

Exploring Women's Empowerment in Fisheries (EWEF)
A Methods Pack for a Collaborative Study on Women's Empowerment in Small-scale Fisheries.



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ABSTRACT

This methods package, *Exploring Women's Empowerment in Fisheries* (EWEF), was developed to fill the gap in assessments of women's empowerment by eliciting framings that capture, and emphasise, local women's understandings of what constitutes empowerment in small-scale fisheries (SSF). EWEF shifts the discourse around empowerment away from narrowly defined economic measures to a more nuanced, intersectional and context-specific mode of assessment. It also captures women's aspirations to elucidate where they want to go and how WorldFish, and other partners, might assist with enhancing women's self-defined strategic freedoms. The EWEF methodology also shifts the discourse around empowerment away from an academic exercise that extracts information from participants to one that empowers women through the process of collecting and analysing the data, and enables the application of the results by key stakeholders.

WorldFish commissioned EWEF in response to growing momentum around sustainable aquatic development pathways and the organization's commitment to not leave women behind in this sector. WorldFish's mission is to reduce poverty and hunger by improving fisheries and aquaculture. Gender equality is integral to WorldFish achieving its goals and advancing Agenda 2030.

This document provides a complete package of the EWEF methodology including research questions, conceptual frameworks, study design, data analyses plans, and recommendations for application. The EWEF will inform public and private sector policy and research for development investments in terms of current forms and degrees of empowerment as both process and outcome for different rural and peri-urban women, as well trends, and constraining and enabling factors.

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KT, CM, PC and KD contributed to conception and design of the study. KT and KD led the design of individual methods with significant input from CM, JS, WW and PC. KD wrote the methods package with input from CM, PC and KT. All authors contributed to revisions, and have read, and approved the published version.

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Cover photo credit: Local fish market in Ayeyarwady Delta, Myanmar. Photo by Jharendu Pant, 2012.

Acronyms and Abbreviations

ANOVA	Analysis of Variance
CGIAR	Consortium of International Agricultural Research Centres
CRP	CGIAR Research Program
EWEF	Exploring Women's Empowerment in Fisheries
FAO	Food and Agriculture Organization
FGDs	Focus Group Discussions
GBA+	Gender Based Analysis Plus
GTA	Gender Transformative Approach
IDI	In-depth Interviews
KIIs	Key Informant Individual Interviews
MRV	Monitoring, Reporting and Verification
NSPAW	National Strategic Plan for the Advancement of Women
OM	Outcome Mapping
PRA	Participatory Rural Appraisal
R & D	Research and Development
SSF	Small -Scale Fisheries
SSIs	Semi-Structured Interviews
VCD	Value Chain Development
WF	WorldFish
WIF	Women in Fisheries

ABOUT THE METHODS PACK

Policy and development efforts to expand women's equitable participation in small-scale fisheries (SSF) governance and livelihoods are growing as a means of enhancing outcomes from the sector. These efforts are linked to the Sustainable Development Goals (SDGs), along with the acknowledgment that gender data gaps are critical to making the paid and unpaid contributions of women to the fisheries sector more visible. But it is not only this data gap that needs to be addressed. Measuring women's empowerment is fraught with complexities associated with its misconception (often seen as interchangeable with participation, capacity, income or nutrition outcomes), and the way it is often assessed according to indexes developed from a different cultural perspective, and usually only offers a snapshot in time. Consequently, women's empowerment tends to be weakly assessed and evidenced and, arguably, remains elusive as an outcome. WorldFish's mission is to reduce poverty and hunger by improving fisheries and aquaculture. Gender equality is integral to WorldFish achieving its goals and advancing Agenda 2030. The organization has a responsibility to its partners to capture and communicate the impact of its work on men and women, girls and boys and communities at large. Moreover, gender equality contributes to inclusive growth and sustainable development (Madgavkar 2020). WorldFish commissioned this methods pack - *Exploring Women's Empowerment in Fisheries* (EWEF) - in response to growing momentum around sustainable aquatic development pathways and the organization's commitment to not leave women behind in this sector.

THE PURPOSE OF THE METHODS PACK

EWEF was developed to fill the gap in assessments of women's empowerment by eliciting framings that capture, and take seriously, local women's understandings of what constitutes empowerment in SSF. This methodology shifts the discourse around empowerment away from narrowly defined economic measures to a more nuanced, intersectional and context-specific mode of assessment. It also captures women's aspirations to elucidate where they want to go and how WorldFish and other partners might assist with enhancing women's self-defined strategic freedoms.

The study of, and advocacy for, women's empowerment is necessary because the causes and consequences of low levels of empowerment limit women's opportunities (Malhotra and Schuler, 2005) and while many policies and programs aim to increase empowerment (Alsop and Heinsohn, 2005), evidence of their success is lacking (Springer and Drucza 2019). The power relations surrounding the women respondents across spheres/levels and value chain nodes is a core part of this methodology which builds on and complements existing WorldFish studies (such as Choudhury et al. 2017, Sari et al. 2017) and adapted assessment tools, such as the WEAI-adapted Women's Empowerment in Fisheries Index (WEFI) tool. From a research for development perspective, this methodology facilitates greater awareness of what women's empowerment is and is not in a given context, and importantly sets a new standard through which researchers can 'claim women's empowerment.'

WHO CAN USE THE METHODS PACK

The methodology presented in this methods pack is intended for a variety of users interested in measuring women's empowerment. It will be particularly useful to policymakers, researchers and program manager and technical advisers who require:

- insights on how women's empowerment is implicated in emerging fish system policies and programs,
- evidence of the risks of not empowering women,
- interventions on how to safeguard against women's disempowerment, and
- maximize the opportunities for women's empowerment in small-scale fisheries.

This document provides a complete package of the EWEF methodology including research questions, conceptual frameworks, study design, data analyses plans, and recommendations for application. While EWEF is meant to provide a generic blueprint for carrying out the scalable case study research design described herein, the methodology will need to be adapted to context and purpose. It is our hope that you learn more about gender norms and power relationships in SSF from using the package.

NOTE TO READER

WorldFish is interested in receiving feedback to help improve the EWEF methodology. Please send questions, comments and experiences to C.McDougall@cgiar.org. Together let's make measuring women's empowerment a more nuanced, intersectional, endogenous and context specific mode of assessment.

The glossary should be read by all as it contains important definitions and should especially be read by those who are not gender experts.

Glossary

Agency refers to the capacity of individuals to act independently and to make their own free choices. Related to the concept of empowerment, agency refers to individual and collective capacities (knowledge and skills), attitudes, critical reflection, assets, actions, and access to services (Hillenbrand et al. 2015: 10)

Endogenous notions and strategies of women's empowerment refer to those that are 'derived internally' e.g., are locally defined and relevant to women's lived realities. By contrast, exogenous notions/strategies of women's empowerment that are externally defined by 'outside development actors' and assume universal relevance to women's lives (Tavener and Crane, forthcoming). As described by Garba (1999:31), endogenous empowerment is a *bottom-up* dynamic process, in contrast to exogenous that is *top down*. While external actors can facilitate empowerment, the notion of empowerment itself must be locally defined.

Gender analysis is a systematic analytical process for organizing, collecting, analysing and interpreting qualitative and quantitative information that examines gender relations in a particular context, ranging from households to communities to nations. The key elements of gender analysis are understanding cultures (especially underlying roles, values, norms and beliefs), power and relationships (access, control and decision-making over time, assets and resources; workloads; needs; empowerment; vulnerability; etc.), at different or multiple scales (Mehtar and McDougall, 2017).

Gender equality refers to "equal rights, responsibilities and opportunities of women and men and girls and boys" and is a precondition to "improve the development process by putting social concerns at the centre" (UN, 2001). It is characterized by equal participation of women and men in decision-making, equal ability to exercise their human rights, equal access to and control of resources and the benefits of development, and equal opportunities in employment and in all other aspects of their livelihoods (Huyer et al., 2016)

Gender equity means being fair to women and men. To ensure fairness, measures are often needed to compensate for historical and social disadvantages that prevent women and men from otherwise operating as equals. Equity leads to equality (Government of Canada, 2020).

Gender relations can be understood as the rules, traditions, and social relationships in societies and cultures that together determine what is considered 'masculine' or 'feminine' and how power is allocated between and used differently by women and men (Foskey, 2006).

Intersectionality as an applied analytic concept has been used to understand how different axes of experience and identity interact to produce different effects that cannot be explained by analysing single categories (Clement et al., 2019). Beyond the analysis of individual-level and intrahousehold relationships, intersectionality can be used to analyse structures of power at multiple scales (global, national, and local) and institutions (communities, markets, and management regimes) (Mohanty, 2003). For Colfer et al (2018) intersectionality is about 'The influences of multiple identities in a person as these interact with marginalizing and empowering structures, norms and narrative.'

Norms are "rules and standards that are understood by members of a group, and that guide or constrain social behaviours without the force of law" (Cialdini and Trost, 1998: 152), and often relate to a perceived social pressure to engage or not engage in specific behaviours (Ajzen, 1991). Cristina Bicchieri (2017) determined that what *people think*, can be different to how they act, or appear in public. By exploring the following types of normative data, along with establishing one's 'reference group' (the people who you please) harmful social norms can be overcome:

- Personal normative beliefs – what do you think?

- Behaviours – what do you do?
- Empirical expectations – what do others do?
- Normative expectations – what do you think others think you should do?
- Sanctions/Policing – how are norms enforced?

Pathways to empowerment is a term that originated from a five-year research project lead by the Institute of Development Studies (see Kabeer 2011; Eyben 2011; Darkwah and Tsikata 2009 and 2011). The research found that there were different avenues to how women became empowered and research had to study social, political and economic empowerment in combination with policy and legislation, along with locus of control, to understand mutually reinforcing dimensions (pathways) that led to increased opportunities for empowerment for women in different contexts. As Cornwall (2016:345), writes

The process of empowerment can usefully be captured in the metaphor of a journey travelled along pathways, one on which women can travel alone or in the company of others, through terrain that may be pitted with thorny thickets, fast-flowing rivers, mud and marshes, and along paths that can double-back on themselves, meander on winding side-routes and lead to dead-ends, as well as opening up new vistas, expanding horizons and extending possibilities.

Power can be a positive or negative social good. For Batliwala (1994) power is defined 'as control over material assets, intellectual resources, and ideology.' Rowland (1997) conceptualizes five different kinds of power: power within, power with, power to, power over and power through. *Power within* refers to women's and men's consciousness – internal and psychological resources [self-efficacy, self-esteem and self-confidence], aspirations and internal beliefs (Hillenbrand et al, 2015: 11). *Power with* refers to collective action and group strength, social capital, networks, and solidarity, and equitable household decision-making and spousal support (Ibid, 11). *Power to* refers to women's and men's power to act and to realize one's aspirations, and includes transformative capabilities and abilities, including knowledge and skills, awareness and conscientization, nutrition, health, and bodily integrity (Ibid, 35). *Power Over* refers to control over resources, services, and others' lives – these include control over income, assets and resources; control over labour; land; and control over others – mobility/gender-based violence (Ibid, 23-31). *Power through* refers to power mediated by forces beyond personal agency and relationships, including fatalism (locus of control) and informal (norms and stereotypes) and formal structural factors (policy) (Galiè and Farnworth, 2019).

Women's empowerment includes equal access and participation, but also extends to the ability of women to assert their rights or interests and to make strategic life choices. It is a much debated topic. Eerdewijk's, (2017) definition gets closer to our understanding of empowerment: 'the expansion of choice and the strengthening of voice through the transformation of power relations, so women and girls have more control over their lives and futures.' As such there are different factors and pathways towards and away from empowerment – it is not a destination but a journey that rarely has a linear trajectory.

1. Introduction to the Methods Package

Food systems have deeply rooted structural inequalities and barriers that need to be addressed for women to benefit on par with men. Globally, women play a crucial role throughout fish value chains, with the Food and Agriculture Organization (FAO) reporting citations from many sources that one out of every two workers in the primary and secondary fisheries and aquaculture sectors, is a woman (FAO, 2020). However, measuring women's empowerment (which is often defined interchangeably with participation, capacity, income or nutrition outcomes) is fraught with complexities. These complexities often arise because of misconceptions around the way indexes developed from a different cultural perspective are used to assess empowerment. Additionally, multiple methods such as WEFI¹ and WEAI² provide a snapshot in time of women's empowerment. How to empower women in small-scales fisheries (SSF) over time requires empirical exploration, along with how to measure that process.

WorldFish and Includovate teamed up in late 2019 to examine local women's understandings of what constitutes empowerment through a case study in SSF. This package presents the methodology developed from that process. According to Eerdewijk (2017) empowerment is: 'the expansion of choice and the strengthening of voice through the transformation of power relations, so women and girls have more control over their lives and futures.' In this methodology empowerment is conceptualized as both a process and an outcome that varies by place and is influenced by other intersectional categories. This methodology adopts a nuanced, intersectional and place-based mode of assessment than traditional economic assessments and indexes in order to prioritize empowerment pathways identified by respondents. This methodology and methods package addresses existing literature gaps, while applying the lessons learned from the literature review completed for this study in order to measure women's empowerment in SSF.

The structure of the methods package is as follows, the first section briefly presents findings from the literature review and how the EWEF builds upon the gaps identified. The methodological approach and framing follows which outlines the conceptual framework, the research questions and design. There are three research phases and the tools used in each phase are outlined in detail, including an explanation of how to use the tools, an outline on their purpose, the time it takes to complete, strengths and weaknesses, and informed consent statements.

2. Literature review on women's empowerment in SSF

In addition to the general women's empowerment literature, several studies have focused on women's empowerment in SSF (FAO, 2017c, FAO, 2017a, FAO, 2016, Salim and Geetha, 2013). Calhoun et al. (2016) call for utilizing a holistic approach to studying women's empowerment in SSF that includes an understanding of the intersection between the dynamics of fisheries management and women's participation within fishing, and community resilience over time. In Oregon, USA, Calhoun, et al. (2016) found that women contribute to the well-being, resilience, and adaptive capacity of the state's evolving commercial fishing industry. In a low-income context, the Pacific islands, Harper et al. (2013) similarly found that recognizing and quantifying the role of women in fisheries has profound implications for management, poverty alleviation and development policy.

¹ The Women's Empowerment in Fisheries Index (WEFI) is a new tool adapted from the pro-WEAI (Coles et al., 2018; Coles et al., 2020) that captures information on household decision making around fish-related activities, including fishing, processing, storage, transportation and marketing, access to productive resources related to fisheries and fisheries extension services, leadership, time allocation and attitudes towards men's and women's activities in the fish value chain.

² The Women's Empowerment in Agriculture Index (Alkire et al. 2013) measures women's empowerment in five domains: decisions about agricultural production; access to and decision-making power about productive resources, control of use of income, leadership in the community, and time allocation. The index also measures the percentage of women whose empowerment 'achievements' are at least as high as men in their households, and for women lacking parity, the relative empowerment gap with respect to the male in their household.

While most fisheries related empowerment, research is done at a specific node of value chains, Salim and Geetha (2013) studied four occupational groups – fish retailers, fish vendors, dry fish makers, and value-added fish producers. They revealed that the highest level of gender discrimination faced by female respondents across the four different occupational groups was in handling, transporting, and storing bulk quantities of fish resources. Meanwhile, women working in value-addition (producers) followed by retailers for the dry fish makers and vendors, had the most empowerment, emphasizing the need to compare value chain nodes in future studies. Moreover, Cole, et al., (2018) found that even within a node (in this case the postharvest value chain node) women can be more or less empowered and can disproportionately experience postharvest losses because of time constraints, a lack of decision-making powers and access to processing, storage, and handling technologies.

Literature relating to a given node within larger scales is limited to policy or published literature reviews (Kawarazuka et al., 2017, FAO, 2017b). This limits the ability to contextualise any research findings to the local context. For Kruijssen, et al. (2018) the evidence indicates the need for research to elucidate practical ways to increase women's engagement in and returns from aquaculture value chains. This would include addressing formal and informal barriers to women's control over assets, including gender norms that reproduce inequality and exclusion. Robust studies of aquaculture and gender should measure any changes in equality at the levels of the couple, the household, and the community (Underwood, Leddy and Morgan 2014). Thus, there is a need to fill the gaps in the broader literature and in the SSF/aquaculture literature pertaining to women's empowerment.

The literature review for this assignment found a number of gaps and lessons learnt that have been incorporated into this methodology as outlined in Table 1. EWEF also builds upon the twelve key findings from the multi-year pathway to women's empowerment research project (Kabeer 2011).

Table 1 Methodological limitations and lessons for measuring women's empowerment

Literature gaps/lessons learnt	Solution provided by the EWEF methodology
Malhotra & Schuler (2005) discuss the need to reconcile universal perspectives with the realities and values of those whose empowerment is at issue, and to take into account the evolving meanings and correlates of empowerment in specific contexts.	Adopts an endogenous approach whereby empowerment is seen as a bottom-up, locally defined dynamic process in contrast to a top down, exogenous process.
Mayoux & Chambers (2005) measures what is convenient rather than what's important (for example, the proxy of 'women's participation in meetings' to signify their empowerment or 'gender success' in a project).	Identifies how women understand empowerment and what it means to them. If participation in a meeting is empowering for them, then the methodology tries to understand why this meeting/ participation is important.
Gill's (1993) use of conventional survey assume 'universalist development goals' for empowerment especially within agrarian and rural contexts.	Empowerment is conceptualized as a process, not an end goal/destination.
Anthias (2012) problematizes binary 'sex' in women's empowerment indices. The reduction of women and men to dualistic categories ignores the intersections of race, age, ethnicity, class/cast that are historically and socially constructed and geographically (locally) contingent. Hillenbrand, Karim, Mohanraj, and Wu, D (2015) Understanding and measuring changes in empowerment entails an examination of the multiple manifestations of power and how they interact to create unequal outcomes and aim to capture the critical intersections of gender, race, class and sexuality etc.	Explores power structures and relational experiences across levels/scales (individual, household, community, policy) and institutions (markets, community governance bodies) as well as place (urban, rural), age, marital status, position in value chain, migrant.
Some empowerment researchers understand power as a zero-sum game whereby women and men always (or should) make decisions individually, ignoring areas of jointness, negotiation, and complementary responsibilities (see Stoian et al. 2018).	Considers what decision-making means for the respondent, how it is done and if they want more or less decision-making power, without assuming that individual decision making is the primary goal.
Comparing life history data to the results of the abbreviated version of the WEAI (A-WEAI), Stoian et al., (2018) found contradictions in regard to group membership, labour burden, control over land and water resources, and decision-making at the household level and argue for the use of mixed methods because a quantitative index cannot capture enough nuanced understanding of empowerment.	Uses a mixed methods approach to benefit from complementarity between methods. Methods include a survey inspired by the WEAI and WEF1 combined with qualitative methods to document respondents' life journey. The data across different instruments is analysed collectively to build the picture of women's pathways towards and away from empowerment.
Agarwala & Lynch, (2006) found that autonomy has multi-dimensional aspects that can vary by the categories used. Freedom from violence, participation in non-economic family decisions, community involvement, and participation in household economic decisions are important but are not well captured in existing surveys.	Applies a multidimensional approach to measuring autonomy along with an iterative approach in order for one instrument to inform the development of the questions asked in the other instruments.
Sandberg & Rafail (2013). Using the preferred measurement model of autonomy (e.g., over household decision-making, the acceptability of domestic abuse and freedom of	Does not only rely upon autonomy as a means to assess empowerment and does not assume that autonomy is the only means to empowerment. Instead,

<p>movement) were insufficient in capturing the structure of individual autonomy in India. Ultimately, longitudinal data for robust comparisons of women's autonomy across time is required. Hillenbrand, Karim, Mohanraj, and Wu, D (2015) changes are often emergent rather than linear.</p>	<p>the EWEF enables women to self-define what equates to empowerment. By completing a case study comparative analysis and collecting longitudinal data over time, this study anticipates being able to eventually develop a comparative measure.</p>
<p>Pratley (2016). Measurements for women's empowerment must include indicators on psychological, legal, and political dimensions of women's empowerment and development of a comprehensive conceptual framework that can guide research and policy making.</p>	<p>Uses a comprehensive conceptual framework and measures empowerment across levels/scales.</p>
<p>Kaneer (1999a). A three-dimensional conceptual framework for thinking about women's empowerment is required: 'resources' as part of the preconditions of empowerment; 'agency' as an aspect of process; and 'achievements' as a measure of outcomes.</p>	<p>Kabeer's framework was incorporated into the original pilot and has since been revised and incorporated into a power/pathway framework. Resources, and agency are clearly mentioned in the power framework. However, achievement is left as a subjective experience in order to capture women's own understanding of their achievement without it being related to outcomes. This reinforces the idea of empowerment as a journey and not an outcome.</p>
<p>Sraboni, E., Malapit, H.J., Quisumbing, A. R., and A.U. Ahmed (2014). elasticities analysis is not good at accounting for intersectional analysis or identifying how increases in underlying variables can be achieved.</p>	<p>This methodology does not use elasticities analysis. Instead, it uses an iterative design approach to developing a holistic understanding of women's own definition for, and a manifestation of, empowerment.</p>
<p>Doss (2017) focus on the structural sources of inequality rather than on simplified metrics of women as beneficiaries that have little to no emphasis on redressing gender imbalances.</p> <p>Taylor, G. and P. Perezniето (2014) only 30 % of evaluations applied a holistic contextual gender analysis approach to WGEE that captured gender norms, roles and relations. The remainder narrowly focused on change only in terms on women's economic advancement, which relied on stereotypes of women's activities.</p>	<p>The EWEF methodology checks, rather than assumes which indicators matter to women and ensures that power and structural exclusion are incorporated into the design and instruments.</p>
<p>Levtov, Barker, Contreras-Urbina, Heilman and Verma (2014) There is a close link between equitable attitudes and practices. How boys learn and internalize equitable or inequitable norms in their childhood home (and presumably, other settings) influences their attitudes as adult men. Researchers should be aware of socially desirable responses</p>	<p>Uses individual interviews and focus group discussions structured in a politically-sensitive, power-sensitive way, to explore individuals' understanding of empowerment and norms and how inequitable attitudes are formed and manifested.</p>

<p>when conducting empirical investigation and should delve in depth into the specific context in each setting.</p>	
<p>Richardson (2017) identifies the gap that researchers should draw upon theory to construct measurement models (e.g., using theory to construct dimensions of empowerment and selection of indicators). Researchers should collect comprehensive empowerment information (e.g., supplementing quantitative measures with qualitative interviews to learn how and why changes took place).</p>	<p>Starts with theory, then constructs ways to measure empowerment and uses mixed methods to understand why and how changes took place.</p>
<p>O’Hara, C. and F. Clement (2018) Using a qualitative measure of ‘critical consciousness’ enriched the analysis of the relationships between women’s agency and empowerment using the WEAI instrument. Using critical consciousness helped locate the meaning of empowerment within the broader cultural context that shaped the values, meanings, and identities attached to ‘empowerment’ metrics, and how these influenced the roles of women and men in the food system.</p>	<p>Critical consciousness (the ability to recognize inequality and compare one’s position to others in their community) is included in EWEF via the ladder of power and freedom tool.</p>
<p>Seymour and Peterman (2018) greater investments by researchers—unpacking, interrogating, and innovating around measurement in different contexts—are still needed to understand how measurement matters for making gendered-programmatic and policy recommendations, and to better contribute to reducing gender inequalities and enhancing the empowerment and agency of all individuals. Hillenbrand, Karim, Mohanraj, and Wu, D (2015) embrace complexity and context- specificity.</p>	<p>Avoids neat indexes and instead embraces complexity and context specificity, which enables greater depth rather than breadth. Transferable and informative but not necessarily generalizable at this stage of the methodology’s development.</p>

3. Methodological Framing and Approach

WorldFish (under the FISH program) and Includovate partnered to develop and pilot a methodology that would address the gaps identified in the women’s empowerment literature and apply the lessons learned. The EWEF methodology has evolved through an iterative process of learning and reflection with respondents and research participants, including enumerators and other stakeholders involved in the case-study in Myanmar. Four frameworks were used initially to conceptualize empowerment, and these were melded into one as a result of the data collected during the pilot in Myanmar.

Box 2: The pilot

Myanmar was the pilot country for developing this bespoke methods package on EWEF. Seventy percent of the country’s 51 million people are engaged in agriculture, including fisheries (Aregu, 2017). Myanmar is among the top 10 fish-producing nations, yet pervasive gendered inequalities, including access to productive assets, information and trainings in fisheries, threatens the growth, sustainability and success for women engaged in the SSF sector (ibid). And yet, despite these inequalities, women dominate the post-harvest sectors of the SSF sector in selling and processing activities, and generally control the commensurate income from the sale of fish and fish products. However, these gender power dynamics may well change under increasing efforts to integrate rice, a male-dominated agricultural activity, with fish. Understanding the gender power dynamics underpinning these trends is crucial to identifying the potential risks, safeguards and recommended policy processes to ensure women’s empowerment is not jeopardized in the transition to integrated rice-fish production systems in Myanmar. See policy brief and research report for more information on the pilot’s phases and sample size.

3.1 Conceptual Framework

The EWEF methodology is informed by a conceptual framework (Fig 1) adapted from the pilot and draws upon Colfer et al’s (2018) definition of intersectionality. Intersectionality is a key analytical framework in this study given its role in defining empowerment.

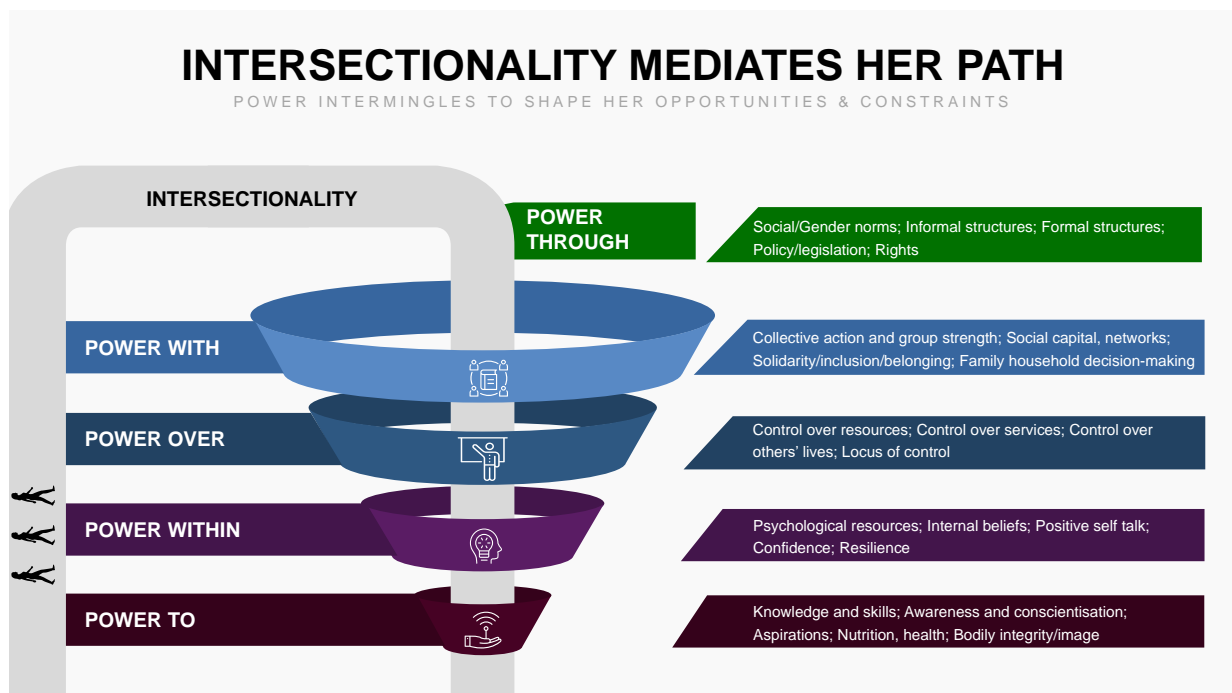


Figure 1 Conceptual framework for the WESSF

As Fig 1 shows, the pathway to women's empowerment is a non-linear, iterative journey mediated by the way's intersectionality intermingles with the different types of power and characterized by multiple obstacles and opportunities. Mutually reinforcing pathways can lead to increased opportunities for empowerment for women in different contexts. This becomes clear when applying the four types of power identified by Hillenbrand et al. (2015):

- A) **Power within** (men's and women's consciousness) – internal and psychological resources (self-efficacy, self-esteem, and self-confidence), and internal beliefs
- B) **Power to** (men's and women's access to resources and opportunities) – knowledge and skills, and awareness and conscientisation; nutrition; bodily integrity; aspirations
- C) **Power with** collective action, group strength, household harmony and decision making
- D) **Power over** control over the agenda, resources, income, labour, land, others (mobility/gender-based violence)
- E) The EWEF adds **power through** to these four types of power.

Galiè & Farnworth (2019) identified **power through** to be a type of power mediated by others (based on inter-personal relations and norms) or by association with significant others (including children/spouse), through community norms and judgement, and through policy and legislation. This fifth type of power is necessary to include in this framework for it emphasises the role of the enabling environment in shaping women's opportunities and the way women can be empowered by the status of their kin.

While Figure 1 depicts the different types of power separately, in practice they intersect and intermingle. While these types of power have been written about and studied before, the pilot tested what criteria/topic mattered for each category.

A second key component the framework explored was locus of control. This concept was grappled with due to the Buddhist concept of karma³ that arose during the pilot study in Myanmar. An internal locus of control strongly influences the amount of effort and persistence one may employ to achieve their chosen options (Lefcourt 1982), but a belief in an external locus of control (such as God, destiny or luck) can also reinforce a sense of empowerment when times get tough. It was hard to place locus of control in the framework at first because it seems to influence other pathways potentially positively or negatively. While locus of control is often reported as inter-related with issues of self-esteem, and achievements (education and economic status) (power within) (Devkota et al., 2018), it is also associated with power through as it concerns the enabling environment and norms. In the EWEF conceptual framework, locus of control is about power over, for it can shape one's worldview so much that it can influence aspirations and the opportunities pursued. Aspirations was another difficult factor to place on the empowerment pathway because it stimulates, and can be stimulated by, other factors. Ultimately, the framework shows that a woman can be empowered and disempowered by similar factors depending on their Intersectional identify and how this interacts with the different types of power. Empowering women involves expanding their freedoms and choice in a positive trajectory.

3.2 Research Questions

The following six research questions have been adapted from the results of the pilot:

- 1.a. To what extent are different categories of women currently empowered or disempowered in relation to which types of power in which node of the given SSF system?
- 1.b. How does women's empowerment compare to men's empowerment in this context and system?

³ Karma is redistributive because good and bad behaviour will incur reward and punishment. In Buddhism the laws of karma is transpersonal because they function across lifetimes and modes of existence. Thus, one could reap the reward of good behaviour in a past life during one's current life. See: Finnigan (2020).

- 2.a. What are the enabling and constraining factors that amplify or stifle empowerment as a process in the given SSF context?
- 2.b. What pathways have led to increased empowerment in the past and what might work in the future?
- 3.a. To what extent do current fisheries development policies, strategies, and programs contribute to or constrain empowerment for different categories of women?
- 3.b. How can the enabling factors be amplified, and the constraining factors and risks to empowerment pathways for diverse women be mitigated?

These research questions and the EWEF methodology shifts the discourse around empowerment away from narrowly defined economic measures to a more nuanced, intersectional, endogenous and location specific assessment, and away from an academic exercise that extracts information from participants to one that empowers women through the process of collecting the data, and enables application of the results by key stakeholders.

3.3 Research Design

a) Integrated Design Approach

This methodology embraces complexity and context specificity by using an integrated design approach. This is a methodology that aims for depth rather than breadth. It is replicable, transferable and informative with an emphasis on local applications. While there are three distinct phases, the study is designed in line with design thinking. Iterations and reflection are needed to arrive at an endogenous notion of empowerment that is triangulated.

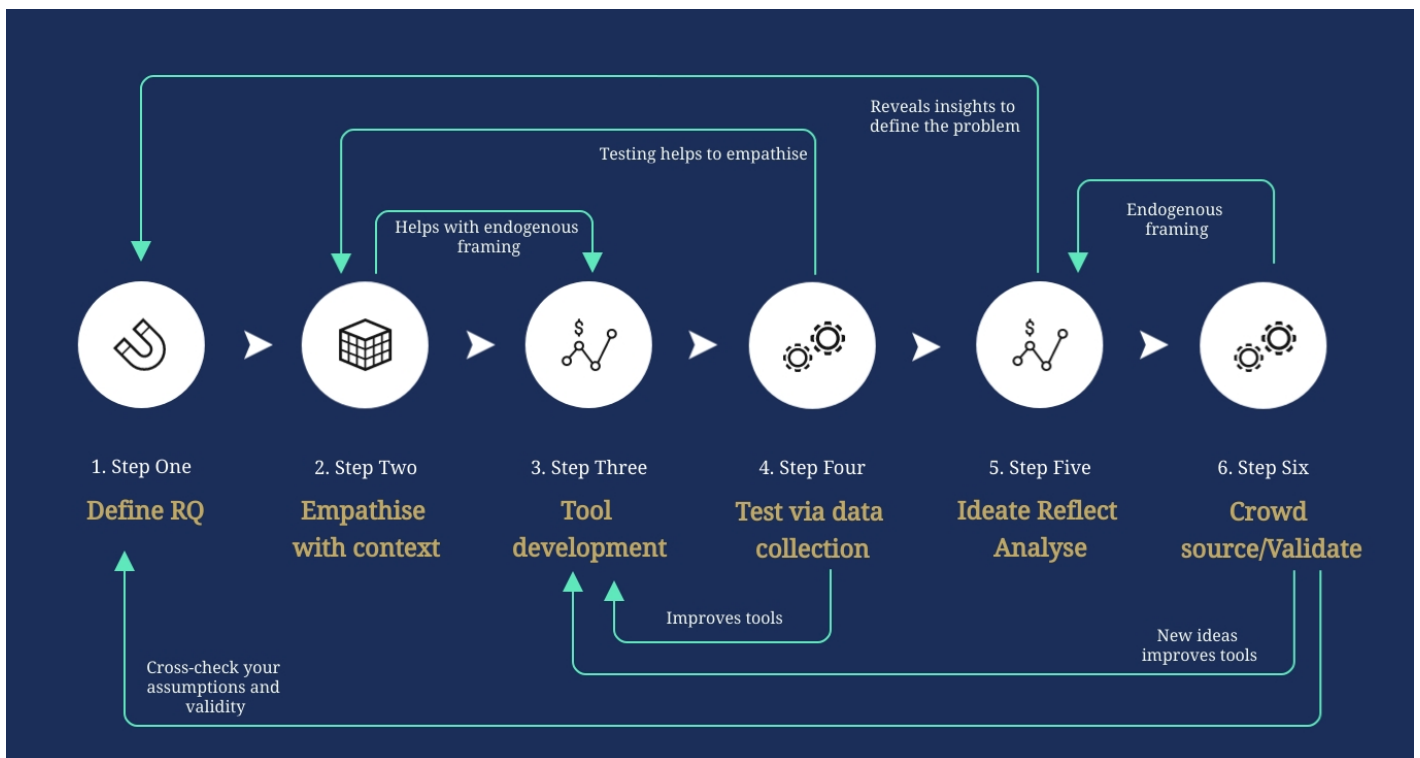


Figure 2 Integrated research design

b) Combining Qualitative and Quantitative Data

The approach of combining qualitative (e.g., narratives, images) and quantitative (e.g., numeric) data – commonly known as a ‘mixed methods’ approach – was chosen as a way to capture the complexities of the different dimensions of empowerment. A mixed methods approach also ensures that the limitations of each method are counter-balanced, so the relative strengths and weaknesses of a given method have a complimentary point of triangulation. As outlined by Vondal (2010) the purpose of combining data builds on four cornerstones:

- Enriching: using qualitative work to identify issues or obtain information on variables not obtained by quantitative surveys.
- Examining: generating hypotheses from qualitative work to be tested through the quantitative approach.
- Explaining: using qualitative data to understand unanticipated results from quantitative data.
- Triangulation (confirming; reinforcing; rejecting): verifying or rejecting results from quantitative data using qualitative data (or vice versa).

Table 2 presents an overview of the type of qualitative and quantitative data to be collected to address the study's research questions.

Table 2 Examples of qualitative and quantitative data to address research questions on WESSF

Qualitative data	Quantitative Data
Comparative data on where women and men are involved in different nodes of SSF value chains (RQ1a)	Contextual data using national level statistics on GBV/other proxies (RQ3a)
Women's and men's perceptions of the meaning of empowerment (RQ1a, 1b, 2a, 2b)	Numeric measures of the exogenous and endogenous empowerment factors identified (RQ1-3)
Perceptions of relative empowerment between women and men (RQ1b)	Numeric measures of attitudes towards gender, cultural and market norms (RQ1a, 2a)
Establishing which form of power are most pertinent to women in the case study context (RQ1a, 2a, 2b)	‘How much empowerment’ for women and men in different nodes of SSF value chains (RQ1a)
Women's and men's experiences of empowerment/disempowerment and reflections/predictions of constraining and enabling factors (RQ1a, 2a, 2b)	Numeric measures of the relationships between predictive variables for empowerment/disempowerment (RQ1a, 2a, 2b)
Women's and men's pathways to empowerment and aspirations over time (RQ2a, 2b)	Numerical measures of self-efficacy, aspirations and perceived control over one's life and power and freedom overall and overtime (RQ1a, 2a 2b)
Processes of empowerment within certain contexts based on intersecting dimensions of vulnerabilities/inequalities (RQ1a, 1b, 2a 2b)	Numerical measures of the intersecting dimensions of vulnerabilities/inequalities and relationships /patterns among/between groups (RQ2a, 2b)
Gendered implications of the different development policies and strategies / Existing synopsis of existing development policies and strategies (RQ3a, 3b)	Numerical measures of the perceived impacts of future changes to the SSF system (RQ3a)

c) Additional layers of triangulation, depth, and validity

Reflexive learning is a critical aspect of feminist methodologies as it inherently acknowledges that the researcher's empowerment cannot be separated from the researched – they are mutually reinforcing. Power and learning are intertwined and are deliberately linked in this methodology.

In qualitative research, subjectivity can be a risk. Managing subjectivity is good for research rigour. The way this methodology mitigates the risk of subjectivity is by having regular reflection points where the researcher notes key terms used by participants and even maps their reality, reflects on the research process and what has been observed and learnt, and checks their assumption with the study population to avoid extrapolation. An endogenous framing trumps an external framing but the two should be compared. The cognitive testing and validation processes serves a similar purpose for the quantitative component of the study.

Reflecting critically on the researchers own experience of the intersecting identities that affect the research process and how their behaviour may have reinforced certain biases and relationships of power, will enrich the study's intersectional lens and help avoid the pitfalls inherent in studies where researchers hold all the power. EWEF builds on a number of tools that are designed to disrupt the traditional researcher/ expert/extractor of information role. This is essential for securing an endogenous understanding of how local women perceive their empowerment. By doing this EWEF compares "apples to apples" or compares local women to their own conception of empowerment in order to not disempower or objectify the women. EWEF acknowledges that agency is a complex scale, and that research has the ability to disempower and present women to hold less agency than how they understand the situation.

In feminist literature there has been a lot of debate around sex workers and whether they are empowered or disempowered. With some authors arguing that they have no choice and therefore are exploited, and others arguing that within patriarchy there are still choices to make, such as not to starve or die, to leave one's husband, to have her kids educated, to sacrifice her own status for that of her children's, and so forth. While women may have limited choices (e.g., they cannot migrate, or be educated, or get a different income source), they still have some choices. Downplaying the limited choices women have denies women their agency, twice.

There is a fine balance here. In bargaining with patriarchy Kandiyoti (1998) shows that women living in patriarchal households can do things that advance their position (power through), but these tended to be viewed by Western researchers as a reinforcement of patriarchy, rather than small sites of protest. The value of EWEF is that it is designed to continually remind the researcher to situate women within their own endogenous understanding of empowerment and then frame this by the overall study's findings, to ensure women are not left with limited choices for advancement.

Each phase of EWEF includes tools to ensure that endogenous framing and a participatory and reflective study process occurs. These tools which include market transect walks, field journals, reflection diaries, and outcome mapping, help the researcher to reflect on their position as a researcher and on the participants' own understanding of empowerment, their context and the possible outcomes within their context.

d) Case Study Design

This methods package utilizes a mixed methods case study research design. Case studies are useful in generating detailed research about a specific site which can be used to add to broader theoretical understandings and identify underlying issues (Newing 2011). The case study design herein can be used comparatively with other cases to build theoretical understanding of women's empowerment in SSF across countries, regions, and localities.

e) Research in phases

Building on the limitations and gaps of the empowerment literature, the EWEF methodology addresses these limitations through offering fortified methodological tools and strategies that seek to capture complexity and context specificity. By adopting a phased research approach, researchers build on data previously collected and incrementally develop a deepening picture of empowerment in a certain context. Figure 3 outlines the research phases and the tools used.

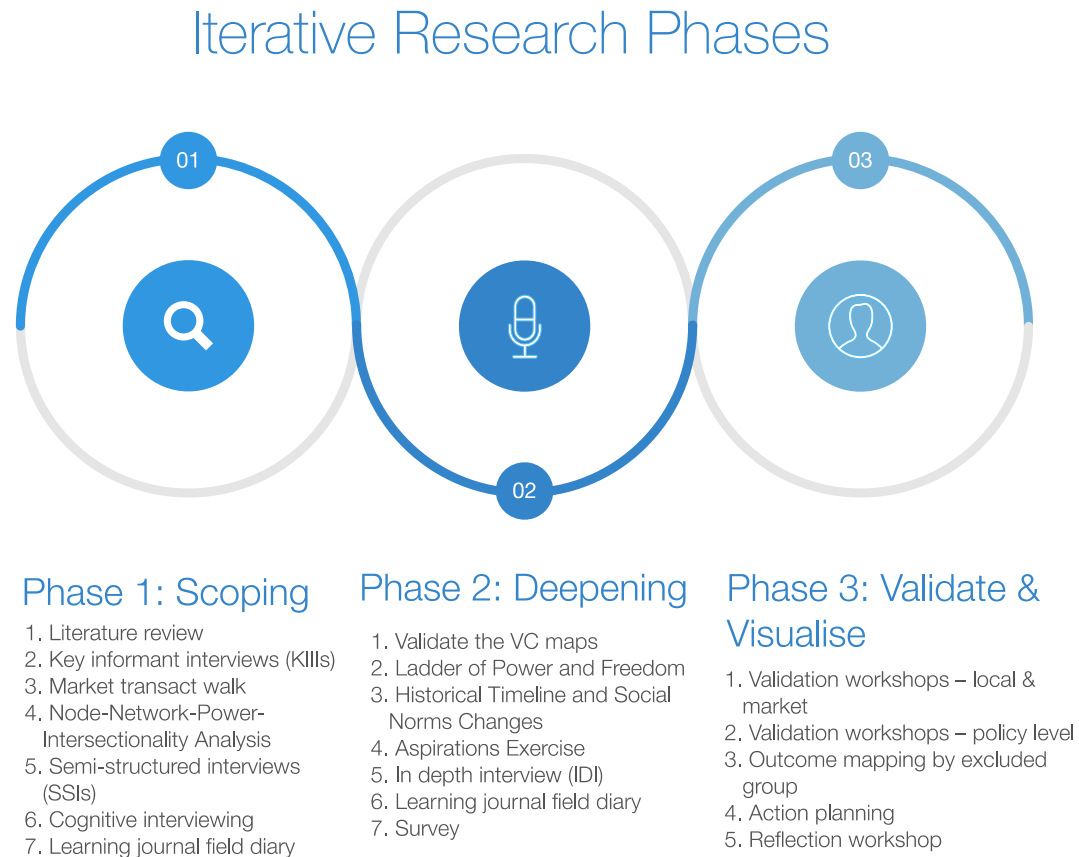


Figure 3 Research Phases

While this methods pack is seen as a complete package, the phases are designed to emphasize how researchers should build upon previous data collected and their experience as researchers. A phased approach also allows researchers to refine the tools by, for example, incorporating local phrases, concepts and ideas for a deeper, more endogenous understanding of issues and improves data quality by allowing researchers to build up layers of knowledge on women’s empowerment. A sequential approach to data collection means that one type of data is collected and used to inform the next phase of data collection which also contributes to data triangulation.

Each of the three research phases in the EWEF methodology: scoping, deepening and validating, has a distinct and clear purpose as described below:

Scoping Phase

The purpose of the scoping phase is to lay the study’s foundation by:

- identifying and building upon the literature gaps.
- understanding the context, recent changes, local phrases and expressions.
- mapping value chains, market place and power relations.
- reflecting on intersectionality.

- identifying interested/knowledgeable informants who can participate in the next phase of data collection.
- checking cognition of survey questions, and key terms such as empowerment.
- understanding the skills required for this type of research
- determining sample sizes; and,
- learning what is needed to build rapport with different types of people in different nodes of the VC.

The EWSF methodology provides a suite of tools for the scoping phase designed to provide broad contextual information on the SSF under review for each individual case. Table 3 outlines the tools in the scoping phase by the type of data it collects. The scoping phase also informs the adaptation of other tools, phases and research design. Gathering first-hand narratives from the most important actors in the SSF value chains during the scoping phase will directly inform what types of respondents are needed in subsequent phases, as well as key terms to help probe more deeply during the next data collection process. As such all tools in the scoping phase may contain information that helps to answer the research questions.

Table 3 Scoping Phase tools and type of data

Scoping Phase	Mapping/ visualization	Quantitative	Story/ conversation	Reflection	Planning	Triangulation
SP1: literature review					x	x
SP2: KIIs			x			
SP3 Market transect walk	x					
SP4 NNPIA	x			x		
SP5 SSI			x			
SP6 Cognitive Interviews		x		x	x	
SP7 field diary				x	x	

Table 3 provides a summary of the tools in the scoping phase and their use. Tool-specific information on adaptations, tips and tricks for using the tool, analysing and interpreting the data appear at section 4.

Deepening Phase

The purpose of the deepening phase is to build upon what is known and explore empowerment more deeply by understanding what contributed to empowerment and disempowerment. This is done by:

- validating the VC nodes and maps made in the piloting phase.
- collecting qualitative descriptive data that inform cases studies of journeys within and along different VC nodes.
- analysing the power relations between and within households, different market actors and VC nodes.
- identifying the winners and losers from policy changes, the status quo and modernisation implications.
- assessing women’s own conceptualisation of empowerment, where they see themselves and others, and what women themselves see as the factors that lead to their empowerment
- mapping the pathways towards and away from empowerment an endogenous framings of empowerment.

- collecting survey data as a means of triangulating and quantifying trends

The tools for the deepening phase consists of a suite of advanced qualitative tools designed to deepen the dataset around the research questions. These tools facilitate further probing beyond the scoping phase into what ways different categories of women are currently empowered/disempowered in the SSF system under study, and how this compares to men's empowerment and what they identify as the enabling and constraining factors for empowerment, and how they manifest and are amplified or stifled along the way. More on how to analyse this data appears in the analysis section.

Deepening Phase	Mapping/ visualisation	Quantitative	Story/ conversation	Reflection	Planning	Triangulation
DP1: Validate VC map	x			x		
DP2: Ladder of Power and freedom	x		x	x		
DP3: Historical timeline and SN	x		x	x		
DP4 Aspirations			x	x		
DP5 IDI			x			
DP6 Learning journal/field diary				x	x	
DP7 Survey		x				

Table 4 Deepening Phase tools and type of data

Validating Phase

The validation process will help to avoid any exogenous lenses overlaying women's own understanding of their strategic freedoms and empowerment. It is designed to help participants apply the study's findings to their own work.

The purpose of the validating phase

- To reality check the analysis.
- validate the potential for changing unequal systems.
- maintain an endogenous understanding of empowerment and the research findings.
- To co-create an action plan for change.
- To build out the tools and method further.

Validation Phase	Mapping/ visualisation	Quantitative	Story/ conversation	Reflection	Planning	Triangulation
VP1: Validation workshop local				x		x
VP2: Validation workshop policy level				x		x
VP3: Outcome mapping	x			x		
VP4: Action planning	x				x	
VP5: Reflection workshop				x	x	

Table 5 Validating Phase tools and type of data

4. Data Collection Tools

The content of this section presents the tools used in the study by phases: scoping, deepening and validating. Collectively these phases present the tools of the EWEF study.

4.1 Scoping Phase Pack of Tools

As shown in Figure 4, Phase 1 of the iterative research phases – the Scoping Phase (SP) – begins with a literature review. The objective of each tool is explained in the relevant section. Table 6 summarise the scoping phase tools, the number and type of respondent and the time it takes to complete the tool.

Table 6 Scoping Phase Methods Summary

Tool	No. and type of respondents	Time it takes
SP1: Literature review	N/A	10-15 days total
SP2: KIIs	4-6 SSF stakeholders in urban area (e.g., fisheries staff, extension officers, licence providers, market managers, other fish stakeholders)	45-60 minutes per KII
SP3 Market transect walk	3 informants: a market leader, a female seller, and a male seller	30 - 45 minutes per respondent plus map making
SP4 NNPIA	1 male and 1 female FGD per value chain node, 6-15 participants per FGD	Activity 1: 1 hour Activity 2: 1.5 hour
SP5 SSI	The sample size should be 4 women and 4 men (2 urban men and 2 urban women and 2 rural men and 2 rural women per value chain node).	1 hour
SP6 Cognitive Interviews	3 women and 3 men engaged in the SSF	1 hour
SP7 Learning journal field diary	Can be done alone or in a group. Should be completed each day of data collection	Will take between 5-30 minutes per evening

Scoping Phase Tool 1: Literature Review

In this methods package, the literature review addresses Research Question 1 by providing information on the overall gender dynamics and different value chain nodes in the relevant SSF within the case study design. The data gathered could include contextual data using national level statistics, where possible, and comparative data on women and men involved in different nodes of the value chain.

LITERATURE REVIEW	
Purpose	To contextualize the research study in the relevant literature and situate its novelty to prevent duplication and put forward why further study is justified. Also, to inform the adaptation of the key informant interviews, questionnaires in the scoping phase, and across other future tools/phases by providing more context-specific information (e.g., what has the literature identified as the most important nodes of the value chain and gendered power dynamics therein that could influence the selection of respondents by profession?)
Respondents	Principal investigator and research team
Sampling	A minimum of 10 sources for a regional/country focus (if available) and 10 sources related to women’s empowerment with a substantive focus on recent publications (<2 years old) is recommended.
Type of Data and Info	Contextual data using national level statistics, where possible, and comparative quantitative or qualitative data on women and men involved in different nodes of the value chains.
Strengths of The Tool	Obtaining the most relevant and current information regarding the SSF case study and understanding new findings in the broader field of women’s empowerment scholarship to appropriately situate the research and inform the adaptation of the tools to the local context.
Weaknesses of The Tool	The scope of the review may be limited by search terms and eligibility criteria. When using academic databases, only articles of which the abstracts are searchable would be included, which might limit the scope of the results obtained.

Table 7 Summary of the Literature Review Details

A. Circumstances

The literature review should be undertaken for each study to achieve the following:

- identify formative research, key researchers, and research methodologies for assessing and measuring women’s empowerment in development interventions and women’s empowerment potentially within the (SSF) sector and/or geographical focus to support the national statistics as discussed below
- identify similarities and differences in methodologies of previous studies, and where possible, the summarize research and development outcomes; and
- identify limitations in previous scholarship and opportunities for new areas of investigation: gaps in research, conflicts/contradictions in previous studies and questions emerging from research. New empirical discoveries, conceptual frameworks and theories are constantly emerging in the rapidly expanding field of gender and fisheries, and it is crucial that researchers are on top of the most recent and relevant publications.

B. Facilitating and Conducting the tool

Establish search terms

Search terms that can be used include: agency, aquatic agricultural systems, aquaculture, capacity, civil society, constraint, culture, decision-making, development, development interventions, diversity, division of labour, domestic sphere, empowerment, entrepreneurs, equality, equity, feminism, feminist, food security, households, headship, inclusion, identity, inequality, international development, intersectionality, livelihood, lived experience, local ecology, marginalization, markets, market systems, masculinity, masculinities, mobility, natural resources, norms, nutrition, participation, patriarchy, performance, policy environment, political ecology, postcolonialism, poverty, private, public, resistance, resilience, rights, rural development, rural women, sex, smallholder farmers, social roles, social inclusion, socio-economic, sustainable development, systems governance, value chains, women in agriculture.

Set the Date Range

Date ranges will vary for sources with a regional/national focus and should not be chosen arbitrarily (e.g., past 10 years could work in some cases, but it is important to balance timely knowledge with sufficient resources for review. In other cases, it may be prudent to start with 5 years and then expand if needed (while documenting reasons for these decisions). Date ranges should be meaningful, so deciding to review sources after a certain date where a significant change has occurred in the SSF system under review could assist in determining the relevance of data for the study. For this project we limited the literature to 2013 onwards because of a notable upswing in the number of publications beginning in 2013, indicating a renewed interest in the field.

Establish Inclusion and Exclusion Criteria

Key selection and exclusion criteria before undertaking the literature review should be developed along a minimum of two source categories:

- i. sources with a regional/national focus and
- ii. sources with a substantive/topical focus on women’s empowerment in fisheries.

For an example, please refer to the Myanmar Pilot Study presented in the text box below.

Myanmar Pilot Study: Key Selection and Exclusion Criteria			
Category	Selection criteria	Exclusion criteria	Selection ‘wild cards’
<i>Regional focus</i>	“Asia”, “Africa”, “Pacific” (e.g., SSF fisheries focused regions)	Non-SSF fisheries regions	Sources which demonstrate innovative gender relations research in non-SSF fisheries regions
<i>Substantive focus</i>	“Gender”/ “empowerment”/ “fish/fisheries”/ “small scale fisheries” <i>*also see additional search terms</i>	No reference to gender, empowerment, or social inclusivity	Specific resources shared by project partners

Table 8 Example showing selection and exclusion criteria for Myanmar Pilot Study

Choose your databases

The literature review should canvass both peer-reviewed and secondary/grey/unpublished sources using databases such as Google Scholar, ProQuest, JSTOR, SAGE Journals online, Taylor & Francis Online Journals, Wiley Online Library, and the CGIAR Collaborative Platform for Gender Research publications database.

C. Adaptations

Adaptations are possible around the key selection and exclusion criteria, especially in regard to widening the scope of the substantive foci of the study (for example, if a study wanted to evaluate women's empowerment in a specific type of SSF system e.g., rice-fish, aquaculture, formal/informal value chains). Table 2 includes the search terms used in the Myanmar Pilot Study as an example.

D. Tips and Tricks for Using the Tool

A literature review should meet the following guidelines:

- Be organized around and directly related to the study's research questions
- Synthesize the results into a summary of what has been confirmed and emergent gaps in the literature
- Identify areas of controversy and conflicting views in the literature
- Formulate questions that need further research
- For additional literature review writing tips, visit the University of Toronto Writing Centre available at: <https://advice.writing.utoronto.ca/types-of-writing/literature-review/>.

E. Analysing the data

Data from the literature review can be organized and analysed by key themes (topical and methodological), including by the methodological implications for studying women's empowerment in fisheries, contributions to the existing literature, and identifying previous studies' limitations. Guiding questions for the literature are:

- What is currently known as to the gender power relations in the SSF system?
- What are women's and men's roles and activities at different nodes in the value chain?

F. Interpreting the data

In interpreting the literature review data, the researcher should evaluate the credibility and authority of the source to use the best quality references (for example, grey literature produced by a donor organisation is not considered to be as objective and rigorous as a peer reviewed journal article). In interpreting the data, the researcher should assess to what extent the existing data can address their specific research questions, and to decide on whether and how to collect more data (e.g., through widening the scope of the existing literature review and/or by selecting other tools).

Scoping Phase Tool 2: Urban Key Informant Interviews

Key informant interviews are often done with people who are knowledgeable about the topic, in this case SSF. They enable the researcher to quickly set the context and to understand the dynamics of the sector.

KEY INFORMANT INTERVIEWS (KIIs)	
Purpose	To identify the different nodes of the fish value chain that the fish travels through and explore the socially embedded gendered norms and market relationships that mediate women’s work within the broader context of the SSF system through the understanding of department of fisheries staff, extension officers, licence providers, market managers, other fish stakeholders.
Respondents	4-6 SSF stakeholders in urban area (e.g., fisheries staff, extension officers, licence providers, market managers, other fish stakeholders)
Sampling	Sampling size should be largely determined by the value chain size (nodes) and the saturation point required to collect the information needed to understand each node.
Type of Data and Info	Qualitative data on the emergent gender issues in the value chain, including the socially embedded gendered norms and market relationships that mediate women’s work.
Strengths of The Tool	Identifies the context-specific, key gender issues in a given fish value chain. Ability to obtain information on women’s challenges, opportunities and relationships in the fish sector. Can help to identify power relationships outside the market place that may affect the market place and women’s empowerment.
Weaknesses of The Tool	Can be time consuming and difficult to arrange KIIs at suitable times for various fish value chain actors due to the location of their jobs (e.g., working in a busy, loud marketplace), power dynamics (not being able to interview women fish vendors alone if accompanied by an older relative; or due to women’s triple labour burden).

Table 9 Summary of the KII’s Details

A. Circumstances

The KII research team should consist of one interviewer and one notetaker. Materials such as an audio recorder, notebook, and a pen as well as an electronic device for manual notes should be used for accurate data collection.

B. Facilitating and conducting the KIIs

Introduce the purpose of the study to each KII and obtain informed consent for both interviewed and audio-recording. After obtaining informed consent the following table should be filled out by the notetaker:

KII Code (numerical)	
Date (dd/mm/yyyy)	
Name of location (market type/village)	
Rural/Urban	
Name of Interviewee	
Age/Sex	
Marital Status	
Type of Business/Profession	

Table 10 Example of table for record of information

The following relevant questions should be asked:

Fish value chain

We need to know if processing is done before reaching the city, or where/how

1. What type of fish are sold in the city from the SSF?
2. Which market in [insert city name] sells the most SSF fish?
 - o Probe: Who runs this market? Where do the fish come from (type of transport and location)? Why does it sell the most SSF fish? What proportion of the market's sales come from the SSF? (what other fish/fish products are sold there?)
3. Who are the key stakeholders in the fish markets of [insert city name]?
 - o Probe: Is there any tension/conflict between stakeholders? Which stakeholders work well together (or are in an alliance?) Are there any monopoly type relationships? Any anti-competitive behaviour?
4. Where is SSF fish processing mainly done?
 - o Probe: Which processing unit is the most successful? Who owns the processing unit?
 - o Probe: Who are the key stakeholders for fish processing? Is there any tension/conflict or any alliances between stakeholders?
5. Do you need to have a license to work in the SSF fish industry?
 - a) If so, how do you apply for the license?
 - b) Are certain people restricted from getting a license? Why?
6. Are there any other rules/regulations for people who work in fish?
 - a) Who usually breaks rules/laws, and what are the consequences for breaking rules/laws?
 - b) What are the SSF fish seasons or any seasonality issues worth mentioning?

Women in Fish

7. As sellers, do women get a fair price for their fish compared to men? Why/why not?
8. As suppliers, do women get a fair price for their fish compared to men? Why/why not?
9. As consumers, do women get a fair price for their fish compared to men? Why/why not?
10. What safety issues affect women in different nodes (compared to men)?
11. Are there any observable gender differences in the markets (do men sell at one market more than another?)
12. What are some of the factors that enable women to participate and thrive in the fish markets (e.g., access to credit, collective bargaining power, training, secure payments)?
13. What are some of the constraining factors that prevent women from participating and thriving in the fish markets (transportation, long hours, no day care, etc.,)
14. How can the enabling factors be amplified?
15. How can the constraining factors be mitigated?
16. Anything else I should know about women's role in other nodes of the fish value chain?

Groups

17. How are fish retailers organized (in x market, or in x location/node)?
 - o Are there trading groups? If so, who typically joins them?
 - o What are your perceptions of these groups? (helpful? Nuisance?)

Policy and Market Changes for Fish

18. In the last 4 years, what have been the major fisheries and development policies and strategies (public, private, civil society) in the given SSF system?
19. What other policies and strategies are you anticipating in the next 1-4 years?

20. Do you know which of these policy/strategy changes will have a bigger/better impact on women compared to men who work in the fish value chain (probe: how? Was a study done/is it a guess/assumption?)

Final words

21. If you had the choice, what VC node would you work in? which node would you never want to work in and why?
22. Which actors in the fish value chain make the most money? Why?
23. Are there any knowledgeable individuals that you think I should speak to about women's role in the SSF value chain?
24. Is there anything extra you would like to ask or tell me?

C. Adaptations

Adaptations to the KII questionnaire tool could be made around the specific node of the SSF value chain targeted for the study (e.g., if a study wanted to specifically investigate fish wholesalers or more specific types of work within fish retailing (e.g., fish skimmers, accountants, and storefront managers), questions could be re-framed (e.g., what constraints do you face in your current role as a fish retailer?)

D. Tips and Tricks for Using the Tool

Tip: Interviewing at a 'place of work' can be difficult in loud and busy marketplaces, or when a vendor is in the middle of a shift/currently working. Try introducing the purpose of the study and asking them if they would be interested in participating now or at another time/place that would be better suited to their schedule and location.

E. Analysing the data

The data collected through KIIs should illustrate the roles of different market players (retailers, wholesalers and collectors) and the gendered power relations and space/place-based issues (including safety and seasonality) that mediate player engagement with the SSF sector. Guiding questions for the analysis are:

- What are the emergent gender issues in the SSF system/value chain/node?
- What are the relevant gender norms and market relationships that mediate women's and men's work in the SSF? In what node?
- What is the nature of market relationships? Where does the most exploitation or monopolies occur? Where are women located?
- How well do the respondents understand the challenges facing women and the implications policy changes will have on women?

F. Interpreting the data

In interpreting and presenting the results of the KIIs, the researcher should prioritize representing the trends and variations found. In addition to the researcher's own analysis, the expectation is to also draw upon direct quotations where possible to express the emergent findings and to give greater voice to research participants themselves in representing the issues. The anecdotes/comments of certain VC actors and their capacity should be captured and can be triangulated during the next phase of data collection.

Tip: Make sure you get ethics clearance before you do any further data collection. If you are affiliated with a research institute or university, you may have an Internal Review Board (IRB) with its own specific requirements and processes. All researchers must check the applicable laws, regulations, and guidelines of their study country/countries and adhere accordingly to their ethics requirements.

For more information on ethics clearance and ethics certification and training programs, please visit the below resources:

CITI Program offers a comprehensive online course in ethics certification for Human Subjects Research (HSR): <https://about.citiprogram.org/en/homepage/>.

The National Science Foundation (NSF) provides a comprehensive list of guidelines for conducting ethical social scientific research that maximizes informed consent and limits harm: <https://www.nsf.gov/bfa/dias/policy/hsfaqs.jsp#egraphy>

The Office of Human Research Protections (OHRP) publishes the International Compilation of Human Research Standards, a listing of over 1,000 laws, regulations, and guidelines on human research protections in 133 countries and several international organizations: <https://www.hhs.gov/ohrp/international/compilation-human-research-standards/index.html>

G. Informed consent statement

ORAL INFORMED CONSENT

Key Informant Interviews

Exploring Women’s Empowerment in Small-Scale Fisheries (EWEF)

Client: WorldFish

Evaluation firm: Includovate

Lead evaluator: Dr. Kristie Druzca kristie@includovate.com

Thank you for the opportunity to speak with you. My name is I am from a research incubator called Includovate which is a social enterprise that innovates for inclusion. WorldFish has contracted Includovate to conduct a collaborative study on women’s empowerment in small-scale fisheries (SSF). We would like to interview you about your experiences within the industry.

Ideally, we wanted to meet you and ask these questions face to face. But we cannot visit you because of COVID-19. However, your views and opinions are still very important for us, hence we are asking you these questions over the phone. We hope that things will go back to normal very soon, and that one day we will get to meet you in person.

We received your contact details through WorldFish who commissioned this methodology because momentum around sustainable aquatic development pathways is growing and because WorldFish does not want to exclude women participants. They may have received your details from their own contacts and networks. You have been chosen to be interviewed because you are considered a SSF stakeholder in an urban area (e.g., fisheries staff, extension officers, licence providers, market managers, or other fish stakeholders). We will ask you questions related to the fish value chain and explore the socially embedded gendered norms and market relationships that mediate women’s work within the broader context of the SSF system.

We ask for your support by answering questions as honestly and fully as possible – there are no right or wrong answers. We just want to know your actual experiences, opinions, and the challenges you face in order to understand how to improve the program. Your answers will be completely confidential. During the interview, we will be taking notes, and with your permission, we would like to audio record the discussion. These materials will be kept completely confidential and any personal identifying information will not be used in any reports, publications, or presentations resultant from this research.

Demographic questions and the responses to any gendered questions will only be used for disaggregation and cannot be tracked back to the respondent.

Although you may not directly benefit from taking part in this study, the information you provide may lead to improved understanding of the SSF industry and any gendered issues, norms and challenges faced specifically by women participants. The interview will take approximately 1 hour, and you will not be compensated for your time. There is no anticipated discomfort for those contributing to this study. If you agree to participate, you can choose to stop at any time or to skip any topics you do not want to answer. Your participation is entirely voluntary.

Do you have any questions about the study or what I have said?

If, in the future, you have any questions or concerns regarding the study and the interview, or if you wish to add additional details, we welcome you to contact Dr Sujata Ganguly who acts as Chair of Includovate's internal ethical review board is sujata@includovate.com. We will leave one copy of this form with you, so that you will have a record of this contact information and about the study.

Do you agree to participate in this study?

[If YES, indicate below that the oral informed consent has been obtained. Then proceed with the question below regarding audio recording. If they refuse, thank them for their time and cancel the interview.]

Oral informed consent received

Do you agree to be audio recorded?

[If YES, indicate below. If participant responds "NO", proceed with the interview without recording.]

Consent to audio record interview received

Signature of interviewer: _____ Date: ____/____/____

Location of respondent: _____

Mode of interview: (e.g., face to face, telephone, zoom) _____

Background information:

WorldFish's mission is to reduce poverty and hunger by improving fisheries and aquaculture. Gender equality is integral to World Fish achieving its goals and advancing #Agenda2030. World Fish has a responsibility to its partners to capture and communicate the impact of its work on men and women, girls and boys and communities at large. Moreover, gender equality contributes to inclusive growth and sustainable development (Madgavkar 2020). The study of, and advocacy for, women's empowerment is necessary because the causes and consequences of low levels of empowerment can be found to limit women's opportunities (Malhotra and Schuler, 2005) and many policies and programs aim to increase empowerment (Alsop and Heinsohn, 2005) but evidence of their success is lacking (Springer and Druca 2019). From a research for development perspective, this research facilitates greater awareness of what women's empowerment is and is not in a given context, and importantly sets a new standard regarding the quality through which researchers can 'claim women's empowerment.' WorldFish is dedicated to ensuring the alleviating of women as an excluded group in the SSF industry to be improved and made equal.

Scoping Phase Tool 3: Market Transect Walk

Transect walks are a participatory method whereby respondents (or community members, or in this case, market actors) walk the researcher from one point in the market to another and discuss their observations on the way (Mahiri, 1998). Finding representatives from all parts of the market willing to speak to you publicly about the market can be challenging (along with gaining ethical clearance as the ability to guarantee anonymity in such a public activity is not possible). A way to mitigate this is by having several groups do the same transect walk. Their experiences can be compared later and validated if need be.

MARKET TRANSECT WALK	
Purpose	To develop a visual map of the main fish markets from the perspective of different actors (with different power relationships). The information will help inform the value chain analysis and understand the different perspectives and power relationships between market actors. The map can be a useful reference that will assist understanding at different stages of the research and can be used to help triangulate future findings, as well as help the researcher adopt the perspective and terms used by the respondents.
Respondents	3 a market leader, a female seller, and a male seller
Sampling	The manager of the market visited should be chosen, or the next in charge, and one female stall owner (seller) and one male store owner (seller). These can be selected based upon first to make eye contact and willingness to spend 30 minutes walking around the market. Ask members of the public along the way their thoughts and opinions if they like a particular stall and why they chose that location to shop.
Type of Data and Info	Participatory visual map with labels that offers a deeper understanding of the market space and participants
Strengths of The Tool	Helps to explain the dynamics/features of a marketplace and can reveal major problems from the perspective of different actors. It can also aid with creating a visual record of the marketplace and triangulation of other data and allow for observation-based market improvement.
Weaknesses of The Tool	Mainly covers the 'observable' situation and requires expert probing to understand hidden dynamics such as power. Best used as an entry point for more in-depth analysis. Can only show a limited snapshot at one point in time/season of local realities (Chambers, 1997).

Table 11 Summary of the Market Transect Walk

A. Circumstances

The transect walk should have one interviewer and one notetaker. Materials such as a notebook and a pen as well as an electronic device for manual notes must be provided for accurate data collection. The target population of a market transect walk are the market stakeholders such as the market manager and sellers of fish. The sample size should be three per market.

Code (numerical)	
Date (dd/mm/yyyy)	
Name of location (market type/village)	
Rural/Urban	
Name of Interviewee	
Age/Sex	

Marital Status	
Type of Business/Profession	
Duration of business in the market (managing/selling)	

Table 12 Example of table for record of information

B. Facilitating and Conducting the Market Transect Walk

1. Develop criteria for observation. The below is a suggested list :
 - Public transit access points, street commerce
 - Public spaces/cafes/common areas
 - Sorting, storage bays
 - Where the manager sits
 - Where money is kept, ATM, phone cards sold, etc.
 - Sanitation (e.g., water, sewerage, garbage collection and blockage points)
 - Lights, cooling areas/fridge and utilities including toilets
 - Contaminated spaces/smells
 - Opening/closing times. First stall to set up (what time do they arrive).
 - Stall conditions, location, segregation of produce, open air/undercover, sex/age/ability/presentation of stall keeper
 - What are the major activities carried out in each zone/section of the market? By whom?
 - Location of the most expensive fish and cheapest fish sold? Are they always in the same location, or do they move around the market?
 - Are women and men, and people from different socio-economic groups, able to equally access each zone?
 - *Probe: Where do different population sub-groups congregate? Are they segregated or mixed? Any stereotypes in the market?*
2. Ask key informants to show you around the marketplace and agree to start at one end and finish at another
3. Walk through the market with key informants (meander around the market – no need for a straight line) and ask them to describe why and how the market is set up. As the walk progresses, stop at key features and take photographs or draw sketches. It is not necessary to stick to a planned route - deviate when useful or interesting, or even at random, to observe the surrounding area, signage, roads, intersections and to gather relevant and useful information.
4. Walk slowly and gain an understanding of the physical features in the market from different perspectives. Question the size of certain stalls compared to the others and the cost of hiring each stall.
5. Question differences (query empty stalls, rubbish collection areas, water points, ask how the market is set up – e.g., why one type of fish is sold here and another over there). Ask if it is better to be at the edge of the market or in the middle and why. Question border areas between market segments.
6. Women and men met along the way (stall owner, shoppers, service delivery people) can be informally interviewed. Stop and talk to people, ask about smells and observations and inquire as to why things are done certain ways.

C. Adaptations




Should there be extra time, below are some additional questions to ask the transect walk participants.

- How regular are the market tenants?
- How long have you had a stall at this market, is there any other markets where you sell your fish?

- Why do you choose to work at this market?
- Age of market? What interventions for improvement have been made in the past 6 months? What is planned for the next 6 months?
- What major changes have there been over the past 5 years?
- What services and infrastructure are available here that makes this market different from the others?
- Any seasonal differences in terms of peak/off peak seasons, in terms of the types of fish bought and sold?
- Are the people who supply this market the collectors or is there someone in between?
- Where are some of the locations that the fish sold at this market comes from?
- Do suppliers get a good price for their fish at this market?
- How would you describe the attributes of the suppliers of the market's fish? (prompt: wealth, sex, age, rural, Wholesaler/retail/own consumption; single/married).
- What are the principal problems in the market (is it infrastructure, stall owners, service provision, council rates increasing)?
 - *Probe: What constraints or problems affect the different zones/areas of the market?*
- How would you describe the attributes of the sellers of the market's fish? (prompt: wealth, sex, age, rural, Wholesaler/retail/own consumption; single/married).
- Do sellers get a good price for their fish at this market? Do consumers get a good price for their fish at this market?
- How would you describe the attributes of the buyers/consumers of the market's fish? E.g., Who comes to buy fish from this market?
 - *Probe: wealth, sex, age, rural, wholesaler/retail/own consumption; single/married).*

D. Tips and Tricks for Using the Tool

Tip: Make sure to stop and ask store holders why they chose to set up at that stall and which stall is their favourite/least favourite and why.

Tip: Using symbols as codes on the map can make the map visually appealing as well as stimulate discussion and questions from informants. For example, the market manager may assume that stallholders selling more expensive fish are richer and thus, charge them more for the stalls. See Figure 1 below to see how a \$, \$\$, \$\$\$ symbol represents table costs, and a corresponding animal symbol represents the product costs (e.g., , ,  for fish).

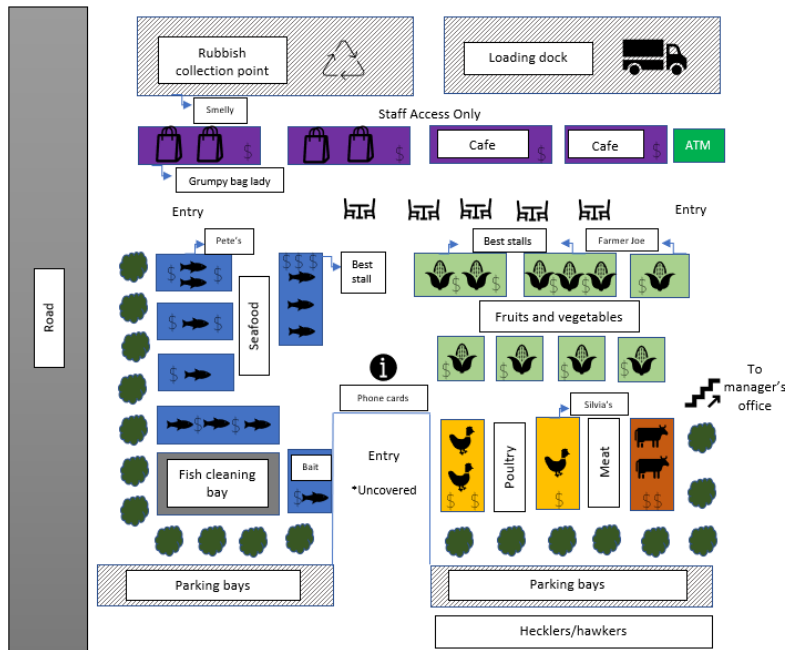


Figure 4 An example of a market map showing the costs of goods through symbols

E. Analysing the data

- After the transect walk has finished, record the information and data collected in a suitable place. These may include, map and name stalls, toilets, washing areas, rubbish collection areas, common areas, café, managers office “table.”
- Create transect diagrams according to informant (e.g., if the market manager says, “this is where the fish ladies sell” then it should be noted on the map or if the market manager states his/her “favourite part of the market”, it must be marked on the map accordingly.
- Down the side of the map, list headings of the areas of interest (plants, land use, problems, drainage system, and so on) and then fill in the details of what was observed in each zone.
- Once more than one transect walk has been completed, results can be combined and compared. Analyse differences in the diagrams in terms of labels, problems, vision.
- Highlight any power differences or resources distribution differences and sites of tension/conflict/discrepancy.

F. Interpreting the data

- Go back through the diagram with those who helped you to create it. Ask about problems, visions for the future and things they would like changed. Have them confirm or challenge/comment on labels, problems, vision, and discrepancies.
- If possible, come up with a master map, if not keep multiple maps from different perspectives.

G. Informed consent statement

ORAL INFORMED CONSENT

Market Transect Walk

Exploring Women's Empowerment in Small-Scale Fisheries (EWEF)

Client: WorldFish

Research firm: Includovate

Lead researcher: Dr. Kristie Drucza kristie@includovate.com

Thank you for the opportunity to speak with you. My name is I am from a research incubator called Includovate which is a social enterprise that innovates for inclusion. WorldFish has contracted Includovate to conduct a collaborative study on women’s empowerment in small-scale fisheries (SSF). We would like to interview you about your experiences within the industry.

In order to maintain safety during COVID-19, we kindly ask that you maintain social distancing measures of staying apart at least 1.5m and wearing a face mask. However, your views and opinions are still very important for us, hence we are still conducting this walk. We hope that things will go back to normal very soon and appreciate you agreeing to social distancing and a face covering.

We received your contact details through WorldFish who commissioned this methodology because momentum around sustainable aquatic development pathways is growing and because WorldFish does not want to exclude women participants. They may have received your details from their own contacts and networks. You have been chosen to be interviewed because you are the owner of a stall within the market or a leader of the market (e.g., manager, deputy manager). We will ask you questions related to the fish market and explore the relationships between the different market actors in this location today.

We ask for your support by answering questions as honestly and fully as possible – there are no right or wrong answers. We just want to know your actual experiences, opinions, and the challenges you face in order to understand how to improve the program. Your answers will be completely confidential. During the interview, we will be taking notes, and with your permission, we would like to audio record the discussion. These materials will be kept completely confidential and any personal identifying information will not be used in any reports, publications, or presentations resultant from this research.

Although you may not directly benefit from taking part in this study, the information you provide may lead to improved understanding of the SSF industry and any gendered issues, norms and challenges faced specifically by women participants. The interview will take approximately 1 hour, and you will not be compensated for your time. There is no anticipated discomfort for those contributing to this study. If you agree to participate, you can choose to stop at any time or to skip any topics you do not want to answer. Your participation is entirely voluntary.

Do you have any questions about the study or what I have said?

If, in the future, you have any questions or concerns regarding the study and the interview, or if you wish to add additional details, we welcome you to contact Dr Sujata Ganguly who Chair of Includovate’s internal ethical review board is sujata@includovate.com. We will leave one copy of this form with you, so that you will have a record of this contact information and about the study.

Do you agree to participate in this study?

[If YES, indicate below that the oral informed consent has been obtained. Then proceed with the question below regarding audio recording. If they refuse, thank them for their time and cancel the interview.]

Oral informed consent received

Do you agree for your responses to be recorded?

[If YES, indicate below. If participant responds “NO”, proceed with the interview without recording.]

Consent to manual record of interview responses received

Signature of interviewer: _____ Date: ____/____/_____

Location of respondent: _____

Mode of interview: (e.g., face to face, telephone, zoom) _____

Background information:

WorldFish's mission is to reduce poverty and hunger by improving fisheries and aquaculture. Gender equality is integral to World Fish achieving its goals and advancing #Agenda2030. World Fish has a responsibility to its partners to capture and communicate the impact of its work on men and women, girls and boys and communities at large. Moreover, gender equality contributes to inclusive growth and sustainable development (Madgavkar 2020). The study of, and advocacy for, women's empowerment is necessary because the causes and consequences of low levels of empowerment can be found to limit women's opportunities (Malhotra and Schuler, 2005) and many policies and programs aim to increase empowerment (Alsop and Heinsohn, 2005) but evidence of their success is lacking (Springer and Druca 2019). From a research for development perspective, this research facilitates greater awareness of what women's empowerment is and is not in a given context, and importantly sets a new standard regarding the quality through which researchers can 'claim women's empowerment.' WorldFish is dedicated to ensuring the alleviating of women as an excluded group in the SSF industry to be improved and made equal.

Scoping Phase Tool 4: Node-Network-Power-Intersectionality Analysis (NNPIA)

This focus group discussion (FGDs) has 2 activities:

Activity 1: Empowerment FGD

Activity 2: Value chain FGD

Collectively, these FGDs capture people's experiences of empowerment and disempowerment and reflections and predictions of constraining and enabling factors within the value chain. The second one builds upon the rapport established and knowledge collected during the first activity. A break will be held between each activity for refreshment purposes and this should be provided by the facilitator. The data from these two FGDs should be used to triangulate the data gathered by the SSIs.

Activity 1: Empowerment	
Purpose	To help identify and frame the concept of 'empowerment' in the local context and within the broader context of the SSF system and to identify drivers (possible factors) of empowerment. Research question(s) addressed: RQ1, RQ2
Respondents	The target population are women and men working in the fish sector as catchers, collectors, retailers, and processors (different nodes and by rural/urban and other relevant intersectional categories). ⁴
Sampling	1 male and 1 female (separate sex) FGD per value chain node, 6-15 participants per FGD ⁵ The concept of "Information Power" is used to determine sample size (Malterud et al. 2016). Information Power "indicates that the more information the sample holds, relevant for the actual study, the lower number of participants is needed" (p.7). Thus, while an initial estimate is needed for planning the study, whether the final sample is sufficient must be evaluated continuously throughout the research process (Carlsen & Glenton, 2011). Six will be sufficient for this purpose but this can be increased depending on budget and the information needed and the diversity of views shared. Additional groups can be added if saturation/information power has not been obtained (McDougall and Curnow, 2020).
Type of Data and Info	Qualitative perceptions of what empowerment means to different women/men based on the study's core definition of 'empowerment' - For women and men, to understand to what extent women and men see themselves as empowered based on their understanding (endogenous framings).
Strengths of The Tool	Provides insights into sources of complex behaviours and motivations. Interactions within groups among participants offers data consensus and diversity of views that capture points of agreement and disagreement.

⁴ If time and budget permits, it would be useful to also do this with an organisation working in the SSF, including WorldFish staff, and compare the results to the workers as a means of triangulating and understanding any differing opinions associated with position.

⁵ Justification for focus group discussion size is a relatively under-researched area compared to the organization and analysis of focus group data, with most guides suggesting a minimum of 4 and a maximum of 12 participants (Carlsen and Glenton, 2011). However, Chambers (1994), the godfather of participatory methods, including rural appraisals suggests 10-15 individuals per group - this larger than the average sampling parameters of a focus group, but not too large to ensure that each member is able to be have their ideas seen and heard within the confines of the workshop.

Weaknesses of The Tool	Underlying power dynamics within groups can lead to nominal participation from less powerful discussants. The moderator, in shaping the discussion, can disrupt the flow and interactions of the group. Specific questions that require abstraction like attributing characteristics to an abstract ideal of an individual/group may be difficult for participants to follow due to cultural differences.
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Table 13 Summary of the Empowerment FGD

A. Circumstances

This method calls for one interviewer and one notetaker. Materials such as a flipchart, markers, pens, sticky notes are needed for the exercise and the materials needed for data collection include an audio recorder, notebook/pen, or device for manual notes. If there is a community leader in the group, invite them to have a semi-structured interview instead (so they do not hijack the group discussion).

B. Facilitating and Conducting the Empowerment FGD

Introduce the purpose of the study at the beginning of the FGD and obtain informed consent (to be interviewed and consent to be audio-recorded) and anonymity should be guaranteed. An example of an informed consent document can be found at section H. After obtaining informed consent the following table should be filled out by the notetaker:

Venue:	
Group:	
Date and Session:	
Note Taker:	
Facilitator:	

FGD Members	Number of Participants
Men	
Women	
Youth	
Elderly	
Disabled	

Table 14 Example of table for record of information

Activity 1A: Role models for women and men

Think of a female member of the community who is able to make important decisions in her life and put those decisions into action? What is this woman like? What is her life like?

Ask participants to think of a female member of the community that is admired (has a high status/reputation). Then ask them to call out the qualities of that person and write them on a flip chart. Write every quality down without judgement. Then go back to each quality and ask if it is a good or bad quality and why (put crosses for bad and ticks for good and make a note of the discussion). Then ask the group to vote for their top 3 qualities that they most agree with (this will help you to understand the most consistent attributes).

Tip: If people cannot think of a woman who is able to make important decisions or who is admired, then ask them to describe a “strong” woman. This can help stimulate the imagination in communities where women are not usually admired.

1. Specifically probe for power within attributes: Psychological resources; Internal beliefs; Positive self-talk; Confidence; Resilience.
2. Are there many women like this (with these attributes) in your community? Why/why not?
3. How are these women regarded by other women?
 - o *Other men?*
4. What would a husband think if his wife was like this?
5. I usually describe women with these attributes as 'empowered' because they have more freedom to move around, make decisions and take action. However, this depends on the context. In this community, would you describe women with these attributes as empowered? Why/why not?
6. Are the qualities of empowered women something to emulate?
7. Who or what empowers these women?
 - o *Probe: in what ways have they been empowered (e.g., divorced a bad husband, won the lottery, migrated and returned with capital, inherited land, worked hard)?*
8. Who is the most important person to these 'empowered' women (reference group6)?
9. In this community, is there an abundance or shortage of empowered women compared to other communities? Why?
10. Do you think the number of empowered women has changed over time? Why or why not?

Repeat the exercise for men

C. Adaptations

This tool can be adapted to the local context as necessary. For example, if the women are illiterate then consider using pictures to expand on what they say for later voting.

D. Tips and Tricks for Using the Tool

Tip: Before closing an FGD ask the participants if there is anything else they would like to ask or share? It is important to give the participants a chance to shape what is recorded and what they learn/discuss.

Tip: Qualitative research pays attention to outliers and anomalies and looks to explore this in more detail in subsequent phases and during validation.

E. Analysing the data

The following questions should guide the analysis:

- a) What are women's and men's perceptions on what empowerment means based on our core empowerment framework?
- b) Who can empower them and in what ways?
- c) Is there a frequently heard reference group?
- d) How are men's empowerment pathways different to men?

F. Interpreting the data

In interpreting and presenting the results of the FGDs, the researcher should prioritize representing the trends and variations found. The flip chart responses and categorisation process should be presented in a table. In addition, to the researcher's own analysis, the expectation is to also draw upon direct quotations where possible to express the emergent findings and to give greater voice to research

⁶ A reference group involves one or more people who shape / influence the norms that this person subscribes to. Understanding if any patterns emerge for men or women here can be useful for changing norms.

participants themselves in representing the issues. This is done by the use of participant quotes. You should discuss how common such a sentiment was heard, e.g., across all FGDs, only by a few older women... this helps the reader of your report contextualise your data.

The results of the focus groups should give an explanation of a women’s empowerment characteristics/pathways compared to men. Any differences between the FGDs should be noted (e.g., younger people are more likely to note the following empowerment characteristics..., whereas older people are more likely to note...) the reference group should be explained by category (e.g., for married women it was the husband but for younger women it was their father), and any commonalities or differences observed between and among groups.

This activity can be repeated (and tweaked/improved) during the deepening phase if the initial FGDs yield informative data that requires further clarification.

Tip: If it is decided to do exercise 2 immediately after exercise 1 it is advisable to have a refreshment break. Provide drinks and snacks for participants and let them make some calls and use the bathroom before continuing.

ACTIVITY 2: Value chain map	
Purpose	To map out the different power dynamics (visible, hidden and invisible) at different scales (individual, intra-household, community, market) within different value chain nodes of the SSF system and to capture people’s experiences of (dis)empowerment and reflections and predications of enabling/constraining factors within the value chain. The goal of this activity is to produce a map that can be validated in the next phase and to examine power relations and personalities, demographics for different value chain nodes. Research question(s) addressed: RQ1, RQ2
Respondents	1 male and 1 female FGD per value chain node
Sampling	Workers from intersectional categories per value chain node
Type of Data and Info	Qualitative data describing the different value chain nodes, actors, and gender power dynamics; visual maps and diagramming of complex gendered relationships and roles at different nodes of the SSF system. A ‘follow the fish’ approach entails identifying the different nodes of the fish value chain that the fish travels through – from catchment point to sales/processing to consumption – and exploring how different gendered actors within the value chain are connected. Participants can be selected from either a single node or multiple nodes of the value chain but should reflect the diversity of intersectional social positions within the study site (e.g., gender + age/wealth status/ethnicity/etc.).
Strengths of The Tool	An engaging visual activity that facilitates group dialogue around the differentiated roles and relationships between and among women and men in the SSF system in a less formal way than an FGD.
Weaknesses of The Tool	Literacy and confidence in presenting ideas visually may limit the ability for the group to fully engage in the mapping exercise. Group power dynamics and cultural norms influence who speaks first, who can contest/question/add new ideas to the conversation.

Table 15 Summary of the FGD Activity 2

A. Circumstances

Same as activity 1. If some participants have to leave, make a note of this on the table used at the start of activity 1. If you complete activity 2 at a different time to 1 you will need to complete a new record table.

B. Facilitating and Conducting the tool

Using a flipchart and markers, beginning with the raw product and ask the participants to help sketch out the different nodes in the fish value chain (e.g., retailer, customer/consumer, catcher, processor). Ask which fish/seafood or product each node sells. Next, examine the flow, 'a follow the fish approach.' Who catches what (do they have a different name if they catch different species?) how do they catch (hands, boat, net), who do they sell it to and do that do any value addition/processing themselves? See figure X for an example of an early brain storming value chain map with landless people. They were unable to complete more of the value chain because they were unaware of what happens next.

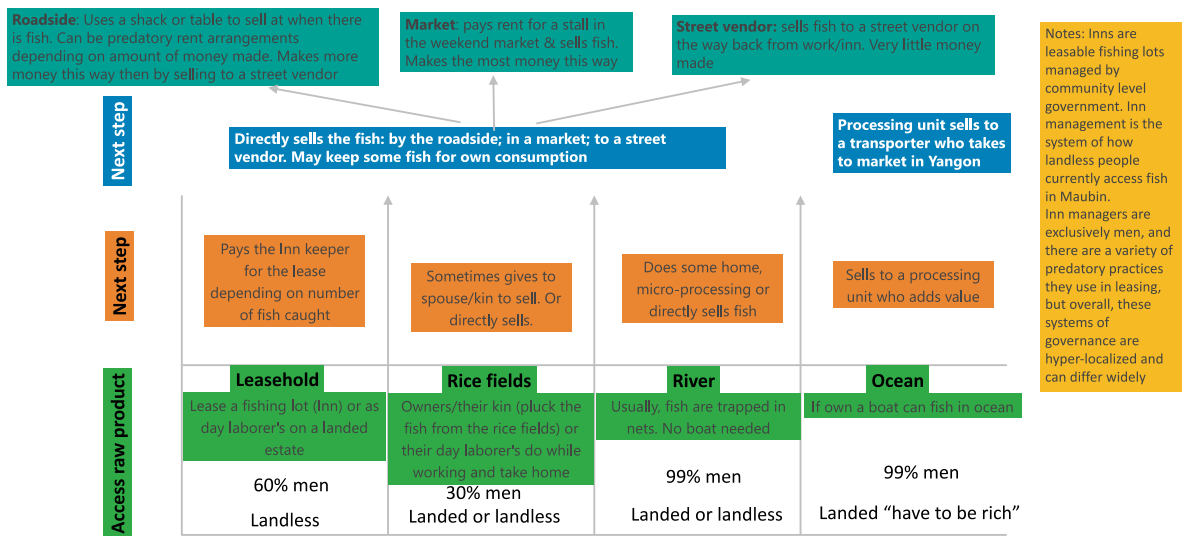


Figure 5 value chain map example

After your main map is completed, examine each node differentiated by gender and intersectionality (G & I) by asking the following questions:

- o Are these mainly men or mainly women (%)?
- o Average age?
- o Socio-economic status?
- o Name of the most successful male and female at this node/level.
- o Name of the most empowered male/female at this level according to empowerment FGD definitions.
- o Average income per node?
- o Average price of fish bought and sold?
- o What are the characteristics/demographics of those with power at this node?
- o How are decision made in this node (any collective buying/selling, or is it individual) are there key stakeholders and decision-makers?
- o What roles do different stakeholders play?
- o Where are the spaces where decisions are made? (e.g., Visible, hidden, invisible?)
- o How/Where are stakeholders/nodes connected (time/spaces/places)?

Tip: If there is dispute between categories of respondents (e.g., a young woman and an old women disagree, or a landless and a landed person disagree) then point out the way intersectionality could shape these differing opinions. Ask the group if some of the differences might be associated with the category of woman answering? For example,

"It seems to me that I am hearing that there is a difference between young/old, landed/landless? Am I understanding correctly?" Probe: Why or why not?
 Make sure to write down any comments heard as it will help you with the intersectionality analysis.

- Once the map is finished (and this could be a messy and iterative process, where perfection and neatness follows afterwards), ask:
- How might the links between these nodes change as rice production intensifies?

C. Adaptations

This is a flexible tool to open discussion and build trust while doing the mapping. You should note down the local terms and expressions used to describe nodes/people. You can add or subtract prompting questions as needed. For example, asking about background and/or historical information on relationships, policies and interventions and how these have impacted the current value chain set up is useful. Additionally, probing for emergent trends, risks and opportunities (especially for women) that may have come from the literature review or previous tools is recommended.

D. Tips and Tricks for Using the Tool

Sampling bias is a common pitfall in qualitative research, especially when using group data collection methods such as PRAs and FGDs.

The use of convenience and/or snowball sampling risks bias towards dominant groups and can create an 'echo-chamber' effect by not representing the perspectives and experiences of the community as whole.

To prevent sampling bias, try using context-appropriate strategies, like working through local partners and women's groups, or gathering information via women and men key informants who can reliably represent other marginalized actors (McDougall and Curnow, 2020).

E. Analysing the data

The following questions should guide the analysis:

In analysing each node differentiated by gender, address:

- Who are the key stakeholders and decision-makers? What do they do? What are the ways in which they are connected? Where are they connected (time/space/ places)?
- Where are the spaces where decisions are made? How might the links between these nodes change as fish production intensifies?

F. Interpreting the data

In interpreting and presenting the results of this FGD, the researcher should prioritize representing the trends and variations found. In addition to the researcher's own analysis, the expectation is to also draw upon direct quotations where possible to express the emergent findings and to give greater voice to research participants themselves in representing the issues.

The goal of this activity is to produce a map that can be validated in the next phase and to examine power relations and personalities, demographics for different value chain nodes.

Tip: The two focus groups should be compared together to show a map of the different power dynamics (visible, hidden, and invisible) at different scales (individual, intra-household, community, market) within different value chain nodes of the SSF system. The map should include where empowered people reside in the VC and who will be winners and losers of any policy changes.

G. Informed consent statement

ORAL INFORMED CONSENT

Focus Group Discussion

Exploring Women's Empowerment in Small-Scale Fisheries (EWEF)

Client: WorldFish

Research firm: Includovate

Lead researcher: Dr. Kristie Druzca kristie@includovate.com

Thank you for the opportunity to speak with you. My name is I am from a research incubator called Includovate which is a social enterprise that innovates for inclusion. WorldFish has contracted Includovate to conduct a collaborative study on women's empowerment in small-scale fisheries (SSF). We would like to interview you about your experiences within the industry.

Ideally, we wanted to meet you and ask these questions face to face. But we cannot visit you because of COVID-19. However, your views and opinions are still very important for us, hence we are asking you these questions over the phone. We hope that things will go back to normal very soon, and that one day we will get to meet you in person.

We received your contact details through WorldFish who commissioned this methodology because momentum around sustainable aquatic development pathways is growing and because WorldFish does not want to exclude women participants. They may have received your details from their own contacts and networks. You have been chosen to be interviewed because you are a woman or man working in the fish sector as catchers, collectors, retailers, and processors.

We ask for your support by answering questions as honestly and fully as possible – there are no right or wrong answers. We just want to know your actual experiences, opinions, and the challenges you face in order to understand how to improve the program. Your answers will be completely confidential. During the interview, we will be taking notes, and with your permission, we would like to audio record the discussion. These materials will be kept completely confidential and any personal identifying information will not be used in any reports, publications, or presentations resultant from this research.

Other participants in this group discussion will hear your answers. Therefore, it is also your responsibility to maintain the confidentiality of fellow participants. Please do not share the discussion content with anyone beyond those who are present for the group discussion.

Although you may not directly benefit from taking part in this study, the information you provide may lead to improved disability programming. This group discussion will take approximately 1-2 hours and you will not be compensated for your time. There is no anticipated discomfort for those contributing to this study, so risk to participants is minimal. If you agree to participate, you can choose to stop at any time or to skip any topics you do not want to answer. Your participation is entirely voluntary.

Do you have any questions about the study or what I have said?

If, in the future, you have any questions or concerns regarding the study and the interview, or if you wish to add additional details, we welcome you to contact Dr Sujata Ganguly who acts as Chair of Includovate's internal ethical review board is sujata@includovate.com. We will leave one copy of this form with you, so that you will have a record of this contact information and about the study.

Do you agree to participate in this study?

[If YES, indicate below that the oral informed consent has been obtained. Then proceed with the question below regarding audio recording. If they refuse, thank them for their time and cancel the interview.]

Oral informed consent received

Do you agree to be audio recorded?

[If YES, indicate below. If participant responds "NO", proceed with the interview without recording.]

Consent to audio record interview received

Signature of interviewer: _____ Date: ____/____/____

Location of respondent: _____

Mode of interview: (e.g., face to face, telephone, zoom) _____

Background information:

WorldFish's mission is to reduce poverty and hunger by improving fisheries and aquaculture. Gender equality is integral to World Fish achieving its goals and advancing #Agenda2030. World Fish has a responsibility to its partners to capture and communicate the impact of its work on men and women, girls and boys and communities at large. Moreover, gender equality contributes to inclusive growth and sustainable development (Madgavkar 2020). The study of, and advocacy for, women's empowerment is necessary because the causes and consequences of low levels of empowerment can be found to limit women's opportunities (Malhotra and Schuler, 2005) and many policies and programs aim to increase empowerment (Alsop and Heinsohn, 2005) but evidence of their success is lacking (Springer and Druza 2019). From a research for development perspective, this research facilitates greater awareness of what women's empowerment is and is not in a given context, and importantly sets a new standard regarding the quality through which researchers can 'claim women's empowerment.' WorldFish is dedicated to ensuring the alleviating of women as an excluded group in the SSF industry to be improved and made equal.

Scoping Phase Tool 5: Semi Structured interviews (SSI) with Fish Value Chain Actors

These interviews enable the researcher to deeply explore the topic. They are semi structured to allow for probing. This enables the researcher to ask follow up questions, depending on the answers given, and allows the researcher to follow the topics of interest to the participant.

SEMI STRUCTURED INDIVIDUAL INTERVIEWS	
Purpose	To elicit women's and men's perceptions and experiences as fish value chain actors. This information will provide the foundation for understanding empowerment pathways for women in different nodes of the Rice-Fish system. Research question(s) addressed: RQ1, RQ2
Respondents	The target population are women and men working in the fish sector as catchers, collectors, retailers, and processors (different nodes and by rural/urban and other relevant intersectional categories)
Sampling	The sample size should be 4 women and 4 men (2 urban men and 2 urban women and 2 rural men and 2 rural women per value chain node).
Type of Data and Info	SSIs provide valuable qualitative data that capture different drivers and pathways to empowerment for retailers in SSF by probing the impact their daily activities, opportunities, constraints, relationships with suppliers and consumers, and examining the role resources, collective action, knowledge and information, and enabling institutions have on their sense of individual empowerment.
Strengths of The Tool	Allows in-depth probing of women's and men's pathways to empowerment and identifies possible factors towards empowerment.
Weaknesses of The Tool	Can be difficult to isolate individuals for interview, due to domestic, productive or community responsibilities that constrain time and availability for interview.

Table 16 Summary of the SSI

A. Circumstances of SSI

The SSI's should have one interviewer and one notetaker. Materials such as a notebook and a pen as well as an electronic device for manual notes must be provided for accurate data collection.

B. Facilitating and Conducting the SSI's:

Introduce the purpose of the study at the beginning of the SSI and obtain informed consent (both consents to being interviewed and consent to being audio-recorded). After obtaining informed consent the following table should be filled out by the notetaker:

SSI Code (Interview Type_location_gender_#)	
Date (dd/mm/yyyy)	
Name of location (market type / village)	
Rural/Urban	
Interview Type (SSI)	
Name of Interviewee	
Age/sex	
Marital Status	
Landowner Status	

Table 17 Example of table for record of information

Questionnaire Guide

Overall story

1. Can you tell me about how you become a fish retailer/catcher/collector/processor?

2. *Probe*: was it your individual choice? An expectation from family? Was anyone in your family in fish selling before you? An opportunity presented itself.
3. What are the types of resources you needed to work in fish?
 - a. How did you acquire them?
4. How did/do you obtain knowledge for your work in fish?
 - a. Did you ever attend a training program or certification related to fish handling or fish business?
5. Regarding the income you make in fish, what generally happens to the money you make? (what do you spend it on)?
 - a. Who keeps it, decides about how to spend or save it?
 - b. Have these dynamics changed over time? Why/why not?
6. Out of the fish you catch/sell, how much (%) do you keep for own/family consumption?
7. What are your expectations for the future of your business as a fish retailer/catcher/collector/processor?
 - a. What are some of the reasons you've stayed in the fish sector?
 - b. Are you planning on leaving the trade or staying? If yes, what are some of the challenges you face as a fish retailer/catcher/collector/processor that makes you want to leave?
 - c. What are some of the ways you've dealt with these challenges?
 - d. Are there challenges that you continue to deal with? If yes, why don't you solve these challenges/what do you need to overcome these challenges?
 - e. What opportunities would you need to stay and upgrade your fish business?
 - f. What would make you leave the fish industry completely?
8. Do you ever exchange fish informally as a gift? Why/why not?
9. How do you feel when you give or receive fish as a gift? (What does it mean to you as a woman/man)?

Relationships with Fish Consumers

10. Who typically buys from you (men or women, friends, extended family, certain caste/ethnicity)?
 - a. Is it usually the same people every day or different people?
 - b. What do they do with the fish? (Eat it? Process it? On-sell)?
11. Why do your customers buy from you?
 - a. Is there anything different about the fish you sell (compared to other fish sold at this market/in this town)?

Credit

12. Do you ever allow customers to buy on credit? Why, how often, and how do you seek repayment?
13. Have you ever applied for a credit yourself?
 - a. What was your experience of trying to get a loan?
 - b. What were the repayment terms?
 - c. Did you manage to repay or default? If you defaulted, what happened?

Day-to-day activities

14. Can you walk me through an average day for you?
 - a. What time do you wake up and go to bed?
 - b. How do you allocate your time between tasks?
15. Outside of your work as a fish retailer/catcher/collector/processor, what are some of your other responsibilities?
 - a. How does this compare to other people in your household?
 - b. How have your responsibilities changed over time?
16. Do you have enough time to do the things you enjoy as well as work? Why/why not?

- a. Which types of work/chores do you enjoy more than others? Why/why not?
- 17. What are some of the day to day decisions you need to make?
 - a. Do you prefer to consult anyone when you make these decisions (who)?

Gendered social status of fish retailers

- 18. How is fish as a job regarded by other people in your community?
 - a. How are you treated when and because you sell/work with fish? Why?
- 19. Are women working in other commodities treated differently to women in fish? Why/why not?
- 20. Are there certain types of jobs that are never done by men or women in the fish industry? (e.g., in some cultures, women do not catch the fish, but they can sell it)
 - a. What about any differences between older and younger women or men?
 - b. Any differences by caste, ethnicity, family status (e.g., Mother in-law /daughter in-law? First wife/second wife)

Policies, Laws and Regulations

- 21. Do you need to have a license to work in the fish industry?
 - a. If so, how do you apply for the licence?
 - b. Are certain people restricted from getting a licence? Why?
- 22. Are there any other rules/regulations for people who work in fish like you?
 - a. Who usually breaks rules/laws, and what are the consequences for breaking rules/laws?
- 23. Do you have to interact with any authorities during your fish work?
 - a. If yes, what is your relationship to these authorities like (resentful? Fearful? Collegial? No problems? ...)
 - b. Does everyone in the fish industry have a similar relationship to fish authorities as you? (e.g., do some people have better or worse relationships? Why?)

Ladder of Power & Freedom (for the individual)

If time, please complete this activity (you do not have to complete this for every interview, only those that have time/interest. This activity will be completed in a FGD in the deepening phase. This is an opportunity to get an individual's perspective on the ladder of power and freedom. This can later be compared with the FGD results.

Explain: In this activity we want to understand to what degree you have the power (freedom) to make your own decisions about important affairs in your life, such as "if you will do paid work, which kind, how many children you will have, if you get to pursue an education, or whether you will start or end a marriage." We want you to think about power and freedom as if it is a 5-step ladder. Step 5, the top step, indicates great power and freedom, whereas step 1 signifies very little power and freedom to make important decisions.

The facilitator should have a five-step ladder printed out (see Figure 1).



Figure 6 Example of a ladder of power and freedom⁷

1. **Where do you think you are now on the ladder?**
 - *Probe:* why do you think this? What kinds of decisions do you get to make at this level? (e.g., in terms of relationships; in terms of access and control over resources, assets and income and other).
2. **Where is the average woman in this community on this ladder of power and freedom? Probe: why is the average women higher or lower or the same as you?**
3. **Do you know a woman in your community who is on the top rung, step 5?**
 - *Probe:* tell me about why you think she is step 5? Describe her relationships, access and control over resources, assets and income. How did she come to be on that rung (what enabled that high level of empowerment)?
4. **Let's return to you: Where were you on the ladder 10 years ago?**
 - *Probe:* In what ways has your ability to make important life decisions and act on them changed (+, -)? Why?
5. **If possible, would you want more power to make choices?**
 - *Probe:* If yes, in what ways would you like more power? Probe to understand over what parts of their life (including which decisions, and over time, body, etc), enablers/ constraints.
6. **If no, why not?**

Wrap Up

24. Would you advise your daughter and son to enter the fish industry? Why/why not?
25. Is there anything else I should know about being a man/woman who sells fish?
26. Who is the most successful woman in the SSF value chain?
 - *Probe:* How can I contact her?

C. Adaptations

Adaptations include adding in the ladder of power and freedom. This tool returns in an FGD setting in the deepening phase, so it is a good idea to practice asking about it with at least some individuals during this phase.

D. Tips and Tricks for Using the Tool

⁷ Sari, Irna & McDougall, Cynthia & Rajaratnam, Surendran. (2017). Women's empowerment in aquaculture: Two case studies from Indonesia.

Tip: Interviewing at a ‘place of work’ can be difficult in loud and busy marketplaces, or when a vendor is in the middle of a shift/currently working. Try introducing the purpose of the study and asking them if they would be interested in participating now or at another time/place that would be better suited to their schedule and location.

E. Analysing the data

The data collected through these interviews should provide a good picture of what it means to be a woman working in the SSF sector, and how they got into the industry and their desire to leave or expand and why. It can help triangulate information in other tools on the roles of different market players (retailers, wholesalers and collectors) and the gendered power relations and space/place-based issues (including safety and seasonality) that mediate player engagement with the SSF sector. Guiding questions for the analysis are:

- What are the emergent gender issues in the SSF system/value chain/node?
- What are the relevant gender norms and market relationships that mediate women’s and men’s work in the SSF? In what node?
- Level of power and contentment with the SSF sector (past versus now)?

F. Interpreting the data

In interpreting and presenting the results of the SSIs, the researcher should prioritize representing the trends and variations found in terms of empowerment, pathways, and factors, changes over time and location. In addition to the researcher’s own analysis, the expectation is to also draw upon direct quotations where possible to express the emergent findings and to give greater voice to research participants themselves in representing the issues.

G. Informed consent statement

ORAL INFORMED CONSENT

Semi Structured Individual Interviews

Exploring Women’s Empowerment in Small-Scale Fisheries (EWEF)

Client: WorldFish

Research firm: Includovate

Lead researcher: Dr. Kristie Drucza kristie@includovate.com

Thank you for the opportunity to speak with you. My name is I am from a research incubator called Includovate which is a social enterprise that innovates for inclusion. WorldFish has contracted Includovate to conduct a collaborative study on women’s empowerment in small-scale fisheries (SSF). We would like to interview you about your experiences within the industry.

Ideally, we wanted to meet you and ask these questions face to face. But we cannot visit you because of COVID-19. However, your views and opinions are still very important for us, hence we are asking you these questions over the phone. We hope that things will go back to normal very soon, and that one day we will get to meet you in person.

We received your contact details through WorldFish who commissioned this methodology because momentum around sustainable aquatic development pathways is growing and because WorldFish does not want to exclude women participants. They may have received your details from their own contacts and networks. You have been chosen to be interviewed because you are a woman or man working in the fish sector as catchers, collectors, retailers, and processors. We will ask you questions related to the fish value chain and explore your perception and experiences as a fish value chain actor in the SSF system.

We ask for your support by answering questions as honestly and fully as possible – there are no right or wrong answers. We just want to know your actual experiences, opinions, and the challenges you face in order to understand how to improve the program. Your answers will be completely confidential. During the interview, we will be taking notes, and with your permission, we would like to audio record the discussion. These materials will be kept completely confidential and any personal identifying information will not be used in any reports, publications, or presentations resultant from this research. Demographic questions and the responses to any gendered questions will only be used for disaggregation and cannot be tracked back to the respondent.

Although you may not directly benefit from taking part in this study, the information you provide may lead to improved understanding of the SSF industry and any gendered issues, norms and challenges faced specifically by women participants. The interview will take approximately 1 hour, and you will not be compensated for your time. There is no anticipated discomfort for those contributing to this study. If you agree to participate, you can choose to stop at any time or to skip any topics you do not want to answer. Your participation is entirely voluntary.

Do you have any questions about the study or what I have said?

If, in the future, you have any questions or concerns regarding the study and the interview, or if you wish to add additional details, we welcome you to contact Dr Sujata Ganguly who acts as Chair of Includovate's internal ethical review board is sujata@includovate.com. We will leave one copy of this form with you, so that you will have a record of this contact information and about the study.

Do you agree to participate in this study?

[If YES, indicate below that the oral informed consent has been obtained. Then proceed with the question below regarding audio recording. If they refuse, thank them for their time and cancel the interview.]

Oral informed consent received

Do you agree to be audio recorded?

[If YES, indicate below. If participant responds "NO", proceed with the interview without recording.]

Consent to audio record interview received

Signature of interviewer: _____ Date: ____/____/____

Location of respondent: _____

Mode of interview: (e.g., face to face, telephone, zoom) _____

Background information:

WorldFish's mission is to reduce poverty and hunger by improving fisheries and aquaculture. Gender equality is integral to World Fish achieving its goals and advancing #Agenda2030. World Fish has a

responsibility to its partners to capture and communicate the impact of its work on men and women, girls and boys and communities at large. Moreover, gender equality contributes to inclusive growth and sustainable development (Madgavkar 2020). The study of, and advocacy for, women's empowerment is necessary because the causes and consequences of low levels of empowerment can be found to limit women's opportunities (Malhotra and Schuler, 2005) and many policies and programs aim to increase empowerment (Alsop and Heinsohn, 2005) but evidence of their success is lacking (Springer and Druza 2019). From a research for development perspective, this research facilitates greater awareness of what women's empowerment is and is not in a given context, and importantly sets a new standard regarding the quality through which researchers can 'claim women's empowerment.' WorldFish is dedicated to ensuring the alleviating of women as an excluded group in the SSF industry to be improved and made equal.

Scoping Phase Tool 6: Cognitive Interviewing

Cognitive interviewing is done to estimate maximum variance among the respondent group by interviewing a diverse range of individuals who will be useful in informing decisions about if and how to modify questions. The modifications that could be made include re-wording questions, providing more specific instructions and specifically offering culturally appropriate examples, and defining terms explicitly.

COGNITIVE INTERVIEWING	
Purpose	To determine whether the survey question’s intent and the meanings inferred by participants align.
Respondents	Respondents should be randomly selected from local level lists (e.g., village, woreda, location where associated project is being implemented). This information can be obtained from project partners and/or local level administration.
Sampling	3 women and 3 men engaged in the SSF sector identified as potential survey respondents (make sure to include someone with only a primary school education)
Type of Data and Info	Qualitative data in the form of detailed notetaking to determine whether the question’s intent and the meanings inferred by participants align.
Strengths of the Tool⁸	Adds internal validity on how meaningful survey questions are. Provides critical feedback on survey participant comprehension, retrieval, judgement, and response.
Weaknesses of the Tool	Takes the time of respondents.

Table 18 Summary of the cognitive interviews

A. Circumstances of Interview

The cognitive interviews should have one interviewer and one notetaker. Materials such as an audio recorder, notebook/pen and device are needed for data collection and flipchart, markers, pens, sticky notes must be provided for the exercise. The target population are the women and men involved in the SSF sector and the sample size should be 5-8 women and men respondents.

B. Facilitating and conducting the Cognitive Interviews:

Read through the finalized survey questionnaire individually with each participant. For each question, ask what the question means to the respondent, discuss whether the respondent fully comprehends the intent of each question, while also exploring potentially different meanings and areas of confusion. Make detailed notes of such cases. Ask the respondent how they would answer the question. This will help to more deeply cross check comprehension.

C. Adaptations

Future testing of the tool is needed to determine possible adaptations. Malapit et al. (2016) suggest that portions of the questionnaire that may be particularly challenging/relatively easier to misinterpret should be prioritized in the facilitation of cognitive interviews. Further testing of the tool is needed to determine adaptations regarding specific questions.

D. Tips and Tricks for Using the Tool

⁸ For full set of strengths and weaknesses of cognitive interviewing, see Malapit, H. J., Sproule, K., & Kovarik, C. (2016). *Using cognitive interviewing to improve the Women’s Empowerment in Agriculture Index survey instruments: Evidence from Bangladesh and Uganda* (Vol. 1564). International Food Policy Research Institute (IFPRI).

Tip: To save time, the research team can opt to not transcribe the cognitive interviews and simply summarize the key findings and proceed with making the necessary edits to the survey before piloting.

Tip: if certain words, definitions or phrases are not understood by the respondent, the researcher may want to pilot some of the following:

- 1 – modifying the wording of questions until comprehension is reached.
- 2 – have culturally/ locally relevant examples prepared to experiment with probes/prompts.
- 3 – defining terms explicitly in the survey and comparing these to how the respondent would explain the definition. and

E. Analysing the data

The following questions should guide the analysis:

- What specific questions and/or areas of the questionnaire did potential respondents struggle with/were confused by?
- Which questions were identified as requiring modification in terms of wording?
- Are more specific instructions needed for completion and/or culturally appropriate examples?
- Do any terms need to be defined more explicitly in the questionnaire?
- Data should be organized and coded according to area of the questionnaire (domain of empowerment) and further divided by specific questions and sub-questions.

F. Interpreting the data

If more than one person does the cognitive interviews, then the research team should meet and compare/compile notes from the cognitive interviews clustered around the questions for guiding the analysis. A full list of potential areas for revision should be assembled (based on domain of empowerment, specific question, and sub-questions) and be discussed in terms of possible revisions.

G. Informed consent statement

ORAL INFORMED CONSENT

Cognitive Interviews

Exploring Women’s Empowerment in Small-Scale Fisheries (EWEF)

Client: WorldFish

Research firm: Includovate

Lead researcher: Dr. Kristie Drucza kristie@includovate.com

Thank you for the opportunity to speak with you. My name is I am from a research incubator called Includovate which is a social enterprise that innovates for inclusion. WorldFish has contracted Includovate to conduct a collaborative study on women’s empowerment in small-scale fisheries (SSF). We would like to interview you about your experiences within the industry.

Ideally, we wanted to meet you and ask these questions face to face. But we cannot visit you because of COVID-19. However, your views and opinions are still very important for us, hence we are asking you

these questions over the phone. We hope that things will go back to normal very soon, and that one day we will get to meet you in person.

We received your contact details through WorldFish who commissioned this methodology because momentum around sustainable aquatic development pathways is growing and because WorldFish does not want to exclude women participants. They may have received your details from their own contacts and networks. You have been randomly chosen to be interviewed because you are a woman or man engaged in the SSF sector. We will ask you questions related to the fish value chain and explore your perception and experiences as a fish value chain actor in the SSF system.

We ask for your support by answering questions as honestly and fully as possible – there are no right or wrong answers. We just want to know your actual experiences, opinions, and the challenges you face in order to understand how to improve the program. Your answers will be completely confidential. During the interview, we will be taking notes, and with your permission, we would like to audio record the discussion. These materials will be kept completely confidential and any personal identifying information will not be used in any reports, publications, or presentations resultant from this research.

Although you may not directly benefit from taking part in this study, the information you provide may lead to improved understanding of the SSF industry and any gendered issues, norms and challenges faced specifically by women participants. The interview will take approximately 1 hour, and you will not be compensated for your time. There is no anticipated discomfort for those contributing to this study. If you agree to participate, you can choose to stop at any time or to skip any topics you do not want to answer. Your participation is entirely voluntary.

Do you have any questions about the study or what I have said?

If, in the future, you have any questions or concerns regarding the study and the interview, or if you wish to add additional details, we welcome you to contact Dr Sujata Ganguly who acts as Chair of Includovate's internal ethical review board is sujata@includovate.com. We will leave one copy of this form with you, so that you will have a record of this contact information and about the study.

Do you agree to participate in this study?

[If YES, indicate below that the oral informed consent has been obtained. Then proceed with the question below regarding audio recording. If they refuse, thank them for their time and cancel the interview.]

Oral informed consent received

Do you agree to be audio recorded?

[If YES, indicate below. If participant responds "NO", proceed with the interview without recording.]

Consent to audio record interview received

Signature of interviewer: _____ Date: ____/____/____

Location of respondent: _____

Mode of interview: (e.g., face to face, telephone, zoom) _____

Background information:

WorldFish's mission is to reduce poverty and hunger by improving fisheries and aquaculture. Gender equality is integral to World Fish achieving its goals and advancing #Agenda2030. World Fish has a

responsibility to its partners to capture and communicate the impact of its work on men and women, girls and boys and communities at large. Moreover, gender equality contributes to inclusive growth and sustainable development (Madgavkar 2020). The study of, and advocacy for, women's empowerment is necessary because the causes and consequences of low levels of empowerment can be found to limit women's opportunities (Malhotra and Schuler, 2005) and many policies and programs aim to increase empowerment (Alsop and Heinsohn, 2005) but evidence of their success is lacking (Springer and Druza 2019). From a research for development perspective, this research facilitates greater awareness of what women's empowerment is and is not in a given context, and importantly sets a new standard regarding the quality through which researchers can 'claim women's empowerment.' WorldFish is dedicated to ensuring the alleviating of women as an excluded group in the SSF industry to be improved and made equal.

Scoping Phase Tool 7: Learning Journal Field Diary

This tool is a reflect journal that will help improve the research quality and overall methodology. The researcher’s skills and familiarity with the tools will also improve from this process.

Learning Journal Field Diary	
Purpose	The purpose of the learning journal field diary is to reflect daily and collate feedback as a research team during the data collection process. The diary should include specific reflections and areas for improvement (e.g., How successful was the method(s)? Why? What worked well/less well and what improvements to the design or certain questions, or tools are necessary). Through these iterative reflections, this reflexive tool adds internal context validity. To reflect on the responses, and an endogenous understanding of empowerment that is emerging. To remain vigilant of when an exogenous understanding of empowerment is creeping in and/or to understand how an exogenous understanding is different to an endogenous one.
Respondents	Each researcher who collects data. If more than one researcher collects data (e.g., FGD note taker and facilitator) then both should complete the diary together.
Sampling	The diary should be completed daily but there are times when it might make sense to do it after a specific activity. For example, if an interview did not go to plan, then capturing the reasons while they are fresh in the researcher’s mind is advised, so the information is not lost.
Type of Data and Info	Qualitative and self-reflexive data in the form of detailed notetaking to determine the relevance of the study design and to reflect upon the position and power of the researcher.
Strengths of The Tool	Gives the researcher additional time to reflect upon and analyse, become familiar with, the data and the different respondent types. Ensures the researcher learns and has the time to improve their research skills while reinforcing and reflecting upon their role as insider/outsider. As such it helps with intersectionality and power analysis.
Weaknesses of The Tool	Can take time and some tired researchers can be resentful of taking the extra time in the evening to do the activity.

Table 19 Summary of the Learning Journal Field Diary

A. Circumstances

This can be done individually or as a team at the end of each day. If the day is tiring (hot sun, busy, or lots of challenges faced), then the learning and reflection can be done as a team in the vehicle on the way home.

B. Facilitating and Conducting the tool

After each day of data collection, please take time to complete the following reflection journal

Date:
Location:
Your name:
Research assistant’s name(s):
Observations and broad takeaways from the tool
Overall, did you get good data from the respondent? Why/why not?
Did the respondent get emotional for any of the questions? Why/which question(s)

In terms of the research questions, what topics/questions worked well?
In terms of the research questions, which questions/topics were hard for the respondent to understand?
What did you have to do to help the respondent understand?
What were the challenges? (be specific, it may be about finding participants, or having them turn up on time, getting them to understand the questions)
Specific reflections
What new information did I get about women's empowerment from today's interviews?
Could I identify any empowerment pathways from the data collected? What?
Did I learn anything new about conducting this type of research?
Have any patterns emerged from the research so far?
How did I feel doing this interview (confident, shy, like an outside/insider, rushed?)
Areas for improvement
What hindered the process of data collection? (it may be a person, the weather, time of the interview, you had to ask a lot of prompting questions...)
Which questions did you not need to ask because they had already been answered?
What else would you like to know about but there isn't a question covering this?
If we could turn back the clock, what should we/you do differently next time?
What advice would you give to another researcher who was completing this study (especially in terms of building rapport with the respondent)?

C. Adaptations

These questions are a guide. More questions or reflections can be added as needed.

D. Tips and Tricks for Using the Tool

Completing the journal at the end of each day is advised. Even if you are tired, this information will be used during the validation process and shared with WorldFish to improve the methodology.

E. Analysing the data

Pay attention to repeated observations and strengthens and weaknesses. Count the frequency of observations.

F. Interpreting the data

Develop tables and other graphs so they can be easily presented during the validation workshop.

4.2 Deepening Phase Pack of tools

The deepening phase is designed to more deeply explore the research questions. There are a number of long focus group discussions, an in-depth interview and a survey in this phase

Tool	No. and type of respondents	Time it Takes
DP1: Validate the VC maps	<ul style="list-style-type: none"> • 2 women who work in the VC • 2 men who work in the VC • 1 government official • 1 other stakeholder 	45 minutes
DP2: Ladder of power and freedom	Four focus group discussions per study location: <ul style="list-style-type: none"> • 2 all-women groups • 2 all-men groups 	2 hours
DP3: Historical Timeline and SN change	2 FGDs groups, 1 all-women group and 1 all-men group.	1 hour per tool
DP4: Aspirations	6 FGDs, two all-women and two all men group and two mixed sex groups.	2 hours
DP6: IDI	It is recommended that 6 life histories are recorded with 3 younger women (25-35) and 3 older women (35-65) at different nodes of the value chain in a rural area, and another 6 should be completed in an urban area.	1.5 hours
DP7: Learning journal Field Diary	N/A	Will take between 5-30 minutes per evening
DP8: Survey	50% women/50% men, with 1/3 of the survey population representing de jure women-headed households. The total number of respondents will vary depending on the population size and the size of the SSF	1 hour

Table 20 Deepening Phase Methods Summary

Deepening Phase Tool 1: Validate VC maps

This is a validation activity to check the value chain maps. While there is a separate validation phase it is important to have a good understanding of the value chains at this point. Hence any errors in the map should be corrected.

Value Chain Map Validation	
Purpose	To cross check with different actors if the value chain and the gender and social relationships of power resonate with their experiences.
Respondents	<p>The following respondents are recommended:</p> <ul style="list-style-type: none"> 2 women who work in the VC 2 men who work in the VC 1 government official 1 other stakeholder <p>Each VC node should be covered by at least one respondent who has worked in aquaculture.</p>
Sampling	There are no strict sampling specificities for this tool, as the sampling strategy is based on convenience and purpose. However, the target population are women and men engaged in the SSF sector by different types of production, node and/or intersectional identity (as identified in the scoping phase), market stakeholders such as the market managers and sellers of fish. The main goal is to show the maps to people not involved in the first data collection process and have them confirm or contest the gender and power relations between nodes/actors. If major discrepancies emerge from this activity then you will need to repeat the NNPIA scoping phase activity.
Type of Data and Info	Validation data
Strengths of The Tool	Corrects any mis-interpretations or assumptions before the research continues, gives the researcher confidence in the findings and may provide participants with a new way of understanding markets and the flow of goods and services.
Weaknesses of The Tool	Sampling is based on convenience and VC node/purpose.

A. Circumstances

You could approach people at the marketplace, or elsewhere you know they will be from the scoping phase. Meeting with government people may require an appointment and more organisation. Print your maps out first and take them with you together with a voice recorder. You will need to use informed consent for participation and recording purposes. The location can be in a marketplace, in an office, or anywhere.

B. Facilitating and Conducting the tool

Background Information

Name of facilitator	
Date (dd/mm/yyyy)	

No. of participants	
Location	
Sex	
Age range	
Marital Status	
Position/role in the community	

Table 21 Example of table for record of information

Show the map and explain to the respondent how the map was developed and that you would like to get their opinion on the accuracy of the map. Explain the map and allow the respondent to ask clarifying questions or to critique anything. Make a note of what they ask and say.

1. What are your first impressions about this map? (probe: did you learn something new?)
2. Is there any actor or stakeholder missing from this map? (Who/where?)

Is there anything you would agree with, want to change, or comment on about the following:

3. The number of men or mainly women (%) in the node?
4. Average age of workers/producers/suppliers in the node?
5. Socio-economic status of workers/producers/suppliers in the node?
6. Name of the most successful male and female at this node/level.
7. Name of the most empowered male/female at this level according to empowerment FGD definitions.
8. Average income per node?
9. Average price of fish bought and sold?
10. What are the characteristics/demographics of those with power at this node?
 - a. What roles do different stakeholders play?
11. How are decisions made in this node (any collective buying/selling, or is it individual. Do certain people control a lot of decisions? And if so, how are these done e.g., in public or private spaces)?
12. How/Where are stakeholders/nodes connected (time/spaces/places)?
13. Is there anything else you would change about this map after all your comments?
14. Anything else you want to add or share with me before I ask my final question?
15. How might the links between these nodes change as rice production intensifies?

C. Adaptations

Adaptations to the instrument are allowed and will depend on the original VC map and the responses of the person. Additional iterations and testing are needed to assess what questions can be skipped in future usage of the tool.

D. Tips and Tricks for Using the Tool

This is a very relaxed tool. There is no need to stress about using it wrong. We are putting in a little quality check at this stage of the data collection to reconnect with participants and maintain an endogenous understanding.

E. Analysing the data

Any new information should be noted and added to the map. If the map needs to be re-done because a lot of discrepancies emerged, then please repeat activity four from the scoping study.

F. Informed consent statement

ORAL INFORMED CONSENT

Value Chain Map Validation

Exploring Women's Empowerment in Small-Scale Fisheries**Client:** WorldFish**Research firm:** Includovate**Lead researcher:** Dr. Kristie Druzca kristie@includovate.com

Thank you for the opportunity to speak with you. My name is I am from a research incubator called Includovate which is a social enterprise that innovates for inclusion. WorldFish has contracted Includovate to conduct a collaborative study on women's empowerment in small-scale fisheries (SSF). We would like to interview you about your experiences within the industry.

In order to maintain safety during COVID-19, we kindly ask that you maintain social distancing measures of staying apart at least 1.5m and wearing a face mask. However, your views and opinions are still very important for us, hence we are still conducting this activity. We hope that things will go back to normal very soon and appreciate you agreeing to social distancing and a face covering.

We received your contact details through WorldFish who commissioned this methodology because momentum around sustainable aquatic development pathways is growing and because WorldFish does not want to exclude women participants. They may have received your details from their own contacts and networks. You have been chosen to be interviewed because you are considered a woman or a man in the fish value chain, a government official or a SSF stakeholder (e.g., fisheries staff, market managers, or market owner). You must not have been involved in the first data collection process. We will ask you questions related to a series of maps that we will provide regarding the fish value chain and explore the different actors in the diagram. We will require you to either confirm or contest the information we give you and provide justification.

We ask for your support by answering questions as honestly and fully as possible – there are no right or wrong answers. We just want to know your actual experiences, opinions, and the challenges you face in order to understand how to improve the program. Your answers will be completely confidential. During the interview, we will be taking notes, and with your permission, we would like to audio record the discussion. These materials will be kept completely confidential and any personal identifying information will not be used in any reports, publications, or presentations resultant from this research. Demographic questions and the responses to any gendered questions will only be used for disaggregation and cannot be tracked back to the respondent.

Although you may not directly benefit from taking part in this study, the information you provide may lead to improved understanding of the SSF industry and any gendered issues, norms and challenges faced specifically by women participants. The interview will take approximately 1 hour, and you will not be compensated for your time. There is no anticipated discomfort for those contributing to this study. If you agree to participate, you can choose to stop at any time or to skip any topics you do not want to answer. Your participation is entirely voluntary.

Do you have any questions about the study or what I have said?

If, in the future, you have any questions or concerns regarding the study and the interview, or if you wish to add additional details, we welcome you to contact Dr Sujata Ganguly who acts as Chair of Includovate's internal ethical review board is sujata@includovate.com. We will leave one copy of this form with you, so that you will have a record of this contact information and about the study.

Do you agree to participate in this study?

[If YES, indicate below that the oral informed consent has been obtained. Then proceed with the question below regarding audio recording. If they refuse, thank them for their time and cancel the interview.]

- Oral informed consent received

Do you agree to be audio recorded?

[If YES, indicate below. If participant responds "NO", proceed with the interview without recording.]

- Consent to audio record interview received

Signature of interviewer: _____ Date: ____/____/____

Location of respondent: _____

Mode of interview: (e.g., face to face, telephone, zoom) _____

Background information:

WorldFish's mission is to reduce poverty and hunger by improving fisheries and aquaculture. Gender equality is integral to World Fish achieving its goals and advancing [#Agenda2030](#). World Fish has a responsibility to its partners to capture and communicate the impact of its work on men and women, girls and boys and communities at large. Moreover, gender equality contributes to inclusive growth and sustainable development (Madgavkar 2020). The study of, and advocacy for, women's empowerment is necessary because the causes and consequences of low levels of empowerment can be found to limit women's opportunities (Malhotra and Schuler, 2005) and many policies and programs aim to increase empowerment (Alsop and Heinsohn, 2005) but evidence of their success is lacking (Springer and Druca 2019). From a research for development perspective, this research facilitates greater awareness of what women's empowerment is and is not in a given context, and importantly sets a new standard regarding the quality through which researchers can 'claim women's empowerment.' WorldFish is dedicated to ensuring the alleviating of women as an excluded group in the SSF industry to be improved and made equal.

Deepening Phase Tool 2: Ladder of Power and Freedom

The Ladder of Power and Freedom is a key tool in provide meaningful contextual and comparative evidence of people’s own assessments and interpretations of their levels of agency in their lives, and the key factors and processes that they perceive to shape their capacities in making important decisions. The activity also enables the capturing of perceptions of relative empowerment between women and men.

THE LADDER OF POWER AND FREEDOM – FOCUS GROUP DISCUSSION (FGD)	
Purpose	To provide meaningful contextual and comparative evidence of people’s own assessments and interpretations of their levels of agency in their lives, and the key factors and processes that they perceive to shape their capacities in making important decisions and to capture relative empowerment between women and men. Research question(s) addressed: RQ1; RQ2
Respondents	It is recommended that there will be four focus group discussions per study location: <ul style="list-style-type: none"> • 2 all-women groups • 2 all-men groups 6-12 participants per focus group
Sampling	Non-Probability Sampling or Purposive sampling by exclusion categories will be done in consultation with context-appropriate local partners/organisations/ experts to select respondents from the intersectional groups prioritized for the individual study. Sampling size will be largely determined by the saturation point required to collect the information needed for the study
Type of Data and Info	Qualitative data: Perceptions of relative empowerment between women and men (Ladder of Power and Freedom)
Strengths of The Tool	Identifies drivers of women’s empowerment and relative levels of empowerment between women and men. Also helps identify who different types of people in the community (e.g., at different levels of empowerment) and interactions within group among participants offers data consensus. Diversity of views that capture points of agreement and disagreement.
Weaknesses of The Tool	Overt group power dynamics/biases mean that some participants self-identify at a certain ladder rung and tell others what rung they “should be” on, reflecting their biases of the understanding of the questions and activity. Group may think the activity is about social status/wealth ranking in the community as opposed to individual decision-making

A. Circumstances

The focus group discussion should have one facilitator and one notetaker. Materials such as flipchart, markers, pens, sticky notes should be used for this exercise together with an audio recorder, camera (to photograph the ladder), paper/pen or device for manual notes. The target population are the women and men engaged in the SSF sector by different types of production, node and/or intersectional identity (as identified in the scoping phase), market stakeholders such as the market manager and sellers of fish.

Name of facilitator	
---------------------	--

Date (dd/mm/yyyy)	
No. of participants	
Location	
Sex	
Age range	
Marital Status	
Position/role in the community	

Table 22 Example of table for record of information

B. Facilitating and Conducting the tool⁹

The goal of the exercise is to understand the factors that shape women’s or men’s conceptions of power and freedom in their lives, and reasons for changes in these conceptions over time, rather than obtaining exact measurements or absolute values for agency.

Before starting the focus group, the facilitator should create a visual of a five-step ladder on a flipchart (Fig 1).

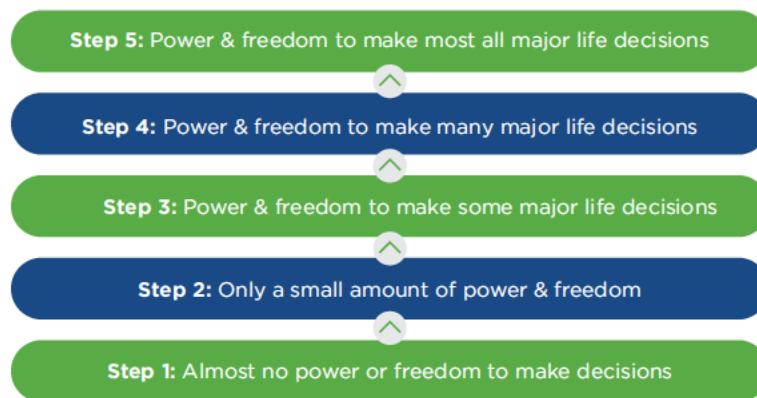


Figure 7 Example of a ladder of power and freedom¹⁰

The facilitator will explain to the focus group that step 5, the top step, indicates great power and freedom, whereas step 1 signifies very little power and freedom to make these consequential decisions. On the first step, is a women who nobody wants to be like, she has little power to make her own decisions about important affairs in her life. She has little to say about if or where she will work, or about starting or ending a relationship. On the highest step, the fifth, stand those who have great capacity to make important decisions for themselves, including about their working life and whether to start or end a relationship in their personal life.

1. Ask the group to describe women from this community who are on step one
List the attributes of the person on step one on a flip chart according to what the respondents say. Cross out if people disagree and add to the list when there is agreement.

Prompt: what is her self-worth and self-belief like (power within); what is her social network/capital like, her mutual support and respect (power with); can she take action to change her life if she

⁹ Directions and information on this tool directly cited from Petesch, P. & Bullock, R. (2018). Ladder of Power and Freedom: Qualitative data collection tool to understand local perceptions of agency and decision-making. GENNOVATE resources for scientists and research teams. CDMX, Mexico: CIMMYT.

¹⁰ Sari, Irna & McDougall, Cynthia & Rajaratnam, Surendran. (2017). Women’s empowerment in aquaculture: Two case studies from Indonesia.

wants (power to); does she control any income, assets and resources (power over); does she have important networks that will support her advancement (power through)?

Ask: Does everyone agree that someone with these attributes would be on step 1? Discuss until there is agreement about what qualities constitutes step 1. Write then down so people remember the attributes for step 1.

2. Repeat for the person on step five: Ask the group to describe women from this community who are on step five if any (there may be none, do not pressure to add here)

List the attributes of the person on step five on a flip chart according to what the respondents say. Cross out if people disagree and add to the list when there is agreement.

Prompt: what is her self-worth and self-belief like (power within); what is her social network/capital like, her mutual support and respect (power with); can she take action to change her life if she wants (power too); does she control any income, assets and resources (power over); does she have important networks that will support her advancement (power through)?

Ask: Does everyone agree that someone with these attributes would be on step 5? Discuss until there is agreement about what qualities constitutes step 5. Write then down so people remember the attributes for step 5.

3. Repeat for the person on step two: Ask the group to describe which women are on step two, if any.

List the attributes of the person on step two on a flip chart according to what the respondents say. Cross out if people disagree and add to the list when there is agreement.

Prompt: what is her self-worth and self-belief like (power within); what is her social network/capital like, her mutual support and respect (power with); can she take action to change her life if she wants (power too); does she control any income, assets and resources (power over); does she have important networks that will support her advancement (power through)?

Ask: Does everyone agree that someone with these attributes would be on step 2? Discuss until there is agreement about what qualities constitutes step 2. Write then down so people remember the attributes for step 2.

4. Repeat for the person on step three: Ask the group to describe which women are on step three, if any.

List the attributes of the person on step three on a flip chart according to what the respondents say. Cross out if people disagree and add to the list when there is agreement.

Prompt: what is her self-worth and self-belief like (power within); what is her social network/capital like, her mutual support and respect (power with); can she take action to change her life if she wants (power too); does she control any income, assets and resources (power over); does she have important networks that will support her advancement (power through)?

Ask: Does everyone agree that someone with these attributes would be on step 3? Discuss until there is agreement about what qualities constitutes step 3. Write then down so people remember the attributes for step 3.

5. Repeat for the person on step four: Ask the group to describe which women on step four, if any.

List the attributes of the person on step four on a flip chart according to what the respondents say. Cross out if people disagree and add to the list when there is agreement.

Prompt: what is her self-worth and self-belief like (power within); what is her social network/capital like, her mutual support and respect (power with); can she take action to change her life if she wants (power too); does she control any income, assets and resources (power over); does she have important networks that will support her advancement (power through)?

Ask: Does everyone agree that someone with these attributes would be on step four? Discuss until there is agreement about what qualities constitutes step four.

6. Ask each focus group participant to privately vote on a small sticky note for the step where they think they land on the ladder. Symbols may be used if illiterate.

Ask: Would they like to be higher or lower on the ladder? Inform respondents to write an arrow pointing up or down on the same sticky note

Ask: What do they do to earn income/livelihood? Inform respondents to write this on the same sticky note

Ask: Where would you place yourself on the ladder 10 years ago? Inform respondents to write this on the same sticky note but on the other side.

Go around the room one by one and ask the person if they were higher or lower 10 years ago and why this is the case. Probe for people, experiences, networks, policies, programs, crises, own capacities or confidence/agency, relations + resources + formal and informal institutions (norms, rules, policies) + programs, control over own time and mobility, control over/access to technology/information).

Ask: Were you engaged in a different livelihood 10 years ago or the same? Inform respondents to write this on the same sticky note

Collect the paper/sticky note and document later.

Tip: In facilitating the discussion and to elicit a multidimensional and inclusive discussion of the reasons for the rankings identified the facilitator should probe deeply into the focus group members' explanations of their ladder rankings. The rankings and discussion are then repeated to capture perceptions of power and freedom 10 years ago. These discussions should also be probed deeply to elicit detailed explanations for the trends in agency identified.

7. What are some of the things that would cause a woman to move down the ladder?

Write down the list on a flip chart paper. After the brain storming is finished and people have run out of ideas, read each item out again and allocate a symbol next to it for people who may be illiterate. Give each person 3 tokens (rocks, pens, bits of paper) and explain that they can chose the top three biggest problems/barriers/pitfalls that would cause someone to move down the ladder. Place the flipcharts on the floor and explain that they must place their 3 tokens on what they consider to be the biggest problems/barriers/pitfalls.

8. What are some of the things that would help a woman move up the ladder?

This can be relationships, good luck, assets, resources, education, inheritance, etc). Write down the answers on a flip chart paper. After the brain storming is finished and people have run out of ideas, read each item out again and allocate a symbol next to it for people who may be illiterate. Give each person 3 tokens (rocks, pens, bits of paper) and explain that they can chose the top three biggest opportunities that would help someone move up the ladder. Place the flipcharts on the floor and explain that they have to place their 3 tokens on what they consider to be the biggest opportunities to move up the ladder.

9. In which of these spaces do women face the greatest challenge: the market, home, community, school, health centre, work or other space?

Ask people to write their answer down and then facilitate a discussion on why they think this space is the most challenging.

10. If you think about the women in your life.
a) what is the biggest barrier they face?

Probe ideas/attitudes (and norms) about what women or men can and can't and why? Access to or control over certain resources (which ones), including financing or information or technologies; control over own time and mobility (including gender distribution of labour & ability to share domestic roles/unpaid labour); access to programs (e.g., opportunities), including extension; policies (any level); own capacities or confidence; relationships (HH, community or group, association, VC networks, private sector, other?)

- b) ...and what are the most important things that could happen to remove those barriers? Probe re things women could do (individual or together), men could do, programs could do, policies et cetera.

C. Adaptations

Adaptations to the instrument and adjustments will be informed and identified respectively in future iterations of the tool. Additional iterations and testing are needed to assess what questions can be skipped in future usage of the tool.

D. Tips and Tricks for Using the Tool

Tip: The success of this activity in capturing detailed explanations for the trends in agency identified is contingent on the quantity and quality of the probing of rankings. In addition to the mechanics of the main ranking activity, the researchers should intimately familiarise themselves with the probing questions to facilitate an inclusive and deep discussion.

The Ladder of Power and Freedom tool also allows for more direct probing around research question #3 regarding the hypothetical changes that could occur in the SSF system given policy changes or interventions (e.g., If SSF production intensifies so there is greater fish production, how will this affect women? Which women (e.g., poorer, landless, minority groups)? How would the burdens, risks and potential opportunities manifest? Further probing for ideas regarding programming and policy to mitigate risks and create an enabling environment conducive to empowerment are also encouraged in this activity. The questions in the IDI tool focus on understanding the different pathways women take towards empowerment and who and what helps them along their journey. The tool also helps understand changes in empowerment over time.

E. Analysing the data

Provide meaningful contextual and comparative qualitative evidence regarding what empowerment is seen locally to embody, current and past levels (degrees/kinds) of empowerment of different women and men, and insights into enablers/constraints and pathways to empowerment for different women and men. Specifically, elucidate how women and men:

- Understand empowerment to be in that context terms of what kinds of 'powers and freedoms' are important

- See ‘full’ versus ‘little’ empowerment in that context (e.g., what the top versus bottom rungs represent)
- See different people of their own gender – and the opposite gender – in terms of how empowered they are/are not and WHY (e.g., drivers, barriers/enablers and people’s perceptions of relative empowerment between women and men)
- Perceive how empowerment has changed (or not) for different women and men over the past decade and why (e.g., trends, barriers/enablers and pathways)

Tip: Remember, the goal of the exercise is to understand the factors that shape women’s or men’s conceptions of power and freedom in their lives, and reasons for changes in these conceptions over time, rather than obtaining exact measurements or absolute values for agency.

Please also use the coding tree to help make sense of the data.

F. Interpreting the data

In interpreting and presenting the results of the Ladder of Power and Freedom, the researcher(s) should prioritize representing the trends and variations found amongst the participants. In addition to the researcher’s own analysis, the expectation is to also draw upon direct quotations where possible to express the emergent findings and to give greater voice to research participants themselves in representing the issues.

G. Informed consent statement

ORAL INFORMED CONSENT

Ladder of Power and Freedom Focus Group Discussion (FGD)

Exploring Women’s Empowerment in Small-Scale Fisheries

Client: WorldFish

Research firm: Includovate

Lead researcher: Dr. Kristie Druzca kristie@includovate.com

Thank you for the opportunity to speak with you. My name is I am from a research incubator called Includovate which is a social enterprise that innovates for inclusion. WorldFish has contracted Includovate to conduct a collaborative study on women’s empowerment in small-scale fisheries (SSF). We would like to interview you about your experiences within the industry.

Ideally, we wanted to meet you and ask these questions face to face. But we cannot visit you because of COVID-19. However, your views and opinions are still very important for us, hence we are asking you these questions over the phone. We hope that things will go back to normal very soon, and that one day we will get to meet you in person.

We received your contact details through WorldFish who commissioned this methodology because momentum around sustainable aquatic development pathways is growing and because WorldFish does not want to exclude women participants. They may have received your details from their own contacts and networks. You have been chosen to be interviewed because you are part of our target population. We will ask you questions related to your personal empowerment, gender equality and relationships.

We ask for your support by answering questions as honestly and fully as possible – there are no right or wrong answers. We just want to know your actual experiences, opinions, and the challenges you face in order to understand how to improve the program. Your answers will be completely confidential.

During the interview, we will be taking notes, and with your permission, we would like to audio record the discussion. These materials will be kept completely confidential and any personal identifying information will not be used in any reports, publications, or presentations resultant from this research. Demographic questions and the responses to any gendered questions will only be used for disaggregation and cannot be tracked back to the respondent.

Other participants in this group discussion will hear your answers. Therefore, it is also your responsibility to maintain the confidentiality of fellow participants. Please do not share the discussion content with anyone beyond those who are present for the group discussion.

Although you may not directly benefit from taking part in this study, the information you provide may lead to improved understanding of the SSF industry and any gendered issues, norms and challenges faced specifically by women participants. The interview will take approximately 1 hour, and you will not be compensated for your time. There is no anticipated discomfort for those contributing to this study. If you agree to participate, you can choose to stop at any time or to skip any topics you do not want to answer. Your participation is entirely voluntary.

Do you have any questions about the study or what I have said?

If, in the future, you have any questions or concerns regarding the study and the interview, or if you wish to add additional details, we welcome you to contact Chair of Includovate’s internal ethical review board: sujata@includovate.com. We will leave one copy of this form with you, so that you will have a record of this contact information and about the study.

Do you agree to participate in this study?

[If YES, indicate below that the oral informed consent has been obtained. Then proceed with the question below regarding audio recording. If they refuse, thank them for their time and cancel the interview.]

Oral informed consent received

Do you agree for your responses to be recorded?

[If YES, indicate below. If participant responds “NO”, proceed with the interview without recording.]

Consent to manual record of interview responses received

Signature of interviewer: _____ Date: ____/____/____

Location of respondent: _____

Mode of interview: (e.g., face to face, telephone, zoom) _____

Background information:

WorldFish's mission is to reduce poverty and hunger by improving fisheries and aquaculture. Gender equality is integral to World Fish achieving its goals and advancing [#Agenda2030](#). World Fish has a responsibility to its partners to capture and communicate the impact of its work on men and women, girls and boys and communities at large. Moreover, gender equality contributes to inclusive growth and sustainable development (Madgavkar 2020). The study of, and advocacy for, women’s empowerment is necessary because the causes and consequences of low levels of empowerment can be found to limit women’s opportunities (Malhotra and Schuler, 2005) and many policies and programs aim to increase empowerment (Alsop and Heinsohn, 2005) but evidence of their success is lacking (Springer and Druzca 2019). From a research for development perspective, this research facilitates greater awareness of

what women's empowerment is and is not in a given context, and importantly sets a new standard regarding the quality through which researchers can 'claim women's empowerment.' WorldFish is dedicated to ensuring the alleviating of women as an excluded group in the SSF industry to be improved and made equal.

Deepening Phase Tool 3: Historical Timeline and Social Norms Change

Activity 1: Historical Timeline

Activity 2: Mapping of Changes in Gender Norms

This tool has two activities. The historical timeline and mapping of changes in gender norms should provide valuable contextual information on the major events the community has collectively experienced, and how these events are implicated in the current SSF practices of men and women in the community. The findings from this tool can inform questions in IDIs that can probe around specific events/changes that have occurred that are of particular relevance to the current system and anticipated changes in the future.

HISTORICAL TIMELINE AND MAPPING OF CHANGES IN GENDER NORMS	
Purpose	To document changes in gender norms in a given time frame based on past, present, and anticipated future changes, and document people’s experiences and pathways of change within the value chain. Research question(s) addressed: RQ1, RQ2
Respondents	The target population are women and men working in the fish sector as catchers, collectors, retailers, and processors.
Sampling	Rural: 2 FGDs groups, 1 all-women group and 1 all-men group. Recommended sample size: Approximately 10-15 individuals per group. ¹¹
Type of Data and Info	Qualitative data: visual map of community-produced timeline that illustrates key events and gender changes across time that have influenced/are influencing people’s notions, experiences, and pathways of gender norm change.
Strengths of The Tool	Provides a community-driven baseline of their conceptualization of key events and gender changes over time to further contextualize the emergence of different notions of empowerment
Weaknesses of The Tool	Literacy and confidence in presenting ideas visually may limit the ability for the group to fully engage in the mapping the timeline.

Table 23 Summary of the FGD Activity 2

A. Circumstances

This workshop should have one interviewer and one notetaker. Materials such as a flipchart, markers, pens, sticky notes are needed for the activities and the materials needed for data collection include an audio recorder, notebook/pen, or device for manual notes. If there is a community leader in the group, invite them to have a semi-structured interview instead (so they do not hijack the group discussion).

¹¹ Sampling for FGDs should be based on approximate stratification of the community by geographic location, relative wealth and positioning within the community and cross-checking with local experts (Cavestro 2003). For example, consulting with local experts to identify salient wealth categories at community level (e.g., using roofing materials as proxies for wealth categories, such as iron, wooden, and bamboo/grass to indicate rich, average, and poor households) can also produce meaningful representation. As opposed to seeking maximum representation, the FGD approach tends to emphasize the importance of “identifying poor, marginalized and vulnerable people and giving them a voice” (Leurs 1996: 66). A sample size of approximately 10-15 individuals per group is the original suggested size (Chambers, 1994), but this should be viewed as flexible depending on the budget and time constraints of the study. A sample size of 10-15 participants is larger than the average sampling parameters of a focus group, but not too large to ensure that each member is able to have their ideas seen and heard within the confines of the workshop. The recommended 2 FGDs groups of women and men for each activity should be viewed as the minimum number - additional FGD groups should be considered if saturation/information power has not been obtained.

B. Facilitating and Conducting

Introduce the purpose of the study at the beginning of the FGD and obtain informed consent (both consents to being interviewed and consent to being audio-recorded). After obtaining informed consent the following table should be filled out by the notetaker:

Venue:	
Group:	
Date and Session:	
Note Taker:	
Facilitator:	

FGD Members	Number of Participants
Men	
Women	
Youth	
Elderly	
Disabled	

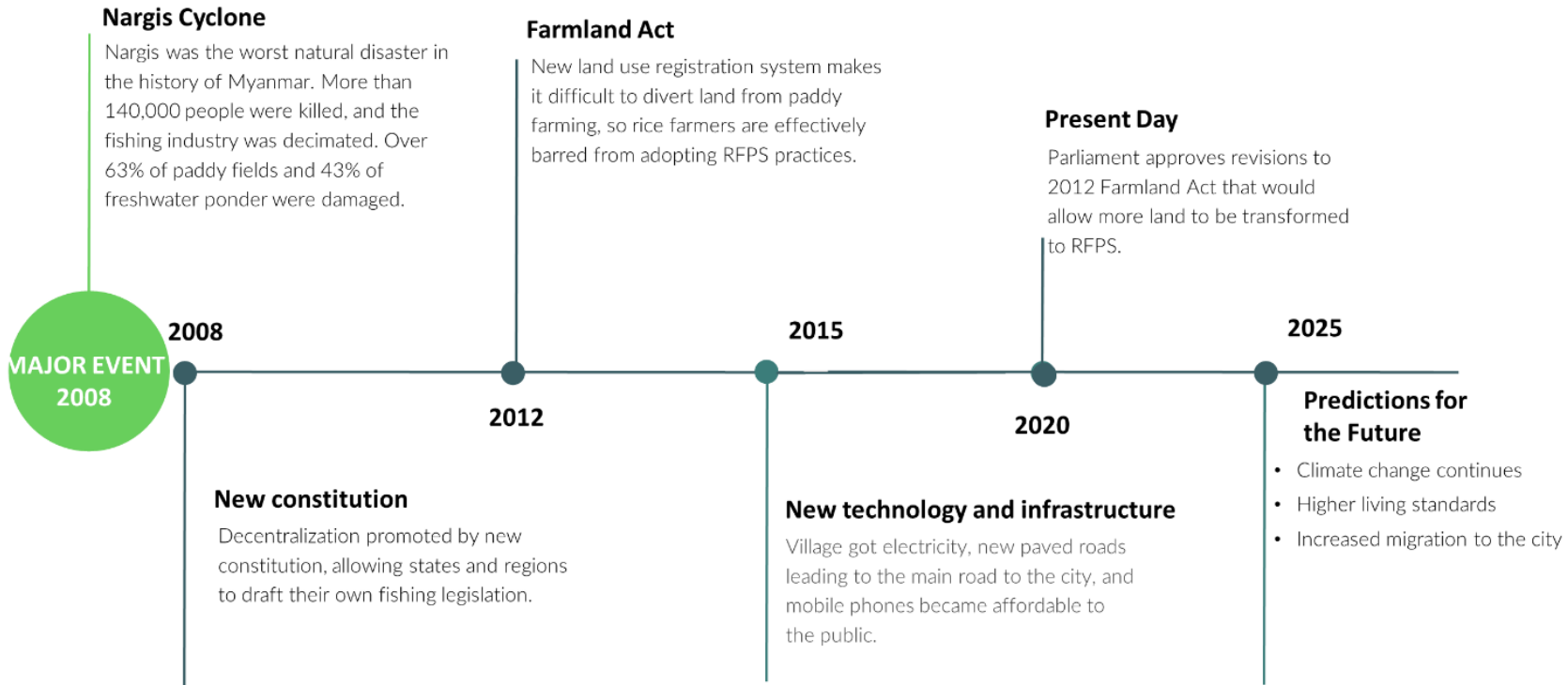
Activity 1 Historical Timeline

Step 1: Identify a member of the FGD as the first ‘artist’ and ask them to draw a timeline that begins at the present moment and extends into the past and future. While ideally, a group will have multiple artists to add to the timeline, depending on the comfortability of the group with sharing their thoughts visually, the facilitator may need to take on this role.

Step 2: Ask the group what the key events have been since the beginning of the timeline. Individual responses will vary per group but try to include all key events mentioned. If there is a singular event in time that can be identified as a “major event” label it on the timeline and start mapping other events from that point in time. An example of a completed historical timeline from a rural fishing community in Myanmar is listed below, with the major event of the Nargis Cyclone as the starting point.

Historical Timeline

Example from Myanmar Pilot



Step 3: As the group is populating the timeline, ask questions around these key events and moments in time, being sure to capture information on how men and women were involved and effected at the time. These questions include:

1. Specifically probe for how 'power over' attributes were implicated in each of the key events. These include control over assets; control over land/fisheries; and control over other's lives (e.g., power relations between the government and fishers, power relations between fishers and inland fisheries managers/owners).
2. What have been the positive impacts of these events? Have the impacts been different for women and for men? If so, how? If not, why not?
3. What have been the negative impacts of these events? Have the impacts been different for women and for men? If so, how? If not, why not?
4. Who in the community has been the most negatively impacted by this event? Why?
5. Who in the community has most benefitted from these events? Why?
6. Given everything that has happened up until now, what are your predictions for the future of this community?

Tip 1: Before closing Activity 1, ask the participants if there are any other events they would like to add to the timeline or any additional information they would like to provide on an event that is already on the timeline.

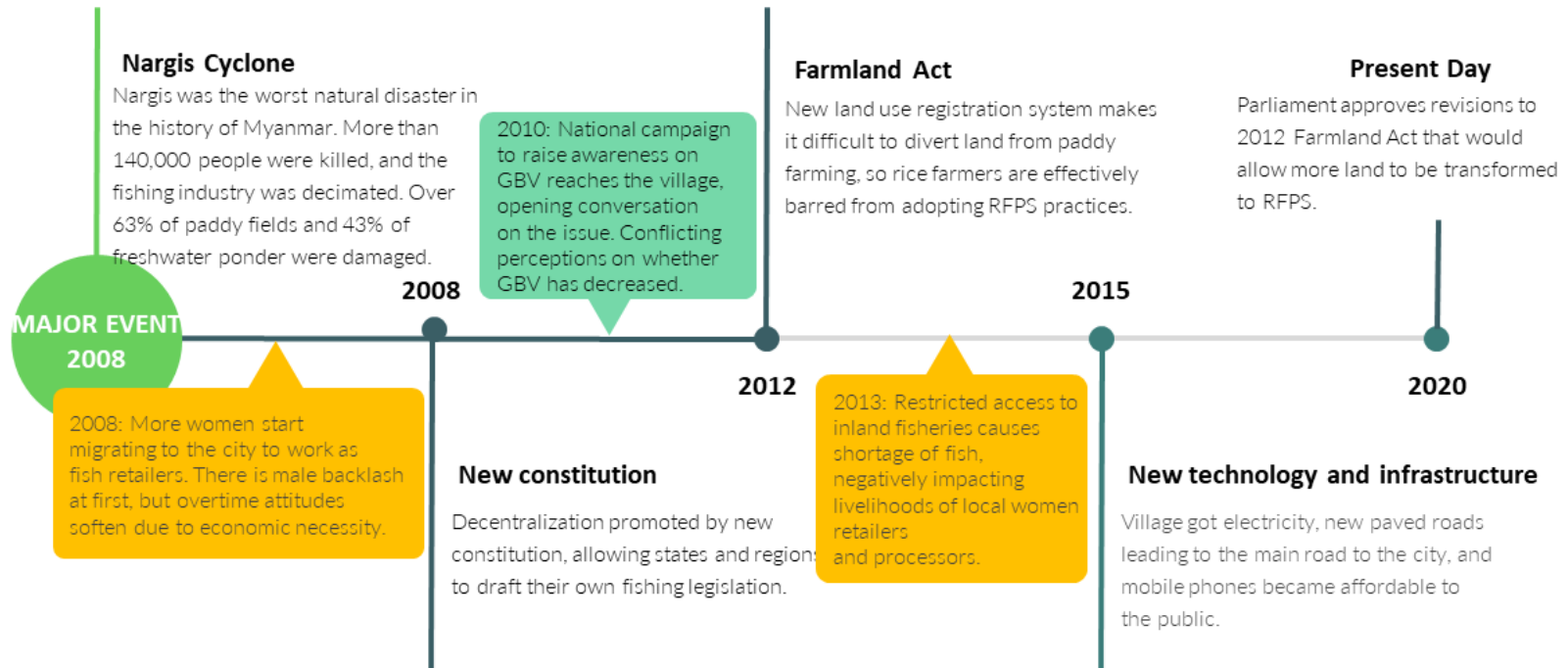
Tip 2: If doing Activity 2 immediately after Activity 1, it is advisable to have a refreshment break. Provide drinks and snacks to participants and let them make some calls and use the bathroom before continuing. Be sure to set a time limit to ensure participants stay focused and committed to returning to the activity.

Activity 2 Changes in Gender Norms

Step 1: When the group has re-convened after the refreshment break, introduce the purpose of the second activity: Now that the group has mapped out the key historical events and their impacts on women and men, the facilitator can probe deeper into how gender norms have changed over the historical timelines, and to discuss issues directly related to people's experiences and pathways of change within the SSF system over that time, plus get their perspectives on anticipated future changes. This activity will require sticky notes and pens/markers to write down the specific changes in gender norms and apply them to the historical timeline. An example of a completed historical timeline with changes in gender norms mapped onto it is listed below.

Mapping changes in gender norms

Example from Myanmar Pilot



Step 2: Begin by asking how women's and men's roles in the community have changed since the "Major Event" identified in Activity 1. Use the following questions to guide the activity:

1. Have women entered new professions/started engaging in new livelihood activities since the major event? What about in the time before the major event? Have men experienced the same changes or different changes? Please, describe these changes.
2. Have the day-to-day activities of women and men changed since the major event? In what ways? Have these changes had a positive or negative impact on the community? Why?
3. Are the expectations of what women and men are 'supposed to do' the same now as they were at the time of the major event? What about in comparison to the time before?
4. Can you tell me about women leaders in your community (probe: could be from the past or present)? What were the types of changes they helped start? What changed? What enabled the change to happen? What have been the implications of the change(s)?
5. What have been some of the challenges that women and men have faced in relation to their roles in the SSF system over the timeline? Do you think these challenges will be the same in the future?
6. Have issues like gender-based violence and women's mobility changed since the "Major Event"?

Tip 1: If additional probing is needed to kickstart the conversation on identifying key changes in gender norms, ask, what have been the changes and trends in the environment, economy, and/or technologies and ask how different types of women and men have been affected by these changes?

Tip 2: In addition to capturing the gender norm changes on the timeline, make sure the notetaker is taking detailed notes of the discussion. If consent for audio recording was obtained at the beginning of the workshop, ensure the facilitator and notetaker listen to the recording in transcribing and/or summarizing the data.

C. Adaptations

This tool can be adapted to the local context as necessary. For example, if group participants do not feel comfortable adding to the timeline themselves, the facilitator can take over this role. It is recommended that the facilitator familiarize themselves as best as possible with the history of the community through existing literature, so they can probe for additional key events in case they are not brought up (for example, potentially controversial issues related to government regime changes).

Further adaptations can be made to the sampling frame, which can be adapted to urban populations if the case study is specifically focusing on nodes of the VC that are non-rural. The recommendation is to hold 2 FGDs groups, 1 all-women and 1 all-men. This may require additional coordination through local partners to organize participants, so be sure to plan far enough in advance to ensure this is possible (e.g., 2-3 weeks in advance).

G. Tips and Tricks for Using the Tool

Existing power dynamics within communities can be reinforced in these activities if there is no direct intervention from the facilitator. Power dynamics within the FGD may mean some participants do not feel comfortable speaking out and/or voicing perspectives that are different from the more outspoken/dominant/relatively more powerful members of the group. The facilitator should be cognizant of these dynamics throughout the activity, and try to elicit participation from as many people as possible. As opposed to calling on specific individuals within the group, try asking questions aimed at the different intersectional groups, e.g., *"What do the younger members of the group think? Have you*

had experiences with these changes or not? Have you experienced different changes? If so, can you please share with us?”

D. Analysing the Data

The following questions should guide the analysis:

- How were women and men involved in the key events and gender changes that have taken place?
- What were the gendered implications of these changes?
- Open-ended organizational and substantive coding is recommended.¹² This is a deductive coding structure, where the researcher identifies recurring themes and concepts that become categories through the coding process (known as organization coding). Subthemes are then created to identify the relevant key concepts and issues identified by the participants (known as substantive coding). All codes should be revisited to identify significant data that addresses the case study’s research questions.

E. Interpreting the data

In interpreting and presenting the results of the activity, the researcher should prioritize representing the trends and variations found. In addition to the researcher’s own analysis, the expectation is to also draw upon direct quotations where possible to express the emergent findings and to give greater voice to research participants themselves in representing the issues.

The goal of these activities is to produce a community timeline of historical key events and the accompanying gender changes that have occurred, and how these changes are implicated in the current SSF system and how they could be implicated in transitions to other types of systems (e.g., from open-access fishing to aquaculture).

F. Informed consent statement

ORAL INFORMED CONSENT

Historical Timeline Workshop

Exploring Women’s Empowerment in Small-Scale Fisheries

Client: WorldFish

Research firm: Includovate

Lead researcher: Dr. Kristie Druzca kristie@includovate.com

Thank you for the opportunity to speak with you. My name is I am from a research incubator called Includovate which is a social enterprise that innovates for inclusion. WorldFish has contracted Includovate to conduct a collaborative study on women’s empowerment in small-scale fisheries (SSF). We would like to interview you about your experiences within the industry.

In order to maintain safety during COVID-19, we kindly ask that you maintain social distancing measures of staying apart at least 1.5m and wearing a face mask. However, your views and opinions are still very

¹² See Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications for additional guidance on coding options.

important for us, hence we are still conducting this walk. We hope that things will go back to normal very soon and appreciate you agreeing to social distancing and a face covering.

We received your contact details through WorldFish who commissioned this methodology because momentum around sustainable aquatic development pathways is growing and because WorldFish does not want to exclude women participants. They may have received your details from their own contacts and networks. You have been chosen to be interviewed because you are a woman or man working in the fish sector as catchers, collectors, retailers, and processors. You will be asked questions about changes in gender norms in a given time frame which will allow us to document this data and better analyse our research topics.

We ask for your support by answering questions as honestly and fully as possible – there are no right or wrong answers. We just want to know your actual experiences, opinions, and the challenges you face in order to understand how to improve the program. Your answers will be completely confidential. During the interview, we will be taking notes, and with your permission, we would like to audio record the discussion. These materials will be kept completely confidential and any personal identifying information will not be used in any reports, publications, or presentations resultant from this research.

Other participants in this group discussion will hear your answers. Therefore, it is also your responsibility to maintain the confidentiality of fellow participants. Please do not share the discussion content with anyone beyond those who are present for the group discussion.

Although you may not directly benefit from taking part in this study, the information you provide may lead to improved disability programming. This group discussion will take approximately 1-2 hours and you will not be compensated for your time. There is no anticipated discomfort for those contributing to this study, so risk to participants is minimal. If you agree to participate, you can choose to stop at any time or to skip any topics you do not want to answer. Your participation is entirely voluntary.

Do you have any questions about the study or what I have said?

If, in the future, you have any questions or concerns regarding the study and the interview, or if you wish to add additional details, we welcome you to contact Dr Sujata Ganguly who acts as Chair of Includovate’s internal ethical review board is sujata@includovate.com. We will leave one copy of this form with you, so that you will have a record of this contact information and about the study.

Do you agree to participate in this study?

[If YES, indicate below that the oral informed consent has been obtained. Then proceed with the question below regarding audio recording. If they refuse, thank them for their time and cancel the interview.]

- Oral informed consent received

Do you agree to be audio recorded?

[If YES, indicate below. If participant responds “NO”, proceed with the interview without recording.]

- Consent to audio record interview received

Signature of interviewer: _____ Date: ____/____/____

Location of respondent: _____

Mode of interview: (e.g., face to face, telephone, zoom) _____

Background information:

WorldFish's mission is to reduce poverty and hunger by improving fisheries and aquaculture. Gender equality is integral to World Fish achieving its goals and advancing [#Agenda2030](#). World Fish has a responsibility to its partners to capture and communicate the impact of its work on men and women, girls and boys and communities at large. Moreover, gender equality contributes to inclusive growth and sustainable development (Madgavkar 2020). The study of, and advocacy for, women's empowerment is necessary because the causes and consequences of low levels of empowerment can be found to limit women's opportunities (Malhotra and Schuler, 2005) and many policies and programs aim to increase empowerment (Alsop and Heinsohn, 2005) but evidence of their success is lacking (Springer and Druza 2019). From a research for development perspective, this research facilitates greater awareness of what women's empowerment is and is not in a given context, and importantly sets a new standard regarding the quality through which researchers can 'claim women's empowerment.' WorldFish is dedicated to ensuring the alleviating of women as an excluded group in the SSF industry to be improved and made equal.

Deepening Phase Tool 4: Aspirations

This focus group discussion is all about understanding the aspirations and dreams of respondents. Knowing this will help ask respondents what they might need to do to achieve their dreams, and if anyone stands in their way. As such it documents women’s strategic freedoms and potential pathways towards these.

ACTIVITY 3: ASPIRATIONS EXERCISE	
Purpose	To document the trajectories and pathways of women’s empowerment in the community by eliciting their personal visions for the future and how they conceptualise their strategic freedoms. It also addresses the multi-level and multi-relational aspects of aspirations by discussing how people’s visions are situated within societal structures, interpersonal relationships, and norms. Research question(s) addressed: RQ1, RQ2
Respondents	Women and men working in the fish sector as catchers, collectors, retailers, and processors.
Sampling	6 FGDs, two all-women and two all men group and two mixed sex groups. Recommended sample size: Approximately 10-15 individuals per group.
Type of Data and Info	Qualitative data: explores how men and women see themselves in their current life/social positionings and identifies possible trajectories and pathways to empowerment.
Strengths of The Tool	Provides multi-level and multi-relational information on how women and men envision empowerment as both an ‘end goal’ and pathway.
Weaknesses of The Tool	Eliciting pathways to empowerment specifically within the SSF can be complicated if participants’ aspirations, dreams and goals for themselves and the future are to leave the SSF sector.

Table 24 Summary of the Aspirations Activity

A. Circumstances

This should have one interviewer and one notetaker. Materials such as a flipchart, markers, pens, sticky notes are needed for the exercise and the materials needed for data collection include an audio recorder, notebook/pen, or device for manual notes.

B. Facilitating and Conducting the tool

Introduce the purpose of the study at the beginning of the FGD and obtain informed consent (both consent to being interviewed and consent to being audio-recorded). After obtaining informed consent the following table should be filled out by the notetaker:

Venue:	
Group:	
Date and Session:	
Note Taker:	
Facilitator:	

FGD Members	Number of Participants
Men	
Women	

Youth	
Elderly	
Disabled	

Today we will discuss qualities that help you overcome challenges and that you admire, your dreams for the future, and for that of your children.

1. Tell me a story about a time when you faced adversity in your life and overcame it?
 - a. What happened, who was involved and who/what helped you to overcome the challenging time/situation?

Tip: Sometimes people are initially reluctant to speak and express their opinions. You may want to call upon someone to start. You may want to share a story from your own life as a way to encourage people to share.

2. With this next activity I would like to go around the room and hear from everyone and then write their answers on a flip chart. Can you tell me what you hope your son will be like (achieve) in adulthood?
 - a. Ask if anyone else has the same ambition for their son, and hopefully a discussion and some laughter between respondents around hopes for their son will ensue.
3. Then ask the same questions for their daughters - Can you tell me what you hope your daughter will be like (achieve) in adulthood?
 - a. Ask if anyone else has the same ambition for their daughter, and hopefully a discussion and some laughter between respondents around hopes for their daughters will ensue.
4. Comment on whether participants are more excited to think about their son’s future or their daughter’s future – and ask if your observation is correct and why that is the case (probe: do men have more opportunities than women, does a daughter or son (or in law) look after you more)?
5. If no one mentions their current profession in fish, then ask if they would like their son or daughter to follow in their footsteps in the fish industry.
 - a. If a different activity, why? What would their child achieve by pursuing such an activity?
 - b. What would they need to achieve this profession in the future? How would they be able to accomplish this?
 - c. If the same fish activity, why? And what would you advise them about working in fish?
6. I would like to go around the room and make a list of everyone’s visions for the future? (prompt: where would you like to be financially, socially, in your career, in your family in 10 years’ time) *Write the responses on a flip chart and discuss each one and make sure what everyone means is clear.*
7. Then ask who wrote this one (if you don’t remember)? (read it out for anyone who is illiterate) And ask them what change would need to happen for this to be achieved/ would contribute most to making that change happen?
8. Then ask about who are the change agents that can help make it happen (see table below).

Tip: If there is time, then add a column to the below table and ask what might prevent this vision/dream/change from occurring.

10 year future state/vision	What change needs to happen	Change agent
-----------------------------	-----------------------------	--------------

	to realise this vision	
I want to earn more money and feel financially safe. I would like to have a job in an office and not sell fish anymore.	Get a college degree	Self – has to study hard
My children will go to university.	Save money for tuition	Husband, self and children
I will get a market stall in a big market and sell twice as many fish and make twice as much money.	Save money. Find the price of stall, take loan	Self & micro finance company

9. Imagine your daughter/son is all grown up. Is there a woman/man in your community that you hope your daughter becomes like?
 - a. Who is it (Is it yourself?)
 - b. What qualities does this woman/man have that you would like to see in your daughter/son?
10. Imagine a rich philanthropist (you can also use the name of a famous person that most people know like a singer, film star or sportsperson) visited your village/town and said they would give \$100 to the household that was the most gender equal when then returned in 4 weeks. What would your household do to win that money?
11. Imagine a rich philanthropist visited your village/town and said they would give \$1000 to the household that was the most gender equal when then returned in 4 weeks. What would your household do to win that money?
12. Do you want your household to be more gender equal even if there wasn’t a rich philanthropist offering you money? Why/why not?

C. Adaptations

A number of tips are present throughout the tool which can be considered adaptations. The facilitator will need to read the room to see how fatigued people are, and the rapport and energy of the participants. Ideally all questions will be covered. But these additions can be skipped if time and energy will not permit them. We do not want our participants to feel tired or drained after such a workshop.

Tip: It can be emotional for some people to talk about their future or their children, or when/how they overcame diversity. If people cry during the FGD or show strong emotions that represent dis-ease, please pause the focus group and focus on the participant’s feelings. Let them know they do not have to continue the FGD, or that story if it is upsetting.

D. Tips and Tricks for Using the Tool

During the pilot study a clear external locus of control was found. There were strong cultural beliefs raised about success/personality:

- Wealth is associated with past lives/religion
- Empowered women are “just born that way” (in-born drive)
- Past lives/fate are associated with their future and aspirations.
- Their children’s personality and success were already determined.

In terms of gender norms, it was heard that you cannot have two people in a relationship be ‘powerful’ (e.g., ‘power couples’ do not exist). Thus, one must always be above. These observations were more challenging to interpret during the scoping phase. However, during the deepening phase these nuances became more obvious.

However, reconciling how aspirations change over time when everything is pre-determined and why education for their children could actually change fate, along with social relations was challenging to explore/comprehend and required non-judgemental facilitation.

E. Analysing the data

The following questions should guide the analysis:

- What do women’s and men’s aspirations for themselves and their children indicate about pathways to empowerment over time?
- What qualities related to empowerment do role models in the community possess?
- How are men’s and women’s aspirations connected to fish as a livelihood?

F. Interpreting the data

In interpreting and presenting the results of the FGD, the researcher should prioritize representing the trends and variations found. In addition to the researcher’s own analysis, the expectation is to also draw upon direct quotations where possible to express the emergent findings and to give greater voice to research participants themselves in representing the issues.

G. Informed consent statement

ORAL INFORMED CONSENT

Aspirations Exercise

Exploring Women’s Empowerment in Small-Scale Fisheries

Client: WorldFish

Research firm: Includovate

Lead researcher: Dr. Kristie Druzca kristie@includovate.com

Thank you for the opportunity to speak with you. My name is I am from a research incubator called Includovate which is a social enterprise that innovates for inclusion. WorldFish has contracted Includovate to conduct a collaborative study on women’s empowerment in small-scale fisheries (SSF).

Ideally, we wanted to meet you and ask these questions face to face. But we cannot visit you because of COVID-19. However, your views and opinions are still very important for us, hence we are asking you these questions over the phone. We hope that things will go back to normal very soon, and that one day we will get to meet you in person.

We received your contact details through WorldFish who commissioned this methodology because momentum around sustainable aquatic development pathways is growing and because WorldFish does not want to exclude women participants. They may have received your details from their own contacts and

networks. You have been chosen to be interviewed because you are a woman or man working in the fish sector as catchers, collectors, retailers, and processors. We will ask you questions related to your aspirations, dreams and personal vision of your future.

We ask for your support by answering questions as honestly and fully as possible – there are no right or wrong answers. We just want to know your actual experiences, opinions, and the challenges you face in order to understand how to improve the program. Your answers will be completely confidential. During the interview, we will be taking notes, and with your permission, we would like to audio record the discussion. These materials will be kept completely confidential and any personal identifying information will not be used in any reports, publications, or presentations resultant from this research. Demographic questions and the responses to any gendered questions will only be used for disaggregation and cannot be tracked back to the respondent.

Although you may not directly benefit from taking part in this study, the information you provide may lead to improved understanding of the SSF industry and any gendered issues, norms and challenges faced specifically by women participants. The interview will take approximately 1 hour, and you will not be compensated for your time. There is no anticipated discomfort for those contributing to this study. If you agree to participate, you can choose to stop at any time or to skip any topics you do not want to answer. Your participation is entirely voluntary.

Do you have any questions about the study or what I have said?

If, in the future, you have any questions or concerns regarding the study and the interview, or if you wish to add additional details, we welcome you to contact Dr Sujata Ganguly who acts as Chair of Includovate's internal ethical review board is sujata@includovate.com. We will leave one copy of this form with you, so that you will have a record of this contact information and about the study.

Do you agree to participate in this study?

[If YES, indicate below that the oral informed consent has been obtained. Then proceed with the question below regarding audio recording. If they refuse, thank them for their time and cancel the interview.]

Oral informed consent received

Do you agree to be audio recorded?

[If YES, indicate below. If participant responds "NO", proceed with the interview without recording.]

Consent to audio record interview received

Signature of interviewer: _____ Date: ____/____/____

Location of respondent: _____

Mode of interview: (e.g., face to face, telephone, zoom) _____

Background information:

WorldFish's mission is to reduce poverty and hunger by improving fisheries and aquaculture. Gender equality is integral to World Fish achieving its goals and advancing [#Agenda2030](#). World Fish has a responsibility to its partners to capture and communicate the impact of its work on men and women, girls and boys and communities at large. Moreover, gender equality contributes to inclusive growth and

sustainable development (Madgavkar 2020). The study of, and advocacy for, women's empowerment is necessary because the causes and consequences of low levels of empowerment can be found to limit women's opportunities (Malhotra and Schuler, 2005) and many policies and programs aim to increase empowerment (Alsop and Heinsohn, 2005) but evidence of their success is lacking (Springer and Druca 2019). From a research for development perspective, this research facilitates greater awareness of what women's empowerment is and is not in a given context, and importantly sets a new standard regarding the quality through which researchers can 'claim women's empowerment.' WorldFish is dedicated to ensuring the alleviating of women as an excluded group in the SSF industry to be improved and made equal.

Deepening Phase Tool 5: In Depth Interviews (IDI)

This in-depth interview is part life history and needs to be understood as probing ‘pathways’, which means being more explicit about what contributed to empowerment or disempowerment. In each of the questions, the researcher(s) should probe for who and what enabled or constrained women’s (and men’s) power and freedoms to make important life decisions. This might include people/relations, experiences, networks, policies, programs, crises, and self-belief/agency.

IN-DEPTH INTERVIEWS (IDIs)	
Purpose	<p>The questions in the IDI tool focus on understanding the different pathways women take towards empowerment and who and what helps them along their journey. This tool will inform endogenous understandings of women’s empowerment and changes over time.</p> <p>Research question(s) addressed: RQ1; RQ2</p>
Respondents	<p>It is recommended that 6 life histories are recorded with 3 younger women (25-35) and 3 older women (35-65) at different nodes of the value chain in a rural area, and another 6 should be completed in an urban area.</p>
Sampling	<p>Non-Probability Sampling – Purposive Sampling done in consultation with context-appropriate local partners/organisations/experts to select respondents from the intersectional groups prioritized for the individual study.</p> <p>To fully capture the spectrum of life histories, it is important to capture IDIs from relatively younger and relatively older generations of women. Sampling size will be largely determined by the saturation point required to collect the information needed for the study.</p>
Type of Data and Info	<p>Qualitative data: Rich narratives on women of different generations’ pathways/journeys to empowerment.</p>
Strengths of The Tool	<p>Allows in-depth probing of women’s and men’s pathways to empowerment and identifies possible factors towards empowerment.</p>
Weaknesses of The Tool	<p>Can be difficult to isolate individuals for interview, due to domestic, productive or community responsibilities that constrain time and availability for interview.</p>

A. Circumstances of Interview

The IDIs should have one interviewer and one notetaker. Materials such as an audio recorder, notebook, and a pen as well must be provided for the exercise.

The questions focus on understanding the different pathways women take towards empowerment and who and what helps them along their journey. We also want to understand changes in empowerment over time. This tool needs to be understood mainly as probing ‘pathways’, which means being more explicit about what contributed to empowerment or disempowerment? In each of these, probe for who and what enabled or constrained women’s (and men’s) power and freedoms to make important life decisions. This might include people/relations, experiences, networks, policies, programs, crises, self-belief/agency., etc. As such, you will need to probe to see if it was:

- Due to internal (to the respondent) drivers (agency), versus/combined with external (to the respondent) drivers, including (existing or changes in) relations or structures (attitudes, norms; policies).
- Probe to see what the mechanisms were that caused the changes above (including if it was a program, an experience such as becoming a 'head of household' due to migration, evolution of community norms, or other)
- And try to identify in the above specifics of how this interacted with access to and control over resources, including information, technologies, finance, with care and time burdens, or other factors

B. Facilitating and Conducting the tool

Start with introductions, purpose, and permissions (as per ethics protocols) including that all will be made anonymous. Clarify that the questions you will ask are about the respondent (not their family), that there are no 'right or wrong' answers etc.

C. Facilitating and conducting the IDIs:

	Building block/theme	Question/Tool
1	<p>Overall story: Who is the respondent and how did they come to be in the place, work, and situation? What is their self-perception/identity? Do they have an internal/external locus of control?</p>	<p>1. Please tell me the story of your life (...‘who are you’, what is your family background, and how did you come to be living here and working in this sector/ livelihood?) (Prompt if she does not cover her age, number of children and marital status) <i>Probe:</i> How would you describe your wealth status? How would you describe your health and nutrition status? And family situation/marital status (so we can interpret all below)</p> <p>2. I am going to ask you two questions and I would like to know which one you most agree with and why: a. “Each person is primarily responsible for his/her success or failure in life.” b. “One’s success or failure in life is a matter of his/her destiny/luck.”</p> <p>3. Who do you admire or look up to because you consider them a role model? <i>Probe:</i> Are there exemplary people who inspire your daily conduct? e.g., religious and community leaders, relatives, in-laws, neighbours, model farmers, etc. What attributes does this person have that you would like to emulate? Why would you like these attributes?</p> <p>4. Does anyone admire you or consider you a role model? <i>Probe:</i> Who/why?</p>
2	<p>What are your important life changes /desires and who has power over them? Power to</p>	<p>5. What has been the most significant change in your life? <i>Probe</i> to understand enablers/ constraints, who was involved? How did you cope during this period of change? (Who or what supported you?)</p> <p>6. What important things in your <i>life</i> would you like to see change? (e.g., quality of relationships, control over resources, workload, or labour situation, solve personal problems, get more education and/or training, make home improvements, etc.) <i>Probe:</i> Who would have the power to make that change happen? Who would prevent that from happening?</p> <p>7. What are the main difficulties that you feel might prevent these changes from occurring? (it could be a lack of funds, social support, feeling too old or to have low status, etc.) <i>Probe:</i> How much of making that change is within your control? (You? Others? Why/not?)</p>

3	<p>Concerns and ability to address them Power to, power within</p>	<p>8. What do you worry most about? (what keeps you awake at night/are the main stresses in your life) 9. How much can you do to address these worries/stresses versus how much are they out of your control? <i>Probe:</i> Under whose control? How much can others influence what you do? <i>Probe:</i> If they have control to change things ask, why don't they take steps to change this?</p>
4	<p>Life aspirations and what needed to get there?</p>	<p>10. What outcomes would you like to see for yourself in 5 years? a) Is this achievable? b) Why/why not? <i>Probe</i> to understand enablers/constraints 11. What future would you like your children to have? [Life and work] a) Is this achievable? b) Why/why not? 12. What advice would you give to your children so they can have a better life than you? 13. What advice would you give your younger self to make your life better at your age? <i>Probe:</i> Is this advice realistic/achievable?</p>
5	<p>Abilities in things that matter Power within self</p>	<p>14. In your work, what are things that you are good at? What enabled you to become good at these things? <i>Probe:</i> how did you acquire these skills? Through someone, extension, formal education, watching/mimicking others? 15. In your work, what things (that matter to you) that you are not good at but wish you were? What has stopped you from becoming good at them? <i>Probe:</i> relations, ideas, self-belief 16. In your work, what don't you know how to do but wish you did because then you would feel more content/competent or become more successful? <i>Probe:</i> What would be needed in order for this to happen – within your control? That is controlled by others (people, programs, policies, other)?</p>
6	<p>Solving problems related to livelihoods (power to)</p>	<p>17. What are the main challenges you have faced in your work as a [e.g., fish retailer]? E.g., transport, etc 18. To what extent have you been able to solve these challenges? How? (Which yes, which no –why?) 19. How confident are you in yourself that you will be able to solve challenges that will arise in the future in your work? Why/why not? Tell me about a time in your life when you did not have enough time in the day to fulfil your daily duties? (Prompts: what was going on in your life at the time? How long did this period of time last? What brought an end to this business? Did you ask for help? From whom?)</p>
7.	<p>Relationships Power with (relations)</p>	<p>20. Which relationships have been most important in contributing to your ability to live the life you want/make the choices you want? <i>Probe:</i> it could be your spouse, parents, friends, children, women's group/association, etc 21. Do you feel able to live up to their expectations? Why/why not <i>[Note shift here to work from life]</i> 22. Which relationships enable you to be successful in your work? Why? Which are most constraining?</p>

		<p>23. What do other family members think about your fish work? (e.g. spouse (if married), children and/or other powerful family members) <i>Probe:</i> How do you know this (how does it play out?) How do those perceptions affect you and your ability to make choices about your work [or succeed in your work?]</p> <p>24. To what extent are you connected with customers, buyers, sellers, or decision makers that shape how successful you are/aren't in your work?</p> <p>25. To what extent are you connected to/socialize with other women or men in similar work as you (e.g., through formal or informal groups?) In what ways do you help each other versus compete?</p> <p>26. Is it harder for women to make decisions and act on them at different points in their lives (e.g., before they are married, as elders in the community, when married)?</p>
8	Ability and desire to succeed in livelihood(s)	<p>27. On a scale of 1- 5 how good are you at market negotiation. Prompt: bargaining and getting a good price for your produce? <i>Probe:</i> What are some of the negotiation strategies you use? Where did you learn these?</p> <p>28. What motivated you to be in your current work(s) ("how did you end up in this job"?) <i>Probe:</i> To what extent did you have other options? Why/why not?</p> <p>29. To what extent, if any, have you been able to improve your success in/benefits from this work (e.g., new products, increasing sales, income) <i>Probe:</i> If so how and why? If not, why not? What is within their power versus outside factors</p> <p>30. How do you see yourself progressing in your current job? 'Moving up' by expanding your current activities or moving to a different job in the fish sector, or 'moving out' of the fish sector? <i>Probe:</i> Why? What is needed to make this happen? Is this in your control? Who/what controls that?</p> <p>31. What advice would you give your children if they enter the same livelihood as you?</p>
9	Wrap up, final questions	<p><i>If by the end of the interview, none of these topics have been discussed (domestic work; stress; extension/training/agriculture knowledge; access/control over finances, owning/controlling assets and resources) please ask the respondent: we haven't heard anything from you on _____ can you tell me a little bit about how this helps or hinders your progress.</i></p> <p>32. <i>Is there anything else you would like to say or ask?</i></p>

D. Adaptations

Adaptations to the instrument and adjustments will be informed and identified respectively in future iterations of the tool. Additional iterations and testing are needed to assess what questions can be skipped in future usage of the tool.

E. Tips and Tricks for Using the Tool

Note from the pilot: Capturing both rural and urban perspectives in this regard was done to take a 'systems approach' to the analysis, and the SSF value chain has clear and important linkages between the rural site (Maubin) and the urban site (Yangon). Thus, the sample strategy for the pilot chose a total of 6 women from the rural site and 6 women from the urban site.

- In Maubin (2 x fish vendors, 2 x fish paste producer, 2 x woman engaging in SSF business) AND
- In Yangon (2 x woman working as a fish 'scaler'/processor, 2 x individual fish vendor, 2 x woman manager of fish business)

Tip: While asking questions, please record the persons emotions when they answer or think about their answer. If the person requires clarification on the questions, but there is not a prompt/probe, tell them you will come back to the questions at the end. If they still do not understand the question, do not prompt, just skip the question and record that this happened.

F. Analysing the data

The following questions should guide the analysis:

- What are the different pathways people take towards empowerment and what helps them along their journey?
- Who and what enabled or constrained women and men's power and freedoms to make important life decisions?

The coding structure can be deductive based on the building block/themes described in the tool, with further inductive codes identified based on recurring themes in the emergent data.

G. Interpreting the data

In interpreting and presenting the results of the IDIs, the researcher(s) should prioritize representing the trends and variations found amongst the participants. In addition to the researcher's own analysis, the expectation is to also draw upon direct quotations where possible to express the emergent findings and to give greater voice to research participants themselves in representing the issues.

H. Informed consent statement

ORAL INFORMED CONSENT

In-Depth Interviews

Exploring Women's Empowerment in Small-Scale Fisheries

Client: WorldFish

Research firm: Includovate

Lead researcher: Dr. Kristie Druza kristie@includovate.com

Thank you for the opportunity to speak with you. My name is I am from a research incubator called Includovate which is a social enterprise that innovates for inclusion. WorldFish has contracted Includovate to conduct a collaborative study on women's empowerment in small-scale fisheries (SSF). We would like to interview you about your experiences within the industry.

Ideally, we wanted to meet you and ask these questions face to face. But we cannot visit you because of COVID-19. However, your views and opinions are still very important for us, hence we are asking you these questions over the phone. We hope that things will go back to normal very soon, and that one day we will get to meet you in person.

We received your contact details through WorldFish who commissioned this methodology because momentum around sustainable aquatic development pathways is growing and because WorldFish does not want to exclude women participants. They may have received your details from their own contacts and networks. You have been randomly chosen to be interviewed because you are a woman between the age of 25-35 or a woman between the age of 35-65. We will ask you questions related to your life histories and what personal decisions you have made that have significantly changed your life direction or otherwise.

We ask for your support by answering questions as honestly and fully as possible – there are no right or wrong answers. We just want to know your actual experiences, opinions, and the challenges you face in order to understand how to improve the program. Your answers will be completely confidential. During the interview, we will be taking notes, and with your permission, we would like to audio record the discussion. These materials will be kept completely confidential and any personal identifying information will not be used in any reports, publications, or presentations resultant from this research.

Although you may not directly benefit from taking part in this study, the information you provide may lead to improved understanding of the SSF industry and any gendered issues, norms and challenges faced specifically by women participants. The interview will take approximately 1 hour, and you will not be compensated for your time. There is no anticipated discomfort for those contributing to this study. If you agree to participate, you can choose to stop at any time or to skip any topics you do not want to answer. Your participation is entirely voluntary.

Do you have any questions about the study or what I have said?

If, in the future, you have any questions or concerns regarding the study and the interview, or if you wish to add additional details, we welcome you to contact Dr Sujata Ganguly who acts as Chair of Includovate's internal ethical review board is sujata@includovate.com. We will leave one copy of this form with you, so that you will have a record of this contact information and about the study.

Do you agree to participate in this study?

[If YES, indicate below that the oral informed consent has been obtained. Then proceed with the question below regarding audio recording. If they refuse, thank them for their time and cancel the interview.]

Oral informed consent received

Do you agree to be audio recorded?

[If YES, indicate below. If participant responds "NO", proceed with the interview without recording.]

Consent to audio record interview received

Signature of interviewer: _____ Date: ____/____/____

Location of respondent: _____

Mode of interview: (e.g., face to face, telephone, zoom) _____

Background information:

WorldFish's mission is to reduce poverty and hunger by improving fisheries and aquaculture. Gender equality is integral to World Fish achieving its goals and advancing [#Agenda2030](#). World Fish has a responsibility to its partners to capture and communicate the impact of its work on men and women, girls and boys and communities at large. Moreover, gender equality contributes to inclusive growth and sustainable development (Madgavkar 2020). The study of, and advocacy for, women's empowerment is necessary because the causes and consequences of low levels of empowerment can be found to limit women's opportunities (Malhotra and Schuler, 2005) and many policies and programs aim to increase empowerment (Alsop and Heinsohn, 2005) but evidence of their success is lacking (Springer and Druzca 2019). From a research for development perspective, this research facilitates greater awareness of what women's empowerment is and is not in a given context, and importantly sets a new standard regarding the quality through which researchers can 'claim women's empowerment.' WorldFish is dedicated to ensuring the alleviating of women as an excluded group in the SSF industry to be improved and made equal.

Deepening Phase Tool 6: Learning Journal Field Diary

See scoping phase tool 7

Deepening phase tool 7: Formal Survey

While the tool is partially inspired by the Women’s Empowerment in Fisheries Index (WEFI), this survey is not meant to be a composite index. Although this survey covers different domains of empowerment (similar to the Women’s Empowerment in Agriculture Index (WEAI), the questions are more related to strategic freedoms, are perceptions-based, and are tailored to the fish value chain (or in the case of the pilot study, the integrated Rice-Fish system). Compared to other indices for assessing women’s empowerment in agriculture (WEAI) or fisheries (WEFI), the questionnaire for the formal survey provides significantly more detailed demographic information, including data related to migration, gendered composition of households, and specific social positioning in the small scale fisheries system that enables a truly innovative, intersectional gendered analysis of survey data.

FORMAL SURVEY	
Purpose	The purpose of the formal survey is to measure to what extent men and women from different intersectional groups in the small-scale fisheries system are currently empowered (e.g., “how much” empowerment for women and men based on the different domains of empowerment). Overall, the survey tool is meant to generate robust gender analysis that goes beyond women’s economic empowerment to identify potential patterns and relationships between predictive variables for empowerment in SSF; to obtain numerical measures for attitudes towards gender, cultural and market norms; numerical measures of the perceived impacts of hypothetical changes to the SSF system. Research question(s) addressed: RQ1; RQ2; RQ3
Respondents	Women and men engaged in the SSF sector
Sampling	50% women/50% men, with 1/3 of the survey population representing de jure women-headed households. The total number of respondents will vary depending on the population size and the size of the SSF. *See tool for sample size specifications
Type of Data and Info	Quantitative data: Provides detailed numerical data across 5 domains of women’s empowerment (power within, power with, power to, power through, and power over)
Strengths of The Tool	Allows in-depth analysis of women’s and men’s pathways to empowerment. Surveys provide detailed demographic information, including data related to migration, gendered composition of households and specific social positioning in SSF system that facilitates intersectional gendered analysis of survey data.
Weaknesses of The Tool	Intersectional analysis weakens statistical significance. Pilot data is needed to assess survey’s potential weaknesses.

For a full list of comparisons between the WEFI and this formal survey questionnaire, see Table 1 below.

WEFI Survey Sections	WEFI Key Variables	This Survey Tool
<i>Identification and Demographics</i>	Key Variables: sex, age, education, total # of people in household (not gendered)	Provides significantly more detailed demographic information, including: <ul style="list-style-type: none"> • Migration variables (#years/months in current location; presence of spouse)

		<ul style="list-style-type: none"> • Gender of adult members of household • Land/landlessness • Rice production
<i>Role in household decision-making around fish-related and other activities</i>	Key variables: Participation (yes/no binary); input in decision-making (ordinal); input on decision-making related to income (ordinal)	Provides additional variables related to group participation, networks and equitable household decision-making and spousal relations (<i>Power With</i>) Provides additional variables related to skills and knowledge needed to succeed and for 'moving up'/expanding participation in fish sector, safety, conscientization (<i>Power To</i>)
<i>Access to productive assets</i>	Key variables: Decision-making and control over assets disaggregated by categorical intrahousehold selection [e.g., self; spouse; jointly; other HH member] Asset questions: Do you have asset; how acquired; how many your household has; who can decide to sell, give away or purchase	Provides variables related to access to and control over key assets (income, credit) and services (digital); (<i>Power Over</i>)
<i>Access to fisheries extension services</i>	Key variables: Met with agent in past year; # times met; gender of agent; training received (y/n); who provided	Do you have access to fisheries extension services? (<i>Power Over</i>)
<i>Individual leadership and influence in the fishing camp</i>	Key variables: Do you feel comfortable speaking in public to help decide on projects and issues affecting this [name of fishing camp] (e.g., canal clearing, fishing ban)? And to protest the use of <i>sefa-sefa</i> and other illegal fishing activities? (Likert scale)	No variables related to fishing camp leadership, but does provide questions related to more general norms around leadership (e.g., I believe that if I publicly criticized our community leaders then my spouse would be upset with me; I feel able to be a leader in my community; Women can be leaders as well as men. (Likert scale)
<i>Gender attitudes</i>	Key variables: 8 questions related to existing gender attitudes relevant within the fish value chain	Provides variables that capture locus of control and structural influences, including norms and rights (<i>Power Through</i>)
<i>Time allocation</i>	Key variables: 20 different activities tracked for time allocation; do you have enough time for leisure; who makes the decision on how your leisure time is spent	Does not collect data related to time allocation, but asks questions related to the 'meaning of time' (e.g., I feel like I have enough time to take care of myself; I feel like I get enough sleep) (<i>Power To</i>)

Table 25 Summary table of key differences between WEFI and this survey tool

A. Circumstances

Survey Target Population, Location, and Sampling Protocol

The methods package protocols regarding the appropriate selection of the target population, location and sample size are listed below.

Target population

The target population for this tool should be identical to the target population for the qualitative component of the methodology.

Location

Location selection will be contingent upon the gendered axes of intersectional disaggregation the project wants to focus on. These gendered axes of intersectional disaggregation shall be identified in Phase I and Phase II of the Methodology Package and substantiated during the cognitive interviewing tool to take place before the implementation of this survey tool. Selecting the specific geographical location for the survey will be contingent upon the specific goals of the study, whether the study is interested in one or more nodes of the supply/value chain and whether the desired gendered axes of intersectional disaggregation are available amongst the given population.

Sampling

Choosing the appropriate sampling for the survey should be decided upon 2 key factors:

- (1) Gender balance** – Respondent selection should be 50% women/50% men, with 1/3 of the survey population representing de jure women-headed households (you will need to distinguish between de-facto and de jure headed households) to allow for inter-household three-way comparisons between women and men in dual-headed households and women in women-headed households.
- (2) Balanced sample based on identified/desired intersectional categories:** Selecting an equal number of respondents based on the identified and prioritized intersectional category(ies) desired for the analyses. Recognizing that achieving statistical significance will be more difficult the more disaggregated/ "sliced" the dataset becomes, we recommend calculating sample size based on the number of desired intersectional categories for analysis. If a statistically significant sample is not possible from the given population, we recommend running descriptive statistical analyses or basic inferential statistics as opposed to multi-variate regressions to demonstrate patterns as opposed to significant relationships among variables.

B. Facilitating and Conducting the tool

Section 1: Identification

1. Household identification number (e.g., H001 numeric)
2. Name of respondent {fill in the blank}
3. Name of district/village {fill in the blank}
4. Contact details/ WhatsApp number/phone number? {fill in the blank}
5. Birthplace {fill in the blank}
6. No of years/month living in current location/village? {fill in the blank}

Section 2: Demographics for applied intersectional analysis

1. Age of the respondent (the year they were born in) {numeric-fill in the blank}
2. Which gender do you identify as? 1=male; 2=female; 99=Or please specify your gender {fill in the blank}
3. Mother tongue¹³ of the respondent {fill in the blank}
4. What is the specific part of the small-scale fisheries sector you are working in? {1=Vendor; 2=Wholesaler; 3= Processor; 4=Fisher; 99=other {specify}}
5. What activities are you involved in? {multiple choice: 1=fishing; 2=processing fish (drying/smoking); 3=fish marketing (selling/trading fish); 99=other {specify}}
6. What is your highest level of education? {1=none; 2=basic; 3=secondary; 4=vocational; 99=other {specify} or Number of years of schooling {numeric-fill in the blank}
7. What is your marital status? {single choice: 1=single, 2=married, 3=de-facto/living with partner, 4=separated from spouse, 5=divorced, 6=widowed}
8. Presence of spouse in household (migration): *If answer 2 or 3 (to Q7):* are both spouses living in the HH (vs one working away? 1= both in HH for most of the year; 2= husband away for >50% of the year; 3= wife away for > than 50% of the year; 99=other arrangement {specify}
9. Marriage type: *if answer 2:* 1= marriage of two people (e.g., wife and husband); 2= polygamous; 3= polyandrous; 99=other arrangement {specify}
10. Size of household (# of adults and kids) {numeric-fill in the blank}
11. Gender of adult members of household (gender composition of household) {single choice: 1=male and female adults; 2=female adult(s) only; 3=male adult(s) only}
12. What is the construction material of your home's roof?¹⁴ 1=Nipa Palm; 2=Zinc; 99=other specify_____}

Demographics related to rice-fish system:

Land/Landlessness¹⁵

13. Does someone in your household currently own land? {single choice: 1=yes, 2=no} If yes, what type of land? {fill in the blank}
14. Do you personally currently own land? {single choice: 1=yes, 2=no}
15. Do you personally aspire to own land if you do not have your own land? {single choice: 1=yes, 2=no}

Fish and Rice

16. How do you currently access fish? {multiple choice: 1=purchase; 2=process; 3=re-sell; 4=harvest from own land; 5=harvest from open land; 6=exchange with other goods; 7=receive as payment; 99= other {specify}}
17. Is your household currently engaged in rice production? {multiple choice: 1=yes, for home consumption only; 2=yes, with some consumed at home and some sold; 3=yes, with all rice sold; 4=no}

¹³ Asking about ethnicity can be too sensitive and political. Reframing by asking, what is your "mother tongue" and/or "religion" can usually give the same result without making respondents uncomfortable.

¹⁴ Question 12 is meant to indicate the socio-economic status of the household. Home roof construction material was chosen for this specific case as this was identified in the qualitative pilot component of the study as a meaningful local proxy for wealth. For other research contexts, we suggest drawing upon qualitative data to select socio-economic status indicators that resonate in the local context – if no qualitative data is available, we suggest adding a question in a pre-survey cognitive test.

¹⁵ Following on the general demographic data generated in questions 1-12, we suggest different research contexts have 1-3 questions to identify the respondent in relation to the priority intersectional characteristic. In this Myanmar case study example, land-landless is the primary dimension of power difference, hence these questions.

Section 3: Power and Freedom, Intrinsic Agency (Power Within)¹⁶

Power and Freedom (overall, over time)

1. On a scale of 0-5, with 0 being the lowest score (a person that cannot change their life) and 5 being the highest score (a person that has total freedom to change their life), where would you rank your ability to make important decisions about your life right now? {single choice scale 0-5}
2. On a scale of 0-5, with 0 being the lowest score (a person that cannot change their life) and 5 being the highest score (a person that has total freedom to change their life), where would you rank your ability to make important decisions about your life 10 years ago? {single choice scale 0-5}

Self-Efficacy, Aspirations and Perceived Control Over One's Life

3. For each of the following statements select one: {single choice: 1=NA/DK; 2=Strongly disagree/3=Disagree/4=Neither agree nor disagree; 6=Agree;7=Strongly agree}
 - 3a. Other members of my community, other than my household consult me for advice.
 - 3b. I know that if I try hard enough, I can do what I need to improve my family's life.
 - 3c. There are things I would like to change about my life, but I do not feel that I can.
4. If you had more ability to choose and more power in determining/changing your life, what would you do? {Fill in the blank}

Fish Specific: Aspirations in Relation to Fish as Livelihood

5. For each of the following statements select one: {single choice: 1=NA/DK; 2=Strongly disagree/3=Disagree/4=Neither agree nor disagree; 6=Agree;7=Strongly agree}
 - 5a. I worry that working in the fish sector could damage my reputation or bring me shame.
 - 5b. I feel safe travelling in the fish market by myself.
 - 5c. I aspire to one day not work in the fish sector.
6. How does engagement in fisheries relate to the expansion of life choices, successes, and aspirations? [to round out identification of factors]
 - 6a. To what extent has working in fisheries been a way FOR YOU to expand your life choices, successes/meeting your aspirations? Why/why not? {fill in the blank}
 - 6b. To what extent has working in fisheries been a way FOR OTHERS to expand their life choices, successes/aspirations? {fill in the blank and probe why same or different from you?}
 - 6c. What would need to change in the sector for work in fisheries to be a way for you to expand your life choices, successes/meet your aspirations? {fill in the blank}

Section 4: Group Participation, Networks, and Equitable HH Decision Making (Power With)¹⁷

Collective Action and Group Strength

1. Are you currently a member of a group or association? {single choice:1=yes, 2=no}

¹⁶ *Power within* refers to women's and men's consciousness – internal and psychological resources [self-efficacy, self-esteem and self-confidence], aspirations and internal beliefs.

¹⁷ *Power with* refers to collective action and group strength, social capital, networks, and solidarity, and equitable household decision-making and spousal support.

2. If you are a member of a group of association, what are the benefits of being a member? {multiple choice is possible: 1=access to loans; 2=information related to fish business; 3=gaining confidence to share my opinions; 99=other specify_____}

Social Capital, Networks and Solidarity

3. Are you currently engaged in social or business networks (e.g., buyer networks) that help you succeed? {single choice: 1=yes, 2=no}
4. In the groups that you belong to, do you feel that you have decision-making power or the ability to influence decisions? {single choice: 1=yes, 2=no}
5. Are you linked to private sector organisations that delivers seeds or other inputs for fish production? {single choice: 1=yes, 2=no}
6. Are you linked to private sector organisations that delivers seeds or other inputs for rice production? {single choice: 1=yes, 2=no}

Equitable household decision-making and spousal relations

7. If you had the choice, would you like to have more involvement than you currently do in any of the following*: 1=household budget/expenditure; 2=children's education; 3=selling household assets; 4=how you earn money
*for each, rank with 1=more involved; 2=same; 3=less involved; 4=don't know; 5=NA
8. How supportive is your partner in you working outside the home to earn an income? {single choice: 1=not supportive, 2=a little supportive, 3=very supportive, 4=does not have a partner}
9. If your partner is not supportive or just a little supportive, how do they show that they do not support you? {[multiple response is possible]: 1=by telling you it is not important/not worth it, 2=by telling you the family is more important, 3=by telling you that it's not a good idea/silly, 4=with violence, 99=other specify_____}
10. If your partner supports you, how do they show that support? {[multiple response is possible]: 1=by encouraging you in difficult situations, 2=by taking more responsibility at home, 3=by financially assisting your business, 4=by giving you ideas, 99=other specify _____}
11. For each of the following questions select one: {single choice: 1=NA/DK; 2=Strongly disagree/3=Disagree/ 4=Neither agree nor disagree; 6=Agree;7=Strongly agree}

11a. I discuss what I want for my future with my spouse

11b. My spouse trusts I can manage our household finances well
11c. I feel able to resolve disagreements with my spouse.

11d. It is a woman's role to tolerate violence in her household to keep her family together.

11e. My spouse restricts me from speaking with my parents, brothers and/or sisters.

Section 5: Skills and knowledge needed to succeed and for 'moving up'/expanding participation in fish sector, safety, conscientization (Power To)¹⁸

Knowledge and skills

1. What are the top skills you need to succeed in your profession? {fill in the blank}
2. To what extent do you have the information you need to succeed in your profession? {fill in the blank}

¹⁸ *Power to* refers to women's and men's power to act and to realize one's aspirations. The *Power to* dimension includes transformative capabilities and abilities, including knowledge and skills, awareness and conscientization, nutrition, health and bodily integrity (Hillenbrand et al, 2015: 35).

Awareness and conscientization

3. Women's awareness of their rights: Do you know of any laws that supports women's rights? {single choice: 1=yes; 2=no} If yes, specify {fill in the blank}
4. Do you feel entitled to exercise these rights? {single choice: 1=yes, 2=no}

Nutrition and Income- implications to 'power to' from changes in fish-rice systems

5. What would happen to your family's food security if you could no longer catch any fish from rice fields? {fill in the blank}
6. What would happen to your own income if you could no longer catch any fish from rice fields? {fill in the blank}

Safety

7. Can you rate your perception of safety (for yourself) in relation to the place you operate in the fish sector? (e.g., marketplace; processing place) {1=safe; 2=somewhat safe; 3=somewhat unsafe; 4=unsafe; 5=NA/DK}
8. Theft is something I worry about when moving around my community {single choice: 1=NA/DK; 2=Strongly disagree/3=Disagree/ 4=Neither agree nor disagree; 6=Agree;7=Strongly agree}

Bodily Integrity - Looking After Ones' Health and Well Being

9. Who usually makes decisions about health care for yourself? {single choice:1=respondent; 2=spouse; 3=jointly; 99=other{specify}}
10. For each of the following questions select one: {single choice: 1=NA/DK; 2=Strongly disagree/3=Disagree/ 4=Neither agree nor disagree; 6=Agree;7=Strongly agree}
 - 10a. I would prefer to be more involved in making decision about my health care.
 - 10b. Looking after my health is important.
 - 10c. I have time to take care of myself.
 - 10d. I feel like I get enough sleep.
 - 10e. My spouse's health is more important than mine.
 - 10f. I believe it is a woman's role to always meet her spouse's sexual needs.

Section 6: Access to and control over key assets (income, credit) and services (digital) (Power Over)¹⁹

Power Over: Control Over Income, Assets, and Resources

Control over income

1. From the income you derive from fish, do you make the final decision to put it towards becoming a processor or to buy more fish? (invest in your business) {single choice: 1=yes, 2=no, 3=not married/does not apply}
2. If you would like to grow your business, how supportive do you think your spouse would be? {single choice: 1=not supportive, 2=a little supportive, 3=very supportive, 4=does not have a partner}
3. When you envision growing your business in the future, do you think your spouse, or another member of your household would try to take over the income generated? {single choice: 1=yes, 2=no, 3=not married/does not apply}

¹⁹ *Power Over* refers to control over resources, services, and others' lives – these include control over income, assets and resources; control over labour; land; and control over others – mobility/gender-based violence.

Control over credit

4. Do you think you have sufficient access to credit? {single choice: 1=yes; 2=no}
- b) When you wish to acquire credit, do you need to consult your spouse? {single choice: 1=yes; 2=no; 3=not applicable}
5. Do I need to consult my spouse with how I use that credit? {single choice: 1=yes; 2=no; 3=not applicable}
6. Do you feel that credit has enabled you to increase your wellbeing? {single choice: 1=yes; 2=no; 3=not applicable}

Access to Digital Services

7. Do you own a mobile phone? {single choice: 1=yes; 2=no}
8. Do you use a phone to access extension services? {single choice: 1=yes; 2=no}
9. Do you use a phone to access financial services? {single choice: 1=yes; 2=no}

Power over: Control Over Others

Mobility

10. For each of the following questions select one: {single choice: 1=NA/DK; 2=Strongly disagree/3=Disagree/ 4=Neither agree nor disagree; 6=Agree;7=Strongly agree}
- 10a. My spouse tries to stop me from meeting with my friends.
- 10b. If I want to go to the market, I can do that.

Gender-based violence

11. For each of the following questions select one: {single choice: 1=NA/DK; 2=yes; 3=no; 4= prefer not to answer. In your opinion, is a husband justified in hitting or beating his wife:}
 - 11a. If she goes out without telling him?
 - 11b. If she neglects the children?
 - 11c. If she argues with him?
 - 11d. If she refuses to have sex with him?
 - 11e. If she burns the food?

Section 7: Locus of Control and structural influences, including norms and rights (Power Through)²⁰

Locus of control

1. Which of the following do you most agree with?
 - A "Each person is primarily responsible for his/her success or failure in life."
 - B "One's success or failure in life is a matter of his/her destiny/LUCK."

Formal Structures - Policy and rights

2. Do you have legal status in your country? {single choice: 1=yes; 2=no; 3=NA/DK}
3. Do you have access to social protection? {single choice: 1=yes; 2=no; 3=NA/DK}
4. Are your rights recognized in the marketplace? {single choice: 1=yes; 2=no; 3=NA/DK}

Informal Structures - Norms

²⁰ *Power through* refers to power mediated by forces beyond personal agency and relationships, including fatalism (locus of control) and informal (norms and stereotypes) and formal structural factors (policy).

5. For each of the following questions select one: {single choice: 1=NA/DK; 2=Strongly disagree/3=Disagree/ 4=Neither agree nor disagree; 6=Agree;7=Strongly agree}

5a. I believe that if I publicly criticized our community leaders then my spouse would be upset with me.

5b. Even if my spouse would be upset with me, I would express my opinions.

5c. I feel able to be a leader in my community.

5d. Women can be leaders as well as men.

5e. I believe the husband deserves the best meal.

5f. When there is a job opportunity, men deserve the job more than women.

5g. When a mother works for income outside the house, the children suffer.

6. If you must choose only one (boy or girl) to send to the school, which would you choose? {single choice: 1=boy; 2=girl; 3=don't know; 4=prefer not to answer}

C. Adaptations

Further piloting and testing of the tool are needed to address potential adaptations and adjustments, however, as this questionnaire was originally created based on a rice-fish system, it is anticipated that Section 2 sub-sections "Demographics related to Rice-Fish" (land/landlessness) and (fish and rice) can be removed/adopted to specific case study SSF system. Further piloting and testing of the tool are needed to address what questions can be skipped under which situation.

D. Tips and Tricks for Using the Tool

Tip: From the Pilot Case in Myanmar: Landed/landlessness was identified as the biggest contributing factor to whether men and women can benefit from the transition to integrated rice-fish in Myanmar. While the survey during the pilot phase was not implemented due to COVID-19, the hypothetical sample would have been 50/50 women and men, divided into equal "High risk" = landless and "lower risk" = landed categories.¹

E. Analysing the data

In the Methods Package, quantitative data is collected in the Scoping Phase (in the form of contextual data using national level statistics on GBV/other proxies)²¹ and in the Phase III survey tool. The survey is meant to mainly address research questions 1 and 2, but also touches on elements related to research question 3. Ultimately, the survey tool can be used to produce analyses along two areas of inquiry: (1) To explore relationships among variables; and (2) To explore differences among groups. The guidelines for how to run these analyses in relation to the method package's research questions are listed below.

Guidelines for Addressing RQ1: The Extent of Empowerment Between/Among groups:

The first research question deals with the extent to which women and men are empowerment or disempowered in each SSF system, and how women's empowerment compares to men's empowerment in this context. This requires measuring 'how much' empowerment between women and men and exploring differences between groups of different women and men. Because the survey captures various intersectional categories (see Table 2), these can be run as independent variables in both descriptive and

²¹ Regarding the quantitative data from the Scoping Phase, this secondary data can be presented in the form of descriptive statistics (e.g., % of women and men engaged in the retail sector of the fish value chain, # of hours per day women spend on fish-related activities).

inferential statistical analyses. In this way, the researcher can explore the various gendered axes of intersectional disaggregation, also known as Gender Based Analysis Plus (GBA+) (Status of Women Canada, 2020). Using GBA+, the following can be explored in the survey dataset using descriptive and inferential statistics:

- Measures of the exogenous and endogenous empowerment factors identified across domains
- Relative empowerment in the different domains between women and men

Descriptive statistics: Display descriptive statistics and use GBA+²² categories for intersectional disaggregation. For Categorical Variables, use Frequencies. For Continuous Variables, use mean, standard deviation, minimum, maximum, skewness, and kurtosis.

Inferential statistics: T-tests, One-way analysis of variance (ANOVA), Two-way analysis of variance, multivariate analysis of variance (MANOVA), Analysis of covariance

As discussed in the sample size selection section, running these inferential statistical tests across multiple intersectional groups in a single test (e.g., comparative interactions between gender, ethnicity, and wealth status), is unlikely to yield sufficient statistical power for post hoc multiple comparisons without a very large sample size (see Brooks and Johanson, 2011 for ANOVA sample size determinations). For example, to achieve a standardized mean difference effect size of 0.80 for the Tukey HSD Multiple Comparison Procedure using a 3-way ANOVA (comparison of means across 3 groups to see whether there are statistically significant differences between groups), there would be a minimum of 33 participants per group sample size, for a total sample size of 99 (Brooks and Johanson, 2011). Thus, we encourage running these tests to compare means between groups to draw out patterns and trends in the data, but not to expect/rely on significance in the interpretation of results.

Independent variables	Variable Type
Location (e.g., Village/District)	Categorical
# of years/months living in the village	Continuous (can be collapsed into categorical variable using cut-offs)
Age	Continuous (can be collapsed into categorical variable using age cut-offs, e.g., 18-35, 36-55, ...)
Gender identity	Categorical
Ethnic group	Categorical
Education level	Ordinal
Marital status	Categorical
Presence of spouse in household (migration proxy)	Categorical
Marriage type	Categorical

²² Gender-based Analysis Plus (GBA+) is an analytical process used to assess how diverse groups of women, men and non-binary people may experience policies, programs, and initiatives. The “plus” in GBA+ acknowledges that GBA+ goes beyond biological (sex) and socio-cultural (gender) differences to consider other identity factors, such as race, ethnicity, religion, and age (Status of Women Canada, 2020).

Size of household	Continuous (can be collapsed into categorical variable using cut-offs)
Gender of adult members of household	Categorical
Wealth proxy (e.g., roof construction type)	Categorical
Land/Landlessness	Categorical
Fish Access	Categorical
Specific node/activities in value chain	Categorical
Rice production	Categorical

Table 26 Independent variables list that can be used as gendered axes of intersectional disaggregation (Gender Based Analysis Plus / GBA+)

Guidelines for Addressing RQ 2: Factors for Empowerment

The second research question deals with identifying the enabling and constraining factors for empowerment in a SSF case study context. This requires exploring relationships between different variables within the five domains of empowerment. There are a variety of inferential statistics that can be used to explore these relationships, including correlations and partial correlations, multiple regressions, and factor analysis.

- Numeric measures of attitudes towards gender, cultural and market norms
- Numeric measures of the relationships between predictive variables for empowerment and disempowerment
- Numeric measures of self-efficacy, aspirations and perceived control over one’s life, and Power & freedom over time
- Explore relationships between variables and patterns among groups to explore how the intersecting dimensions of vulnerabilities/inequalities are related

F. Informed Consent statement

INFORMED CONSENT

Online Survey

Exploring Women’s Empowerment in Small-Scale Fisheries

Client: WorldFish

Research firm: Includovate

Lead researcher: Dr. Kristie Druzca kristie@includovate.com

We are inviting you to participate in an online survey to do with a collaborative study on women’s empowerment in small-scale fisheries (SSF). If you agree to participate, you can choose to stop at any time or to skip any topics you do not want to answer. Your participation is entirely voluntary.

Although you may not directly benefit from taking part in this study, the information you provide may lead to improved understanding of the SSF industry and any gendered issues, norms and challenges faced

specifically by women participants. The interview will take approximately 30 minutes, and you will not be compensated for your time. There is no anticipated discomfort for those contributing to this study.

We received your contact details through WorldFish who commissioned this methodology because momentum around sustainable aquatic development pathways is growing and because WorldFish does not want to exclude women participants. They may have received your details from their own contacts and networks. You have been randomly chosen to be interviewed because you are a woman, or a man engaged in the SSF sector. We will ask you questions related to you, your role in SSF, your position as a stakeholder and relationships with other actors within the industry.

We ask for your support by answering questions as honestly and fully as possible – there are no right or wrong answers. We just want to know your actual experiences, opinions, and the challenges you face in order to understand how to improve the program. Your answers will be completely confidential.

Confidentiality and Data Security

We will collect the following identifying information for the research: your name and email address. This information is necessary to contact you for the study. A common risk you experience any time you provide information online is that the online data is hacked or intercepted. So, there is a chance your data could be seen by someone who should not have access to it. We are using a secure system to collect this data, but we are unable to completely eliminate this risk. However, we are minimizing this risk in the following ways:

- All identifying information is removed and replaced with a study ID in the publication of results.
- Includovate will store all electronic data on a password-protected, encrypted computer.
- Includovate will keep your identifying information separate from your research data, but the researchers will be able to link it to you.
- For more information on Includovate's privacy policy, see [here](#).

Demographic questions and the responses to any gendered questions will only be used for disaggregation and cannot be tracked back to the respondent.

Where will data be stored?

The data will be stored on the Includovate server for the online survey software. It will be downloaded without your email and other identifying information and stored on Includovate's secure server.

How long will it be kept?

The data will be kept for at least 5 years in case Includovate researchers need to contact the study's participants in the future.

Who can see my data?

The evaluation team will have access to your name and email address so we can identify you for the study. The evaluation findings will be presented in a final report and during presentations. No identifying information will be provided during interviews and pseudonyms (fictitious names) will be used if location is required.

Contact information:

For questions about the research, or to make a complaint: Contact Dr. Kristie Drucza lead researcher, kristie@includovate.com, or Dr. Sujata Ganguly Includovate's Ethical Review Board Chair

sujata@includovate.com. Should you wish to make an anonymous complaint, please refer to Includovate's online anonymous complaints process [here](#).

Agreement to Participate

If you meet the eligibility criteria below and would like to participate in this study, click the button below to begin the survey. Remember, your participation is completely voluntary, and you are free to withdraw at any time.

- **I am at least 18 years old**

Completion and submission of the survey is considered your implied consent to participate in this study. Please print this form for your records.

Background information:

WorldFish's mission is to reduce poverty and hunger by improving fisheries and aquaculture. Gender equality is integral to World Fish achieving its goals and advancing [#Agenda2030](#). World Fish has a responsibility to its partners to capture and communicate the impact of its work on men and women, girls and boys and communities at large. Moreover, gender equality contributes to inclusive growth and sustainable development (Madgavkar 2020). The study of, and advocacy for, women's empowerment is necessary because the causes and consequences of low levels of empowerment can be found to limit women's opportunities (Malhotra and Schuler, 2005) and many policies and programs aim to increase empowerment (Alsop and Heinsohn, 2005) but evidence of their success is lacking (Springer and Druzca 2019). From a research for development perspective, this research facilitates greater awareness of what women's empowerment is and is not in a given context, and importantly sets a new standard regarding the quality through which researchers can 'claim women's empowerment.' WorldFish is dedicated to ensuring the alleviating of women as an excluded group in the SSF industry to be improved and made equal.

4.3 Validating Phase Pack of tools

The content of this validation phase will need to be developed from the analysis and the data you collect. The tools have been developed as guiding documents. In line with the literature on social norms it is suggested that you use vignettes to get beyond normative answers.²³ Consequently, you will turn some of the findings into vignettes. You will ask participants to indicate their level of confirmation with the vignetter on a Likert scale.

In line with the validation literature that argues a researcher should not pursue evidence to agree with their findings, but that validation should be considered a form of due diligence to uncover additional information that supports or contradicts the data.²⁴ Consequently, Likert scales are used to help understand if outliers are a data collection anomaly or sit within an acceptable range of possibility, without pressuring respondents with a binary choice.

There is no doubt, that a different definitions of empowerment will emerge from each case study and possibly from different value chain nodes, sexes and other intersectional categories. The validation process will help to avoid any exogenous lenses overlaying women’s own understanding of their strategic freedoms and empowerment.

Table 27 Validation Methods Summary

Tool	No. and type of respondents	Time it takes
VP1: Validation workshop local	Per study site, 20-30 men and women who work in the SSF and participated in the research	2 hours
VP2: Validation workshop policy level	30 SSF stakeholders in urban area (e.g., fisheries staff, extension officers, licence providers, market managers, other fish stakeholders)	2 hours
VP3: Outcome mapping and action planning	Either the same as the policy making workshop or 10-15 interested participants from key stakeholders.	1.5 hours
VP4 Reflection workshop	As many of the research team as possible	1.5 hours

²³ Bicchieri, C. (2016). Diagnosing norms. In Norms in the wild (1st ed.,). Oxford, United Kingdom: Oxford University Press.

²⁴ Roller and Lavrakas 2015. Applied Qualitative Research Design: A total quality framework approach. Guilford Press: New York and London.

Validation Phase Tool 1: Validation workshop local

VALIDATION WORKSHOP – LOCAL LEVEL	
Purpose	To cross check the results with participants and engage them in a discussion
Respondents	20-30 men and women who work in the SSF and participated in the research. One validation workshop should be sufficient.
Sampling	This will be based on diversity. Each intersectional category that contributed to the research should be at the validation workshop.
Type of Data and Info	Validation data
Strengths of The Tool	Helps to check that your analysis is valid, and reliable. It also provides the opportunity to ensure the study has been sufficient and to hear if any more current evidence available. Can allow for a more accurate reflection of one’s reality/situation and can stimulate further thought/discussion. It is ethically responsible to validate your study findings with those who participated in the study.
Weaknesses of The Tool	If a biased sample attends the validation process, then this can lead to biased results. Without the opportunity for marginalised or excluded groups to reflect on the findings their critical awareness and the possibilities for change will be less likely to manifest.

A. Circumstances

This tool assumes that the validations will occur at the local level and with less literate groups, or where there may be language barriers. For each question, participants will vote on a Likert scale that has symbols or numbers with a rock or some other physical object (this will help to ensure active participation for all participants):

Can you please confirm if this situation is familiar in your community/country by placing your rock on a number?

- i. If you can strongly confirm that this situation is familiar to your community place your rock on number 5/symbol (point to the number 5)
- ii. If you confirm but not strongly then place your rock on number/symbol 4 (point to number 4)
- iii. If you can neither confirm nor deny, please place your rock on this symbol/number 3.
- iv. If you cannot confirm that this situation is familiar to your community, please place your rock on number/symbol 2 (point to it)
- v. If you strongly deny please place your rock here on number 1.
- vi. If you don’t know place your rock here.

[Make note of how many rocks are on each Likert number].

One note taker and one facilitator should be at this validation workshop. It would be useful if the note taker can watch the participants for shows of emotion and record these. For example, question 2 made people uncomfortable as they began shifting in their seats and shaking their heads.

G. Facilitating and Conducting the tool

Each research question (aside from 3²⁵) should be covered during this workshop. The following evidence that answers the research questions should be presented here in qualitative, quantitative and diagrammatic form. Ask participants to rank on a Likert scale their agreement with the findings.

1. Women's own empowerment-related aims and aspirations in local context

This workshop should be seen as an opportunity to discuss the endogenous notion of empowerment arising from the research, as well as reach consensus on the understanding proposed.

- 1.a. To what extent are different categories of women currently empowered or disempowered in relation to which types of power in which node of the given SSF system?
- 1.b. How does women's empowerment compare to men's empowerment in this context and system?

2. Empowerment pathways

The conceptual framework should be presented here before the results to the following research questions:

- 2.a. What are the enabling and constraining factors that amplify or stifle empowerment as a process in the given SSF context?
- 2.b. What pathways have led to increased empowerment in the past and what might work in the future?

H. Adaptations

These will depend on the data you have collected. It is important to pay attention to anomalies and outliers as well as present data representing the endogenous framing and some of the research questions. If there is too much information to validate at each level, then consider splitting the validation workshop into two with different participants validating different questions to reduce the time burden on respondents.

An additional adaption is around the discussion of the Likert scale rankings. *If there is time and the participants are interested, pick up each rock one-by-one (make sure you vary the order with which you do this – e.g., sometimes start at 3, sometimes at don't know (D/K), sometimes at 1, etc.) and ask*

- 1.1 "Who's rock is this?" "Please explain why you [confirm/disagree/D/K...] that this situation is familiar in your community? [Ask a promoting/clarifying question depending on the response that digs a little deeper into the answer].

I. Tips and Tricks for Using the Tool

²⁵ Question 3 could evoke negative responses from citizens or inflame conflict – depending on the results. The ethics clearance process should help to determine if questions 3 should be covered in this workshop.

Facilitation skills are key to getting people to participate and share their opinion. It is essential that you spend time building rapport even before the workshop begins. Create a friendly and open environment so everyone feels like contributing.

J. Analysing the data

This validation workshop is structured so every participant can vote on the findings. This will make it easy to present graphs as an annex to the final research report. Notes of discrepancies, or discussions, debates should be recorded and analysed for what they might mean.

K. Interpreting the data

The results from the validation workshop at the local level should be compared and contrasted to the other validation exercises, particularly those at the policymaking level, for each level represents a different purview.

L. Informed consent statement

The purpose of this discussion is to validate some of the findings from the original data collection process and share some of the research results with members of the community that participated in the original research. This will take approximately two hours. We will leave our office's email address and phone number with you in case you wish to make a complaint about the research, share additional information and insight, or to ask us some additional questions.

This discussion will be conducted anonymously. We will not record your name against your responses and no compensation will be provided for your time. We wish to record this discussion to ensure we accurately reflect all comments. It is hard to take down notes as fast as someone speaks. As already explained, we will not record your name or show the recording to anyone not affiliated by legal contract to our organization. The overall research results will be published and shared with the general public and decision makers.

We are going to ask you to confirm and clarify some statements for us

You are going to be given a rock with a symbol on it. You will then place the rock on one of the numbers between 1 – 5 when we ask you a question and then sit down again. We want you to think about your responses. 5 is strongly confirm 4 is confirm, 3 neither confirm nor deny, 2 can't confirm and 1 is strongly deny. We have written them on a piece of paper with symbols next to them to represent what each number stands for. We will then ask you to explain why you chose that number. There is no wrong answer. You are all allowed and encouraged to think the way you think whether the same or different to your peers.

We are interested in everybody's thoughts, experiences, beliefs and feelings. We want to hear from each and every one of you. We believe your uniqueness will add value to this research. My colleague here will observe and try to write down all your comments. She can refer back to the recording if she misses anything. We hope to have an interesting and insightful discussion with you.

Participation in this discussion is voluntary. You have the opportunity to withdraw at any time or refuse any component(s) of the research without repercussion or penalty. Please let me know if you consent to being a part of this research by remaining seated. If anyone does not feel comfortable or does not want to

participate, I request that you depart now. You may leave at any time during our discussion as well. If you choose to participate in the research then we expect you to share your opinion and speak up. We also expect everyone to respect each other's opinions and differences. It is ok if you express your disagreement with other speakers – but please do so respectfully. Does anyone have any questions before we begin? We do encourage you to ask questions at any point.

Validating Phase Tool 2: Validation workshop policy level

VALIDATION WORKSHOP – POLICY LEVEL	
Purpose	To cross check the results with participants and engage them in a discussion
Respondents	30 people for fisheries related policies, plus the Ministry of Women, any small business association for women or enterprise ministry and other relevant social affairs ministries. One validation workshop should be sufficient.
Sampling	This will be based on the stakeholder map produced. The aim is to achieve maximum representation across stakeholders.
Type of Data and Info	Validation data
Strengths of The Tool	Helps to check that your analysis is valid, and reliable. It also provides the opportunity to ensure the study has been sufficient and to hear if any more current evidence available. Can allow for a more accurate reflection of one’s reality/situation and can stimulate further thought/discussion. It is ethically responsible to validate your study findings with those who participated in the study.
Weaknesses of The Tool	If a biased sample attends the validation process, then this can lead to biased results. Without the opportunity for marginalised or excluded groups to reflect on the findings their critical awareness and the possibilities for change will be less likely to manifest.

A. Circumstances

One note taker and one facilitator should be at this validation workshop. It would be useful if the note taker can watch the participants for shows of emotion and record these. For example, question 2 made people uncomfortable as they began shifting in their seats and shaking their heads.

B. Facilitating and Conducting the tool

Background Information

Name of facilitator	
Date (dd/mm/yyyy)	
No. of participants	
Location	
Sex	
Age range	
Marital Status	
Position/role in the community	

Table 1 Example of table for record of information

Present the results as graphs, vignettes, qualitative, quantitative and diagrammatic form under the following headings:

3. Women's own empowerment-related aims and aspirations in local context

- **1.a. To what extent are different categories of women currently empowered or disempowered in relation to which types of power in which node of the given SSF system?**
- **1.b. How does women's empowerment compare to men's empowerment in this context and system?**

These could be presented in a number of ways and should be seen as an opportunity to discuss the endogenous notion of empowerment arising from the research, as well as reach consensus on the understanding emerging from the data.

4. Empowerment pathways

The conceptual framework should be presented here, and participants should be asked to rank on a Likert scale their agreement with the findings. Present evidence from the study for the following research questions:

- **2.a. What are the enabling and constraining factors that amplify or stifle empowerment as a process in the given SSF context?**
- **2.b. What pathways have led to increased empowerment in the past and what might work in the future?**

Explain that resilience can be considered a pathway towards empowerment because people have an opportunity to experiment with their own strength, overcome adversity and gain the confidence to try again.

5. Policies and programs that enable and constrain women's empowerment

The purpose of this discussion is to understand if there are any additional ways that policies and development investments might assist with enhancing women's self-defined strategic freedoms that were not captured by the research. And if any new solutions emerge. Policy and decision makers have a unique purview and the opportunity to validate with them should not be wasted. This question will not be asked at the local level.

- **3.a. To what extent do current fisheries development policies, strategies, and programs contribute to or constrain empowerment for different categories of women?**
- **3.b. How can the enabling factors be amplified, and the constraining factors and risks to empowerment pathways for diverse women be mitigated?'**

6. Recommendations

These can either come from the study's findings, or from crowd sourcing the participants of the validation workshop. Either way, the recommendations should be voted on by the audience in terms of a Likert scale of agreement.

C. Adaptations

Adaptations to the instrument are allowed and will depend on the original data collected and how it is analysed.

D. Tips and Tricks for Using the Tool

For each major data piece presented we want a Likert scale rank from the audience.
 For remote validations this can be done with menti-meter or zoom polling

Policy makers expect a higher level of professionalism during validation workshops. Dress as if you worked on wall street. Give the graphs as handouts for the policy makers to keep. It would be best for information dissemination and uptake to give out a policy brief at the validation workshop.

E. Analysing the data

This validation workshop is structured so every participant can vote on the findings. This is not essential but will make it easy to present graphs as an annex to the final research report. Notes of discrepancies, or discussions, debates should be recorded and analysed for what they might mean. For example, the topic of gender equality often raises strong emotions (for and against). It is political and often misunderstood as a western imposed idea. These ideas should be allowed to surface and if challenged, this should come from the audience. Your role is to facilitate a respectful space for healthy discussion, where opinions can be shared without fear.

F. Interpreting the data

A small summary paragraph under each graph outlining the nature of the consensus or contest and any particular issues that arose should be included. Anything inconclusive should be commented on. The results of validation with policy makers should be compared to the results of the validation with local value chain actors.

G. Informed consent statement

The purpose of this discussion is to validate some of the findings from the original data collection process and share some of the research results with members of the community that participated in the original research. This will take approximately two hours. We will leave our office's email address and phone number with you in case you wish to make a complaint about the research, share additional information and insight, or to ask us some additional questions.

This discussion will be conducted anonymously. We will not record your name against your responses and no compensation will be provided for your time. We wish to record this discussion to ensure we accurately reflect all comments. It is hard to take down notes as fast as someone speaks. As already explained, we will not record your name or show the recording to anyone not affiliated by legal contract to our organization. The overall research results will be published and shared with the general public and decision makers.

We are going to ask you to confirm and clarify some statements for us according to a Likert scale. We will then ask you to explain your response. There is no wrong answer. You are all allowed and encouraged to think the way you think whether the same or different to your peers.

We are interested in everybody's thoughts, experiences, beliefs and feelings. We want to hear from each and every one of you. We believe your uniqueness will add value to this research. My colleague here will observe and try to write down all your comments. She can refer back to the recording if she misses anything. We hope to have an interesting and insightful discussion with you.

Participation in this discussion is voluntary. You have the opportunity to withdraw at any time or refuse any component(s) of the research without repercussion or penalty. Please let me know if you consent to being a part of this research by remaining seated. If anyone does not feel comfortable or does not want to participate, I request that you depart now. You may leave at any time during our discussion as well. If you choose to participate in the research then we expect you to share your opinion and speak up. We also expect everyone to respect each other's opinions and differences. It is ok if you express your disagreement with other speakers – but please do so respectfully. Does anyone have any questions before we begin? We do encourage you to ask questions at any point.

Validating Phase Tool 3: Outcome Mapping and Action Planning

Outcome mapping (OM) was created to help researchers and practitioners working towards behaviour change (such as women’s empowerment) to have some sort of shared direction by visualising what success would look like. OM was originally established as a monitoring and evaluation tool. However, it is often used to promote social learning. Ultimately, OM is a participatory workshop that helps to align expectations and roles, promote reflection and interactive participation with key stakeholders (Ortiz, 2005). In this tool, outcomes are understood as changes in behaviour.

Outcome mapping and action planning	
Purpose	To turn research results into actions that policy makers can adopt/apply. Less of a map and more of an agreement of the behaviour change needed (and key boundary partners) to achieve the desired results as articulated by female respondents engaged in the SSF. To turn research results into actions that policy makers can adopt/apply.
Respondents	Engaged participants from the policymaking validation workshop plus some key stakeholders
Sampling	10-20 participants is sufficient
Type of Data and Info	Outlines the way key decision makers/stakeholder understand the situation and their appetite for change. Set a clear plan for how to achieve deep transformational change for women in the SSF.
Strengths of The Tool	Observations, reflections, and recommendations on what change is possible and can be facilitated by trusted friends (male allies). Can generate action as well as discussion and consensus. Agreement and ownership for reforms is discussed and agreed to. Helps to identify that there is a limit to any opportunity. Focuses on social and organisational learning. Agreement and ownership for reforms is discussed and agreed upon.
Weaknesses of The Tool	Requires expert probing to understand hidden dynamics such as power. It can be subjective. It may be time consuming and resource intensive.

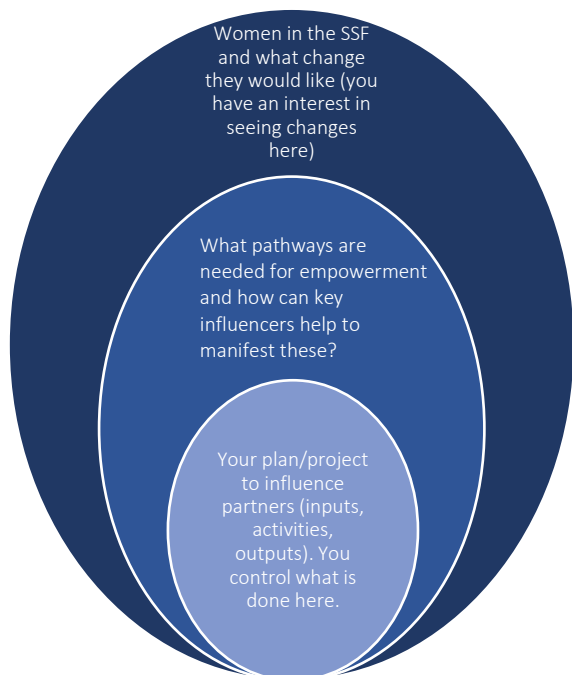
A. Circumstances

One facilitator and one note taker are required.

B. Facilitating and Conducting the tool

The facilitators role is to ensure collective participatory learning and reflection occurs. OM helps identify the key outcomes the research team, community members and other stakeholders would like/love/hope to see at the end of the study/project. This establishes consensus on the needed changes, roles and responsibilities and helps plan the strategies to be used (Earl et al., 2001).²⁶

²⁶ Earl, S., Carden, F., & Smutylo, T. (2001). *Outcome mapping: Building learning and reflection into development programs*. IDRC, Ottawa, ON, CA.



Beneficiaries: sphere of interest. Start here and jot down what deep transformation should happen based upon the research results. What changes would you love to see here that will have a deep impact.

Partners/stakeholders that you can influence (what behaviour change is needed for these partners to operate differently). Write down a list of people/organisations that interact with women in the SSF, or could help contribute to their desired outcomes. What changes would you like to see here that would have these partners actively contribute to the deep transformation? Describe the behaviours that are needed.

Sphere of control: project/plan. What can be done to influence the partners? Write a list on a flip chart.

Have participants vote for the solution they think will be most impactful. Then form groups according to responses and have the groups work to complete the following table based on the recommendation they are most passionate about. You will have each group complete the following action plan table.

Action plan table

Name of the activity	Name(s) of the persons/organisation responsible	Time Schedule		Resources required (money, material, people)	Acceptance of the activity and willingness/availability to dedicate resources
		When to start	When to complete		

When all groups have finished then have everyone huddle around one groups work and have that group explain it to everyone and facilitate a question and answer session until the action plan has been agreed. Move to the next group and repeat the activity.

At the end of this workshop there should be at least four solid action plans for change.

C. Adaptations

These are permitted and very much depend on the data collected and presented. A couple of suggested questions that could be ask if time and interest include:

- How controversial is this data in terms of its alignment or challenge of popular social/gender/cultural norms?
- Who should be in the room for such a discussion but is not there?
- How can they be mobilised to become interested?

D. Tips and Tricks for Using the Tool

This tool can be held immediately after the validation workshop. This can help with motivation and memory recall, rather than having a separate workshop on another day.

It is highly likely that other people will need to be brought into any change agreed upon. The facilitator should think of ways to do this and ensure enough budget is allocated for this purpose.

E. Analysing the data

This is a matter of assessing consensus and contestation. Ideally, influential people will own and take responsibility for implementing/driving certain outcomes/results. The analysis should centre around opportunity and appetite/ownership.

F. Interpreting the data

This is an is, or is not, situation. If influencers decide it is an idea worthy of addressing then the study should present as much. However, if an issue that is highly relevant to local women is not considered important to policy makers/influencers, then WorldFish and the research team have a responsibility to communicate this need and to help generate funding and support for this initiative.

One suggestion is to publish the results of this activity in the form of a brief. This helps with accountability and helps communicate the desired state to a wider audience.

Validation Phase Tool 4: Reflection workshop

This tool is an internal tool to be used by the researchers and enumerators to strengthen the learning around the methodology. The information for this tool will come from the reflection journal notes.

VP5: REFLECTION WORKSHOP	
PURPOSE	To use inputs from the team’s learning journal field diaries to discuss their observations, reflections, and areas for improvement for the next use/iteration of the methods package, ensuring the methodology is continually refined.
RESPONDENTS	Principal investigator and research team; potentially community members and other relevant stakeholders
SAMPLING	Required: Principal investigator, enumerators, research assistants and research team (size contingent on study)
TYPE OF DATA AND INFO	Team observations, reflections, and recommendations on their experience with using specific study tools.
STRENGTHS OF THE TOOL	A method through which recommendations for future iterations of the methodology are identified, discussed, agreed and documented.
WEAKNESSES OF THE TOOL	Richness of discussion will depend on the depth of the research team’s learning journal field diaries and their comprehension of the methodology. It may be time consuming and resource intensive.

A. Circumstances

Prior to the workshop, each researcher/team member is expected to prepare a summary document outlining the key sections of their learning journals over the data collection for the study (Observations and broad takeaways from each tool; Specific reflections; and Areas for improvement) so they will be prepared to participate.

Location: Online or in-person workshop

Materials needed for the exercise [if done in-person]: Flipchart, markers, pens, team learning journal field diaries

B. Facilitating and Conducting

Step 1: The facilitator will explain the purpose of the workshop to the team, obtain informed consent and outline the key activities. An assessment of the similarities and differences from the diaries will be pulled together and presented.

Then a tool called 1-2-4-all, will be used. Invite participants to spend 1 minute alone reflecting on the diary findings and recommendations. They should write down which recommendations they agree with, the ones they disagree with and the ones they are not sure about.

Then have participants pair up and share their notes for 2 minutes. What do they have in common? Are there any differences?

Then have two groups of two join to make a group of four and repeat the activity for 4 minutes. Then hold a plenary discussion whereby similarities and differences are discussed and written onto a flipchart for later recording.

Step 2: In this step, please ask participants to form groups of four again and identify the key findings/new information related to women’s empowerment emergent from the study. Get the group to discuss:

- Which of the main six research questions did we not get answers to, and why do they think this occurred? 12 minutes (2 minutes per research question)
 - o Plenary discussion to see if consensus is reached.
- In the same groups of four, ask what do we now know for sure about an endogenous notion of women’s empowerment in this context (that we did not know before the study commenced)? 5 minute discussion
- Plenary discussion where each group presents their learnings

Step 3: The third activity is to discuss the merit of the tools used in the study. Making a list of each of the tools used, for each research question:

Draw a table similar to the one below for each research question:

	What did we need to know?	What specific type of data was needed?	Which tools generated the information we needed? (strengths/weaknesses)	Recommendations for future use of the tool (how to address gaps)
Tools used				

Have the groups complete the table (if you have three groups, then each get group to do two different research questions). Allocate 15 minutes for each research question.

Plenary discussion - have each group present their table per research question. Each research question has 5 minutes for presentation and 5 minutes for questions/clarifications/disagreements from the audience. Take notes on a flipchart/electronic whiteboard.

Step 4: After filling out the table(s), have each group discuss the following questions:

- A. What were the biggest challenges with carrying out the study?
- B. If we could turn back the clock, what should the study have done differently?
- C. What advice would you give to another researcher who was completing this study?
- D. What are the follow-up questions and greatest points of interest for the next iteration of the methodology?

If there is time then have each group present their answers to these question in a plenary discussion.

C. Adaptations

Optional²⁷: Draw a table like the one below for specific questions within tools used to address the larger research questions

	Which Questions and probes worked best?	Which questions didn’t work?	Recommendations for future use of the tool
Tools used			

D. Tips and Tricks for Using the Tool

You want to hear as much as possible from the research team. It is rare to have such an opportunity to reflect on a data collection process and to hear the perspectives of enumerators. Encourage discussion and debate as much as possible.

E. Analysing the data

The data analysis occurs during the workshop. Very little additional analysis will be needed. There may be a need to refer back to research questions to substantiate the discussion.

F. Interpreting the data

A final report of this workshop and the methodology should occur and be sent to WorldFish.

²⁷ This activity would be useful if only a limited number of the total possible tools were used for the individual study. Otherwise, it could be too time-intensive to be conducted within the confines of a workshop.

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