summary.** We, the Women in SOEST, are issuing a renewed call to SOEST and UH to follow the recommendations of the External Review, including that SOEST “immediately establish a high level administrative position (Associate Dean level), thereby sending a powerful message” and actually “beginning the process of addressing this important issue”. The interim band-aid solution has had the opposite effect, by exposing SOEST and UH as institutions unwilling to commit to real, actionable change. The ramifications of this inaction are far reaching, including the potential for legal liability on the part of the School for exposing personnel to known harassers, as well as attrition of some of our best students and employees.