

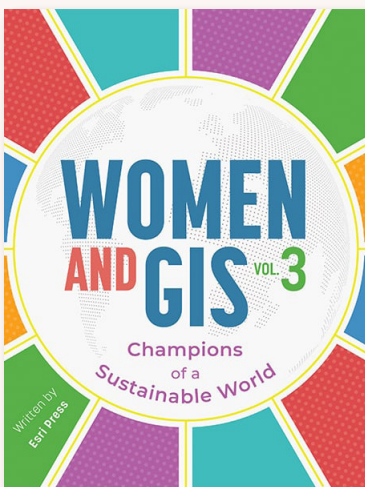
## WOMEN AND GIS VOLUME 2: STARS OF SPATIAL SCIENCE

By Esri Press

Esri Press, 2020

274 pages

Paperback: \$23.99, ISBN 978-1-58948-594-5



## WOMEN AND GIS VOLUME 3: CHAMPIONS OF A SUSTAINABLE WORLD

By Esri Press

Esri Press, 2021

320 pages

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**Review by:** Rebecca Ramsey

THE UNPRECEDENTED THREE VOLUME SERIES *Women and GIS* delves into the lives and journeys of women in the field of GIS. Volume 1: *Mapping Their Stories*, was published in 2019 and reviewed in **issue 100** of *Cartographic Perspectives* (2022), so this review will focus on Volume 2: *Stars of Spatial Science*, and Volume 3: *Champions of a Sustainable World*. Both of the newer volumes follow the lead of the first in celebrating the achievements and diverse experiences of women in GIS by introducing readers to a multitude of women from varying backgrounds, ages, and fields, at assorted moments in their careers.

The second and third books maintain the inaugural volume's familiar format, with individual chapters of about eight pages, each dedicated to a different woman and

recounting her personal journey from early childhood to her entry into, and experiences in, the professional world of GIS. Each navigated her own way through the tangles of educational programs, jobs, career paths, and projects to find success for herself in the GIS field, and readers are provided an opportunity to hear from each why she undertook the journey and how she found her way. The books provide engaging and detailed stories while maintaining a concise format, making it ideal both for readers who prefer short reading sessions and for those who enjoy a long binge read. It's a win either way.

Again, as in Volume 1, each woman profiled has provided several color photographs of her childhood, family, educational milestones, professional presentations, and



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award ceremonies—making the narratives more personal, accessible, and effective. As the series has progressed, there has been an increasing number of photographs and a corresponding reduction in the number of maps: there are only about half as many maps in either Volumes 2 or 3 than appeared in Volume 1. This re-balance has shifted the focus away from career oriented projects and towards the personal narratives—potentially allowing readers more opportunity to recognize likeness to themselves and their own situations and ambitions among so many diverse faces, cultures, interests, and geographic locations.

Both volumes open with the same “Foreword” by the renowned Dr. Jane Goodall, Dame Commander of the Most Excellent Order of the British Empire (DBE). Jane mentions how often people have thanked her for “teaching them that because you did it, I realized that I could do it too” (xv). Her words bring home the fact that a major step towards gaining the confidence that one can achieve a goal in STEM is sometimes simply to see the face of someone else like oneself doing similar work. The importance of these stories, and of the photographs each woman thought it pertinent to share, cannot be stressed enough when it comes to influencing the next generation of women in GIS.

Among the volume-to-volume changes are the way pull quotes are presented. Volumes 1 and 2 employ a similar style, with quotations prominently positioned on the page fly and printed in large, bold text in eye-catching colors. In Volume 3, however, key passages are instead emphasized in place. This method draws the reader’s attention to significant remarks in the context of the narrative instead of pulling them out and repeating them in isolation. In a practical sense, it also means that without the displays in the margins, more page space is available for each woman’s story. To my thinking, Volume 3’s integration of narrative and highlighting seems to strike the right balance by indicating powerful remarks without aggrandizing them.

The personality and experience of each woman profiled in Volume 3 is emphasized by the “Tips and Fun Facts” blocks placed throughout the book in the page margins. The “Tips” are words of wisdom from each woman regarding a career in GIS, such as recommendations on finding a community in the field or reminders to expand your horizons. The “Fun Facts” introduce us to the character of each woman, including their preferred hobbies such as athletic ventures like bike riding, yoga, tennis,

and swimming, as well as other, creative arts hobbies like jewelry making, poetry, crocheting, and photography. Still other hobbies, such as traveling to distant countries, cooking new recipes, and even raising chickens, defy those two categories. Some “Fun Facts” detail items that occupy desk space—dinosaur figures, a copy of *The Little Engine That Could* for extra motivation on challenging projects, cat-chewed Post-It love notes from a spouse, copper wire to fidget with during virtual meetings, or pink pens with fluff on the end. These seemingly external-to-GIS topics are actually another brilliant opportunity for readers to see commonalities between these women’s lives and interests and their own, allowing each reader to see their own personality traits reflected back from the page.

As the number of women, and therefore chapters, increased—the twenty-three in Volume 1 grew to thirty in Volume 2 and thirty-one in Volume 3—the publisher tried different ways of visually indicating similarities and commonalities between the various diverse paths trodden by these remarkable women. Volume 2 uses a complex and confusing multi-dimensional icon based on a four pointed star—in keeping with its “Stars of Spatial Science” theme, and harkening back to Volume 1’s compass rose motif (Figure 1). These stars are embellished with various decorations indicating the profiled woman’s career fields (Science & Research, Education, Government, Business, Humanitarianism, Environment & Conservation). This central element is printed in colors denoting the geographic regions (North America & the Caribbean; South America; Europe; Africa; Asia & the Middle East; Australia & Oceania) where they are active. More than



**Figure 1.** Part of the table of contents for Volume 2, showing the multidimensional icons that symbolize each woman’s career fields, region of activity, and roles.

one career field symbol or geographic region color may be included. One or more smaller, yellow stars in the corners of the icon constellation identify the various roles (Leader, Pioneer, Entrepreneur, Fieldworker) each filled in their undertakings. Unfortunately, this whole scheme comes across as a bit too complicated. When I was in the thick of reading, I found myself frequently leaving one page to flip to the key and back to the chapter in an effort to determine what woman landed where.

Volume 3 improved upon this logic—dropping the “Role” and “Geographic” dimensions entirely—and instead presenting a simple infographic illustrating each woman’s primary, secondary, and tertiary fields of focus by means of a colored, three element “sunburst icon” to the left of their name (Figure 2). The six field of focus options are similar to those in Volume 2, with some minor modifications. “Education” is combined with “the Arts,” “Business” is merged with “Entrepreneurship,” and the “Government” field is replaced outright by “Social Justice.” I, myself, found this simplified organization scheme to be a vast improvement. In particular, this focus on primary, secondary, tertiary fields allows the reader to better grasp each woman’s multi-faceted interests and activities—something that is a common and often reiterated theme in the text of both Volumes 2 and 3 of *Women and GIS*.

Another Volume 3 innovation is the way each woman’s current job position and educational background is presented right up front in the margin text at the beginning of her chapter. Previously, it was buried in the body of text, and a reader learned about them gradually, as a part of following the narrative. Spoiler alert, no two current career positions or educational backgrounds were alike. Unlike Volume 1, Volumes 2 and 3 place significant emphasis on when each woman discovered GIS: showing that while some entered the field later in their careers, many others

found their way there at a younger age. This possible trend may indicate a promising shift toward earlier exposure to GIS in education, or it may be due to more career fields leading more women to consider GIS sooner, or maybe both. And maybe, too, a series like *Women and GIS* is, or will be, doing its part, too.

The *Women and GIS* series goes beyond a corporate diversity puff piece, or a careers pamphlet, and instead brings the lives of actual women doing important work in GIS into the foreground: showcasing their passion, their determination, and the variety of steps that have led them, via various paths, to success. Soon after the publication of Volume 2, the series went one step further by leaping from the published page to a three part webinar series that can still be found on online. Each webinar, one in **May, June**, and the **Fall** of 2020, lasted around one and a half hours and was spent chatting with some of the women featured in the book. The webinar series was hosted in partnership with *WECAN*, Esri’s *Women Enablement and Career Advancement Network*.

Volumes 2 and 3 stand as testament to the fact that there is no one-size-fits-all approach to entering the GIS field. Each woman profiled carved her own path, and this individuality is celebrated throughout the books. Volume 3, in particular, underscores the diverse educational backgrounds found among the participants. It is a smorgasbord of degree programs including: Geospatial, Engineering, Architecture, Biology, Urban Planning, World Politics, Geology, Agronomy, Business, Ecology, Physics and Astronomy, Music therapy, American Studies, Policy Studies, Religious Studies, Public Affairs, and the list goes on. Some pursued undergraduate and graduate studies steeped in geography or GIS right from the start, while others followed more peripatetic paths through alternative programs and degrees, and eventually found on the job that GIS could be a useful and critical tool to support their work. There are numerous avenues to enter GIS, giving hope to professionals of any field that a shift to GIS is not impossible and if anything is common. One of the most important takeaways from this series is that there is no one school that you must attend; no single program you must seek out; and no particular certificate you must obtain to be successful in this field. There is no such thing as starting too late or too early, and there are avenues open to neophytes, to established professionals, and to everyone in between. The possibility is in your own hands to find what



**Figure 2.** "Sunburst icons" indicate the primary, secondary, and tertiary career fields of Volume 3's women.

fits you, and what works for you, based on your own needs and lifestyle.

In conclusion, Volumes 2 and 3 of *Women in GIS* represent a meaningful continuation of the series, marking a consistent effort to highlight the invaluable contributions and experiences of women in the GIS field. These books are a celebration of careers of inspiring women, and of the welcoming and supportive professional community those women have built. All three volumes provide essential insight into the lives, struggles, and achievements of

women in GIS, and are a powerful resource for aspiring professionals in the field. Each book is a testament to the fact that the path to GIS is not rigidly set in stone, and each makes clear that diversity and individuality not only exist within the field, but are among the well-springs of its strength. A continuation of this series would only be natural, and we can surely anticipate more deep dives into the world of women in GIS in the future. It could be said, based on the examples in this series, that there are many faces to GIS, and that your face could be one.

