

We Need to Encourage More Women in STEM Careers—Dr. Lorraine Gray

With 20 years of experience in marine management, Dr. Lorraine Gray is an expert in marine planning and licensing. In her current role at Pioneer Consulting, she leads permitting in the U.S. and Europe. Gray has previously worked on pioneering marine spatial planning projects, including incorporating local fishing knowledge in Scotland and the development of the Marine (Scotland) Act.



A career in the science, technology, engineering and mathematics (STEM) fields unlocks a fascinating and exciting world of possibilities. But for many women, entering a STEM profession can be fraught with obstacles.

I first began my journey as a woman in STEM by earning my Ph.D. in fish ecology. I was a home-carer at the time. Twenty years ago, this was seen as a woman's role, and to some extent it still is, as uncompensated labor and maternity/paternity inequality continue to be issues. I did not speak about my struggles to balance my home responsibilities with my duties at work to my superiors; I was concerned it would be seen as weakness, and I would be treated differently.

Now that I have over 20 years of marine management experience, I know how crucial female representation is in traditionally male-dominated industries. If I'd been open about my needs at work, I hope I could have received support.

By supporting and advocating for more women to become involved in STEM careers, the resulting greater diversity will benefit industry and society. I'd like to address some of the obstacles I've observed that we in STEM industries will need to tackle in order to welcome more women to our ranks.

Job security is one of the greatest obstacles facing women in STEM

careers, due to domestic responsibilities. After earning my Ph.D., I worked for 10 years in academia and for government. Only when I entered industry afterward did I observe a higher proportion of women were employed in academia and government because there is better safeguarding of your position, especially regarding maternity leave (in the U.K., it is common to take one year off). Unfortunately, in industry, I've met women who had their jobs downgraded when they returned from leave. It's a real problem that affects women's career choices.

Another challenge is lack of affordable childcare (speaking from a U.K. perspective). About a decade ago, I faced a choice while caring for two small children. I questioned whether to continue working in government, where most of my salary would go to childcare, or start my own contracting company to enable flexible work hours so I could take care of my children. I went for the latter, arguably riskier option and found myself working a schedule outside of the normal 9 to 5. But there was freedom in the nontraditional route. For the past several years, I've worked in the subsea cables industry—first in the government sector, issuing licenses for survey and installation, then with Pioneer Consulting, where I lead the transatlantic and Europe permitting team. Career independence has enabled me to pursue my passion while still spending time with my family, but it does require out-of-the-box thinking.

Lack of confidence and mentorship remain challenges for women in STEM, which is why it's important for female role models to be visible in their positions. Without proper representation, it is much harder for young women to envision themselves in certain jobs, or even be aware that certain careers exist.

Seeing a woman's achievements, especially on social media, could

inspire young people to get involved in STEM. Companies should publicize the achievements of their female employees and get the word out about what's possible for women in the field.

When faced with an obstacle, it is crucial to be confident and honest in expressing your concerns. It is not a weakness to speak up, as I once may have thought. You may find that you receive support and encouragement from your colleagues. You'll also forge a path for other women at your company and make others feel less alone.

And I cannot say this enough: Finding a mentor, whether a family member, colleague or friend, will go a long way. Look for someone you admire, and don't be shy about initiating the mentorship.

My time as a lecturer intensified my passion for getting young, hard-done-by kids and mature students to return to education in order to move into STEM careers. I wanted to share my passion for the natural world with them.

Empowerment is a critical element of gender equity, and I always told my post-graduate students after completing their thesis: "You are the expert now." This was said to me, and it resonated. However, I still had hang-ups about being a lecturer. I sometimes worried I didn't know enough; imposter syndrome is common, especially among women. But I had confidence anyway, a tactic I learned from my mentors.

In all settings, diverse teams bring different points of view. This improves collaboration and sparks innovation. I hope, with time, gender inequalities in the workplace will diminish. Any industry that lacks the input of half of the population is missing out.

It's important for the advancement of science and technology that women are encouraged and supported to bring their unique talents to the table. **ST**