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RECEIVED 01 April 2025

ACCEPTED 06 May 2025

PUBLISHED 30 May 2025

## CITATION

Williams MJ, Gopal N, Kusakabe K and  
Fakoya K (2025) Women work in fisheries too:  
the Gender in Aquaculture and Fisheries  
Section story.  
*Front. Ocean Sustain.* 3:1599625.  
doi: 10.3389/focsu.2025.1599625

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# Women work in fisheries too: the Gender in Aquaculture and Fisheries Section story

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## KEYWORDS

gender, aquaculture and fisheries, fish value chain, transdisciplinary research, gender networks, research demand

## 1 Introduction

In fisheries, 47 million women and an unknown number in aquaculture make up nearly half of the workers in production, processing, trading, and marketing (FAO et al., 2023). Despite major contributions, women are frequently not recognized and supported, do not have a voice in setting sectoral directions and lack control over their own work needs. Historical biases against women still operate in the workplace and community, affecting household food and financial security, and women's physical safety and wellbeing. From the 1980s, researchers began investigating why gender matters and how to improve gender equality in fisheries and aquaculture (GAFS, 2018).

Collectively we have almost nine decades of experience as gender researchers, gender champions, managers and leaders, including in aquaculture and fisheries (GAF). Our professional lives have intersected, along with those of hundreds of other colleagues, through the creation and work of the Gender in Aquaculture and Fisheries Section (GAFS) of the Asian Fisheries Society (AFS).

People are drawn into GAF work from four main backgrounds. Many are fisheries and aquaculture researchers who discover that gender blindness is a problem arising when gender differences are ignored, e.g., in fish value chain employment, or when contributions by one gender are considered important but not that by others, e.g., in fishing and fish processing. Three of us primarily started this way (MW, NG, and KF). Others are gender and social science researchers who find that not much work is done in the field of fisheries/aquaculture or entered fisheries because their study area was a fishing village (KK). A third background type is comprised of development practitioners and policy makers who recognize opportunities for helping neglected groups among the fisheries/aquaculture sector. Finally, a very few people, mainly from labor and environment advocacy groups and the private sector have noticed the large women's workforce as an area of opportunity for development and action.

The majority of GAFS members and our broader set of GAF colleagues are women. Inevitably women's careers are of interest, but the personal professional advancement of members' careers has taken a back seat in GAFS activities. The driver's seat is occupied advancing knowledge that helps the tens of millions of women in aquaculture and fisheries economies and communities. In an evolutionary way, GAFS efforts have highlighted the missing women's work in fisheries policies and programs, added to sectoral knowledge sets (local, regional and global), deepened the understanding of women's diverse

and complex roles, and advocated for integrating women's issues into policies (Williams, 2019). Indirect career support such as helping colleagues build their GAF knowledge through short courses, e.g., our GAF-101 courses on theorizing gender, and intersectionality (Supplementary material 3), have also focused on the women in the fish value chains and not professional career paths. We know, however, that many members and colleagues support others' careers through mentoring, helping get papers published, editing and reviewing manuscripts sent to journals, teaching and participating in GAF projects. Another career facet is that GAFS has opened up a path for social scientists to be engaged in fisheries issues, with its strong focus on gender analysis.

Focusing on GAFS work in advancing knowledge and its application, we describe how the GAFS was built and then reflect on three major challenges encountered. We conclude with an exhortation for others to also reach out beyond the world of women professionals and consider all those whose lives are entwined with the oceans.

## 2 Building the GAF section

The progenitor of GAFS was a gradually growing informal network that began in India. In 1990 Dr M.C. Nandeeshia initiated the workshop on women in fisheries in India, run by the Indian Branch of the Asian Fisheries Society (AFS). Nalini Nayak's feminist perspective keynote opened the event (Nayak, 1992). Nandeeshia also led the next events on Cambodia, Indo-China countries and in Beijing, China (Supplementary materials 1, 9). The first AFS Symposium (1998 Women in Asian Fisheries) attracted a wide geographic range of participants. Over the course of subsequent symposia, the events became global and went beyond women in fisheries to include gender relations. The broader events attracted experienced gender researchers such as Marilyn Porter, Katia Frangoudes, Holly Hapke, Siri Gerrard, and Kyoko Kusakabe. They generously shared their knowledge and pratique with the majority who were newcomers from natural science and other social science backgrounds but had little gender research experience. In 2016, through several discussions with network colleagues from other regions such as Europe (AKTEA) and Philippines, and interests such as gender and fisheries education, we arrived at the decision to become a formal section of the Asian Fisheries Society, while maintaining our global interests.

With help from experienced colleagues, we then built the machinery of GAFS as an approved Section of AFS (<https://www.genderaquafish.org/gaf-section.htm>). The elected Executive Committee (ExeComm) oversees the GAFS operations, scheduling conferences, projects and other activities, and managing the budget, elections, membership and constitutional matters. We publish an annual e-Newsletter. Our first standalone international conference (GAF7) was held in 2018.

In a new policy step in 2021–22, we drafted and consulted members on Core Principles (<https://www.genderaquafish.org/principles.htm>) to guide members representing GAFS in meetings, conferences, projects and when giving policy advice. By this stage, we had started to contribute to selected regional and global policy consultations.

GAFS objectives address gender issues through advocating women's material importance in aquaculture and fisheries policies and programs, and advancing capacity and equitable cooperation among researchers and multiple stakeholders, including policymakers. The GAFS main activities are: (a) events and projects, (b) networking and communications, and (c) cultivating demand for and supply of GAF research.

### 2.1 Events and projects

The research and outreach work GAFS fosters in events and projects reveals the practicalities facing women. In partnerships with local host organizations and AFS forums, GAFS and its progenitor network conducted inclusive and open conferences, symposia and workshops for those presenting GAF studies and activities, and convened panels and special theme sessions. Each event was supported by the participants and sponsors, the latter mainly from development assistance, research and outreach organizations. The events' results were reported in numerous conference reports and published papers arising from presentations. Our earliest conference papers were published in edited but unrefereed proceedings until we progressed to refereed papers, thematic overviews and guest editorials in special sections or special issues of quality journals (see Supplementary materials 1, 2).

We also helped convene gender sessions at the events of other groups, especially the International Institute of Fisheries Economics and Trade (IIFET) (Supplementary material 2).

In response to invitations or calls for proposals, GAFS also undertakes projects relevant to our objectives and for which we can convene the necessary expertise.

To date, our projects have, included gender dialogues in seaweed farming, and a cooperative action plan on decent work for women in fisheries. Currently, GAFS is developing and testing gender monitoring procedures for nature-based aquaculture for conservation, and helping environmental activists examine the ways forward for greater equity for women in inland fisheries (see Supplementary materials 2, 5).

### 2.2 Networking and communications

GAFS itself is a network, integrated into a mainstream professional body, the Asian Fisheries Society, and networked with GAF and social science individuals and groups. Our professional society partners are in other professional societies, including those in other disciplines, e.g., IIFET (economics), the Asian Fisheries Social Science Research Network (AFSSRN), and the Indian Branch of AFS.

Digital communications have been vital to GAFS, through our websites ([genderaquafish.org](http://genderaquafish.org) and [gafconference.org](http://gafconference.org)), and email groups. One group is a closed members group and another a more expansive group of over 800 members we have supported for over two decades (Genderaquafish). We also reach out by social media (FaceBook and X).

## 2.3 Cultivating demand for and supply of GAF research

Despite progress, the capacity for high-quality GAF research is still too low relative to even the modest demands, although there has been an increasing trend in the number of journal papers focusing on gender and fisheries/aquaculture being published. Supply and demand are related and GAFS aims to stimulate both. If credible and usable GAF knowledge and expertise cannot meet an expressed demand, such as for gender experts to staff fisheries organizations, or gender design input into a new aquaculture programme, then skepticism may undermine the case for the importance of GAF and weaken future demand. Inside technical organizations, young gender experts often face challenges in making their contributions when the institutional culture is dominated by biophysical disciplinary experts.

GAFS helps meet demand by undertaking projects and submitting advice to consultations, mainly in the global system (see [Supplementary material 8](#)). We note a large gulf between those who are working on gender in fisheries and those in other feminist fields, whether in other economic sectors and themes, e.g., agriculture, water, the garment industry, environment, climate, etc. or more generic fields such as gender-based violence, education and political participation. GAF researchers and experts could learn from those in other feminist fields, adapt the lessons and entice some of the other experts to focus on GAF research.

With rare exceptions, such as at Asian Institute of Technology, graduate and post-graduate courses do not include GAF. The supply of GAF researchers is lean, and many researchers learn on the job. Building researchers' capacity has been a priority for GAFS. We have aided in several ways: facilitating the publishing of research articles and improving their quality; providing information rich websites; encouraging students with recognition and awards at conferences; and holding GAF 101 and other workshops (see [Supplementary material 3](#)). Our most recent training workshop was a 1-day event for fisheries, aquaculture and trade economists held at the biennial conference of IIFET.

## 3 Major challenges

Despite these activities, fisheries and aquaculture lag all other similar sectors in gender research and application. The reasons are many, starting with the masculine ambiance projected from the fish sectors. We highlight three challenges but can only offer a glimpse of possible solutions in this short article.

One challenge is that gender expertise has a low demand. This is largely because fisheries scientists and managers see gender as "extra" work and do not want to be bothered or do not want to share the resources for gender work, and because the fisheries funders do not require gender integration as much as those in other sectors. For example, in agriculture sectors or climate change, gender integration is a requirement. The research and project proposals in these fields have a clear and higher standard of gender integration required. This drives the scientists to reach out to gender experts to work with them. These fields also have women-focused research and development projects that are led by women

researchers. In fisheries, the realization that women are playing a large role came much later than in other sectors, and research in gender and fisheries is a field growing from a low base.

The Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines) is one of the first major instruments that has highlighted the importance of gender integration and called for the need to ensure gender equality in fisheries. Since the SSF Guidelines were agreed in 2014, the number of gender focused and gender related journal publications in fisheries has gradually increased ([Kusakabe and Thongprasert, 2022](#)). Therefore, one solution to address the demand challenge is to highlight gender integration needs in major fisheries policy documents and increase funding for gender-integrated or gender-focused research and development projects. Critical next steps are adapting the global Guidelines framework and achieving similar gendered changes to regional, national and sub-national fisheries policies. GAFS members and colleagues mainly work at these levels, gathering the evidence to influence policy change. They often link research and activism, such as working with the International Collective for Smallscale Fishworkers (ICSF) and Comunidad y Biodiversidad (COBI) in Mexico.

The low demand for gender research affects the swelling ranks of young researchers graduating with PhDs and masters degrees specializing in GAF. They struggle to find related career pathways. Meanwhile, many seasoned researchers are mainly doing GAF research as a "night job." On the upside, a small but slowly growing number of fisheries/aquaculture organizations are now creating positions for gender experts.

Increasing fish production to feed growing global food and nutritional needs is important but this drives fisheries and aquaculture policies to be primary production centric and causes a second and fundamental gender challenge. The primary production focus subjugates women's interests because it excludes the half of the workforce that comprises most of the women (in processing and trading) while systematically undercounting women in primary production. Beyond and within primary production, a broader, inclusive policy framework is imperative to appreciate the potential impacts and sectoral transformations including gains in income and improved livelihoods in pre- and post-harvest activities. The GAFS Core Principles stress the importance of including the whole value chain. The value chain approach can account for the whole workforce and shape understanding of the linkages between those who are engaged in processing fish to those producing it either through capture fisheries or aquaculture.

Official statistics indicate that primary production employs predominantly men, but progress is being made in enumerating and understanding the primary production work of women despite lacking data in many official country fisheries statistics. Many GAFS members and colleagues were involved in the Illuminating Hidden Harvests study that built the evidence for women's engagement throughout the value chains, including primary production and across scales of fisheries ([FAO et al., 2023](#)). This study also revealed that more than half the 58 country case studies required data from non-fisheries sources, particularly various types of less specialized household studies, in order to make gender disaggregated estimates across the

value chain nodes (pre-harvest, primary production, post-harvest processing and trading). Arising from these findings, a group (of which the present authors are part) is now developing advice on closing the gender data gaps in all nodes of the value chain.

A third challenge is posed where key actors, such as women and men policymakers in public and private sectors, are not knowledgeable about gender equality concepts and approaches and consider these irrelevant. The problem starts with education. In universities, the interdisciplinary approach is still a far cry. Fisheries/aquaculture and social/development studies where gender and development are normally taught are often in different faculties/departments. Rarely do students take both and interdisciplinary research may be discriminated against. More interdisciplinarity and transdisciplinarity is needed in university education, so that students of both sides are exposed to different fields and different ways of seeing.

## 4 Conclusions

If you are a woman or identify as a gender minority in ocean science and are interested in gender equality, we urge you to look beyond your own professional needs. Your professional needs are a special microcosm of the wider spectrum of needs that women, gender minorities and men experience right throughout the fish value chains. Consider in addition how you, your organization or networks can contribute to knowledge that helps others in the value chains achieve better outcomes for people and the environment.

## Author contributions

MW: Writing – review & editing, Conceptualization, Project administration, Writing – original draft. NG: Writing – original draft, Supervision, Writing – review & editing, Conceptualization. KK: Writing – review & editing, Conceptualization, Writing – original draft. KF: Writing – original draft, Conceptualization, Writing – review & editing.

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## Funding

The author(s) declare that no financial support was received for the research and/or publication of this article.

## Acknowledgments

We thank all the Executive Committee and members of the Gender in Aquaculture and Fisheries Section of the Asian Fisheries Society, and all our colleagues and supporters in the wider GAF networks.

## Conflict of interest

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## Supplementary material

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/focsu.2025.1599625/full#supplementary-material>

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