



## WOMEN AND GIS: MAPPING THEIR STORIES

By Esri Press

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EACH CHAPTER OF *Women and GIS* focuses on a different woman—outlining her personal journey from early childhood, through her education and entry into the professional world, and how she found herself working in the field of GIS. Throughout the twenty-three chapters, the reader is wafted along on a whirlwind, world spanning tour of education programs (some completed, some not), jobs (some fulfilling, some not), career paths, and projects (ranging from the early 2000s through 2018) that the spotlighted woman found pertinent on her path to and within GIS. The careers run the gamut—touching on GIS in academia, education, government, humanitarian agencies, nonprofits, exploration, conservation, and industry. The term *diverse perspectives* does not even come close to describing this book.

Pull quotes and words of wisdom from each woman are—despite being emphasized in large, often bold, and (usually) colored type—seamlessly interwoven into and between their varied and various stories. Color photographs and examples of a few of the maps and images produced by each woman give the reader a taste of their passions and of the worlds they have built around themselves. The individual chapters are brief: averaging eight pages each. Their abbreviated length makes for an effortless read that can be taken in large chunks or broken up across multiple evenings.

Journalists frequently report on gender disparity amongst students in science, technology, engineering, and mathematics (STEM) courses, and the corresponding

domination of these professional fields by men. Esri is no stranger to these concerns, as was made apparent in 2022, when they **agreed to pay \$2.3 million** to resolve a Department of Labor allegation of pay discrimination for 176 female engineers in 2017. When tech companies are confronted about their plans for closing this gap, many respond with public relations statements boasting statistics about the number of women on their payrolls. Unfortunately, head counts alone do little to bring more candidates to the fields, or staff to the firms. What does raise participation in a field is *showing* members of the targeted demographic performing in it successfully.

*Showing* success is the challenge Esri Press took on in 2019 with *Women and GIS: Mapping Their Stories*. It is the first in a series that has now grown to three volumes, including: *Women and GIS, Volume 2: Stars of Spatial Science* (2020) and *Women and GIS, Volume 3: Champions of a Sustainable World* (2021). Kudos to them for not simply splashing images of women in GIS on posters and pasting them up in schools, but instead taking a page out of the feminist geography handbook by reaching out to the persons involved to obtain qualitative, on-the-ground conversations that put names and accomplishments to faces. Showing real examples of women as active and leading participants in GIS makes it easier for other women to envision themselves in this field.

*Women and GIS: Mapping Their Stories* introduces the world to twenty-three powerful, motivated, and driven women in the GIS technology field. Each woman's passions and



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interests are highlighted—demonstrating that they didn't come to the field just for the science and art of GIS; they came because it supported them and facilitated their work in pursuit of their interests. The variety of individual stories allows readers—even those readers who may not, at this point, be entirely sure what GIS is—to see how GIS could be used to further satisfy their curiosity about their own passions, and possibly encourage them to seek out this profession that they mightn't have otherwise considered.

As the book makes clear, there is no single mold or “type” to which women entering the field must conform in order to be successful, and, in fact, each chapter showcases the way that the backgrounds, education, and interests of the women discussed are both multifaceted and diverse. No two are identical: each is a unique combination of languages spoken, country of origin, educational background, and profession. Most gratifyingly, this is accomplished without beating the reader over the head with adulatory hagiography, as so many other institutions do when trying to advertise their successes in diversity.

This book does have some shortcomings. In giving each individual equal “on-air” time while keeping the overall page count reasonably low, the fast paced biographies are painted with very broad strokes—each woman's life is condensed to between six and fourteen pages. This brief overview of each woman comes in a surprisingly uniform format, in contrast to the diverse content of the stories. The structure for each chapter—cover their childhood; review their education; touch on their past jobs; discuss their careers; and pay tribute to their mentors—came across as a little too formulaic a way to review each woman concisely. I would have preferred a longer book if it offered an opportunity for deeper portraits. If a longer book would not have been possible, I would have preferred longer writeups on each woman, even if this in turn meant fewer women were featured.

The book itself maintains an incredibly positive voice—it seems that whenever a failure appears in the woman's life, it is framed as showing that if a door closes somewhere, a window surely opens somewhere else. In my opinion this, too, was a missed opportunity. Too heavy a focus on positives and successes undermines the human dimension and sort of flattens out the portrait. No person is perfect, and neither is their life—despite what social media purports to show. Very few readers care to read about perfection that is impossible to obtain and out of their reach. One of

the reasons we have the gender gap in the first place is the socially reinforced disincentive to envisioning oneself in a certain position because it seems that only the perfect can succeed. Each person then shoots themselves down before even attempting the challenge because they don't think they can attain the perfection necessary. People want and need to see the at times messy, honest, genuine, and real struggles. Through struggles a person can find connection with another with whom they can relate by striking a chord of resonance. If this book is indeed seeking to inspire the next generation of women GIS professionals, the details of failures and challenges overcome shouldn't be glossed over.

This is not to imply that the struggles of these women are not narrated in a relatable manner. A great example of what is possible when this is achieved successfully is in the chapter about Dr. Paulette Brown-Hinds (26), where she discusses the hurdle of having a child while in graduate school. As she sat for her master's degree exams—eight months pregnant, wondering if she could manage it all—she overheard her fellow students mocking her for being pregnant while in school. She also discusses navigating conversations with her colleagues who are also moms, and the sensitive work of not discussing their own choices as if those choices were a critique of the other person's decisions. It is inspiring to witness women overcoming these challenges so that the next generation may not see having a family as a roadblock to a STEM career. These are by no means the only challenges women face, but it is a prime example that relates on the level of the next generation of women GIS professionals.

This book is an inspiration to women professionals either currently in GIS or considering it as a part of their career path. In fact, in this regard every word in *Women and GIS* is significant. It pulls back the curtain to reveal a number of women who have already brought their chair to the table, and it draws attention to a critical factor in how they got there: mentorship. This mentorship theme is a thread that runs through all the varied stories in this book. Each woman reached her goals or overcame a challenge with the mentorship and support they found in unexpected places. Building a network of support and mentoring requires time and effort, and the younger a person starts working on it, the better their chances become. As the chapter about Kate Chapman points out: “Many women enter STEM fields of study, and then leave mid-career. She says she wishes she had known earlier about

some of the frustrations women might face midcareer so she could have developed a better mentorship and support network for herself” (48). Here, again, is another instance where future professionals benefit directly from a frank discussion—with no sugar coating—of the challenges and frustrations that can be encountered, and how others have learned from them.

This book not only showcases how these women *became* GIS professionals, it reveals how they *stayed* GIS professionals. Books like this should exist for every career as a way for young professionals or curious teens to see the variety of jobs and paths related to that career. Despite what is often told to teens, there is rarely a single, straight path to any career goal. All too often youth are told to think inside the box and answer the questionnaire using only the multiple-choice options—and only too rarely are they offered the opportunity to conclude that there is more than one way to reach a goal. This book provides just that opportunity.

The photographs of the featured women, their work, and their world, ground the book in reality and are imperative

to bringing home the theme that GIS can be an inclusive space for all. The quotations and words of advice scattered throughout the text could easily be plucked from the book, written on Post-its, and placed in prominent spots near one’s computer monitor as a reminder or mantra for moving forward during difficult or tumultuous times. The words provide insights from women who have indeed been there and done that, reaching across space and time to encourage the next generation of women in GIS and STEM.

Women *do* exist in GIS, and it is certainly time we praise them for their contributions and their struggles. While *Women and GIS* might have benefited by staying a while longer with each woman, it does an admirable job introducing us to twenty-three diverse and admirable people in only 215 pages.

This book is a giant leap in the right direction. It is a fantastic, gripping book for inspiring a young professional woman in GIS and I look forward to the deeper dives with women in the GIS field that will inevitably result from its existence.

