Obstacles in the Advancement of Early-Career Female Geoscientists: Research Results from the Earth Science Women’s Network (ESWN)

Marina Kogan and Sandra Laursen
Ethnography & Evaluation Research, 580 UCB, University of Colorado, Boulder, CO 80309-0580

Abstract
While the number of women receiving advanced degrees in the geosciences has been rising, the faces of scientific leaders in academia remain predominantly male. Women are currently underrepresented in tenure-track positions in Earth science departments at research universities. Additionally, women are less likely to have more senior positions within their academic institutions.

The Earth Science Women’s Network (ESWN) is a professional network of early-career female geoscientists that provides its members with a variety of career resources. We also conducted a survey of the co-ed Earth Science Jobs list also run by ESWN and used the Jobs list’s male and female members as comparison samples. The survey data provide insight into critical career junctures for women in geosciences and identify salient issues that institutions will need to address to successfully recruit, retain and promote women scientists.

Demographics
The demographics of the ESWN members and the comparison group are mostly similar, but also differ with some respects:

Interactions with Colleagues
ESWN women rate their interactions with colleagues less favorably than men:

- Less likely to recommend their unit to someone like them
- Indicated lower levels of collaboration within the unit, while...
- No difference in the levels of collaboration outside the unit
- Rated their productivity with respect to their unit lower

ESWN women rated their department atmosphere less favorably than non-ESWN women:

- 1 = Strongly disagree to 4 = Strongly agree

Role Models
• Lack of mentors and role models is an important barrier to retention of women in science
• The example of women in senior roles is especially important, since it justifies young women’s aspiration to be successful scientists
• Members agreed that women were represented in senior roles less than non-ESWN men:
  - 31% of members agreed
  - 72% of non-ESWN men agreed

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