

From coast to coast to coast: An introduction to gender and small-scale fisheries co-management in Canada

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Abstract

Women across Canada possess distinct gender knowledge and skills in their contribution to small-scale fisheries (SSF). However, present management efforts disregard the knowledge, needs and contributions of female participants, thereby weakening the effectiveness of SSF management. Here, examples of the contributions of both Indigenous and non-Indigenous women to SSF within Canada, the value of women's involvement in Canadian fisheries co-management and the barriers to such involvement are assessed based on the existing literature. As illustrated by this review, women in Canada improve fisheries co-management arrangements but face multiple barriers to participating in co-management. This work points towards a need for intersectional feminist considerations within Canadian co-management arrangements.

Keywords

Co-management, gender, small-scale fisheries, Canada, intersectionality

Introduction

Management of common-pool resources, such as fisheries, has often struggled to balance environmental conservation, economic demands and the social needs of the resource harvesters and users. Co-management is one management system that seeks to improve all three of these challenges through localised management that is grounded in community action. Co-management attempts to link resource users, government agencies and other stakeholders through both top-down and bottom-up processes (Quimby and Levine 2018). Fisheries co-management is meant to be adaptable and culturally appropriate and promote both social and ecological benefits by empowering resource users with decision-making and enforcement abilities (Quimby and Levine 2018).

Co-management is one way to address management dilemmas in small-scale fisheries (SSF), which are characterised as diverse and complex social-ecological systems. Previous

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Figure 1. Cowichan Estuary on Vancouver Island, British Columbia, is an important rearing habitat for juvenile salmon and home to Cowichan Tribes for millennia.

research regarding co-management in SSF has focused heavily on the range of institutional arrangements and governance systems (Quimby and Levine 2018). Underpinning those institutions are complex themes of participation, power and equity which, while they make up the backbone of co-management, are often poorly defined and measured (Quimby and Levine, 2018). It is critical to understand where power originates, how it emerges, manifests and persists in order to gain insight on the positive and negative influence it has on collaboration and learning (Armitage et al. 2009). Co-management arrangements must be established with a strong understanding of the social and economic power dynamics present that affect both management institutions and the society more broadly (Armitage et al. 2009). Specifically, class, ethnicity, age, and gender need to be understood in order to challenge the existing governing authority's sharing and flexibility (Armitage et al. 2009).

Although fisheries have long been considered a male domain, women play significant roles that vary regionally based on ecology, economics and culture (Klieber et al., 2015). Globally, women contribute significantly to SSF in terms of biomass, economics and livelihoods (Harper et al., 2020). Recent research has brought attention to the gender division of labour in SSF, while there is still a growing understanding of gender and resource management activities, social networks, ecological impacts, and household power dynamics (Weeratunge et al. 2010; Santos 2015). Despite women's substantial contribution to the fisheries sector, their participation in community-based fisheries management is believed to be limited, although formal evidence is still lacking (Leisher et al. 2016; Alonso-Población and Siar 2018).

Equity, specifically gender equity, is of high importance in the context of SSF. Equitable outcomes in SSF are preferable, as they can improve livelihoods, decrease poverty and reduce vulnerability among fishers (Kittinger 2013; Barnett and Wakin 2015). Equitable outcomes are not only key to long-term sustainability but also aid in improving the legitimacy and compliance of co-management agreements (Jentoft 2013; Turner et al. 2016). A lack of recognition of women's involvement and contribution is of major concern, as fisheries policies and management decisions continue to exclude gender considerations, thereby focusing only on male experiences and knowledge (Zhao 2013; Harper et al. 2017; Frangoudes et al. 2019).

If co-management is to be built on principles of community action and collective needs, then it is crucial for all voices to be equally valued and incorporated. The rationale behind including gender in SSF co-management is simple: how can we consider management fair, effective, realistic and sustainable if half the population is excluded? (de la Torre-Castro 2019). When management perspectives and actions are based on only half of the population, the entire scope of resource threats, conflicts and opportunities are not understood (Di Ciommo and Schiavetti 2012).

Small-scale fisheries in Canada

Small-scale fisheries in Canada contribute a small percentage to global SSF, yet they hold large social, cultural and economic benefits to the communities they are located in (Fig. 1). Indigenous peoples across Canada stewarded fisheries ecosystems for millennia prior to European contact (Jones 2000; Augustine and Dearden 2014). For example,

Figure 2. Kokanee salmon (*Oncorhynchus nerka*) caught by recreational fisher in Stump Lake, British Columbia © Colin Bailey



salmon stewardship practices on the Pacific Coast were built on social and cultural processes that sustained productive salmon runs and limited over-harvesting (Atlas et al. 2021). In the mid-nineteenth century, Indigenous management was disrupted and replaced by the colonial government, altering Indigenous practices, rights and access to fisheries (Atlas et al. 2021). The current commercial fishery in Canada is dominated by an individual fishing quota system, whereby each fisher is assigned a permit that grants rights to a share of a total allowable catch (TBTI 2018). This neoliberal system has increased influence from outside investors, reduced the number of fishing vessels and focused on profit maximisation (TBTI 2018).

When discussed in a global context, fisheries in Canada are often regarded as being industrialised and large scale, despite the diverse range of fisheries found throughout the country. Small scale fisheries in Canada are not clearly defined at a national level; thus, research and documentation has previously been limited but is beginning to gain more attention (TBTI 2018). Generally, fisheries in Canada can be grouped into three categories: commercial fisheries, recreational fisheries and First Nation Food, Social and Ceremonial (FSC) fisheries (Fig. 2). Within each of these fisheries, there is a range of vessels and methods used such that SSF can be found within all three fisheries categories (TBTI 2018). In this way, SSF in Canada are diverse and exist on a continuum rather than within defined categories. Recent work has been undertaken to classify the degree of “small-scaleness” within British Columbia fisheries, Canada’s most western province bordering the Pacific Ocean (Gibson and Sumaila 2017). Based on various features of the fisheries, Gibson and Sumaila (2017) identified that the FSC fishery exhibited the greatest number of SSF features.

Gender and SSF in Canada

Mirroring trends seen globally, women in Canadian SSF play diverse and dynamic roles that have shifted through time (TBTI 2018; Harper et al. 2018) (Fig. 3). The majority of gendered fisheries research in Canada to date has been situated around non-Indigenous East Coast fisheries. Historically, there was a strong division of labour, with women in Newfoundland and Labrador concentrated in seafood processing, particularly in plants associated with the small-scale in-shore sector, while men were concentrated in the harvest sector (Neis et al. 2013). Previous research has identified the barriers to women’s inclusion and access within the fishery and to their ability to secure equal workplace benefits to those of men (Cahill and Maryland 1993; Power 2000; Neis et al. 2013). Recently, the Atlantic fishery has undergone a transformation where more women work on boats as harvesters, although they remain marginalised with limited work stability and security (TBTI 2018).

There is limited research on gender and Indigenous fisheries in Canada, although there are some accounts of women’s critical work on the Pacific Coast processing salmon and harvesting shellfish (Moss 1993; Jones 2000). More recent work in the last three years has brought to light how Indigenous women of Pacific Coast First Nations are reaffirming their roles as leaders and stewards of the land and sea (Coastal First Nations Great Bear Initiative 2020). Specifically, Harper et

al. (2018) identified the critical role that Heiltsuk women played in catalysing change during a fisheries management conflict.

When reviewing gender and Indigenous fisheries, it is important to consider how First Nations’ world views shape gender relations and gender in fisheries. In many Indigenous societies, traditional gender roles and responsibilities are defined by the needs that shape the survival of the collective (Kermoal and Altamirano-Jimenez 2016). In Kafarowski’s (2004) inquiry about women in Arctic fisheries management, an Inuit woman stated “As Inuit, there’s no gender thing. If it was left up to traditional ways, women would be equals” (Kafarowski 2004, p. 31). Western understanding of gender imposes a strong binary between men and women, but in the Inupiat whale hunt the interdependence of men and women is emphasised instead. Men and women contribute different skills and knowledge that, while complementary, are inseparable from the whole (Todd 2016).

Most of the research on gender and fisheries in Canada focuses on non-Indigenous fisheries on the East Coast, while there is limited work in the Arctic and limited but recent work on the Pacific Coast. Through this review, it is clear that women’s roles are diverse, ranging from harvesting and processing to management. More research is necessary to understand gender dynamics within Canadian SSF and how these dynamics have and will continue to shift through changing ecological, government and management periods. Understanding how gender and co-management in Canada interact is necessary to create gender responsive co-management spaces. Recognising this need, the following discussion draws on Canadian examples to illustrate the importance of including gender in SSF co-management and the current barriers women face to participate in co-management. Understanding and addressing gender in Canadian co-management is necessary for management to be considered fair, effective, realistic and sustainable (de la Torre-Castro 2019).

Why consider gender in Canadian SSF co-management?

Past Canadian fisheries management has been gender-blind, masking or ignoring the contribution of women and the consequences of policies on gender relations and household dynamics, affecting the equity and resilience of SSF (Neis et al. 2013). For co-management to be effective, full involvement and active participation of all stakeholders is necessary, including the involvement of women. Drawing from limited but important available literature, this section discusses the importance of considering gender within the context of Canadian SSF co-management specifically regarding women’s roles, knowledge and management priorities as well as women’s impact on leadership.

Women’s roles, knowledge and management priorities

Women have different types of knowledge, observations, experiences and interpretations which lead to different natural resource management perspectives, needs and priorities (Kleiber et al. 2015). Women interact with fisheries in distinct ways to men, resulting in women having different resource priorities from their male counterparts (Staples and Natcher 2015).

In Northern Canada, a staff member on a wildlife co-management board spoke about the different ecological roles of men and women through saying “women, you know, a lot of them are harvesters of a different nature, the berry patches and the roots and the medicinal plants, so the nature of what brings them onto the land brings them to different places than men” (personal interview, 15 August 2013, Staples and Natcher 2015, p. 362). The quote from this board member identifies how men and women have specific relationships to ecosystems through their distinct harvesting roles.

Focusing solely on the harvesting of resources, primarily a male-dominated sector, can exclude other potentially valuable sources of information necessary for management. In a study of gender and co-management in the Yukon, one female board member commented,

When you look at like a traditional fish camp perspective, the majority of the work, anyways in my culture, is done by the women. And so you know we're the one cutting the fish, seeing the fish, doing all the work with them, hanging them, drying them, preparing them. Normally the men are catching the fish but it's that type of involvement ... me bringing that perspective of what it's like to have run a fish camp ... I think I bring a very different, and I think I bring more of an emotional perspective to the table (board member, interview 4 July 2013, Staples and Natcher 2015, p. 362).

Men and women's different roles in the Yukon fishery result in different knowledge and understanding of the system.

In the Atlantic fishery, Power (2000) argues that incorporating women processor's experience and knowledge of changes in species composition of catches, location of catches, and size of the fish is valuable for informing sustainable management. Specifically, “these women processing workers connected reduced volume, size, and softer texture of cod arriving in their plants to an emerging problem of stock decline, specifically to the impacts of overfishing and the effects of certain technologies” (Power, 2000, p. 196). Where women work and their responsibilities within fisheries results in distinct ecological knowledge and subsequent management priorities. Failure to consider gender can lead to limited perspectives, knowledge, skills and experience that may narrow the scope of decision-making within management (Staples and Natcher 2015).

Impact of women's participation on leadership

Women's participation in management can lead to different forms of leadership. Women's leadership takes on several forms that can aid in the navigation of various policy issues (UNEP 2015). Women's contributions enrich management and lead to novel ideas when analysing problems and tailoring solutions (Klugman et al. 2014). Women have been shown to improve management through the promotion of positive collective action, collaboration and conflict resolution (Westermann 2005), providing a more ethical and holistic



Figure 3. Small-scale fisher Dafne Romero harvesting giant kelp off the coast of Haida Gwaii, British Columbia. © Skipper Otto

outlook (Lauber 2001) and cooperating in different settings with environmental importance (Revollo-Fernández 2016).

Staples and Natcher (2015) identified that when women were present on co-management boards, decision-making generally took a longer time, but boards were more likely to establish a longer-term view of management issues. Women generally brought a more holistic approach, and discussions were more complex and respectful with improved communication and mediation. The presence of women contributed to a more positive institutional work setting for decision-making. In general, co-management boards were more cohesive when women were present because women were more likely to maintain personal relationships (Staples and Natcher 2015).

A study in Nunavut regarding women's decision-making in Arctic fisheries resource management identified similar sentiments about women's impact on leadership. A Pangnirtung community resident said,

It would be good to see women and men working in the fisheries area because it is our livelihood, it is our culture, it is within us. And in order for a good community, good working together, you have to have that balance. I think it could be a lot stronger just because women are able to hear, listen and process in a holistic way, not just in money terms, but they are thinking of their children and their grand-children-to-be. They are thinking long-range and not just financial. (Pangnirtung community resident, Kafarowski 2004, p. 34).

In a parallel study regarding Hunter and Trapper Organizations in the Arctic, participants mentioned that when engaging in discussion about economic and environmental aspects of managing wildlife, female board members also brought forth questions about fostering traditional skills in youth, food security and initiating socio-cultural activities that focused on family (Kafarowski 2005).

While the impacts of women's participation on leadership is extremely positive and beneficial, it is worth noting that resource management institutions are linked and influenced by social and cultural gender norms. For example, women's representation leading to improved collaboration is tied to women's role as mothers and mediators within the household (Staples and Natcher 2015). Attention must be given to the fact that governance spaces are not neutral and are influenced by social and power norms. The power that men and women can exercise within management is just as much influenced by what happens outside these institutions as what happens inside, as discussed further in the following section.

Barriers to women's participation in Canadian SSF co-management

Women face specific constraints to effective representation and participation in co-management that are distinct to their gender experience. The barriers faced by women in Canadian SSF co-management are discussed here in three categories: access to education and training opportunities, domestic roles, and power-sharing dynamics.

Education, training and knowledge

A lack of education and technical training affects women's ability and confidence to participate in co-management positions. Without the requisite education and skills, women are often confined to lower ranked positions with no participation in policy and management decisions. In Nunavut, an absence of high school diplomas and limited training in natural resource management were shown to be two barriers preventing young women from applying for fisheries-related work (Kafarowski 2004). Additionally, a fish processing plant representative in Nunavut identified that a lack of technical training reduced women's ability to progress to higher managerial positions (Kafarowski 2004). In co-management boards in the Yukon, women were shown to face gender specific barriers in terms of skills and knowledge (Staples and Natcher 2015). There was a perception that women lack certain types of land-based knowledge, especially on boards that only targeted male-dominated land-based activities. The study results identified that 32% of participants believed women's lack of experience in wildlife harvesting was a limiting factor in female board membership (Staples and Natcher 2015).

Domestic roles and childcare

Childcare and household duties tie women to their homes and reduce their available time, thus decreasing their representation and participation in co-management. In Nunavut, a requirement for support services, particularly childcare, to promote women's involvement in decision-making processes was identified (Kafarowski 2004). Most Indigenous families are traditionally supported by extended family networks, but as more families participate in the wage economy, the demand for support services has increased. Lack of childcare particularly affected fish plant workers looking to move to managerial positions, and women aspiring to return to school (Kafarowski 2004). Logistical challenges were faced by women in the Yukon as they had to juggle full-time jobs and childcare. Thus, women were only able to participate in co-management boards if they had the full support of their family or access to alternative childcare support services (Staples and Natcher 2015).

Power-sharing dynamics

Women face barriers to effective participation in co-management due to the power dynamics between genders that exist in society and continue to exist within governance spaces. In Nunavut and the Inuvialuit Settlement region, it is common for men to hunt and trap whereas the majority of women fish. Men who hunt hold a higher social status than women who fish (Kafarowski 2005). Although Hunter and Trapper Organizations are mandated to cover all wildlife, including fish, this higher status is part of the reason why the Hunter and Trapper Organization Boards are mostly male (Kafarowski 2005). On the Atlantic Coast, because women were historically concentrated in processing plants and men in the harvest sector, women were effectively excluded from the decision-making process. Within processing management, women were clustered in clerical work and rarely attained managerial or supervisory positions (Cahill and Martland 1993). Women were generally not represented on administrative bodies that address resource allocations

or harvesting recommendations, despite these processes affecting their work. Women were poorly represented in unions and often worked in non-unionised plants (Cahill and Martland 1993)

There are several Canadian cases where women had to prove their knowledge and capabilities to their male colleagues, revealing that men continue to control power in management spaces. Power (2000) identified barriers that exist for Newfoundland women fish processors to express and legitimise their knowledge and ideas to management. Women were noted to be questioning and uncertain about their knowledge due to the constraints of managerial strategies, surveillance within processing plants, and a lack of ownership (Power 2000). In the Yukon, female co-management board members noted that their contributions were not taken seriously by the male chair (Staples and Natcher, 2015). Women identified that they had to prove their standing and capabilities to their predominantly male colleagues. Most of the women who described having to prove themselves were First Nations, attesting to the need for an intersectional approach to be taken due to the multiple, interrelated inequalities operating against Indigenous and female identity (Staples and Natcher 2015).

The three categories of barriers women face for effective participation and representation in co-management, especially power-sharing struggles, make it clear that ensuring effective and equitable decision-making processes in co-management arrangements requires looking beyond just opportunities to participate. To address gender equality in co-management, we must address the pre-existing power dynamics, gender roles and norms. The interaction between gender and other social dimensions has been shown to affect the knowledge, perspectives and concerns brought forward in management institutions (Reed and Davidson 2011; Staples 2015). Clearly, gender parity does not necessarily equal gender equality, especially when women's participation is constrained in the existing gender norms and relations (Nunan and Cepić 2020). Instead, weight must be given to understanding how different voices are valued in decision-making and what conditions contribute to these voices holding value (Staples and Natcher 2015).

Conclusion

SSF are complex systems made up of natural, social and political spheres that require interdisciplinary attention. Co-management is a transformative form of management that values vertical collaboration and empowerment of local resource users and communities. Within the fields of both SSF and co-management research, gender responsive action is coming to the forefront as a critical component to developing long-term, environmentally sustainable and socially just management systems. In Canada, and across the globe, women play diverse roles in SSF, yet they face considerable barriers to equitable representation and ability to participate in fisheries management and decision-making.

Considering gender within Canadian SSF co-management is critical to creating legitimate and equitable outcomes for all. Including women in co-management broadens the scope of the arrangement and the potential outcomes because women

have roles, knowledge and management priorities that are distinct from those of men. Additionally, including women in co-management settings can improve collaboration and create long-lasting outcomes due to a more holistic approach and women's impact on leadership. Although the importance of including gender in SSF co-management is clear, barriers exist to women's effective participation. Women struggle to progress to managerial positions due to lack of education and technical skills. Domestic and childcare duties often impede women's ability to participate in management due to lack of time. Women also face power dynamics within management settings that inhibit their ability to effectively participate.

Based on the examples provided here, it is clear that actively including gender considerations in Canadian SSF co-management is both necessary and beneficial to communities and the ecosystems to which they are connected. For effective participation and representation of all women in co-management spaces, an intersectional approach must be taken. Intersectional approaches can reveal how various forms of social difference, such as gender, race, ability and age, interact to create power dynamics within resource use and management (Ferguson 2021). Intersectionality moves away from the idea that all women fishers have the same experience and deepens our understanding of the complexities of individual experiences within management spaces (Ferguson 2021). This is especially critical in Canada when considering the experience of Indigenous women in management spaces built on patriarchal and colonial frameworks.

This discussion is part of a larger project being undertaken that will contribute to an e-book focused on SSF in Canada. Future work will examine how current policies and management structures in Canadian SSF consider gender. Ultimately, this work will aim to provide suggestions for achieving gender-responsive management spaces and outcomes. With a changing climate, nationally declining fisheries stocks, calls for reconciliation and the resurgence of Indigenous fisheries, now is a critical time to co-develop management systems that represent entire communities, including all women.

References

- Agarwal B. 2000. Conceptualising environmental collective action: why gender matters. *Cambridge Journal of Economics*, 24: 283–310
- Alonso-Población E. and Siar S.V. 2018. Women's participation and leadership in fisherfolk organizations and collection action in fisheries: a review of evidence on enablers, drivers and barriers. FAO Fisheries and Aquaculture Circular No. 1159. Food and Agricultural Organization, Rome.
- Armitage D.R., Plummer R., Berkes F., Arthur R.I., Charles A.T., Davidson-Hunt I.J., Diduck A.P., Doubleday N.C., Johnson D.S., Marschke M., McConney P., Pinkerton E.W. and Wollenberg E.K. 2009. Adaptive co-management for social-ecological complexity. *Frontiers in Ecology and the Environment* 7(2):95–102.



- Atlas W.I., Ban N.C., Moore J.W., Tuohy A.M., Greening S., Reid A.J., Morven N., White E., Housty W.G., Housty J.A., Service C.N., Greba L., Harrison S., Sharpe C., Butts K.I., Shepert W.M., Sweeney-Bergen E., Macintyre D., Sloat M.R. and Connors K. 2021. Indigenous systems of management for culturally and ecologically resilient Pacific salmon (*Oncorhynchus* spp.) fisheries. *BioScience* 71(2):186–204.
- Augustine S. and Dearden P. 2014. Changing paradigms in marine and coastal conservation: A case study of clam gardens in the Southern Gulf Islands, Canada: A values-based approach to coastal conservation. *The Canadian Geographer / Le Géographe Canadien* 58(3):305–314.
- Barnett A.J. and Wakin H.C. 2015. “We and us, not I and me”: Justice, social capital, and household vulnerability in a Nova Scotia Fishery. *Applied Geography* 59(107):116.
- Cahill M. and Maryland S. 1993. Women in the Newfoundland Fishery. Prepared for the Task Force on Incomes and Adjustment in the Atlantic Fishery. Department of Fisheries and Oceans, Canada.
- Coastal First Nations Great Bear Initiative. 2020. Indigenous women rising: Tina Ryan, Coastal Guardian, Metlakatla Nation. October 6, 2020. Coastal First Nations Great Bear Initiative, Vancouver.
- Cohen P.J., Lawless S., Dyer M., Morgan M., Saeni E., Teioli H. and Kantor P. 2016. Understanding adaptive capacity and capacity to innovate in social-ecological systems: Applying a gender lens. *Ambio* 45:309–321.
- de la Torre-Castro M. 2019. Inclusive management through gender consideration in small-scale fisheries: the why and the how. *Frontiers in Marine Science* 6(156)
- Di Ciommo R.C. and Schiavetti. A. 2012. Women participation in the management of a Marine Protected Area in Brazil. *Ocean & Coastal Management* 62:15–23.
- FAO. 2014. Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication. Rome, Italy: United Nations Food and Agriculture Organization.
- Ferguson C. 2021. A rising tide does not lift all boats: Intersectional analysis reveals inequitable impacts of the seafood trade in fishing communities. *Frontiers in Marine Science* 8:1–14.
- Frangoudes K., Gerrard S. and Kleiber D. 2019. Situated transformations of women and gender relations in small scale fisheries and communities in a globalized world. *Maritime Studies* 18:241–248.
- Gibson D. and Sumaila U.R. 2017. Determining the degree of ‘small-scaleness’ using fisheries in British Columbia as an example. *Marine Policy* 86:121–126.
- Harper S., Grubb C., Stiles M. and Sumaila U.R. 2017. Contributions by women to fisheries economies: Insights from five maritime countries. *Coastal Management* 45(2):91–106.
- Harper S., Salomon A.K., Newell D., Waterfall P.H., Brown K., Harris L.M. and Sumaila U.R. 2018. Indigenous women respond to fisheries conflict and catalyze change in governance on Canada’s Pacific Coast. *Maritime Studies* 17:189–198.
- Jentoft S. 2000. Legitimacy and disappointment in fisheries management. *Marine Policy* 24:141–8.
- Johannes R.E. 2002. The renaissance of community-based marine resource management in Oceania. *Annual Review of Ecology, Evolution and Systematics* 33:317–340.
- Kafarowski J. 2004. Canada. p. 25–38. In: Liljegren S. I. (ed). *Woman in a Northern landscape*. Forlaget Nora, Kvinneuniversitet Nord.
- Kafarowski J. 2005. “Everyone should have a voice, everyone’s equal”: Gender, decision-making and environmental policy in the Canadian Arctic. *Canadian women’s studies* 24(4):12–14.
- Kermoal N. and Altamirano-Jimnez I. 2016. *Living on the Land: Indigenous women’s understanding of place*. Edmonton: AU Press, Athabasca University.
- Kittinger J.N. 2013. Human dimensions of small-scale and traditional fisheries in the Asia-Pacific region. *Pacific Science* 67:315–325.
- Kleiber D., Harris L.M. and Vincent A.C.J. 2015. Gender and small-scale fisheries: a case for counting women and beyond. *Fish and Fisheries* 16:547–562
- Klugman J., Hanmer L., Twigg S., Hasan T., McCleary-Sills J. and Santamaria J. 2014. *Voice and Agency: Empowering women and girls for shared prosperity*. Washington DC: World Bank.
- Lauber T.B., Anthony M.L. and Knuth B.A. 2001. Gender and ethical judgments about suburban deer management. *Society and Natural Resources* 14:571–583.
- Leisher C., Tensah G., Booker F., Day M., Samberg L., Prosnitz D., Agarwal B., Matthews E., Roe D., Russell D., Sunderland T. and Wilkie D. 2016. Does the gender composition of forest and fishery management groups affect resource governance and conservation outcomes? A systematic map. *Environmental Evidence* 5(6).
- Moss M.L. 1993. Shellfish, gender, and status on the Northwest Coast: Reconciling archeological, ethnographic, and ethnohistorical records of the Tlingit. *American Anthropologist* 95(3):631–652.
- Neis B., Gerrard S. and Power N.G. 2013. Women and children first: the gendered and generational social-ecology of smaller-scale fisheries in Newfoundland and Labrador and Northern Norway. *Ecology and Society* 18(4):64.

- Nunan F. and Cepić D. 2020. Women and fisheries co-management: Limits to participation on Lake Victoria. *Fisheries Research* 224:105454.
- Power N. 2000. Women processing workers as knowledgeable resource users. p. 179–201 In: Felt L. and Neis B. (Eds.). *Finding our sea legs: Linking fishery people and their knowledge with science and management*. St. Johns ISER Books.
- Quimby B., and Levine A. 2018. Participation, power, and equity: Examining three key social dimensions of fisheries comanagement. *Sustainability* 10(9):3324.
- Reed M.G. and Davidson, D. 2011. Terms of engagement: The intersections among gender, class and race in Canadian sustainable forest management. p. 199–220. In: Pini B. and Leach B. (eds). *Reshaping gender and class in rural spaces*. Burlington, Vermont: Ashgate Publishing Company.
- Revollo-Fernández D., Aguilar-Ibarra A., Micheli F. and Saenz-Arroyo, A. 2016. Exploring the role of gender in common-pool resource extraction: evidence from laboratory and field experiments in fisheries. *Applied Economics Letters* 23:912–920.
- Santos A. 2015. Fisheries as a way of life: Gendered livelihoods, identities, and perspectives of artisanal fishers in eastern Brazil. *Marine Policy* 62:279–288.
- Staples K. and Natcher D.C. 2015. Gender, decision making, and natural resource co-management in Yukon. *Arctic* 68(3):356.
- TBTI 2018. North America small-scale fisheries: A regional synthesis. *Too Big To Ignore Research Report Number R-05/2018*. St John's, Newfoundland, Canada: Too Big To Ignore.
- Todd Z. 2016. This is the life: Women's role in food provisioning in Paulatuuq, Northwest Territories. p. 191–212. In: Kermaal, N. & Altamirano-Jimnez, I. (Eds). *Living on the Land: Indigenous women's understanding of place*. Edmonton. AU Press, Athabasca University.
- Turner R.A., Addison J., Arias A., Bergseth B.J., Marshall N.A., Morrison T.H. and Tobin R.C. 2016. Trust, confidence, and equity affect the legitimacy of natural resource governance. *Ecology and Society* 21:18–32.
- UNEP. 2015. *Gender equality and the environment. Policy and Strategy*. Nairobi, Kenya: United Nations Environment Programme.
- Weeratunge N., Snyder K.A. and Sze C.P. 2010. Gleaner, fisher, trader, processor: understanding gendered employment in fisheries and aquaculture. *Fish and Fisheries* 11:405–420.
- Westermann O., Ashby J. and Pretty J. 2005. Gender and social capital: the importance of gender differences for the maturity and effectiveness of natural resource management groups. *World Development* 33:1783–1799.
- Zhao M., Tyzack M., Anderson R. and Onoakpovike E. 2013. Women as visible and invisible workers in fisheries: A case study of Northern England. *Marine Policy* 37:69–76.

