



Gender and innovation processes in integrated fish agri-food systems in Bangladesh and the Philippines: Insights from the CGIAR Research Program FISH

**GENNOVATE report on the
CGIAR Research Program
Fish Agri-Food Systems (FISH)**



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Citation

This publication should be cited as: Aregu L, Farnworth CR, Choudhury A, Rajaratnam S and McDougall C. 2018. Gender and innovation processes in integrated fish agri-food systems in Bangladesh and the Philippines: Insights from the CGIAR Research Program FISH. GENNOVATE program report on the CGIAR Research Program FISH. Penang, Malaysia: WorldFish.

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Acknowledgments

This work was undertaken as part of the CGIAR Research Program Fish Agri-Food Systems (FISH). Funding for this study was provided by the CGIAR Research Program Aquatic Agricultural Systems (AAS), FISH and GENNOVATE. We are grateful for the technical and financial support of GENNOVATE to facilitate the data analysis and writing of this report by organizing a number of forums.

We thank the women and men from the communities in Bangladesh and the Philippines who participated in the research. We are grateful for the comments, feedback and suggestions from the GENNOVATE Executive Committee and principal investigators. We appreciate the constructive critical comments from reviewers Elias Marlene, Shelley Feldman and Nozomi Kawarazuka, which strengthened the report, and we acknowledge the early contributions to the study by Miranda Morgan, Aisa O. Manlosa, Rita Sen and Paula Kantor.

We sincerely appreciate the WorldFish gender teams from Bangladesh and the Philippines who supported the fieldwork. We thank the data enumerators and the AAS teams in Bangladesh and the Philippines, and the Bangladesh Center for Communication Programs (BCCP) for their support in data collection.

Executive summary

The objectives of the CGIAR Research Program Fish Agri-Food Systems (FISH) are (i) to facilitate sustainable increases in gender-equitable, socially-equitable livelihoods returns from aquaculture production without creating adverse socioeconomic or environmental impacts, and (ii) to secure and enhance the contribution of small-scale fisheries to gender-equitable poverty reduction and food security through the production and equitable distribution of nutritious fish.

FISH recognizes that while resolving technical problems in aquaculture and fisheries is essential to its mandate, addressing gender and other social considerations in agricultural research for development in these sectors is integral to developing equitable and effective innovation processes (Kantor 2013; Okali 2012; Cornwall and Edwards 2010; FAO 2010). The purpose of this report is to provide insights on how interactions between gender norms, agency and other contextual factors shape access to, adoption of and benefits from agricultural innovations to help guide FISH's investments. The study on which the report is based took place in Bangladesh and the Philippines during August and September 2014. It forms part of the CGIAR cross-CRP initiative entitled Enabling Gender Equality in Agricultural and Environmental Innovation (GENNOVATE).

Study sites and methods

The study applied qualitative methods, based on the GENNOVATE initiative's research design. Sex-disaggregated data was collected through focus group discussions (FGDs) and key informant interviews (KIIs). Semi-structured questionnaires were used to guide the FGDs and KIIs using various tools. The research design enabled consideration of intersectionality in terms of age and wealth groups, specifically allowing the contrasting of female and male youths with female and male adults and also poor and middle-income groups. The qualitative data was organized, coded and analyzed using the NVivo 10 software. The study was conducted in Bangladesh and the Philippines—both countries that WorldFish worked in under the CGIAR Research Program Aquatic Agricultural Systems (AAS). Bangladesh and the Philippines were selected for the study because they represent important integrated fish agri-food system contexts. They offer useful comparative insights through their different gender contexts. The Philippines ranked 10th out of 144 countries in the World Economic Forum's Global Gender Gap Report 2017, while Bangladesh ranked 47th (first in South Asia) (World Economic Forum 2017). Six communities in Bangladesh and three in the Philippines were sampled from intervention areas of AAS, which was one of the precursors to FISH. They were selected purposively to enable variation in local economic status and gender gaps to be included, along with country-specific indicators. Fieldwork was conducted in 2014 and 2015 by AAS.

Findings

The study found that gender norms and gender roles have changed in the given contexts. Farmers and fishers were aware of these changes. As well as signaling this ongoing change, two interrelated learning points emerge from the study. First, the study signals that the relationship between gender norms and innovation is not a narrow one-way relationship (i.e. only norms shaping spheres of innovation). Rather, the relationship is reciprocal and iterative. This includes that participation in innovation processes was found to shape gender norms and women's agency. This contributes to the second point. As such, there was a reciprocal and iterative relationship between gender norms and innovation.

Additionally, the study found that women in the contexts perceived that their strategic decision-making power increased significantly over a period of 10 years, while men's perception of their own decision-making power did not decrease. This implies a shift toward increased contributions of both spouses to decisions rather than a zero-sum shift from one to the other.

Poverty was viewed by respondents to be associated with a lack of jointness of intra-household decision-making and women's disempowerment, including over their own bodies and how many children to have. Although men are strongly identified as innovators by development partners,

men find it hard to change what they have always done to earn a living when their livelihoods are threatened. The findings suggest that men's involvement with rice and fish are part of how "being a man" is defined locally. However, young men are finding this definition increasingly problematic, though no clear alternatives are being offered. Older men, too, are finding it difficult to find ways out of livelihoods that no longer generate sufficient income but are considered "what men do." The findings indicated that women in the study were relatively more successful in innovating their way out of difficulty, particularly through recourse to off-farm livelihoods in the case of the Philippines.

Lessons from FISH: Entry points for constructive change around gender norms

The distinction between accommodative and transformative gender approaches needs to be examined and worked with care. In Bangladesh, women are working to meet their practical and strategic needs within an overarching gender ideology that does not necessarily support open articulation of these needs. In this situation, women are deploying their agency carefully in ways that might outwardly support men as the primary decision-maker, while less overtly working toward their own strategic gender needs.

Detailed recommendations for research, FISH in particular, are provided in the final section of this report. They are summarized here:

Develop a model of change based on social norm theory. Gender norm literature and empirical insights should be built upon to develop a model of change that describes, analyzes and develops programmatic responses to concepts outlined in this study and elsewhere. As part of this, factors driving change will need to be identified, including farmers' own perceptions of what drives change. Working with and building on their perceptions is likely to leverage change more rapidly.

Continue to target women. Recognition and promotion of women and their capacities by external actors is integral to women's empowerment processes. This includes enhancing their status at the community level and strengthening their voice in intra-household bargaining.

Support equity in intra-household decision-making processes. Household methodologies (HHMs) promote family togetherness and empower men as well as women to take charge of their lives. HHMs are effective in promoting men's participation in household and care work because men realize that the "family vision" cannot be realized if they do not share this work with women. It is important also to include discussions on food and nutrition security, and on women's reproductive health, as part of a HHM intervention.

Combine technical training on innovations with gender-transformative approaches. Participatory social consciousness-raising exercises should be added, as well as dialogue and reflection on enabling and harmful norms, as part of technical training packages. These include use of other fun methods so as to help people think about and remove social constraints for adopting technologies. Key decision-makers influencing women's participation in innovation processes, for example in-laws and community gate keepers, should be included in the process.

Help adult and young men diversify their livelihood portfolios. Collapsing men's livelihoods put immense strain upon women to take up the slack. Empirical evidence shows that diversifying men's livelihoods can lead to women losing control over crops and livestock previously considered to lie within the women's domain. However, encouraging men to take up different options in conjunction with promoting a HHM will encourage gender-equitable livelihood diversification.

Support men to shift toward norms, attitudes and behaviors that support gender equality and equity. Strategies should be considered to support men as they begin to confront and question norms that inhibit gender equality and equity. These norms shape their identities at home, in their community, in innovation processes and in the media. Similarly, strategies should be investigated that

can effectively support men in strengthening their personal commitment to gender equality and equip them with the knowledge and skills to put that commitment into practice in their own lives. In some situations, it would be useful to create men-only groups to help men support each other in changing their behavior and challenge concepts and practices related to traditional ways of "being a man."

Develop specific programs to support young women and men. Processes can be facilitated to enable young people to discuss the implications of their expectations for their own lives, and for older people to reflect upon how best to engage with the expectations of young people. This can be made more practical by relating discussions to how young people can be engaged in innovation processes that will enable those that aspire to remain in agriculture and fisheries to do so.

Support research partners, private sector partners and rural advisory services to recognize and work more explicitly with age intersectionality. Poor women and men, young men and women, and women in general, want to innovate and "do things differently." Strategies for each should be developed; this can include promoting dialogue between different groups. Older women can mentor younger ones, in innovation practices for example, and older women can be trained to mentor young women in horticulture and household fishpond management. NGOs working with poor women and men can develop strategies with private sector players to "hand over" poor people when they reach a certain level of economic development.

Promote learning by doing. Enable all farmers (men and women) to learn using their own resources and field ponds rather than on a single demonstration plot. This will promote farmer control over the experimental design, encourage experiential learning and thus contribute to adoption and sustainability.

Train women as co-researchers in specific innovations processes. Women's ability to be proactive should be strengthened by training them to develop a research strategy, develop indicators, implement their strategy and reflect (on their own and in groups) on the outcomes. These could be challenging for some innovations, like pond work, since women in these contexts currently have little or no control and decision-making power over land. Considering these constraints and other restrictions, an accommodative entry point is that women can be trained as co-researchers on innovations that can be done around the homestead, where they have better access and control and can engage in innovations while maintaining their household responsibilities. This can be done while working with and/or toward gender-transformative strategies as well.

Demonstrate and uphold the benefits of more equitable gender relations at the community level so as to incentivize and influence community members. Examples should be showcased of equitable households with improved production and productivity, better intra-household food and income security, and stronger, more flexible livelihood planning. Research organizations and programs should also gather evidence on the link between equitable gender relations and production as well as food and income security. This evidence can be used for advocacy, to influence policymakers, biophysical scientists and technologists to focus on gender alongside livelihood and production solutions.

1. Introduction

The goal of FISH is to achieve sustainable increases in the production and equitable distribution of nutritious fish to improve the livelihoods and nutrition of poor households. Its research agenda is structured around two objectives¹:

1. Enable sustainable increases in, and gender- and socially equitable livelihood returns from, aquaculture production without creating adverse socioeconomic or environmental impacts.
2. Secure and enhance the contribution of small-scale fisheries to gender-equitable poverty reduction and food security in priority geographies.

Box 1. Contribution of fisheries and aquaculture sector to the livelihood of the people.

Fisheries and aquaculture contribute to livelihoods for 800 million people worldwide and provide 3.2 billion people with 20% of their animal protein intake. To meet future demand for fish, particularly in developing countries, production will need to double by 2030. The scale of this challenge requires research innovations across the whole spectrum of aquaculture and fisheries production systems and value chains. In collaboration with national governments and partners, FISH leads research to enhance sustainability, productivity and access to fish by those most in need.

FISH research works to attain these objectives through four interdependent change mechanisms:

1. local adoption and dissemination of technologies and management practices
2. private sector investment and replication of innovative and gender-inclusive business models
3. public sector policy improvement and institutional strengthening
4. influence on policies and priorities of civil society and development agencies.

While FISH is recognized as resolving technical problems in aquaculture and fisheries for its mandate, addressing gender and other social considerations in agricultural research for development in these sectors is integral to developing equitable and effective innovation processes (Okali 2011 and 2012; Cornwall and Edwards 2010; Kumar and Quisumbing 2010). The aim of this report is to provide insights on how interactions between gender norms, agency and other contextual factors shape access to, adoption of and benefits from agriculture innovations, including those in aquaculture and natural resource management, to help guide FISH's investments. The study on which the report is based took place in Bangladesh and the Philippines. It forms part of the CGIAR cross-CRP initiative GENNOVATE.²

Box 2. GENNOVATE approach and aim.

GENNOVATE is an initiative of 11 CGIAR Research Programs that uses a qualitative methodology to examine how gender norms and agency shape women's and men's innovation in agriculture and natural resource management (Petesch et al. 2018). GENNOVATE is not an evaluation of performance or development outcomes associated with any particular technology or practice. Rather, it examines the gender dimensions of innovation processes in a broad sense. The data collection elicits local people's views of and experiences with the range of new technologies and practices that have come into their communities or been devised locally in recent years. This is complemented by literature reviews.

The AAS CRP, which preceded FISH, conducted fieldwork using the GENNOVATE methodology in 2014 and 2015 in four geographies: southern polder zone (Bangladesh), Tonle Sap (Cambodia), Visayas-Mindanao (Philippines) and Malaita (Solomon Islands). It also conducted a social and gender analysis (SGA) in the Barotse Floodplain (Zambia) in late 2013, before the GENNOVATE methodology was introduced to the CRP. These had already been selected as learning sites by AAS for piloting innovations to enhance the social and ecological resilience of small-scale fisheries and vegetable gardens. This CRP report focuses on GENNOVATE findings from Bangladesh and the Philippines. Findings from the other geographies are available in Locke et al. (2017) and Cohen et al. (2016), Rajaratnam et al. (2015) and Cole et al. (2015).

¹ <http://fish.cgiar.org/about-program>

² http://www3.weforum.org/docs/WEF_GGGR_2017.pdf

This report is structured as follows: The remainder of the introduction presents the country contexts in terms of key insights from earlier research on gender norms in Bangladesh and the Philippines. This is followed by the methodology section, which examines the concept of norms more closely before presenting the research sites and explaining how research was conducted. The findings are then presented followed by discussion and recommendations.

1.1 Bangladesh

The Global Gender Gap Index for 2017 ranked Bangladesh 47th out of 144 countries, a big leap from the previous year when it was ranked 72nd (World Economic Forum 2016, 2017). Bangladesh was the top performer in South Asia in 2017, having closed just under 72% of its overall gender gap (World Economic Forum 2017). While this gain represented progress on women's political empowerment, where it came in seventh position, and some gains on educational attainment (an increase of three positions from the previous year) and economic participation (six positions higher), there was in fact a widening gap in health and survival, from 93rd position the previous year to 123rd (World Economic Forum 2016, 2017). Also, despite a significant increase in women's labor force participation over the years (ADB 2016; ILO 2013) and some progress from its 2016 gender gap ranking, Bangladesh still lagged behind in labor force participation and estimated earned income, ranking 124 and 108, respectively (World Economic Forum 2017). Overall, with an average remaining gender gap of 34%, the South Asia region had the second-lowest score in the Global Gender Gap Index, only ahead of the Middle East and North Africa and behind the Sub-Saharan Africa region (World Economic Forum 2017).

Considerable literature has been devoted to studies on gender norms in Bangladesh. This literature is in agreement that prevalent gender norms about household roles cast women as homemakers and as primarily responsible for domestic and care roles (Nokrek and Alam 2011). Norms, especially constraining norms around mobility, limit—though not fully—women's participation in labor markets and can render them economically dependent on their husbands or families (HKI 2011; World Bank 2008). Norms that discriminate against women regarding own food consumption exist in all socioeconomic classes, but vary by age and wealth (Sraboni et al. 2013; World Bank 2010; Sethuraman et al. 2006). An overview study of literature on norms (Farnworth and Jahan 2014, unpublished) found a strong tendency to rely on generalizations about women in Bangladesh, particularly a reliance on what people say is happening rather than examining what is actually happening. Studies by Kantor (2014), Helen Keller International (2011), the Institute of Development Studies (IDS) (2011) and others show considerable dynamism and nuancing with no clear drivers as to why women in some communities and areas appear more empowered than in others. Although studies have found slightly less mobility among Muslim women (see CARE Bangladesh 2003, unpublished), these differences could not be ascribed to religious affiliation. According to a study by Naved et al. (2011), crosscutting sociocultural variables in interaction with local ecologies and livelihood opportunities found that Muslim and Hindu communities exhibit varying levels of gender equality and mobility.

For many decades, development partners—government agencies, research organizations, nongovernmental organizations (NGOs) and increasingly the private sector—in Bangladesh have created initiatives to strengthen women's agency in development processes. Some of the methodologies deployed have sought to reduce social resistance to gender equality and equity by securing "buy in" from opinion formers in the community and through working with household (family) and couple approaches. Evaluations indicate ambivalent outcomes of these women's agency or empowerment-focused initiatives in some cases (Kantor et al. 2015). Projects often report securing economic and welfare achievements, but fewer report sustained women's empowerment outcomes (Terry 2014, for a summary). For example, a 2001–2005 study of the Development of Sustainable Agriculture Project shows that overall household fish consumption was higher when women managed ponds than when men did (Jahan et al. 2010). In a study to assess the impact of aquaculture extension activities, the productivity gap was found to have widened between women and men fish farmers who were trained by the Department of Fisheries under the Fourth Fisheries Project (1999–2006). Although the mean fish produced by women increased by an impressive 78% from baseline, the increase in

mean fish produced by men was even higher (Rahman et al. 2011). The differences between fish produced by women and by men were attributed to social and gender factors within the community. An evaluation of the Mymensingh Aquaculture Extension Project (1989–2003) showed that although women's individually operated ponds resulted in increased household incomes and more nutrient availability at the household level compared to group-operated ponds, the proportion of stunted girls actually increased (Kumar and Quisumbing 2011).

Literature from Bangladesh in this sphere indicates that when projects have targeted women without sufficient recognition of intra-household bargaining processes in project design will lead to unexpected differences in outcomes of individuals within the household (Quisumbing and Maluccio 2000). Building Resources Across Communities (BRAC) is challenging the frontiers of poverty reduction by targeting the Ultra-Poor program and promoting asset transfer, primarily of cattle, to women in very poor households with the aim of strengthening the entire household's livelihood. An evaluation showed that although women tended to maintain control over the transferred asset, including the right to buy and sell the animal, men appeared to compensate by increasing their direct control or sole ownership over a large number of other household assets. Furthermore, women experienced a decrease in intra-household decision-making power and in personal mobility (Das et al. 2013).

These and other studies (cited in Terry 2014) suggest that in Bangladesh targeting women (and men) for asset development or training is insufficient in the absence of direct engagement with the underlying gender and social issues that shape access to assets, the effectiveness of livelihood strategies and the ability of women in particular to implement lessons from training.

1.2 The Philippines

The Global Gender Gap Index for 2017 ranked the Philippines 10th out of 144 countries, three spots drop from the previous year when it was ranked 7th (World Economic Forum, 2016, 2017). The Philippines was the second highest performer in the East Asia and the Pacific region in 2017, having closed 79% of its overall gender gap (World Economic Forum, 2017). There has been a decline in its overall score in 2017 compared with 2016, partly caused by its performance on the wage equality for similar work indicator (World Economic Forum, 2016, 2017). The country's Health and Survival gender gap was re-opened for the first time since 2006, while its gender gap on Educational Attainment remains closed (World Economic Forum, 2017).

Findings from various studies show that while the Philippines' overall Global Gender Gap Index ranking was positive (Locke et al. 2017), gender norms that disadvantage women persist, and these appear to be strongest in agricultural and fishing communities (Locke et al. 2017; Leilanie 2010). Gender norms continue to structure the choices women, and men, feel able to make to improve their livelihoods in these contexts. Women's choices are partly shaped by their strong socialization into altruistic behavior and their having more domestic and managerial responsibilities than men (Locke et al. 2017; Chandra et al. 2017; Brickell and Chant 2010).

Women are involved in agricultural production and in their own processing and trading businesses further along the value chain to a greater extent than in other countries among the Association of Southeast Asian Nations (Chandra et al. 2017; USAID 2013). However, women do not have the same access to land and other productive assets as men (Chandra et al. 2017; Rebeca et al. 2015). Women's strong participation in higher-level value chain activity is partly due to a widespread perception that women should be more involved in non-farm labor (Chandra et al. 2017; Estudillo et al. 2001) because this is advantageous to family income generation. According to Estudillo et al. (2001), land is given to men because rice farming is labor intensive and the returns for men are higher for the work they do whereas women tend to receive higher returns on their education in the non-farm sector.

Women and men are differentially vulnerable to climate change, and this is affecting coping strategies. Women, because of their lower asset base, are more disadvantaged and tend to farm in smaller plots, work shorter hours or limit farming to cash crops (Chandra et al. 2017). Extreme climate events in conflict-prone agrarian communities appear to be driving women to forced migration, increased discrimination, loss of customary rights to land, resource poverty and food insecurity (Chandra et al. 2017).

In the Visayas, the GENNOVATE study area presented in this report, there have been very few recent studies. Studies cited in Locke et al. (2017) show that women are involved in pre- and post-fishing activities, especially processing and marketing, though some women fish from the beach or near shore (Ferrer et al. 1996). Their participation in fishing is viewed as “helping out” and is usually part time and unpaid (D’Agnes et al. 2005). Coconut and rice farming involve both men and women in gender-specialized tasks, as well as tasks in which they work together (Chiong-Javier 2009). Women have vegetable gardens in which men help with land preparation (Ferrer et al. 1996).

Over time, harshening economic conditions in the Visayas are leading to women’s increased participation in productive activities (Locke et al. 2017). However, men continue to construct themselves as breadwinners with women constructed as “helping out.” It is socially permissible in this context for women to earn outside the home and generate income provided that their activities are seen as contributing to family income. When women work on economic activities within the home, this is considered less threatening to men (Locke et al. 2017).

2. Methodology and sites

The study in Bangladesh was conducted in six villages out of the 16 that WorldFish worked in under the AAS CRP. The methodology applied was developed by the GENNOVATE initiative (Petesch et al. 2018). It was qualitative in nature. The specific methods are presented in section 2.3. The data was collected between August and September 2014 by external partner Bangladesh Center for Communication Programs (BCCP).

A total of 36 FGDs were conducted with separate women's and men's groups (18 per gender). The FGDs were guided by semi-structured questionnaires using various qualitative data collection tools (e.g. ladder of life, capacity to innovate and aspirations of youths).

A total of 24 KIIs were conducted with female and male innovative farmers (12 each) using a qualitative data collection tool (innovation pathways) to explore in-depth information on the type of innovations women and men engaged in.

The data was analyzed through a qualitative content analysis using qualitative software, NVivo 10, to organize and code the qualitative data. The analysis considered intersectionality in terms of age and wealth group, specifically contrasting youths with adults from middle- and poor income statuses.

This section opens with a discussion of the analytical framework used to interpret the findings and structure, the discussion and recommendations. This is followed by an explanation of how research sites were selected and a presentation of those sites. The section then presents the specific methods and tools applied, including respondent participation in each tool.

2.1 Innovation, agency and norms

In GENNOVATE, and this study, the term "innovation" is loosely defined to encompass agricultural technologies, natural resource management practices, learning opportunities, relationships and institutions. Innovations can be locally devised or externally introduced (Petesch et al. 2018). For the purposes of fieldwork, innovation was defined to the respondents as either (i) something that they were doing before (for instance, vegetable gardening) but are now doing in a different way, or (ii) something different they are doing now that they were not doing before (for instance, raising horses). The timeframe participants were requested to consider was five years. Therefore, although a specific innovation may not have been "new" in a wider sense, it was new for the individuals and communities concerned (Locke et al. 2017). In line with GENNOVATE, this study recognizes that innovations are not neutral and that they can take on different forms and so contribute to different actors in various contexts. Moreover, according Berdegué (2005) innovations are "social constructs, and as such they reflect and result from the interplay of different actors, often with conflicting interests and objectives, and certainly with different degrees of economic, social and political power."

Agency is a key concept in this study. Agency is defined by Kabeer (1999) as "the ability to define one's goals and act upon them," either independently or with others. It can take the form of varying degrees of participation in decision-making between spouses and in other forums, such as producer groups, of bargaining and negotiation, deception and manipulation, subversion and resistance, as well as processes of reflection and analysis Kabeer (1999). Given its nature, the articulation and deployment of agency can be difficult to perceive, so the exact ways in which women and men use agency can be misinterpreted and misunderstood. In this report, the findings focus on evidence of successful agency, in particular regarding women's participation in significant decisions. Kabeer (1999) calls these "first order choices" or "strategic life choices." They include choice of livelihood, where to live, who and whether to marry, whether and how many children to have, and so on. These are critical for people to live the lives they want. First order choices help frame second order choices, such as what foods to buy, which can be important for one's quality of life but do not constitute its defining parameters.

The theoretical literature on social norms, including gender norms, is large and includes a great number of theoretical positions, some of which are contradictory and others that are complementary. The sociological tradition emphasizes the role of norms in constituting society and governing social behavior, whereas social psychological and game theoretical perspectives examine why people comply with social norms (Marcus and Harper 2014). It is not possible to engage significantly with these perspectives for this report, but Table 1 provides useful language that helps to guide the analysis of the GENNOVATE findings in this report.

Table 1. Terminology around social norms and related terms.

Social norm	A social norm is a pattern of behavior motivated by a desire to conform to the shared social expectations of an important reference group. They determine in significant ways the distribution of the benefits of social life (Heise 2013 as cited in Marcus and Harper 2014).
Gender norm	A gender norm is a subset of social norms relating to patterns of behavior expected of women and men in a specific location.
Descriptive norms	Descriptive norms refer to beliefs about what constitutes normal practice in a given group. For instance, women and men may seek to enact culturally appropriate norms of a “good wife” and a “good husband.” Co-performance of stereotypical gender roles contributes to upholding a particular social order that both women and men feel it is necessary to maintain, albeit for different reasons (Rao 2012; Kandiyoti 1998).
Injunctive norms	Injunctive norms refer to beliefs about what people in a given group should do. Compliers can be positively sanctioned, for instance by being praised or accepted by the group, whereas non-compliers risk being negatively sanctioned, for example through gossip and isolation (Cislaghi and Heise 2017).
Reference group	A social norm is held in place through the reciprocal expectations of people within, and who influence, that group: the reference group.
Attitude	Attitude is an individual’s psychological tendency to evaluate something (a person, symbol, belief, object etc.) with a degree of favor or disfavor.
Behavior	Behavior is what a person actually does.
Gender roles	These are the division of responsibility based on gender.
Gender ideologies	A worldview of what gender relations should be like. These are often more resistant to change than gender roles. Conservative gender ideologies can co-exist with shifting gender roles.
Norms relaxing or bending	Norms relax when people—both male and female—challenge or cross boundaries of traditional gender roles or conduct, but their actions are not recognized as a legitimate and acceptable norm. According to Munoz Boudet et al. (2012), “They are assuming new roles or responsibilities, but are not setting a new standard.”
Norms changing	New roles, responsibilities or ideas are accepted as a new normative standard.
Progressive gender norm change	This occurs when norms change toward greater gender equality.

Source: Adapted and modified from Marcus and Harper (2014).

Norms are not synonymous with culture even though in development discourse these words are often used almost interchangeably (Marcus and Harper 2014). It is only by distinguishing between these concepts that assumptions about specific cultures can be dismantled. A more nuanced and careful understanding allows, for example, gaps between descriptive norms, gender roles and gender ideologies—and also their variability within a country—to be perceived. These gaps can then be used as entry points by development partners to support progressive gender norm changes.

It can be difficult to interpret change processes. For instance, evidence of norm relaxation or norm bending might suggest that a shift to new norms has occurred. However, when the specific situations (e.g. conflict or male outmigration) that lead to norm bending end, less progressive norms that favor male and other forms of dominance might be re-established (Marcus and Harper 2014).

Nevertheless, although one function of social norms is to facilitate continuity across generations (Knight and Ensminger 1998), norms evolve over time. For example, Risseeuw (2005) argues, using a case study of Sri Lanka under colonial rule, that gender norms with regard to property were imperceptibly transformed over time such that gendered concepts of access, control and ownership that would

have appeared to one generation as unthinkable came to seem normal or obvious, indeed natural, to later generations. The same applies to conjugal relationships in Sri Lanka, which were transformed through the colonial experience. Risseeuw (2005) remarks that such changes can happen so subtly and incrementally that change is scarcely perceived, and in time even this slight awareness is lost.

However, although social norms can be so deeply embedded that they appear part of the way of the world and thus beyond question (Bourdieu 1977), they are not neutral in their formulation, practice and underlying justification. They may favor the interests of a certain caste above other castes, one ethnicity above another, one sexual orientation above another, one gender above another, and so on. Some norms draw their legitimacy from religious or other beliefs (Agarwal 1997), but many norms have no clear ethical or moral basis (Stewart 2013).

An important body of feminist analysis understands gender norms as a means by which gender-inequitable ideologies, relationships and social institutions are maintained (Marcus and Harper 2014). Nevertheless, women are capable of deploying their agency to greater and lesser degrees to defend their interests, though within limits. An influential formulation of this is the “patriarchal bargain” developed by Kandiyoti (1988), who says, “Women strategize within a set of concrete constraints, which I identify as patriarchal bargains. Different forms of patriarchy present women with distinct ‘rules of the game’ and call for different strategies to maximize security and optimize life options with varying potential for active or passive resistance in the face of oppression.” Other studies (cited in Marcus and Harper 2014) note that the power embedded in masculinity is not hegemonic but can in fact be precarious. For example, in societies where male honor rests on female behavior, male status is vulnerable to non-compliance by women. This helps to explain why social norms are continually reinforced and also indicates that power relations are open to change (Marcus and Harper 2014).

Entry points for catalyzing shifts toward gender norms that support gender equality are of central interest to FISH. Potential entry points, based on this short literature review and the findings, are provided under section 5.

2.2 Site selection and sites

The study sites were purposively selected to represent the different agro-ecological zones and population size (large, medium and small) from where WorldFish worked under AAS. Moreover, additional contextual site selection variables were applied in each context to increase context relevance. In Bangladesh, these were two of the main religions in the country (Islam and Hinduism). In the Philippines, these were poverty incidence, economic class and proximity to economic centers. Using this approach, six case studies in Bangladesh were selected and three in the Philippines. Each case is represented by village.

Once sites were selected, a shared framework was used to understand the context of the research sites and describe them based on preliminary information from key informants. This is a simple matrix with four variables: high gender gaps or low gender gaps in assets and capacities on one axis, and high economic dynamism or low economic dynamism on the other. The purpose is to understand the level of gender inequalities and the local socioeconomic opportunities in the site selected that facilitate and inhibit innovations in that specific context. Gender gaps were estimated from the community profile provided by the key informants with reference to indicators such as women’s leadership, physical mobility status, education levels, access to and control over productive assets, and the ability to market and benefit from sales of agricultural produce. Economic dynamism is also estimated from the community profile using indicators with reference to infrastructure development, the integration of local livelihood strategies with markets, labor market opportunities and resources available to local communities for innovations in agriculture.

2.2.1 Bangladesh

In Bangladesh the six study sites (referred to as villages 1–6 in this report) were sampled from 16 communities where WorldFish has a presence in partnership with the International Water Management Institute and Bioversity International. WorldFish, which led the AAS CRP, partnered with the BCCP to collect data. In Bangladesh, one village was assessed as experiencing high gender gaps and high economic dynamism (village 6), and two villages as experiencing high gender gaps and low economic dynamism (villages 3 and 4). The remaining two villages were assessed as experiencing low gender gaps and high economic dynamism (villages 1 and 2). Table 2 summarizes this information. Sites experiencing high economic dynamism (villages 1, 5 and 6) have good roads, making it simpler for them to transport their goods and obtain better prices at more distant markets. Trucks and other vehicles access these villages to collect goods from the farm gate.

Table 2. GENNOVATE research sites in Bangladesh.

	Low gender gap-high economic dynamism	High gender gap-high economic dynamism	Low gender gap-low economic dynamism	High gender gap-low economic dynamism
Bangladesh				
Village 1	X			
Village 2			X	
Village 3				X
Village 4				X
Village 5	X			
Village 6		X		

For further nuanced understanding of the research sites, the gender gap was considered alongside the two criteria and the specific site selection variables (Tables 3 and 4). The research teams, using data gathered from key informants via gender indicators, estimated higher gender gaps in villages dominated by Muslim communities (villages 3, 4 and 6) and lower gender gaps in Hindu-dominated communities. This is presented in Table 3, along with the sites' districts. Figure 1 indicates the locations of the fieldwork.

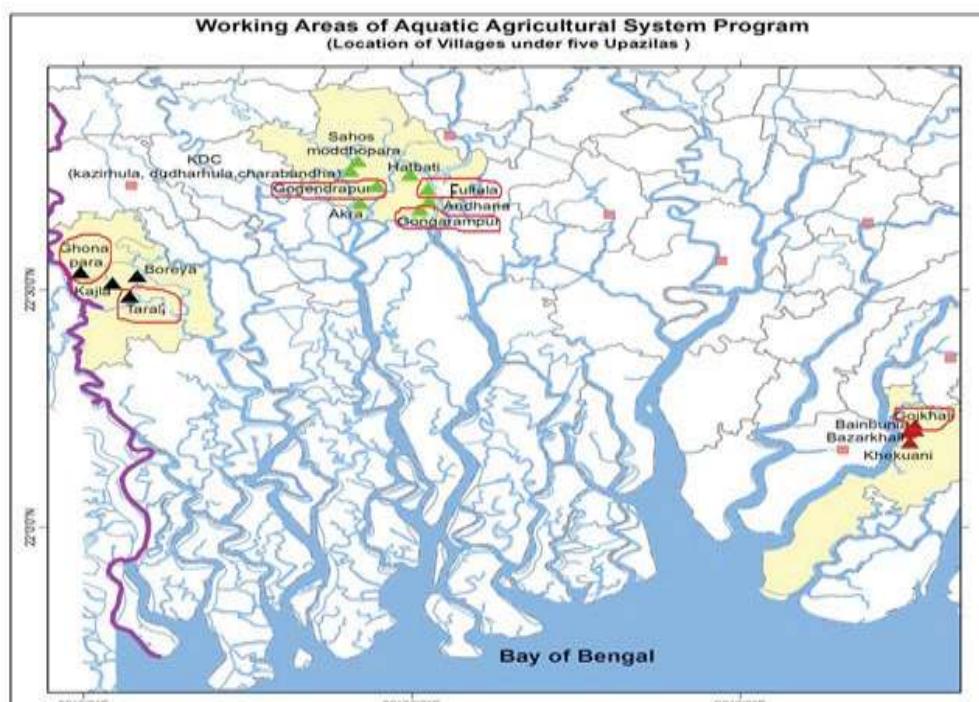


Figure 1. GENNOVATE study sites in Bangladesh. Study sites are circled in red: Satkhira (polder 3), high saline area; Khulna (polders 29 and 30), medium saline area; and Barguna (polder 42/F), low saline.

Table 3. Study villages in Bangladesh: additional selection criteria.

District	Community	Majority religion	Population	Salinity	Gender gap
Khulna	Village 1	Hindu	Small	Medium	Low
Khulna	Village 2	Hindu	Medium	Medium	Low
Satkhira	Village 3	Muslim	Large	High	High
Barguna	Village 4	Muslim	Medium	Low	High
Khulna	Village 5	Hindu	Small	Medium	Low
Satkhira	Village 6	Muslim	Large	High	High

2.2.2 The Philippines

Researchers collected data on the Philippines from its WorldFish office. The three communities were selected from AAS pilot *barangays* (communities) in the Visayas and Mindanao regions (VisMin Hub). Figure 2 indicates the locations of the fieldwork. All three sites had low gender gaps. Two had high economic dynamism (villages 7 and 8) and one had low economic dynamism (village 9) (Table 4).

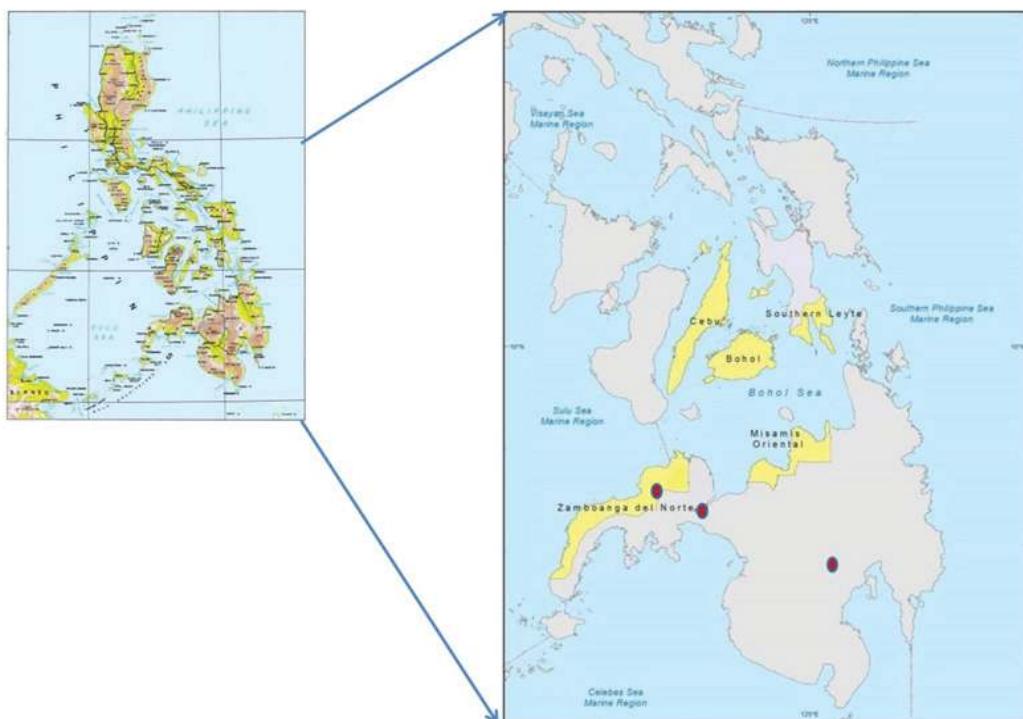


Figure 2. GENNOVATE study sites in the Philippines. The study sites are indicated by ovals.

Table 4. GENNOVATE research sites in the Philippines.

	Low gender gap-high economic dynamism	High gender gap-high economic dynamism	Low gender gap-low economic dynamism	High gender gap-low economic dynamism
Philippines				
Village 7	X			
Village 8	X			
Village 9			X	

Additional selection criteria included population size (large, medium and small), land area (large, medium and small), environmental typology (coastal plain and island), poverty incidence (high, middle and low), economic classification (second, third and fourth class³) and proximity to economic centers (near, moderately near and far) (Table 5).

Table 5. Study villages in the Philippines: additional selection criteria.

Province	Community	Poverty incidence	Economic class	Proximity to economic center	Population	Environmental typology	Gender gap
Zamboanga del Norte	Village 7	61.6%	3rd class	Near	Large	Coastal plain/rolling areas	Low
Southern Leyte	Village 8	43.3%	2nd class	Moderately near	Small	Coastal plain/rolling areas	Low
Cebu	Village 9	30%	4th class	Far	Medium	Island	Low

2.3 Research methods and tools

GENNOVATE uses a comparative case study approach deploying standardized instruments to identify factors that hinder, facilitate and promote men's and women's individual and collective capacities for engaging in innovation processes. The methods are qualitative. Specifically, the study used FGDs and KIIs. Within the FGD and KII methods, the study applied seven tools using semi-structured interviews (SSIs) (Table 6).

All discussions were held in sex-disaggregated groups or with individuals with facilitators and notetakers of the same gender. Two sets of sex-disaggregated FGDs were held with adults aged 25–55 and a second FGD with youths aged 18–24. The adult FGDs were further sub-divided by economic class with respondents drawn from poor and middle-income categories using locally developed classifications. FGD guides for each of these groups covered similar and different themes. One-on-one interviews were held with locally recognized innovators, four from each gender. Landless women and men were not included, though they might have been active in agricultural-related occupations.

Table 6. Themes for FGDs and SSIs.

Community profile SSIs	Overview of key features of the community and trends over the previous 10 years: livelihood dynamics, marriage practices, educational opportunities, economic development, etc.
Well-being FGDs	Factors shaping socioeconomic mobility, poverty trends and their gender dimensions. These include a “ladder of life” activity, which seeks to understand the causal factors of women and men moving in and out of poverty and how they relate to women's and men's decision-making power and participation in innovations.
Gender norms FGDs	Gender norms and household and agricultural/marketing roles; gender norms and household bargaining over livelihoods and assets; intimate partner violence; women's mobility.
Capacity to innovate FGDs	Agency; community trends; enabling and constraining factors for innovation, and their gender dimensions; social cohesion, networks and social capital and their gender dimensions. Some of this information is established through a “ladder of power and freedom,” which seeks to establish the current trends in self-perceived levels of decision-making as compared to 10 years earlier.
Innovator pathways SSIs	Explore in depth the trajectory of individual experiences with new agricultural practices, and the role of gender norms and capacities for innovation in these processes.
Life history SSIs	To understand the life stories of men and women in the community who have moved out of poverty or remained trapped in poverty, and how gender norms, assets and capacities for innovation in agriculture shaped these dynamics.
Aspirations of youths	To understand agency of young people in determining their life choices and their participation in innovation processes.

Source: Modified from Locke et al. 2017.

³ Provinces and cities in the Philippines are divided into five main classes (from first to fifth class) according to their average annual income: http://www.zamboanga.com/z/index.php?title=Classification_of_Provinces,_Cities,_and_Municipalities_in_the_Philippines. Accessed 22 October 2017.

Verbal informed consent was obtained from all participants, and they were assured of their personal anonymity and their right to withdraw at any time.

The data was collected by a team from the BCCP and translated into English by an externally hired translator. It was then centrally coded using a coding system developed for all the GENNOVATE studies conducted by all the CRPs. The Bangladesh gender team reviewed the raw and translated data before coding.

2.3.1 Participant selection

Local extension agents selected participants according to sampling criteria provided by the GENNOVATE research teams. The criteria consisted of willing male and female participants from the selected villages dependent on aquatic agricultural systems for their livelihood. These included male and female youths and adults, participants of different wealth statuses and both AAS innovator farmers and non-AAS farmers.

In Bangladesh, 72 FGDs were held with 669 respondents (324 adult men and 345 adult women) (Table 7). Together with innovator interviews (2 men and 2 women per location, 12 per gender, 24 total), individual life stories (2 men and 2 women per location, 12 per gender, 24 total), and key informants⁴ (2 men and 2 women per location, 12 per gender, 24 total), 360 men and 381 women participated in the research (741 total respondents).

Table 7. Number of FGD participants by gender and age in Bangladesh.

	Location	Low-income adults 25–55		Middle-income adults 25–55		Youths 18–24	
		Men	Women	Men	Women	Men	Women
High economic dynamism-low gender gap	Village 1	25	30	18	21	9	9
	Village 5	28	29	21	19	12	10
High economic dynamism-high gender gap	Village 6	26	27	19	21	11	8
Low economic dynamism-high gender gap	Village 3	26	26	18	20	8	9
	Village 4	25	28	17	20	11	10
Low economic dynamism-low gender gap	Village 2	26	30	16	20	8	8
Totals		156	170	109	121	59	54

In the Philippines, 36 FGDs were held with 247 respondents (111 adult men and 136 adult women) (Table 8). Together with innovator interviews (2 men and 2 women per location, 6 per gender, 12 total) and individual life stories (2 men and 2 women per location, 6 per gender, 12 total), 123 men and 148 women participated in the research (271 total respondents).

Table 8. Number of FGD participants by gender and age in the Philippines.

	Location	Low-income adults 25–55		Middle-income adults 25–60+		Youths 18–24	
		Men	Women	Men	Women	Men	Women
High economic dynamism-low gender gap	Village 7	16	19	14	16	6	8
	Village 8	12	19	9	9	7	4
Low economic dynamism-low gender gap	Village 9	20	30	18	20	9	11
Totals		48	68	41	45	22	23

⁴ These are the people who were interviewed for the community profiles.

3. Findings

3.1 Spheres of innovation

The data shows that spheres of innovation are strongly gendered in the Philippines and Bangladesh. The first part of this section discusses gender norms relating to farming and innovation and then presents findings regarding the ways in which some innovations are gender-specific. These can be considered gendered spheres of innovation. The second part discusses evidence that shows women and men do not necessarily have a clear understanding of each other's preferred innovations.

As a reminder, respondents were told that innovation is either (i) something that they were doing before but are now doing in a different way, or (ii) something different that they are doing which they were not doing before. The timeframe they needed to consider was five years. Therefore, although a specific innovation might not have been new in a wider sense, it was new for the individuals and communities concerned (Locke et al. 2017). To limit bias, the respondents were not given any guidance as to "which" innovations to choose. It was also made clear that innovations did not necessarily come from external actors; internally developed innovations should also be considered. Nevertheless, fieldwork took place in communities in which WorldFish AAS has been active, and this might influence the innovations selected.

Respondents in Bangladesh and the Philippines discussed a wide range of innovations introduced by development partners, including WorldFish, AAS, agricultural advisory services, NGOs and others. Indigenously derived innovations in both countries include women participating in agricultural fieldwork. Innovations discussed include the following:

- small-scale aquaculture: new fish species, improving feed, improving water quality using lime
- improved fish capture: fishing using motorboats, better nets
- improved machinery for rice cultivation: tractors, rice threshers, spraying machines
- improved vegetable production management practices: row planting, quality seed and new species or improved varieties of existing varieties, preparing good seed beds, installing improved drainage systems, preparing organic manure, using inorganic fertilizer and pesticides
- improved livestock: cattle, sheep and goats, poultry, Campbell ducks, as well as starting to raise pigs
- improved livestock management: proper feeding, health care and use of medication
- improved poultry farm practices: proper feeding and medication
- occasional mentions: seaweed farming, planting abacus trees, horses.

The list shows that improvements to machinery, improved crop and livestock practices, and improved crop and livestock gene flow are all recognized as innovations. In most cases, women and men discussed improvements to existing livelihood practices rather than completely new forms of livelihood. The former included growing abacus trees, seaweed farming and raising horses (all in the Philippines).

Middle-income men and women listed a wider range of innovations in their communities than low-income women and men. Youths, both male and female, mentioned fewer innovations.

3.1.1 Bangladesh

Discussions of agricultural norms in Bangladesh suggested that a "good man farmer" is responsible for leading agricultural processes, including crop selection, and managing technical processes, such as irrigation and inputs. A "good woman farmer" is primarily expected to be supportive of men's agricultural work. This is not necessarily in terms of lending a hand—support also entails offering verbal encouragement.

However, although respondents were clear when discussing norms that men "lead," women expressed considerable autonomy in their own spheres of innovation (see section 3.1.1.1). Women felt responsible for cultivating vegetables, raising fish in household ponds and raising poultry, cattle

and sometimes goats around the homestead. They discussed innovations as integral to improving productivity for household consumption and to strengthened income generation in these domains. The only non-farm based entrepreneurial activity mentioned by women was tailoring from home.

Men were clear that they are responsible for rice and fish production. Some men own or work in enterprises such as grocery stores and tailoring. Other men work in brick factories or in collecting and carrying sand.

Respondents were strongly aware that the agro-ecological environment sets the context for their innovation choices. Particularly in saline areas (villages 1 and 5), respondents felt hampered by the limited range of options and experiments they could consider to improve their lives. Women referred more often than men to the importance of natural capital, such as water, perhaps because they have less access to financial and social capital.

[3.1.1.1 Women's spheres of innovation](#)

All women—poor and middle-income adult women, and young women—agreed that improved vegetable production is a leading innovation for them. It was ranked first or second in almost every FGD. In particular, women discussed using raised beds, planting in rows, the importance of seed selection and how to make organic compost.

The second-most important innovation identified by women, particularly for young women and adult middle-income women, was improved poultry practices, including using improved breeds of ducks and chickens. This is because financial investments are low but profits are high. Poultry management does not require much time or effort and so allows women to manage household work as well. Adult women mentioned the importance of eggs for household nutrition, though younger women did not express this concern. However, almost no poor women mentioned improved poultry as an important innovation for them.

The third innovation consistently mentioned by women was cattle. Middle-class and poor women discussed raising calves and selling them as adult animals for a large profit. As with poultry, women find caring for calves easy to fit around their other work. The women also mentioned rearing goats as being an all-time popular choice for women because they are simpler to handle and cheaper than cattle.

Fish-related innovations were mentioned across all groups of women. Middle-class women mentioned fish production from homestead shaded ponds (where fish could not be grown before), using nets for better management of fingerlings in ponds, white fish farming in enclosures, the use of lime to clean ponds, cultivating new varieties of fingerlings, crab fattening and stocking fingerlings. Poor women from all villages, with the exception of one village, mentioned fish culture from cage and rings, new fish farming techniques and rice-fish farming. All female youths, again with the exception of the same village, mentioned rice-fish culture, cage culture, new ways of fish culture in ponds and building fish enclosures in new ways.

Finally, middle-income women in some FGDs considered helping men in the main fields (beyond the homestead) as an innovation. The women who selected this innovation stressed that people increasingly understand that women's work in the fields is valuable and contributes importantly to family income.

[3.1.1.2 Men's spheres of innovation](#)

Men listed a wider range of innovations than women, but the innovations that mattered the most to them—across all age and income brackets—were rice-related technologies. These included improved rice varieties and labor-saving machinery (tractors) for land preparation. In low salinity areas, middle-income men plant rice three times a year on the same plot. Poor men value higher yields on their small plots.

In the villages experiencing high salinity, all men valued innovations in shrimp and prawn highly. Across all other villages, men emphasized new and improved management techniques for the pond and feeding. Actual innovation varies by community. In one village, prawn and lobster are grown for export, for example. In general, fish farming is identified with men because they clean the ponds and guard fish at night. Unlike the women, men did not specifically mention rice-fish culture or farming in cages.

Increasingly, men across all age and income brackets valued vegetable production because innovations have made horticulture more profitable. Young men highlighted the relative lack of effort involved in raising vegetables. Poor men highlighted the fact that they can grow vegetables year-round, giving them a regular source of income.

Figure 3 summarizes the discussions. It shows that livestock and poultry lie clearly within women's spheres of responsibility and that innovations within these are primarily led by women. Men exhibit strong responsibility for rice and fish than women did, so they are interested in innovations pertaining to these. Both genders show strong interest in vegetables: all women and increasingly men. However, poor women do not appear to benefit as much as middle-income women from improved poultry, perhaps because they have not been targeted in the study communities. Poor men see improved productivity in rice and vegetables as central to their income generation practice.

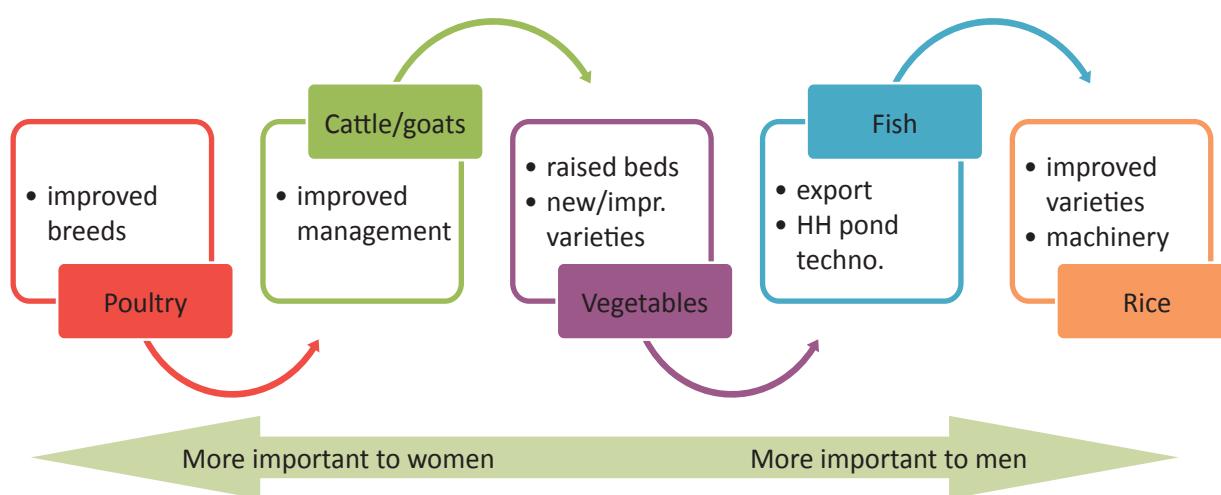


Figure 3. Spheres of innovation by gender in Bangladesh.

3.1.2 The Philippines

Norms delimiting spheres of innovation are less easy to identify in the Philippines than in Bangladesh. This is partly because of rapid change in livelihood strategies in response to the challenges people are facing. Historically, women have not been considered farmers by either women or men in the communities, whether they were de facto involved in farming or not. For example, in villages 7 and 9 women had been evidently working alongside men on land clearance, transplanting rice seedlings, weeding and harvesting rice. Similarly in village 8 women did not participate in farm work in the past, so the perception that farmers are men has historical roots. However, economic need is driving women to work in agriculture and to seek waged farm labor in all three communities. This work is becoming an increasingly important source of household revenue. However, the low volume of produce hampers many smallholders and tenants from entering more profitable markets, which require delivery at scale. Local traders purchase at the farm gate and typically set the purchase price.

Women also were not considered by women or men to be fishers, though they undertake important activities related to fishing, such as net making, and are active in fishing near the shore. Women accompany husbands and sons to the beach to help them prepare for fishing and to manage the catch

afterward. In one FGD, women explained they helped in fishing but that men controlled it. Some women, though, fish alongside their husbands, and most women help men bring in the fish. In an FGD, women from village 9 said, “We help men after their fishing trip, especially after bottom-set long line, because for sure they will be tired. We untangle the long lines.”

While men respondents identified themselves as fishers, many do not own their own a fishing boat or fishing gear. They hitch a ride on a fishing trip or borrow boats and gear from *amo* (who set the purchase price for fish).

Women engage in more diverse livelihoods than men and often ran several small businesses at one time. Strategies included growing vegetables, rice and coconuts, making nipa shingles for roofing, making charcoal, weaving hats, providing laundry services and selling various goods in the market. Women typically sell from a small store in their home or from a designated market stall. Both men and women considered women to be more effective at marketing than men because they are better at “sales talk” than men, more patient at dealing with different types of customers, better at price setting and less likely to give in to pressure from friends to set a lower price.

3.1.2.1 Women’s spheres of innovation

The most consistently mentioned innovation by poor and middle-income women was vegetable growing. For some women, growing vegetables was the innovation, rather than improved practices in their cultivation. Women like vegetable production because they are easy to grow. Those that have been trained in organic fertilizer production considered this an important additional innovation.

Middle-income and poor women, particularly in village 9, also mentioned fishing as a business. In this village, fishing is the main livelihood of the community. Women process and sell fish, and they have adopted new ways to trap fish, such as trolling (using one or more baited lines drawn through the water) and catching squid, which increased overall yield.

3.1.2.2 Men’s spheres of innovation

Men, particularly poor men, find innovations in rice important. In particular, they valued how threshers increase yield and reduce effort and waste.

Although fish capture is a central livelihood strategy, men discussed few innovations. Young men selected the 2- to 3-inch net eye as an important innovation because this helps them catch big sardines and is thus more profitable. Overall, though, the sense was more of despondency. Poverty is widespread and exacerbated by a decline in fish catch. This is due to illegal fishing methods using forbidden nets and compressors that are able to catch small fish.

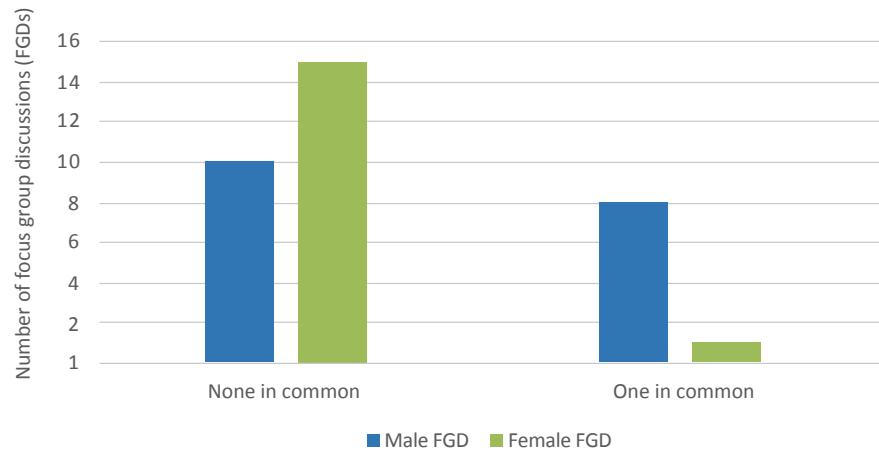
A few men have been introduced to other livestock. Poor men who have started to rear pigs valued the way pigs gain weight rapidly if properly fed and fenced. In other villages, men had been introduced to horse rearing and inorganic fertilizer and pesticide. In each case, they considered these important livelihood options.

3.2 Gendered perceptions of innovation for the opposite gender

Women and men were asked not only to select the most important innovations for their own gender; they were also asked for their perceptions of the most important innovation for the other gender. This exercise showed that women and men believed that innovations important to their own gender were not important to the other gender. This is particularly the case for women’s perceptions.

3.2.1 Bangladesh

In 15 villages, innovations that females considered important to themselves were different from the innovations they thought were important to males. In only one village did females identify the same innovation for themselves and for males (Figure 4).



Source: Bangladesh 34 FGDs (16 females and 18 males FGDs).

Figure 4. The share of female and male FGDs (all adult and youth FGDs) identifying the same innovations for themselves/opposite gender in Bangladesh.

In 10 villages, males did not select the same innovations for themselves as they selected for females (Figure 4). However, in eight villages males selected at least one of their preferred innovations as being the same as for females (in most villages, vegetable gardens). This is probably because both females and males have been targeted by AAS in a participatory action research on quality vegetable seeds and management techniques.

3.2.2 The Philippines

In the Philippines, females and males both valued innovations in the preparation and use of organic fertilizer, and seaweed farming, hence deeming at least one common innovation as important for the opposite sex as they hold important for themselves (Figure 5). However, males did not mention vegetable growing, and females did not discuss innovations in rice as important for each other.

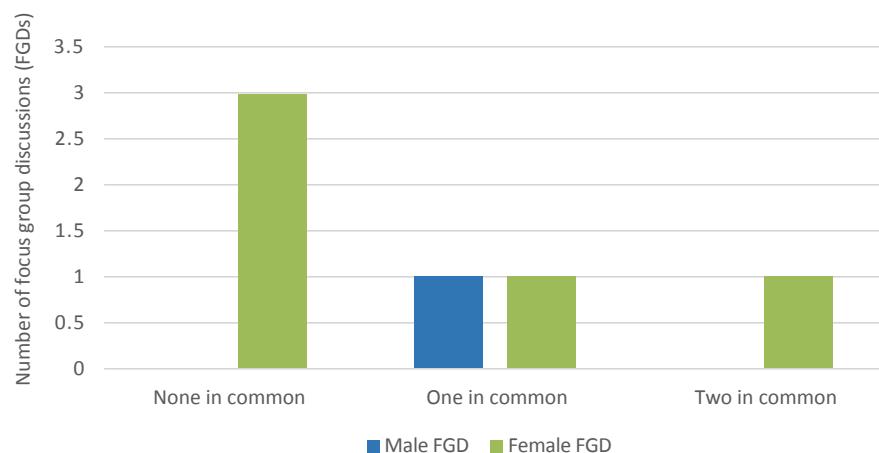


Figure 5. The share of female and male FGDs (all adult and youth FGDs) identifying the same innovations for themselves/opposite gender in the Philippines, village 6 poor female and male (n=6 FGDs, 5 female FGDs: 1 male FGDs).

3.3 Factors facilitating women's and men's participation in innovation processes

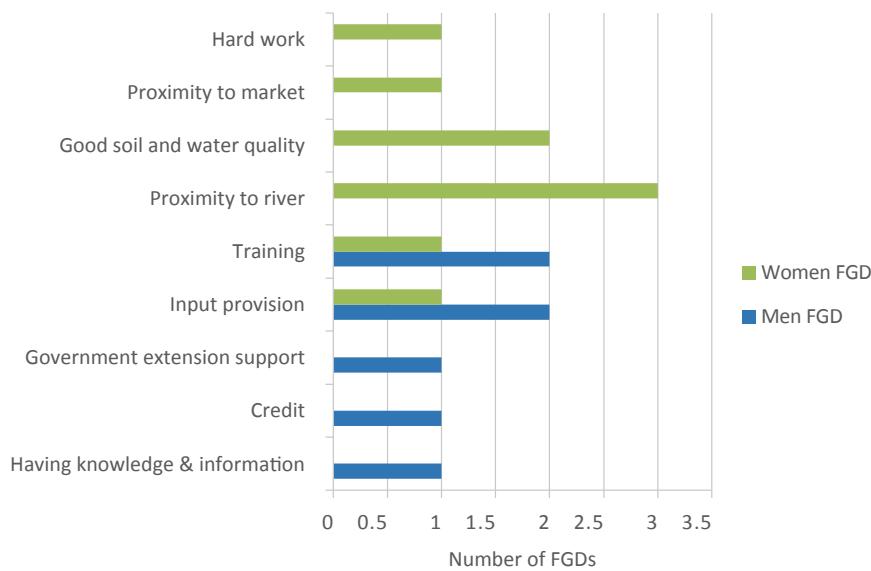
Adult women and men were asked to identify the key facilitating and constraining factors to engaging in innovation in their community. The findings show that the overall environment was considered by study participants to be relatively enabling in Bangladesh, in contrast to the Philippines where despite economic growth respondents are finding it harder to generate livelihoods. Women's and men's ability to innovate within their wider context is strongly gendered in both countries.

3.3.1 Bangladesh

In general, women and men agreed that the overall enabling environment is changing for the better. Market access is improving because of better roads, and buyers are increasingly coming to villages, with women able to sell their products at the farm gate. Although they are largely price-takers, this practice enables them to negotiate directly and to earn an income.

Both women and men respondents in all communities indicated that the overall gender gap narrowed over the study's 10-year period. They ascribed this to women joining the workforce in increasing numbers. Respondents suggested that women now have more work opportunities, better access to credit and better education, and that women are better represented as council members. In the study communities, at least three-quarters of boys and girls had—according to key informants—completed primary and secondary school. It was agreed that education in itself is changing attitudes positively toward gender equality.

Despite the above reported trend, women and men identified quite different enabling and constraining factors. Figure 6 shows the most important enabling factors in each FGD (one or two per FGD).



Source: Bangladesh 12 FGDs (6 women FGDs and 6 men FGDs).

Figure 6. Most important enabling factors for innovation in Bangladesh.

Women and men interact differently with external actors or other farmers. Men benefit from wide social/communication networks with other men within and outside the community as well as with various development partners, including rural advisory services and agricultural research organizations. This enables them to get assistance and advice when they require it; their relationship with providers is demand-led. By way of contrast, women explained they are weakly connected to external providers and are hesitant to build on potential opportunities. Women's relationship to external providers is therefore supply-led.

Women are also more weakly positioned in relation to developing their expertise. Two men's FGDs agreed that training in the innovation technology or practice is necessary, but only one women's FGD. A further men's FGD highlighted the importance of "knowledge and information," which women did not mention, and another FGD highlighted government extension support. Respondents explained that men are able to attend training in any location whereas women do not attend unless the training provider explicitly requests women's attendance. Women further explained that training providers tend to assume that men will share the knowledge acquired during the training with them. However, this is not necessarily the case. When they require advice, women are generally expected to consult other women.

Men reported that they (men) are targeted for technical training by rural advisory services and other agricultural actors and that they value this training very highly in relation to developing their innovative capacity. The lack of mention by women reflects their general sense of marginalization. Nevertheless, women and men agreed that women are being increasingly targeted by the government extension services, research centers and NGOs for technical training, even though this remained at a low level.

Women and men both attempted to source credit to finance their livelihood activities. However, women did not mention credit as an opportunity but rather a constraint. Lack of finance restricted their ability to implement their selected innovation. In the case of married women, men often decide how to use money or assets that women receive, including when these result from the woman's own work, or are provided by her family. By way of contrast men did not generally see credit as a major constraint.

Over half of the women FGDs prioritized access to water (near a river, with good soil and water quality). Women also considered proximity to a market and hard work as important to successfully implementing innovations. This was very different from men, who did not mention any of these factors.

Among constraining factors, some women lack permission from husbands to innovate. For example, an innovative Muslim woman from village 3 explained she has to get permission from her husband to attain training and to go out to interact with people, though he moved to her parents' home to live with her rather than she moving in with him, as is the usual custom in Bangladesh.

The data reinforces the continued significance of gender norms as a constraint to women's mobility. For example, male study participants in Bangladesh frequently referred to the importance of respecting gender norms when discussing women's mobility. A poor man in village 3 said, "A girl going out to work is not acceptable in our society. Why would an unmarried girl go out to work?" A young man in village 1 added, "Young women don't feel comfortable going to the market as there are security issues." A middle-class man in village 3 remarked, "If women go to the market, then people will say that we have seen your wife selling vegetables with other men in the market, mixing with men, gossiping with men." Any man who allowed his wife to go to the market is, men explained, looked down upon. The definition of being a "man" is to be able to fulfill the needs of his wife and children by getting whatever is needed to the house. Men are also deemed to be physically stronger than women. It is therefore considered easier from men to transport agricultural produce to the market.

Women in all FGDs made similar comments as those made by men. For instance, a middle-class woman from village 1 said, "A woman might be derailed if she goes to the market and mixes with other men." While young women in village 3 said, "A woman just doesn't feel comfortable in the local market since people will speak ill of her. If she is married, then her father-in-law and mother-in-law also will speak badly of her." Apart from gender norms and practices, like *purdah*, that limit mobility, women said they also lack time to go to markets, either to purchase or to sell. This may explain why women mentioned proximity to market as an enabling factor (Figure 6).



Source: Bangladesh 12 FGDs (6 women FGDs and 6 men FGDs).

Figure 7. Women's and men's perceptions regarding women's mobility in Hindu and Muslim communities in Bangladesh.

However, surprising findings about gendered perceptions of mobility also emerged when, later in the FGD, women and men were asked in their respective groups to decide how much freedom of movement in the community women had according to a scale between 1 and 10. This was individually decided through a secret ballot and then compiled for discussion by the facilitator, and very different findings emerged.

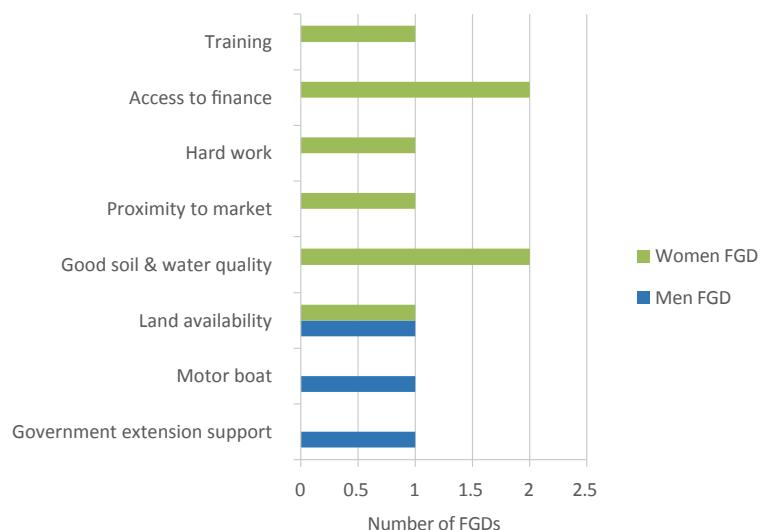
Women in all study communities expressed a higher perception of women's mobility than men did. The women in the three Hindu-majority communities considered, respectively, that 7.87, 5.12 and 9 out of 10 women move freely on their own whereas men considered that 4.25, 1.66 and 1.36 out of 10 women move freely on their own. In the three Muslim-majority communities, women respectively reported that 4.5, 8 and 5.4 women out of 10 move freely on their own whereas the men reported 5.27, 2.75 and 1.36, respectively. The scale of the discrepancy in perceptions is shown in Figure 7. One potential explanation for this discrepancy in perception between men and women is that there is a gap between social norms and behavior—between what norms prescribe what women should do and the reality of what women actually do. In this interpretation, most men's assessments by men's groups relied on their normative expectations, whereas most women's groups considered women's mobility in their everyday lives. Alternatively, the discrepancy might also be interpreted as women's reporting reflecting more aspirational perceptions or wanting to report strongly given the theme of the research. Similarly, an alternative explanation might be differences in how the different groups interpreted the meaning of "move freely on their own." This could be associated with differences in critical consciousness, i.e. men's scoring is based in their awareness of what full freedom of mobility entails (because of their lived experience of full mobility). This is different from women's scoring, because women's assessment of what full mobility means is based on women's lived experience of very limited, but recently increasing mobility. The data surfaces this as a useful area for further empirical assessment, both in terms of the gender gap in perception and the differences between contexts.

3.3.2 The Philippines

Women and men in the study considered that life was more difficult in 2014 than 10 years earlier. The main reason given was the decreasing profitability of agricultural and fishery livelihoods. The effect of this was worsened by the ever-increasing prices of basic commodities. Men were struggling with agricultural and fishery-related challenges. Women, in their additional role as primary caregivers, found themselves struggling to purchase basic necessities for the family. In village 7, which is close to urban centers, the economy was perceived to be growing and the increase in businesses was opening up more livelihood opportunities for a few women and men. However, across the board, respondents shared the perception that economic growth failed to improve the capacity of lower socioeconomic groups to keep pace with the increasing cost of basic commodities.

Calamities like typhoons have significant long-term repercussions on the ability of poor people to generate income and sustain their livelihoods. In village 7, respondents explained that typhoons make it impossible to go out and fish. This tilts them into poverty as they start losing the assets they have and slip down the ladder. In village 8, the coconut harvest was hit by a typhoon and a bridge was destroyed. In village 9, the electrical lines were destroyed.

In terms of enabling factors, women in the study listed a much wider range of enabling factors than men (Figure 8). This related to their active engagement in marketing and small business development, as well as their role in farming and supporting men in fishing. Women identified technical training, hard work, proximity to market—which, unlike in Bangladesh, women can access directly—and good soil and water quality as central to their being able to innovate. Both women and men agree that land is important. However, men noted the importance of motorboats for fishing and government support to the fishing industry.



Source: 6 FGDs (3 women FGDs and 3 men FGDs).

Figure 8. Most important enabling factors for innovation in the Philippines.

Although participants expressed that women are considered by financial providers to be reliable in paying back credit, women in the study identified that it can be difficult for women in low-income groups to obtain credit. Women typically use credit to meet shortfalls in household income (food needs, children's school requirements) or to start small businesses, such as *sari-sari* (a small shop). However, the women reported that high interest rates from the formal banking sector and even the lower demands of microcredit providers can constrain women from investing sufficiently in their businesses. They typically use small profits to address shortfalls in the household budget, making it difficult to meet interest repayments, let alone pay off the capital. In village 7, though, women reported that the frequency of repayment forced them to work hard. They found this energizing because previously they had not earned any money at all.

Most men refrain from taking out a loan whether through a formal lending provider or microcredit. In particular they feel it is not their responsibility to address financial shortfalls at the household level. They consider it their role to provide money for their wives to meet bills, and if this money is insufficient then it is their wife's responsibility to stretch the money or find additional income. While this norm can make life stressful for women, it also allows women a strong say in household decision-making, including regarding how to manage large assets.

In general women experienced very high mobility (equal to men), with only young women complaining of being expected to go home earlier than young men, to prevent potential sexual harassment.

3.4 Current and evolving strategic decision-making power

This section presents findings from three different FGDs—(1) middle-income adults, (2) low-income adults, and (3) youths—on self-perceived strategic decision-making power and how this changed over time.

In the middle-income and low-income FGDs, adult women and men were asked to consider their current ability to make major life decisions about important affairs in their lives, such as which innovations they would like to adopt, what type of work they wish to do, the life partner they choose to marry, how to spend money (including large sums) and similar decisions. They were asked to place themselves on a ladder and secretly write which step they were on, with one being the lowest step and five the top step. Step 1 or 2 expresses low decision-making power. Step 3 represents the level at which respondents feel they can make a number of major life decisions, though not all. Steps 4 and 5 represent strong decision-making power.

Respondents were then asked to consider whether they had the same kind of power and freedom to make the same kinds of decisions 10 years earlier (2004) and to place themselves on the ladder again. Discussion on the reasons for changes, if any, then ensued. This aimed to understand the causal factors of women and men moving in and out of poverty and how (and if) they relate to women and men's relative decision-making power and their participation in innovations.

In the youth FGDs, young women and men were asked to undertake the same exercise relating to their perceptions of their decision-making power on matters important to them. As a result of their age, the prompting questions were different, for example whether they wished to continue in education, whom they wish to marry and the kind of work they wish to do in the future. And because of their age, they were not asked to conduct the same exercise a second time (reflecting on the situation 10 years earlier).

The findings are presented as follows: adult women perceived that their own strategic decision-making capacity had changed over time, regarding their capacity to take such decisions as opposed to adult men. Although the figures presented appear relational, it is important to recall that respondents were asked only to consider their own strategic decision-making power within their own gender groups. They were not asked to consider their power vis-a-vis the other gender or other age groups. However, comparing perceptions elicited separately through combining findings provides useful insights into relative power relations. The findings from the ladder of life activity are then presented. Bangladesh is discussed first, followed by the Philippines.

3.4.1 Strategic decision-making capacity in Bangladesh

3.4.1.1 Adult and young women

Figure 9 shows how adult and young women in Bangladesh assessed their level of strategic decision-making power.



Source: Bangladesh 12 FGDs (6 adult women and 6 young women FGDs).

Figure 9. Women's ability to make important life decisions, as perceived by adult and young women in Bangladesh.

In half the FGDs, adult women placed themselves on, or close to, step 3. Adult women in villages 1 and 2 expressed higher decision-making power (very high in village 2), and women in village 6 expressed lower decision-making power.

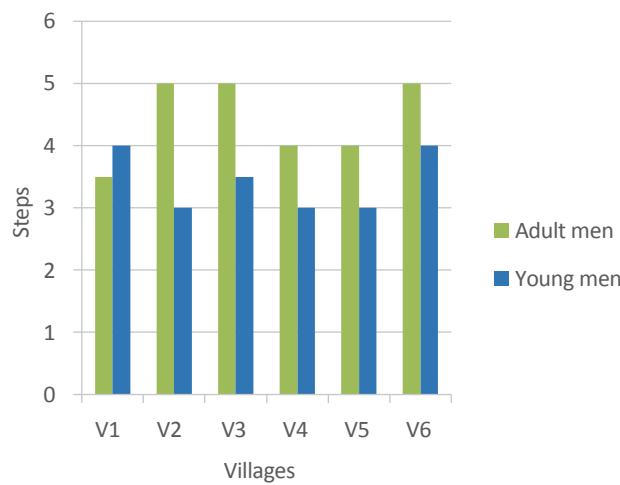
Villages 1 and 2 are Hindu-majority, and village 6 is Muslim-majority. Village 5 is Hindu-majority, but adult women placed themselves on the same step as village 3 and 4, which are Muslim-majority communities.

Young women in villages 3 and 4 awarded themselves the same level of decision-making power as their mothers, but a whole step higher than their mothers in village 6 (all Muslim-majority villages). In village 5 young women awarded themselves slightly higher decision-making power than their mothers did for themselves. Young women in the Hindu-majority villages 1 and 2 awarded themselves the same level of power as young women in two Muslim-majority villages did.

Adult women attributed their relatively low level of strategic decision-making power (level 3) to social norms that expect women to live in accordance with their husband's thinking about his and his family's needs. They argued they had limited scope to question their husband's and in-laws' decisions. In the discussions, they identified underlying factors that support men's stronger decision-making power. In particular, they asserted that male control over land limited women's ability to make decisions. Some women described that although they had been trained in new agricultural technologies and wanted to innovate, they could not implement what they had learned because they did not have their own land or agricultural equipment. Women also linked mobility restrictions with their lower ability to make decisions. Nevertheless, the assessment remains that the women in the study had moderate strategic decision-making power.

3.4.1.2 Adult and young men

Figure 10 shows how adult and young men in Bangladesh assessed their level of decision-making power.



Source: Bangladesh 12 FGDs (6 young men FGDs and 6 young women FGDs).

Figure 10. Men's ability to make important life decisions, as perceived by adult and young men in Bangladesh.

In most villages, adult men placed themselves on steps 4 or 5. These steps represent high levels of strategic decision-making power. Religious affiliation did not appear to play a role, with men in village 1 (Hindu-majority) awarding themselves the lowest ratings, but men in villages 2 (Hindu-majority), 3 and 6 (Muslim-majority) awarding themselves the top rating.

Men explained that they felt confident about their ability to make strategic decisions. Importantly, they received support from relatives and friends. A man from a middle-class men FGD in village 3 said, "There is full freedom for men. I am the guardian of the family. Everyone listens to me and no one in the

family goes against my words because I think thoroughly before making any decision. My relatives and friends support me.... Being the head of the family, we men need, and should, make decisions." In line with gender norms defining men as breadwinners and women as caregivers in all study sites, many men considered it is their prerogative to make key decisions regarding livelihood selection and expenditures.

Young men perceived themselves as having less decision-making power than adult men. Young men in village 1 indicated slightly higher decision-making power, but since they were not asked to compare their power with that of adult men this may be an anomaly. In three villages, young men awarded themselves moderate decision-making power (step 3) and in two villages placed themselves on step 4.

Despite their relatively high placing on the ladder of power and freedom, young men did not feel they had strategic decision-making in some areas of importance to them. They relied on parents in many cases to finance their studies or help them set up a business. Young men also felt they had little say in who they should marry, since this is mostly arranged by their parents. These were choices they wanted to have.

3.4.1.3 Young women and men

Figure 11 shows how young men and women in Bangladesh assessed their level of decision-making power.



Source: Bangladesh 12 FGDs (6 young women FGDs and 6 young men FGDs).

Figure 11. Young people's ability to make important life decisions, as perceived by young women and men in Bangladesh.

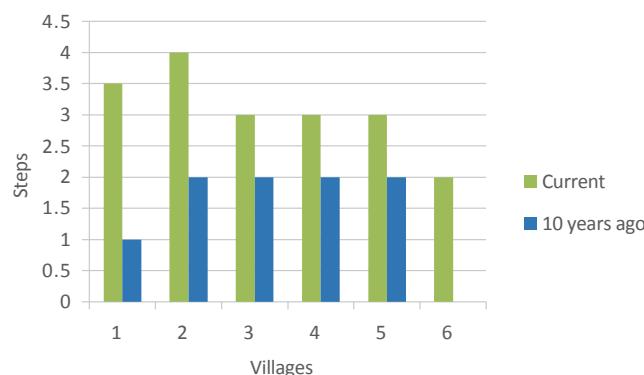
In two villages, one Muslim-majority (village 4) and one Hindu-majority (village 2), young men and women awarded themselves similar levels of agency. This is step 3, which indicates moderate decision-making power.

In villages 1 and 6, young men awarded themselves higher levels of decision-making power than did young women. In village 5, young women awarded themselves slightly higher decision-making power than did young men, but this is only half a step and might be an anomaly (as observed in village 3).

In general, young women and men reported moderate to fairly high decision-making power. In discussions, though, they often focused on limits. For example, several young women and men claimed they had to secure permission from the male household head to participate in any entrepreneurial activities that might interest them. A typical remark, from a young man in village 1, was, "We can't decide to sell or buy any crops. We have to consult the father in the family." They also had little choice in whom to marry. However, a young woman from village 2 noted, "My father wants to do business. I can give him advice and he will listen to me."

3.4.1.4 Trends in adult women's decision-making power

Figure 12 shows how adult women in Bangladesh assessed trends in their decision-making power over the 10 years prior to the research (2004 to 2014).



Source: Bangladesh 6 adult women FGDs.

Figure 12. Trends in women's ability to make important life decisions over 10 years (2004–2014), as perceived by adult women in Bangladesh (village 6 data missing).

Although adult women argued they had relatively lower decision-making power in comparison to the men in their lives, trend data shows that women perceived an increase in their strategic decision-making power over the past decade (2004–2014). In all villages for which comparative data was available, the change was considerable. It was particularly marked in the Hindu-dominant villages 1 and 2, with women in village 1 perceiving that their decision-making power had tripled. In village 2, women considered it doubled. In villages 3 to 5, adult women considered they had moved up a whole step.

In FGDs, adult women agreed that improved access to education and training had strengthened their decision-making power. They did not attribute changes to their life stage (adult), although this likely played a role. SSI data, not captured in Figure 12 with recognized women innovators, indicates that every interviewee believed they stepped up two steps following training in improved vegetable production and other income generating activities. They associated strengthened voice in intra-household decision-making with recognition of their innovative capacity. Over the same time period, women's self-perceived strategic decision-making power rose sharply in all six villages, though it remained lower than that of men in all villages except village 1.

3.4.1.5 Trends in adult men's decision-making power

Figure 13 shows how adult men in Bangladesh assessed trends in their decision-making power over the 10 years prior to the research (2004–2014).



Source: Bangladesh 6 adult men FGDs.

Figure 13. Trends in men's ability to make important life decisions over the study's 10 years, as perceived by adult men in Bangladesh (village 6 data missing).

Men did not perceive any change in their strategic decision-making power during this time. In four villages, men awarded themselves the top rankings in 2014 and in 2004. In village 5, they believed they had strong decision-making capacity. It was only in village 1 that men provided themselves with a moderate ranking. These were both Hindu-majority villages. Men's self-ranking in these two villages was similar to that of women.

3.4.2 Associations between strategic decision-making power and economic dynamism in Bangladesh

Figure 14 summarizes data from FGDs held with low-income women and men on the factors that drive well-being dynamics in their communities. As part of this exercise, they were asked to draw up a well-being ranking for the entire community and locate households on the steps of a ladder, with the lowest rung (step 1) being low and step 5 being high. It was stressed that economic wealth was just one indicator to consider. Social standing, health, happiness and any other criteria they thought important could be used to rank. They were then asked to consider the factors that cause households to move up and down the ladder.

5 Men own land, agricultural equipment, livestock, and off-farm businesses. They also lease land and hire labor. Men make decisions on large amounts of money and land.

Women have vegetable gardens, livestock and fishponds. They can be community leaders, decide how many children to have and if they want to study. They feel their ideas are listened to and appreciated, and they are innovators.

4 Women and men benefit from adult children's remittances. Men worry about the effects of aging pushing the household down the ladder.

Women are involved in all kinds of livelihood activities and innovate readily. However, women argue that they might not have sufficient decision-making power to prevent the household from falling down the ladder.

3 Men have considerable decision-making power over people in their household. They are knowledgeable. They have land and agricultural equipment.

Women participate in decisions over children's education and marriage, and over which crops to grow. They manage vegetable gardens and earn income from other enterprises. However, they have low decision-making power over their own assets/own food consumption.

2 Men are targeted by extension officers and have good relationships with them. They have small businesses and have started to save money. But gambling, drug addiction and debt (including to finance children's education and outmigration) can push the family down.

Women's decision-making power in the household is increasing but remains low. Lack of control over their own bodies, resulting in early marriage, too many pregnancies, low mobility and marital conflict, all make households vulnerable to falling to step 1.

1 Women and men work for others. They do not have land, agricultural equipment or livestock. They have low education and agricultural knowledge. They are not targeted by agricultural research organizations, but NGOs do provide training in vermiculture.

Vegetable growing has enabled some households to move up ladder. Women's additional constraints include no decision-making power over the number of children to have, children's education, money or land. They rely on men to pull the household up the ladder.

Source: the Philippines 6 FGDs (3 young men and 3 young women FGDs).

Figure 14. Ladder of Life, Bangladesh.

Respondents considered that women and men on steps 1 to 4, despite great differences in their livelihoods, were vulnerable and concerned over their current position. Men on step 4, in the opinion of the respondents, feared they might not have consolidated their gains sufficiently over their lifetime to prevent their households from slipping down into poverty as they age. Households on step 2 were considered vulnerable to “vices” as well as financial over-commitment to children’s education, which might push them down the ladder at the very time opportunities are opening up for them. The respondents deduced that it is at this level and above that households are targeted for extension and thus can participate in externally induced innovation processes. The respondents acknowledged that, at the very bottom, households could be targeted for assistance by NGOs and that this too provides an opportunity to move up. NGOs are also active at other levels.

Households on step 5 expressed strong decision-making power for women. This was not only within the household; women in this step were recognized as community-level decision-makers. They could engage in most major decisions in the home, though men remained the final decision-makers regarding land and large sums of money. Between steps 2 to 4, women’s strategic decision-making slowly increased, with women on steps 3 and 4 able to participate in agricultural innovation processes. There thus appears to be a correlation between women’s sense of agency and improved well-being ranking.

Conversely, correlations can be made between a low sense of agency and low well-being. Women on steps 1 and 2 associated their low ranking to their weak agency in relation to their own bodies (too many pregnancies), mobility, money, land and children’s education. Women on step 3 still faced difficulties determining their own food consumption (i.e. how much to eat and what type of food need to be purchased) and how to manage their assets. The challenges these households faced, particularly on the lower steps, contribute to marital conflict and thus, perhaps, to the drug addiction and gambling that can pull households even lower.

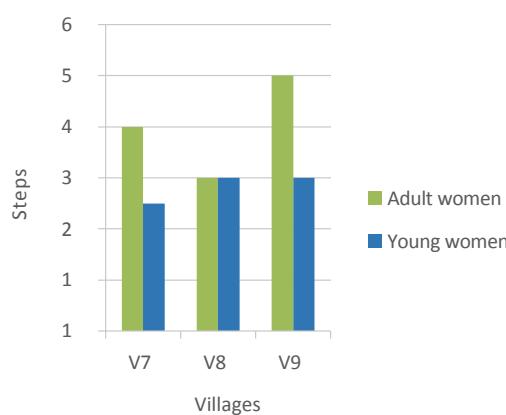
Women made clear associations between their decision-making power and their ability to work effectively with their husbands to pull their households up the well-being ladder. Even on step 4, women were concerned that they might not have enough decision-making power to prevent a slide, and women on step 1 relied on men to pull their households upward.

Finally, in relation to innovation, it is significant that respondents identified increasing technical knowledge as an indicator for each step. This was identified as important because it enables women and men to participate more effectively in various livelihoods.

3.4.3 Strategic decision-making capacity in the Philippines

3.4.3.1 Adult and young women

Figure 15 shows how adult and young women in the Philippines assessed their level of strategic decision-making power.



Source: the Philippines 6 FGDs (3 adult women and 3 young women FGDs).

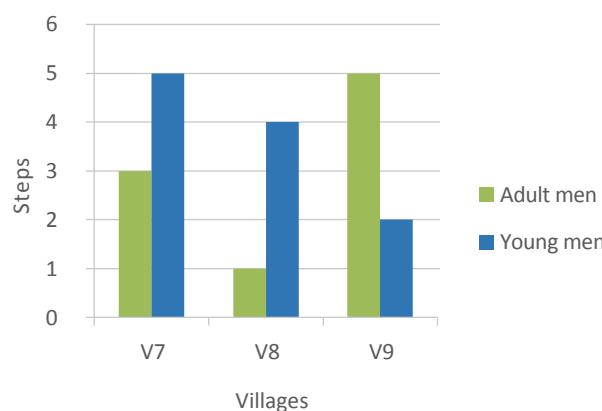
Figure 15. Women’s ability to make important life decisions, as perceived by adult and young women in the Philippines.

Adult women assessed themselves as having very high (5) to moderate (3) strategic decision-making power. In villages 7 and 9, their perceived decision-making power considerably outstripped that of young women, by as many as two steps in village 9 and 1.5 steps in village 7. However, in village 8, adult and young women considered themselves to have only moderate decision-making power.

The relatively lower rating by young women was in contrast to their strong optimism in discussions. One young woman in village 9 said, “If all the women in our community work really hard and try to find a means of livelihood for them to earn, there will be a way out of poverty for them. They will have better lives and won’t experience any difficulties.” Education was considered the key contributing factor to strengthening rankings by young women, because this helps them find good work and improves their social standing. Another young woman in village 9 said, “We really believe that education is the way to success, because if you are not educated, there are a lot of people who will look down on you because they think they are superior. You need education so that people will not treat you this way.” However, young women outlined numerous potential barriers to completing their education. These included needing to provide for the family, helping the main breadwinner of the family and the death of the household head. When girls have many siblings, they often have to exit education because the parents cannot then manage to pay for everyone. Parents might not be able to pay for additional private tuition when girls need it or buy the necessary books. Girls might also be married off early or suffer from sexual harassment. As one young woman explained, “Education ends for girls because they must help their mother in her work, and for boys because they must help their father in his work.”

3.4.3.2 Adult and young men

Figure 16 shows how adult and young men in the Philippines assessed their level of decision-making power.



Source: the Philippines 6 FGDs (3 adult men and 3 young men FGDs).

Figure 16. Men’s ability to make important life decisions, as perceived by adult and young men in the Philippines.

This is the only example in the entire data set of young men awarding themselves higher decision-making power than adult men (villages 7 and 8). Village 8 is the village where adult women awarded themselves lower agency than in the other two villages. So it is difficult to know whether this high rating (step 4) is genuinely reflective of male youth decision-making power in the community. In village 9, the findings echo those of the adult and young women in this community, with young men experiencing considerably lower decision-making power than adult men (and lower than young women). In village 9, adult men placed themselves on the highest possible step (5), just as adult women did.

Young men tended to specify occupations and jobs they wished for but were not optimistic. Even university-educated youths could end up in menial occupations: a female youth FGD in village 7 said, “There is a young man who finished a degree in education but is selling shrimp paste.”

3.4.3.3 Trends in women's decision-making power

Figure 17 shows how adult women in the Philippines assessed trends in their decision-making power over the 10 years prior to the research (2004–2014).



Source: the Philippines 3 adult women FGDs.

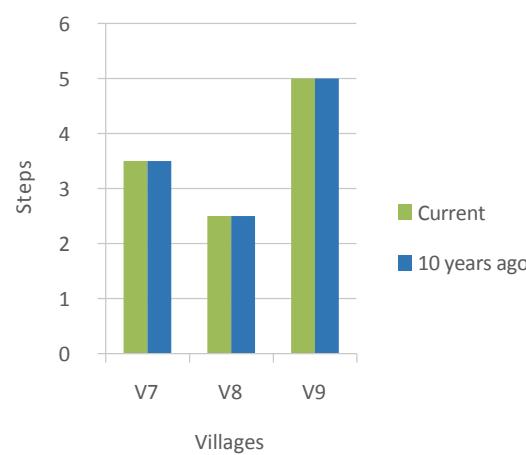
Figure 17. Trends in women's ability to make important life decisions over the previous 10 years, as perceived by adult women in the Philippines.

Adult women in the Philippines awarded themselves a higher level of decision-making power than 10 years earlier in two of the three villages. In village 9, their relative power increased by a whole step to the highest possible level, and in village 8 it doubled from 1.5 (very low) to 3 (moderate). In village 7, it stayed the same.

Adult women perceived themselves as having equal or higher decision-making power than men (Figure 17). They placed themselves on steps 3 to 5, and men placed themselves on steps 1 and 3. Women in villages 7 and 8 rated themselves one step higher than men did. In village 9, women and men awarded themselves the highest possible ranking, step 5. Women attributed their strong position to hard work.

3.4.3.4 Trends in men's decision-making power

Figure 18 shows how adult men in the Philippines assessed trends in their decision-making power over the 10 years prior to the research (2004–2014). Unlike women, men perceived no change, whether positive or negative, in their decision-making power over the previous decade.

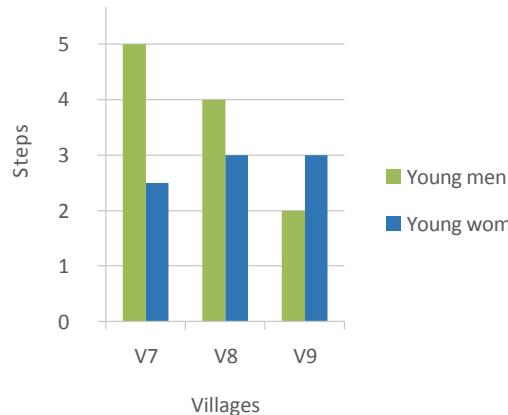


Source: the Philippines 3 adult men FGDs.

Figure 18. Trends in men's ability to make important life decisions over the previous 10 years, as perceived by adult men in the Philippines.

3.4.3.5 Young women and men

Figure 19 shows how young women and men in the Philippines assessed their level of decision-making power. In villages 7 and 8, young men perceived themselves to have high levels of decision-making power, and indeed this was higher than the rankings provided by young (and also adult) women in the same communities. In village 9, conversely, young men considered their ability to make significant decisions very low (2). This is in contrast to adult women and men, and young women, who experienced moderate to high decision-making power. It is possible that this is an anomaly, but since young women only awarded themselves moderate decision-making power (3) young people in general could feel subject to their parents. In village 7, particularly, young women felt they had low decision-making power.



Source: the Philippines 6 FGDs (3 young men and 3 young women FGDs).

Figure 19. Young people's ability to make important life decisions, as perceived by young women and men in the Philippines.

3.4.4 Associations between strategic decision-making power and economic dynamism in the Philippines

Figure 20 summarizes the findings from the “ladder of life” activity in the Philippines.

As in Bangladesh, women’s participation in intra-household decision-making is associated with improvements in well-being. This is mentioned on step 2 as key and is associated with the ability to diversify livelihoods, work hard and to “be ambitious.” On step 4, collaborative decision-making is mentioned again as key.

Strong vulnerability characterizes families on step 1. Irregular work is an issue, as is indebtedness, hunger and the inability to ensure that children complete primary school. Respondents were not able to indicate how these households could move up the ladder. However, two key observed differences with households on step 2 households are that they have fewer children and their children’s education is prioritized. An ever-improving ability to educate children (which later is repaid through them providing remittances to their parents) characterizes every step and is strongly associated with well-being. The finding that large families impede mobility and indeed actively contribute to poverty is shared in the Bangladesh data.

Moving upward, women and men develop their own asset bases, though women develop somewhat smaller assets than men, like chicken. Both women and men develop their own businesses. By step 5, women and men own substantial material assets together and separately. This is similar to the findings for Bangladesh. Just as in Bangladesh, women on step 5 in the Philippines feel they are recognized by the wider society. The difference is that women in the Philippines typically work in professional occupations, which might not be the case for step 5 women in Bangladesh.

Women and men consider "vices" a primary factor in pushing people down the ladder, regardless of step. Vices in this context were identified as gambling, drinking and drug use. Women and men agree that too many children can push people down the ladder, as can illness or the death of partners. Extra-marital affairs can push families over the "precipice," as can abusive relationships and tense husband-wife relations. Dropping out of school and being an unwed mother both contribute to women's poverty.

5 Men and women own land, a concrete house with an air conditioner, businesses, farms and livestock.
Children complete tertiary education.

Men own boats and vehicles and are able to work abroad or for the government.
Women work in professional occupations and "have a position in society."

4 Women and men make decisions together and diversify their livelihood strategies.

Education is highly valued. Men attempt to work abroad.
Both women and men want to marry wealthy people.

3 Women and men have small businesses providing steady income streams. Money is spent on children's education so that they complete at least secondary education.

The family eats three times a day.
Men start buying land.
Women can borrow money, and they own tricycles or motorbikes.

2 Women and men diversify livelihoods. They make decisions together and limit the amount of children they have and make sure their children are educated. Both women and men work hard and are ambitious. They might receive remittances from adult children.

1 The family lives in a simple house with no toilet. They do not own fishing tackle or land. Parents have many children who do not complete primary school. The household is indebted, and everyone in it eats once or twice a day.

Men work as laborers and fishers, but do not always have work.
Some women do not work, but others trap fish and make fish paste. Some women work as hired laborers.

Source: the Philippines 6 FGDs (3 young men and 3 young women FGDs).

Figure 20. Ladder of Life, the Philippines.

3.5 Gender-based violence

Participants were asked to vote on the rates of violence in their community over the previous year and 10 years earlier and evaluate what effects violence had on their lives.

Overall, there was a decline in violence reported by men and women across most villages in Bangladesh and the Philippines, except for what was reported by two female and one male FGD group from three villages in Bangladesh and two female FGD groups from two villages in the Philippines. In Bangladesh, the reasons for this decline were attributed to more awareness and education, better financial situation and an increase in women's value. In the Philippines, the reasons were that there is a fear of law and prosecution now and that there was a lack of human rights in the past.

The reason in the Philippines for the increase was attributed to jealousy and suspicion, women not listening to their husband's decisions, nagging wives, gambling and drinking. In Bangladesh, the reasons given were dowries, mobile phones, striving for equality, men trying to control their spouse and the fact that previously there had been respectable village elders, who would intervene. A woman from a poor Hindu FGD group explained the reason for the increase in violence: "There is more violence now compared to previously, because earlier women listened to their husbands whether they were right or wrong. But now both women and men understand right from wrong."

From the interviews and FGDs, women related personal experiences of how violence has affected their own ability to pursue livelihoods or innovations. One 43-year-old Hindu woman innovator from Bangladesh recounted how she and her husband had to separate from her in-laws because they would torture her and obstruct their efforts in improving their livelihoods. The vignette exercise also helped reveal the fears some of the women have in performing non-stereotyped roles, such as marketing or going against their husband's decision to pursue an innovation. Some women from one FGD group felt that the fictional woman would be beaten even if she suggested going to the market to sell her vegetables for her husband.

4. Discussion

The purpose of this report is to provide insights into how interactions between gender norms, agency and other contextual factors shape access to, adoption of and benefits from agricultural innovations to help guide FISH's investments. The findings examined the extent to which spheres of innovation are gendered and how gender norms shape these. Factors enabling and constraining women's and men's capacity to innovate were presented. Trends, particularly in women's and men's self-perceived ability to make strategic decisions, were analyzed as evidence of the exercise of agency. Comparative data on youths and adults was provided to understand if young people experience more self-perceived decision-making power than their parents.

In the introduction, it was noted that norms are not synonymous with culture and that they are subject to change—even though people living with those norms might perceive them as timeless and natural at any one time, and possibly “beyond question.” The findings make it clear that gender norms are indeed changing and that people are aware of these changes. A significant finding is that men's self-perceived decision-making power in Bangladesh was very high and "remained" so from 2004 to 2014. However, in the same time period women's self-perceived decision-making power increased significantly. It is not clear whether men agreed that women's decision-making became stronger since they were not asked on this point. However, it is interesting to note that men expressed they did not see a change in their own (men's) decision-making power over the previous 10 years, despite women's perception of women's decision-making power having increased. This would be an area for future investigation. In the Philippines, women's self-perceived decision-making power also increased, but men-dominated livelihoods are under stress. This placed a significant burden on women.

Two more core learning points also emerge. First, the study signals that the relationship between gender norms and innovation is not a narrow one-way relationship (only norms shaping spheres of innovation). Rather, it is reciprocal and iterative. Participation in innovation processes shapes gender norms. This includes that participation in innovation processes was found to shape gender norms and contribute to agency. Second, respondents associated effective jointness in intra-household decision-making with improved well-being and improved ability, at the household level, to participate in and secure the gains from innovation. This is expressed in the simple graphic in Figure 21.

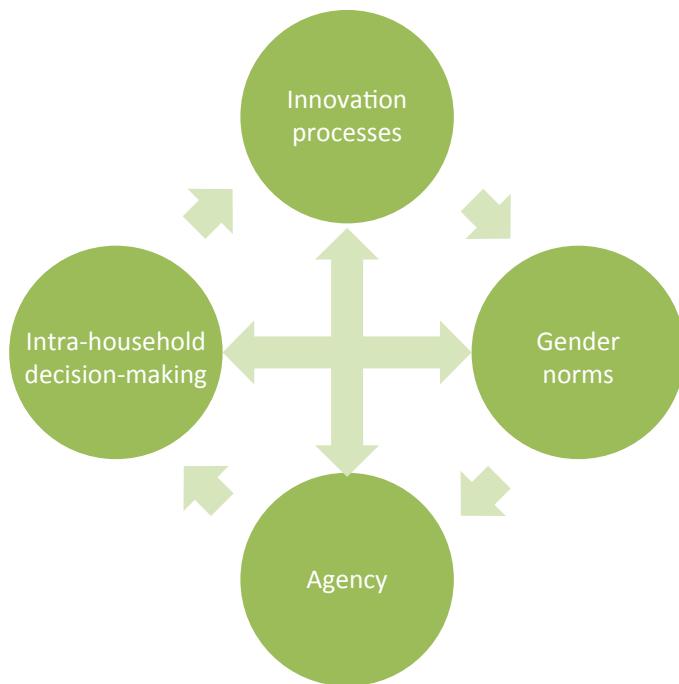


Figure 21. Diagram illustrating the reciprocal and iterative relationship among gender norms, agency, innovation process and intra-household decision-making.

These and other findings are now discussed in detail with reference to concepts outlined in the introduction and summarized in Table 1. As a reminder, they include social norms, gender norms, descriptive norms, injunctive norms, reference group, attitude, behavior and gender roles. They also include gender ideologies, norms relaxing or bending, norms changing and progressive gender norm change.

Stretch innovation and bending gender norms

The findings show that strong descriptive norms influence spheres of innovation in Bangladesh, and to a lesser extent in the Philippines.

The Philippines

Women had been *overtly* "norm-bending" in the study communities in the Philippines over the past decade. Whereas previously some women had not worked in any income-generating activities, it had become commonplace except for some of the most poor. Almost all women were currently fully engaged in market activities, making and selling products, and—in wealthier categories—in professional occupations. Women were just beginning to become involved in agricultural work in the fields, which was previously considered a male domain. Men fully supported women's norm bending, because women's income generation was considered essential to improving well-being and reducing household vulnerability. In other words, women were innovating by doing "new things," whether this was in hitherto male domains or in new ones that emerged as the broader economy diversifies.

It is indeed possible that women's norm-bending became so pervasive that gender norms guiding women's expected roles and duties in society became established such that these norms could change over the long term. However, intersectionalities are important. "New" (descriptive) more constraining gender norms for women appeared strongest in the middle-income groups. By contrast, poor women were living very precariously in an acute state of vulnerability. Their marginalization from wider socioeconomic change processes (i.e. accessing health care and employment, unequal wages, domestic violence) in the Philippines suggests that it will be very hard for women to deploy their agency to change these gender discriminations and inequalities in any meaningful or sustainable way.

The findings further indicate that poor and many middle-income Filipino men in the study communities are not bending norms. They remained locked into behaviors that linked them to fish and agriculture-based livelihood strategies, which are culturally identified as strongly male. These livelihoods, particularly that of fish capture, are under severe strain as a result of difficult weather conditions, inequitable relations among boat holders and fishers, and weak access to markets. Whereas women appeared to view challenging economic conditions as a spur to innovation and doing things differently, many men appeared to lack flexibility and to be despondent. Many young men, too, did not perceive a clear future for themselves. It can be speculated that this is because those in their "reference group"—adult men—were generally failing to demonstrate success in their livelihood strategies. Yet, however hard young men study, potential strategic choices fail to materialize—as in the example of the university graduate "who sells shrimp paste." This is very different from young women, who acknowledged manifold potential difficulties on the road ahead yet spoke optimistically of their futures. It appears that their reference group might have been their mothers and other women, which would account for their "can-do" mentality.

It is not clear from the data why some men seemed to find it difficult to adapt their livelihood strategies given that women were already changing and succeeding to varying degrees. This might be because in this context, it is socially perceived that it is women's responsibility to make ends meet, so these men did not feel the need to find better livelihood strategies. However, male livelihood "lock in" might arise from the acute vulnerability of men's livelihood strategies combined with a paucity of livelihood alternatives that fit with the current normative framing of "male livelihoods." Planned and externally induced development activity appeared to be low in the three study communities, though respondents acknowledged some innovations had been introduced. That is why men were interested when they were targeted for the training in alternative livelihoods, such as rearing pigs.

Bangladesh

In Bangladesh, women too were “norm-bending” but in less overt ways. At first glance, their innovative practice appeared “confined” to activities around the homestead. This conforms to conventional readings of gender norms. However, rather than thinking of women’s innovative sphere (traditionally the homestead) as static, it is more fruitful to consider what changed. This allows new insights to emerge. First, a close examination of their practice shows that many women were engaged in innovation practices—“doing things differently,” for example growing vegetables in raised beds or managing improved poultry. Women were selling their produce at the farm gate and receiving payment themselves. They were thus being increasingly integrated into market relations, though far fewer women conducted transactions in formal market places.

Second, although women as a group received less training from external providers than men, and were not necessarily taught by their husbands, they were able to describe in detail how they innovated and so qualified as being knowledgeable and as experts. Whereas in the Philippines, women were doing new things, women in Bangladesh were innovating by doing “old things” in new ways. Furthermore, although the type of innovation differed and women have to first prove their innovativeness, men in Bangladesh were similar to men in the Philippines in that they were not contesting women’s innovative practice. This suggests that new descriptive gender norms about what is appropriate for women to do were emerging and being validated. However, these remained small steps and did not contravene larger normative practices, such as going to the market or working outside the homestead. Even so, it is possible that these small steps toward more gender equal norms will provide a foundation upon which further steps can be built especially if research and interventions work with them.

Men too were innovating within their traditional domains of rice and fish. However, this is norm-conforming rather than norm-bending. Men identified themselves strongly with their role as providers and saw innovating as integral to this. Poor as well as middle-income men wanted high productivity in rice and fish, and they were becoming increasingly interested in vegetables. However, this interest did not challenge descriptive gender norms about “what men do.” It is arguable this provided women innovators with a “comfort zone.” The data shows that despite changes to norms from within, ambivalence about women working outside the home remained in the study communities, though this was decreasing. This might put less pressure on adult and young women to contribute to the household income and could facilitate experimentation. However, men remained under pressure to be successful.

As in the Philippines, however, young men seemed to be finding it difficult to discern a clear future for themselves. “What men do” was not necessarily appealing to them. Whereas in the Philippines, the external environment did not seem to offer meaningful (strategic) choices to young men, in Bangladesh parents themselves restricted the strategic choices young men wish to make.

Although women’s involvements in innovation initiate gender normative changes, gender transformation is constrained by gender norms

In Bangladesh, the data shows that providing opportunities for women to participate in innovation processes not only enhances their economic situation but also builds up their confidence and others’ respect. In this study, women had proven their ability to grow and provide nutritious fish and vegetables to their families as well as sell the surplus to their neighbors and relatives. Women’s income generation from the sale of vegetables and fish contributed to local social acceptability and recognition of women as financial providers as opposed to primary caregivers only. However, willingness to overtly perform gender roles, such as being a “good wife” and a “good husband” ran alongside women’s indications that their behavior (mobility) contravenes—or at least stretches—these norms. It is important to note that women’s views were expressed in a single-sex group: it is possible that such candor would not have been expressed in mixed-sex FGDs. This may be how it was possible for women in the same FGD to validate descriptive gender norms at the beginning of the discussion and to transgress them an hour or so later. It is also necessary to note that there is no strong data in this study (see also studies cited in the introduction) that supports the suggestion that women had substantially less mobility and freedom in Muslim-majority villages and more in Hindu-majority villages. This interpretation tallies with work

conducted by Rao (2012). In her case study of a community in Uttar Pradesh in India, she reflects on the phenomenon of women self-evidently watering and weeding wheat, yet neither men nor women acknowledged verbally that this was happening. In interviews, men spoke of their work in the wheat fields and women of their work at home. According to Rao, “What one saw seemed almost the opposite of what one heard” (2012). Rao interprets this as women and men “co-performing” to jointly construct women as “housewives” and men as “providers.” She suggests that women find it necessary to define themselves as housewives and men as breadwinners because women lack entitlements to land and other productive assets (Rao 2012). Rao observes that given the impossibility of challenging the entire context they live in, women deploy their agency by seeking reciprocity for their contributions from their spouses (Rao 2012). This is a reformulation of the patriarchal bargain (Kandiyoti 1988).

The strategic decision-making capacity of women is increasing and associated with upward mobility

The data is clear that despite women and men’s co-construction of women as housewives and men as providers in Bangladesh, women perceived themselves as increasingly making significant decisions that affect all areas of life. Although adult women consistently rated their decision-making power lower than men did, their self-perceived ability to make important decisions strongly improved in all communities. The fact that men perceived their decision-making power to remain static and high in the same communities suggests that the relative increase in women’s decision-making power did not diminish how men perceived their own decision-making power. Rather, although this study was not in-depth enough to capture tensions and in-depth conflicts, it appears that intra-household decision-making processes might have been somewhat accommodating women’s increased agency and participation in strategic decisions. This might be because women and men attribute well-being and upward mobility with shared decision-making (jointness). That is to say, women might not understand strategic decision-making power to mean autonomy in decision-making, but rather effective participation in intra-household strategic decision-making. Men may consider they make the “final decision” but accept women’s increased voice in that decision. Women’s increased voice, in turn, rests upon their improved capacity to provide income for the household, which men value. That being said, while in need of further investigation, the study did surface some evidence of tension or resistance to this area of change—in particular the reflection on increasing violence relating to women speaking up.

The picture is more nuanced in the Philippines. Men’s self-assessed decision-making power was muted in two communities and high in a third. This rating did not change over the 10 years. Women accorded themselves equal or higher decision-making than men. However, just as in Bangladesh, jointness was seen as a key contributory factor to families being able to improve their situation.

Women have multiple criteria for innovations that work for them

Within this restrictive context of Bangladesh, women welcomed innovation processes that allowed them the flexibility to integrate the innovation into household and care work. Women in Bangladesh and the Philippines shared one overwhelming constraint: their almost sole responsibility for household and care work (De Schutter 2012). This is a gender norm that “goes without saying because it comes without saying,” according to Bourdieu (1977). Women’s reproductive role is a kind of unquestioned truth that people live by, and it shapes and limits women’s ability to innovate in fundamental ways. In this constraining context, women in Bangladesh preferred innovations that they could integrate into their daily lives around the homestead. Similarly, women in the Philippines also conducted a lot of income-generation work at home, including sales from small shops within their homes.

Innovations require low investment. Universally across the data set, women did not have sufficient working and investment capital to invest fully in their innovation and take it to scale. They faced a triple lock. Whereby credit providers only extended small amounts of finance to women, husbands (particularly in Bangladesh) considered it their prerogative to manage large sums, and women were expected to spend their income on meeting household expenses before considering investments in their innovation. The difference is that women in the Philippines manage the household budget and it is their responsibility to meet shortfalls, whereas in Bangladesh men primarily manage the household finances, but it remains women’s responsibility to ensure household needs are met. This is why “free” resources like hard work, soil quality, water and proximity to a river were so important to Bengali women.

Innovations yield high profit. While profitability might seem an obvious requirement, it is less obvious when studies show that development partners often target women in their reproductive role, particularly as suppliers of food to household members. However, women in both countries are increasingly integrated into market relations. They sell as well as keep food. In doing so, women provide income for a wide range of other goals, such as other businesses and investments in their children's education. This in turn contributes to their increased decision-making power in the family. Development partners need to be careful that innovations do not entrap women in their existing spheres without the opportunity to break boundaries and try new things. Innovations need not reinforce the existing constraints and stereotypes that women face.

Low labor-consuming innovations. Women are already working hard, and their participation in innovations can be time- and labor-consuming. Labor-saving technologies in business and in the home are required. In doing so, research and development investments need to investigate profitability as a criteria and ensure that women are not being systematically directed toward lower return roles.

Researcher/agricultural extension service relationships with farmers are strongly differentiated by gender, age and socioeconomic class. Assessing the assumptions of external providers around "who" is considered capable of innovation is beyond the scope of this study. This includes rationale and implications of targeting that needs further investigations.

However, the data shows that middle-income women and men were targeted by agricultural extension agencies and research organizations for innovations. Young women and men, and poor women and men, were weakly targeted. Access to learning opportunities/knowledge was highly valued across all respondents met. Respondents associated mobility and well-being with knowledge.

The finding that women, regardless of socioeconomic status, were more weakly targeted than men is not surprising. This corresponds with global findings (Manfre et al. 2013) and the finding in this study that women in the Philippines and Bangladesh (which provides the strongest data in this report) were hampered in their innovation practice through their weak social capital. Learning is not necessarily passed from men to women even within the same household. Women thus rely on other women to secure information. Ineffective targeting strategies have been the effect over the long-term of creating passive recipients: women are hesitant to seek external help and so institutional exclusion leads to self-exclusion. The result is that extension to women is supply- rather than demand-driven. It is plausible that this could reduce women's agency and thus ability to shape interventions to their own needs. This is very different from the situation of middle-income men in Bangladesh, who appeared to demand extension. Middle-income men sought, and got, inclusion for their interested interventions.

5. Recommendations

The recommendations provided here are to inform and for practical application in FISH and related research programs that can contribute to the design, implementation, monitoring and evaluation of programs involving farmers and fishers as far as possible. To ensure maximum learning, it would be particularly useful to develop a strong understanding of how norms change and how progressive norm change can be sustained.

Build a conceptual model and theory of gender change within FISH (embedded within FISH's theory of change). It can usefully describe, analyze and develop programmatic responses to build on gender norm literature and empirical insights. As part of this, factors driving change will need to be identified, including farmers' own perceptions of what drives change. Working with and building on their perceptions is likely to leverage change more rapidly.

Concepts to work with are set out in Figure 22. The model of change will need to analyze actual and potential interactions between these. Important decisions and actions may need to be taken. For instance, it is probably more strategic not to directly challenge gender ideologies that appear to discriminate against women but to help people think for themselves about how these discriminations are hampering well-being. Engaging women and men in dialogue about gender relations and outcomes of those in fun ways, such as role playing or games, can help them experiment with behavior change and note how such changes are not cause for fear. Bending norms can lead to some adjustments and associated gains, but it may also not essentially address the larger constraints that can help a woman ultimately succeed. Unless normative challenges brought about by gender ideologies shift, women will continue to remain and work within the limited space, time and money they are provided with. Norm-bending might be a first step, but women will continue to hit the "ceiling" unless more fundamental normative constraints are addressed. Therefore, development partners, to ensure successful adoption of FISH innovations by women, need to think about these norms when designing interventions. Research initiatives could start with norm-bending, but the process of norm changing needs to be facilitated alongside this norm-bending. For example, introducing gender-transformative interventions as complementary to gender-accommodative approaches can shift norm-bending toward sustained change in norms that reflect and support equality and equity.



Figure 22. Concepts and principles to be considered in the change process in gender norms.

The study findings suggest several immediate entry points.

Continue to target women. Targeting women helps enhance their status at the community level and strengthen their voice in intra-household bargaining. Overt recognition and promotion of women and their capacities by external actors is integral to women's empowerment processes.

However, the gains of involving women can be ephemeral. Securing long-lasting change can only succeed if women and men themselves take charge of, and feel they benefit from, changes in gender relations.

Support equity in intra-household decision-making processes. HHMs promote family togetherness and can be understood as one form of gender-transformative strategy. They are built around a vision, gendered analysis of strengths, weaknesses, opportunities and threats, an action plan that is constituted of small but meaningful steps toward the vision, and indicators. Some HHMs—including Gender Action Learning Systems, the focus of the research—use drawings, making them easy to use for low-literate individuals. All HHMs are effective in promoting men's participation in household and care work because men realize that the vision cannot be realized if they do not share this work with women. HHMs are also valuable planning methodologies for producer and marketing groups.

Include discussions on food and nutrition security, and on women's reproductive health, as part of a household methodology intervention. Participants in HHMs must always retain control over the process and what is included. However, promoting discussion workshops on the costs of women's poor nutrition, and too many pregnancies, could encourage people to consider these a threat to the realization to their vision.

Use one or more gender-transformative strategies to help people critically reflect on gender norms and relations and their implications. As well as HHMs, complementary gender-transformative strategies can help people identify the costs of gender-based constraints and the opportunities that emerge when these constraints are transformed. These can be energizing and even fun, such as strategies involving theater, role play and showcasing positive deviators.

Combine technical training on innovations with gender-transformative strategies. Participatory social consciousness-raising exercises and dialogue on gender should be included as part of technical training packages so as to remove social constraints for adoption of technologies. Key decision-makers influencing women's participation in innovation processes, for example in-laws and community level opinion formers, need to be included in the training. Monitoring and Evaluation systems should track the influence of these to inform future design.

Help adult and young men to diversify their livelihood portfolios. Collapsing male livelihoods put immense strain upon women to take up the slack. Empirical evidence shows that diversifying men's livelihoods can lead to women losing control over crops and livestock previously considered to lie within the women's domain. However, encouraging men to take up different options in conjunction with gender-transformative strategies, such as a HHMs, can encourage gender-equitable livelihood diversification.

Support men to change their behavior. Men need to be supported as they begin to confront and question norms that shape their identities at home, in their community, in innovation processes and in the media. Research design can build in strategies to strengthen men's personal commitment to gender equality, and men must be equipped with the knowledge and skills to put that commitment into practice in their own lives. In some situations, it might be useful to create men-only groups to help them support each other in changing their behavior and to challenge concepts and practices related to traditional ways of being a man.

Develop specific programs to support young women and men. Education is having a transformative effect upon the expectations of young women and men. Older women and men are also changing their ideas. Processes should be facilitated to enable young people to discuss the implications of their expectations for their own lives and for older people to reflect upon how best to engage with the expectations of young people. This can be made more meaningful by relating discussions to how young people can be engaged in innovation processes, which will enable some of the most skillful and well trained to remain in agriculture and fisheries.

Support research partners, private sector partners and rural advisory services to recognize and work more explicitly with age intersectionalities. Poor women and men, young men and women, and women in general want to innovate and to "do things differently." Strategies for each should be developed, and this can include promoting dialogue between different groups. For example, older women can be trained to mentor young women in horticulture and household fishpond management. NGOs working with poor women and men can develop strategies with private sector players to "hand over" poor people when they reach a certain level of economic development.

Promote learning-by-doing. All farmers need to learn: for example, research design can enable both women and men farmers to learn from their own individual and collective experiences using their own resources. This could be in their own vegetable gardens or ponds rather than on demonstration

plots. This will promote farmer control over experimental design, which can contribute to farmer's adaptive capacity, resilience and sustainability of innovations particularly when combined with regular discussion meetings with other farmers.

Train women as co-researchers and scientists in specific innovations. Women's ability to be more equal and proactive participants in and beneficiaries of innovation processes should be encouraged and their self-efficacy should be nurtured by training them as farmer-researchers (action researchers). This includes training them as well as men to develop a research strategy, develop indicators, implement their strategy and reflect (on their own and in groups) on the outcomes. Ensure that researcher requirements for study design are harmonized, as far as possible, with farmer-led and co-led research processes on technologies. This will facilitate reporting in respected journals and contribute toward scaling up and scaling out.

Demonstrate tangible gender-equitable benefits. The tangible benefits of gender-equitable relations need to be demonstrated to the communities. There include research initiatives that can uphold more gender-equitable families and their experiences as positive role models. These benefits, such as production, income and food security, which are all important to community members, should be able to incentivize communities to replicate or adopt such equitable behavior. This link between equitable gender relationships and such benefits can also be used to advocate for policy change or a greater attention to gender by policymakers, technologists and biophysical scientists. However, FISH and other research organizations will need to gather strong evidence that highlights this link.

6. References

- Agarwal B. 1997. 'Bargaining' and gender relations: Within and beyond the household. FCND Discussion Paper 27. Washington, DC: IFPRI.
- [ADB] Asian Development Bank. 2016. ADB briefs: Women at work © Asian Development Bank and International Labour Organization. Accessed on 12 February 2018. <https://www.adb.org/sites/default/files/publication/203906/women-work.pdf>
- [BASTOB] Bangladesh Development Research Working Paper Series. 2008. Climate change adaptation research: Climate change, gender and vulnerable groups in Bangladesh. BASTOB Initiative for People's Self-Development in Association with the Centre for Global Change, Bangladesh.
- Berdegué JA. 2005. Pro-poor innovation systems. Background paper. Rome: IFAD.
- Bourdieu P. 1977. *Outline of a Theory of Practice*. Translated by Nice R. Cambridge: Cambridge University Press.
- Brickell K and Chant S. 2010. 'The unbearable heaviness of being': Reflections on female altruism in Cambodia, the Philippines, Gambia and Costa Rica. *Progress in Development Studies* 10(2):145-59. DOI: 10.1177/146499340901000204
- Chandra A, McNamara KE, Dargusch P, Caspe AM and Dalabajan D. 2017. Gendered vulnerabilities of smallholder farmers to climate change in conflict-prone areas: A case study from Mindanao, Philippines. *Journal of Rural Studies* 50:45–59. doi: <http://dx.doi.org/10.1016/j.jrurstud.2016.12.011>.
- Chióng-Javier Ma E. 2009. Health consequences of rural women's productive role in agriculture in the Philippines and other developing Countries. *Journal of International Women's Studies* 10(4):95-110.
- Cislaghi B and Heise H. 2017. Four avenues of normative influence: A research agenda for health interventions in low and mid-income countries. Accessed on 3 August 2017. <http://researchonline.lshtm.ac.uk/4646477/1/STRIVE%20Norms%20Measurement%20Brief.pdf>.
- Cohen PJ, Lawless S, Dyer M, Morgan M, Saeni E, Teioli H and Kantor P. 2016. Understanding adaptive capacity and capacity to innovate in social-ecological systems: Applying a gender lens. *Ambio* (2016) 45(Suppl 3):309. <https://doi.org/10.1007/s13280-016-0831-4>
- Cole S, Puskur R, Rajaratnam S and Zulu F. 2015. Exploring the intricate relationship between poverty, gender inequalities and rural masculinity: A case study from an aquatic agricultural system in Zambia. *Culture, Society & Masculinity* 7(2):18.
- Cornwall A and Edwards J. 2010. Introduction: Negotiating empowerment. *IDS Bulletin* 41(2):1–9. Das N, Yasmin R, Kamruzzaman Md, Davis P, Behrman J, Roy S and Quisumbing AR. 2013. How do intrahousehold dynamics change when assets are transferred to women? Evidence from BRAC's Challenging the Frontiers of Poverty Reduction—Targeting the Ultra Poor Program in Bangladesh. IFPRI Discussion Paper 01317. Poverty, Health, and Nutrition Division.
- De Schutter O. 2012. Women's rights and the right to food. Report submitted by the Special Rapporteur on the right to food, Olivier De Schutter. Human Rights Council 22nd session. United Nations. Agenda item 3.
- Estudillo J, Quisumbing A and Otsuka K. 2001. Gender differences in land in heritance, schooling and lifetime income: Evidence from the rural Philippines. *Journal of Development Studies* 37(4):23–48. doi:10.1080/00220380412331322031
- Jahan R, and Farnworth CR. 2014. Literature review on gender and wider social norms in South West Bangladesh. Unpublished manuscript. Accessed on July 27 2017. <http://static1.squarespace.com/static/551bb3ade4b0404100c31678/t/558c0054e4b0443f864a11ba/1435238484994/Farnworth+%26+Jahan+Gender+%26+Social+Norms+Bangladesh+2014.pdf>

- Ferrer EM, Cruz LP-DL and Agoncillo-Domingo M. 1996. Seeds of hope: A collection of case studies on community-based coastal resources management in the Philippines. Quezon City, Philippines: College of Social Work and Community Development, University of the Philippines: Diliman.
- [HKI] Helen Keller International. 2011. Gender attitudes and practices survey: Nobo Jibon gender baseline. Dhaka: HKI.
- [IDS] Institute of Development Studies. 2011. National discourses on women's empowerment in Bangladesh: Continuities and change. IDS Working Paper. Volume 2011. Number 368.
- Kabeer N. 1999. Resources, agency, achievements: Reflections on the measurement of women's empowerment. *Development and Change* 30(3):435–64.
- Kandiyoti D. 1988. Bargaining with patriarchy. *Gender and Society* 2(3):274–90.
- Kantor P. 2013. Transforming gender relations: Key to positive development outcomes in aquatic agricultural systems. Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems. Brief: AAS-2013-12
- Kantor P, Morgan M and Choudhury A. 2015. Amplifying outcomes by addressing inequalities: The role of gender-transformative approaches in agricultural research for development. *Gender, Technology and Development* 19(3):292–319.
- Kumar N and Quisumbing AR. 2011. Access, adoption, and diffusion: Understanding the long-term impacts of improved vegetable and fish technologies. *Bangladesh Journal of Development Effectiveness* 3(2):193–219.
- Leilanie LJ. 2010. Gender analysis of women in the Philippine agriculture and their occupational issues. *Journal of International Women's Studies* 11(4):73–82.
- Locke C, Muljono P, McDougall C, Morgan M. 2017. Innovation and gendered negotiations: Insights from six small-scale fishing communities. *Fish* 18:943–57. <https://doi.org/10.1111/faf.12216>
- Marcus R and Harper C. 2014. Gender justice and social norms—processes of change for adolescent girls: Towards a conceptual framework 2. Overseas Development Institute (ODI). Accessed on 24 July 2017. <http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinionfiles/8831.pdf>
- Munoz Boudet AM, Petesch P, Turk C and Thumala A. 2012. On Norms and Agency: Conversations about Gender Equality with Women and Men in 20 Countries. Washington, DC: World Bank.
- Naved RR, Khan NN, Rahman Md. H and Ali KL. 2011. A rapid assessment of gender in agriculture in Bangladesh. Submitted to CIMMYT, IRRI and WorldFish by ICDDR, Bangladesh. Accessed on 26 July 2017. https://www.academia.edu/2413829/A_Rapid_Assessment_of_Gender_in_Agriculture_of_Bangladesh
- Nokrek P, Alam MA and Ahmed M. 2013. Livelihood challenges for extremely poor disabled people in the southwest coastal region of Bangladesh. Working Paper No. 12. Shiree, Dhaka, Bangladesh.
- Nokrek P and Alam A. 2011. Vulnerabilities and resilience among extreme poor people: The southwest coastal region of Bangladesh. Shiree Working Paper No. 5. Dhaka, Bangladesh. Shiree
- Okali C. 2011. Achieving transformative change for rural women's empowerment. Paper prepared for the Expert Group Meeting on Enabling rural women's economic empowerment: Institutions, opportunities and participation. Accra, Ghana, 20-23 September. New York: UN Women.
- Okali C. 2012. Gender analysis: Engaging with rural development and agricultural policy processes. Working Paper 026. Future Agricultures Consortium. Brighton: IDS.
- Petesch P, Badstue L and Prain G. 2018. Gender norms, agency, and innovation in agriculture and natural resource management: The GENNOVATE methodology. Mexico: CIMMYT.

- Quisumbing AR and Maluccio JA. 2000. Intrahousehold allocation and gender relations: New empirical evidence from four developing countries. FCND Discussion Paper No. 84. Washington, DC: International Food Policy Research Institute.
- Rahman IR and Islam R. 2013. Female labour force participation in Bangladesh: Trends, drivers and barriers. Decent Work Technical Support (DWT) for South Asia and Country Office for India. International Labour Organization, Asia-Pacific Working Paper Series.
- Rahman M, Naher K, Sarwer RH and Huda MZ. 2008. Impact of BRAC and PDBF sponsored homestead vegetables programme on the socio-economic development of rural women in Mymensingh District. *Journal of Bangladesh Agricultural University* 6(2):423–28.
- Rahman MA, Mustafa MG and Barman BK. 2012. Impacts of aquaculture extension activities on female fish farmers in different areas of Bangladesh. *Bangladesh Journal of Zoology*, 39(2), pp.213–21.
- Rahman M. 2017. Gender gap report 2017 and Bangladesh: A review of The Financial Express. Accessed on 26 July 2017. <https://thefinancialexpress.com.bd/views/reviews/gender-gap-report-2017-and-bangladesh-a-review-1514646132>
- Rajaratnam S, Cole SM, Fox KM, Dierksmeier B, Puskur R, Zulu F, Teoh SJ and Sitomo J. 2015. Social and gender analysis report: Barotse Floodplain, Western Province, Zambia. Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems. Program Report: AAS-2015-18.
- Risseeuw C. 2005. Bourdieu, power and resistance: Gender transformation in Sri Lanka. In Robbins D, ed. *Sage Masters of Modern Social Thought: Pierre Bourdieu*. London/New Delhi: Sage Publications. 93–112.
- Sethuraman K, Kishore Kannuri N and Prasad N. 2006. Report of the gender analysis of the Jibon-o-Jibika Program in Barisal, Bangladesh. Dhaka: Save the Children.
- Sraboni E, Quisumbing AR and Ahmed AU. 2013. The Women's Empowerment in Agriculture Index: Results from the 2011–2012 Bangladesh integrated household survey. Dhaka: International Food Policy Research Institute.
- Stewart F. 2013. Capabilities and human development: Beyond the individual—the critical role of social institutions and social competencies. Occasional Paper 2013/03. Geneva: UNDP.
- Terry G. 2014. Literature review on gender issues in aquaculture value chains and in fish consumption in Southern Bangladesh. Dhaka: WorldFish.
- [USAID] United States Agency for International Development. 2013. Gender: Regional Agricultural Trade Environment (RATE) summary. USAID Maximizing Agricultural Revenue through Knowledge, Enterprise Development and Trade (MARKET) Project. <https://www.usaid.gov/sites/default/files/documents/1861/Gender.pdf>
- World Bank. 2010. Understanding the dynamics of gender and nutrition in Bangladesh: Implications for policy and programming. Dhaka: World Bank.
- World Economic Forum. 2016. The global gender gap report 2016. Geneva: World Economic Forum. Accessed on 16 April 2018. http://www3.weforum.org/docs/GGGR16/WEF_Global_Gender_Gap_Report_2016.pdf
- World Economic Forum. 2017. The global gender gap report 2017. Geneva: World Economic Forum. Accessed on 12 February 2018. http://www3.weforum.org/docs/WEF_GGGR_2017.pdf

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GENNOVATE's qualitative comparative methodology and large sample mark a first in CGIAR, as well as the collaboration of principal investigators from nearly all CGIAR Research Programs worldwide.

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