

Unit response to Review Committee Report
Quantitative Ecology and Resource Management
Timothy Essington – Director

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Summary

We are grateful for the exceptionally thorough and insightful report by the review committee. On the whole, we are in complete agreement with their recommendations, and note that the committee recommendations are largely aligned with our self study. The report and the self study make the following main recommendations:

1. Prioritize program growth. QERM is presently at a minimum viable size. QERM should pursue and investigate any option that would allow for larger student body.
2. Revise the leadership model. Currently, nearly all routine decisions are made by the Director and Administrator. This places a large responsibility on the director, and doesn't create a clear path for leadership transition. The creation of an executive body will solve many problems
3. Continue and enhance efforts to foster diversity and interdisciplinarity.

We respond to specific recommendations below.

Strengths of the program.

We agree with the review committee's assessment. The review noted the unique niche that QERM fills in the academic landscape. Our students are routinely excellent and are the foundation of the program.

Specific challenges

The review committee largely echoed the challenges that we identified in the self study document. The only itemized challenge that was not highlighted in the self study was the proportion of students who take an exceptionally long time to finish their degree. We agree with their assessment that this should be improved upon.

Recommendations

- A. Increase the cohort size to 4 or 5 students annually*

QERM agrees that 4 or 5 is the ideal cohort size: it allows for group dynamics to play out, and is well within our logistical capacity. The committee identified several alternative pathways, many of which QERM leadership shared with the committee. They include

- Hybrid admissions model (accepting students both with and without first year support)
- Advocate for additional College funding, and / or initiate campaigns to fill funding need through gifts and endowments
- Use QSCI TA ships in the first year to expand the pool of funding.

We comment on constraints for each below

- Expand hybrid admissions model. We have made this available for several years yet it has only been used once. We need to create more incentives and more opportunities for faculty to use this tool to recruit top students.
- Additional funding. While more funding is always welcome, we feel we must also plan given a reasonable likelihood of flat funding.
- Use QSCI TAs. To a certain extent, this is a zero sum game. We already use TA ships to support students in second year and beyond. Allocating TAs to first year students will simply shift the funding burden towards the second year. Alternatively, QSCI could take a different approach to TA allocation and give an even greater priority to QERM students (presently, QERM is allocated at least 4 TA ships per year). We have to balance this need with faculty's desire to choose their own TAs (often students in SAFS or SEFS).

We conclude by noting that all are reasonable approaches and merit further investigation. We also note that QERM might tackle this even more aggressively by rethinking our student admissions model entirely.

B. Involve more QERM faculty in leadership.

The committee agreed with the solution we posed in the self study. We also note that the committee identified more benefits to this approach than our self study indicated.

C. Regularly evaluate course content.

We agree that this should be a primary responsibility of the executive committee, and this is consistent with our self study recommendations.

D. Ensure availability in the critical optimization courses.

We suggest that perhaps intervention higher up the college leadership might prove more useful.

E. Explore ways to increase diversity of units involved in QERM student training, to maintain and increase interdisciplinarity

i. Targeted recruitment of faculty to enhance diversity.

We note that QERM presently does this. The self study did not clearly state that QERM faculty are both self selected and also recruited. This year, QERM added 3

- faculty via targeted recruitment efforts, including two units that have not been part of QERM before (biostatistics, school of marine and environmental affairs)
- ii. *Task core QERM faculty to share (e.g. via email, the website, etc) potential projects and opportunities in their labs around the same time QERM students are considering their option.*

This is a fantastic idea, one that is currently done on an ad hoc basis but can be formalized

- iii. *Requiring QERM students to initiate conversations about 2nd year placement earlier.*

Most student begin this in their first quarter, all begin by their second quarter. We do agree with the recommendations to make this more formalized and require students to make and adhere to a schedule.

- iv. *We suggest continued exploration of ways to encourage QERM students to integrate themselves into graduate student communities within other units.*

We respectfully identify this as a broader college of university level issue. QERM by itself cannot change the culture of units and their eagerness for interdisciplinary collaboration. We do think that broadening the quantitative seminar, and perhaps branding it as a CQS event, might increase intellectual connectivity among units

- v. *Provide bridge funding or arrange/assist for such funding for some students during the summer for internships*

We have started this already, using the Jay and Loveday Conquest endowment as a way to support first year students in their transition into new labs

F. Recruitment efforts of both faculty and graduate students should be more targeted and strategic

The committee made several recommendations, some of which were addressed above. These include targeted and strategic recruitment of faculty and increasing QERM outreach to enhance the pipeline of applicants from underrepresented groups. The committee listed several ways to achieve the latter that we had not already identified ourselves, so we are grateful for these recommendations.

G. Provide more structured mentoring to QERM students beyond their first year

This was the most substantive set of recommendations, and the only one that we had not identified in our self-study. We strongly concur with these recommendations, with an eye towards reducing the proportion of students that take exceptionally long periods of time to complete their degree. We

suggest that the executive committee will be tasked with evaluating some of the procedural recommendations (e.g. adjusting the existing annual review meeting structure). We completely agree that we need to create a balanced set of incentives e.g. through TA eligibility, for students that are on track towards their degree. Finally, we are truly grateful for the detailed guidance on implementing individualized development plans as a way to further enhance the quality of our mentorship.

Review committee responses to the self study

The review committee report and the self study are in agreement on the unique value of QERM, its successes, and areas where it can perform even better.

Some specific tactical ideas that were raised by the review committee are very good and useful. For instance, using the QERM seminar to create opportunities for interdisciplinary research, and provide more incentives for Ph.D. students to conduct truly interdisciplinary quantitative science. We also note that we agree that QERM needs to take a strategic approach to curriculum offerings and course content review, and folding in a wider set of expertise (e.g. broader faculty, alumni, and students) will be useful in this regard.