

THE GENDERED TRADITIONAL KNOWLEDGE IN THE FISH CAGE INDUSTRY: A CASE STUDY OF KAMPUNGTARITIPAN, KOTA MARUDU, SABAH

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ABSTRACT

Traditional knowledge has been thought by scholars in the recent past as consisting of cultural beliefs and traditions in a given community that has developed over time and has been passed from generation to generation. The development of knowledge has the potential to change the nature of gender relations within the community. Nevertheless, traditional knowledge has become more encompassing since it has been restructured by new forms of knowledge, from informal education to governance. There are also hesitations and critique that these changes made a realization that traditional knowledge is gendered. This paper provides an overview of the gendered traditional knowledge in the fish cage industry, especially the more well-known product of hybrid grouper fish (*Epinephelus* sp). In this context, the gendered knowledge was evident through the view's men held about women's fisher knowledge. The major methods used in this study were in-depth interviews, focus-group discussion and participant observation at the fish cage culture in KampungTaritipan, Kota Marudu.

Keyword: Gendered Traditional Knowledge and Fish Cage Industry

INTRODUCTION

The development of knowledge changes the understanding of gender roles with their division of work. The gender role of men and women is associated with household structure, access to resources, specific impacts of the global economy, politics and other locally relevant factors such as ecological conditions (FAO, 1997). Men and women have different experiential knowledge based on their division of work and social constraints (Warren, 2000). However, women's roles are considered invisible work. Therefore, Agarwal (1992) pointed out that the development of traditional knowledge is seen to disproportionately affect women by excluding them from the process and tends to be gendered knowledge (Crow & Farhana, 2002). Gendered knowledge in this paper refers to the women's fishers actively involved in the fish cage industry.

Worldwide, the fishery and aquaculture production activities provide revenues to an estimated 155 million people, of whom a substantial proportion is female. Gender analysis in fishing communities is still in its infancy and is mostly limited to the different occupational roles according to gender (FAO, 2012). Their role limited to the pre- and post-harvest sector concentrating on financing the fleet, processing and marketing the catch. Evidence shows that despite all the cultural and economic diversity within the European Union, the position and

perception of women regarding the fisheries sector presents a considerable degree of commonality. Thus, women feel unwelcome in the seagoing fishing sub-sector.

Transparently, the fish cage industry in Sabah is considered by many to be a male domain because of the high labour input and investment. The gender and development perspective suggests that the role of women is often not acknowledged although they have proved to be competent in adopting new aquaculture technologies (Shaleesha & Stanley, 2000). It had to be understood that the gender roles in the fish cage culture industry have dynamic relation to each other in protecting the food security. Thus, the women fishers' knowledge in fish cage culture industry needs to be recognized.

METHOD

This paper is part of a larger postgraduate research project at Universiti Malaysia Sabah, which shows that women in the study area actively participate in the fish cage industry at Kampung Taritipan, Sabah. This paper is based on fieldwork that was conducted for six months from February 2016. This paper uses the qualitative method which includes in-depth and informal interviews, focused group discussion, household survey through questionnaire and participation observation. A total of 11 respondents, who are actively involved in fish cage culture, were surveyed to identify their socio-economic background. For the sake of confidentiality, all names in this article are pseudonyms. In addition to formal interviews through questionnaire, informal conversations were held on the way to farms or fishing trips. Such conversations were crucial for understanding their daily activity and well-being. In particular, the gender roles in the fish cage cultures and their access to fishing and fish cages — using questionnaire with 11 household's representative/head were conducted. The findings draw on the women's fishers' active participation in fish cage culture and their contribution to knowledge that shared across gender for initiating social learning (Nivasiniet al, 2019).

THE ROLE OF WOMEN IN FISH CAGE CULTURE INDUSTRY

The previous study showed that the women's knowledge about fishery knowledge resources and their fishing activities are associated with the intertidal zone (Nivasiniet al, 2018). Whereas, the men's fishing knowledge is associated with ocean and reef (Nivasiniet al, 2017).

Nevertheless, the fishing activity is now insufficient to provide continued economic well-being; as communities face reduced fish catch (Saleem, 2015). This issue raises whether fishing industry provides a safety net for uncertainties that arise, as household economies diversify. Consequently, there is a need to search for alternative livelihoods that include fish cage culture industry where the women dominate. The Kampung Taritipan fishers' communities show their initiative and creativity in fish cage culture. The fishers adapted their traditional knowledge (hunting fish) to domesticating fish (breeding fish) in developing/farming their fish cage culture.

Through participant observation and interviews, the researcher finds the adaptation of traditional knowledge is gendered. Furthermore, the communities also do realise the different

forms of knowledge held between genders. The gendered traditional knowledge in the fish cage culture is captured as below:

Researcher : “ *Maksudnyailmukenelayanankamuadalah lain darilelakika?*”(It means you know that your knowledge of fishing differs from men)

Responses (WOMEN): “*Ia....suami kami manatahu proses ikan.....diaorangtangkapikan je...*” (Ya. The men don’t know how to process fish. They just catch fish.)

Responses (WOMEN): “*Tapiitulahkebelakangansejakadaikansangkarini....adamerekabelajar proses ikan.....*” (But since there is fish cage the men start to learn the method of processing fish.)

Researcher: “*Sekarang kamu pun tolong wanita dalam proses ikan?*” (Now are you helping the women in processing fish too.)

Responses (MEN): “ *Ya. Sekarang kami sama-sama buat....tu....ikan masin....sekarang kami tidak selalu turun laut sejak ada sangkar ikan...sama-sama buat kerja...dapat lebih duit.* ” (Yes. Now we process fish together with the women.....the salted fish.... now we seldom go fishing in the sea since we have the fish cage.....so we do work together....get more money.)

This conversation proves that there is a process of sharing knowledge between genders that occurs once the fish cages have been established in their place. Carpenter and Gunderson (2001) stress the need for continuously testing, learning about, and developing knowledge and understanding to cope with change and uncertainty in complex adaptive systems. The men do realize the differences in women’s knowledge from their own such as processing fish and producing fish feed. Therefore, the men emphasize the participation of women in fish cage culture as an active participation. The researcher interpreted the adaptation of gendered traditional knowledge as can be seen in Table 1.

Table 1: Application of Gendered Traditional Knowledge in the Kampung Taritipan Fish Cage Industry

KNOWLEDGE		Adapted knowledge as practiced in the fish cage industry
MEN	WOMEN	Men observe the women and do the salting process together. <ul style="list-style-type: none"> - Clean fish - Salting fish according to the type of fish (different measurement of salt according to the fish type) - Duration of drying fish under the sun. Women gain knowledge from men the characteristics of the fish . <ul style="list-style-type: none"> - Fish skin varies according to the species of fish. - The amount of salt differs according to the species of fish.
Type of fish	Salting method	

Knowledge of weather pattern	Producing fish feed	<p>Men are expert in reading weather patterns. They understand the nature of fish according to the weather pattern.</p> <ul style="list-style-type: none"> - Number of fish according to the season - Appropriate fish as fish feed/demand by fish cage owners - Habitat of fish <p>Women gain that knowledge in producing fish feed.</p> <ul style="list-style-type: none"> - Women separate fish to salted fish and fish feed.
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(Source: Fieldwork, 2016)

The interaction between the genders leads to social learning. Social learning is vary and change in understanding which goes beyond the individual to communities of practice through interactions (Marks *et al*, 2006). Interaction or learning occurs between them without deliberation to co-create knowledge among them as part of the adaptation practice. The men in Kampung Taritipan practice the knowledge of processing fish as part in essential to the survival of new adventure in fish cage culture.

As in traditions, learning is a process of critical reflection within the fishers' community that occur in the social context. It shapes their thinking as offer a sense of meaning at the community level. The effort in understanding the sharing knowledge enable the social process to take action and reflection and produce a new meaning (co-create of knowledge) to overcome challenges in their fish cage culture. It develops shared ways of learning as common to support the emergence of different gender knowledge and ways of operating it in fish cage culture.

However, the women knowledge on intertidal zone not always recognised, the women's role in the fish cage industry is unseen. Therefore, the perception on women's contribution is prejudiced by gendered ideologies (Agarwal, 1997). Hence, women receive lesser wages than men since the women processing the unsold fish cage product which contributes to the systematic undervaluation of women's outside work. Thus, it leads to Agarwal's conjecture of 'incorrect perceptions', undervaluation of women's waged contribution reduces their bargaining power (Agarwal, 2010).

DISCUSSION AND CONCLUSION

The paper has outlined the lack of attention in women's vital role in fish cage culture. The major issue is the internalisation of men's views about women. According to Allison (2003), women generally have less control over the fish value chain, their activities are less profitable, they have less access to resources and their fish are of poorer quality. Although women have made strides in the production phase of aquaculture, they tend to be excluded from the most profitable markets and enterprises, as well as from highly paid posts in fish-processing factories, even though they make up the majority of workers in the post-harvest sector.

Therefore, women lose the most from an increasingly globalized market, and are vulnerable to poor services and catch declines. In many societies, the fishing income of men is theirs to spend as they wish, while the income of women from fishing supports the household (BMZ, 2013). Thus, women have real economic incentives to innovate and have great potential as active agents of change as their knowledge on fishery used to adapt in the fish cage industry. In spite of that, the fish cage is important; women's access to cages is confined to secondary access (via male family members) because, at Kampung Taritipan, the Fisheries Department gives priority of ownership to men.

This research indicates that the changing role of women in the fish cage culture is important to be highlighted because fisherwomen can be considered as having progressed the most in the empowerment process such as introducing gender specific development programs and proper extension strategies. They are supported by several laws to recognize their contributions to the fishing community. Frangouides and O'Doherty (2006) described how the rights of the fishers' collaborating spouses are protected by laws, especially concerning social security, health care, old-age pension and maternity benefits. Asian countries have started to give importance to women. For example, in Thailand women are provided with skills and livelihood training that can offer good leadership opportunities to them (Lim & Laowapong 2012).

Women are a major contribution in the fish cage culture and their work ranges from breeding to harvesting fish and also household chores. Still, their role is not seen and recognised. Therefore, the policies and programmes in Malaysia must recognise the value of women's knowledge in the fish cage culture and empower them.

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