

When a Fisherman can not Fish: Impact of the 2016 Legal Reform on Male Fishermen in Phan Thai Norasing Fishing Community, Samut Sakhon Province

KHAMNUAN KHEUNTHA*

Department of Gender and Development Studies, Asian Institute of Technology,
PrathumThanee, Bangkok

Abstract

In the village of Phan Thai Norasing, Samut Sakhon Province, Thailand the livelihoods of villagers revolve around fishing-related activities in which men concentrate on fishing and women on on-shore activities such as sergestid shrimp (*Acetes* spp.) processing. Here, masculinity has been constructed around the status of the breadwinner. The men must fish to catch targeted species and earn sufficient income. Working at sea also provides the fishermen with an important sense of being their own boss. However, traditional fishing is uncertain and unreliable with fluctuations of weather, uncertain volumes of catches, especially for traditional fishermen who use fishing boats not larger than 10 gross-ton. Since 2015 in Thailand, the yellow card issued by the European Union for not taking sufficient measures against illegal fishing has become an issue in Thai fisheries, leading to massive legal reform and tightening legal enforcement. Such legal amendments brought about a strict ban on push nets which have been traditionally and extensively applied by fishermen in Phan Thai Norasing village. Previous studies have shown how changes in law that hinder men from fishing can impinge on the way those fishermen perceive themselves as men. This paper, set in Phan Thai Norasing fishing village, portrays how the legal amendment effects hindered the capability of fishermen to maintain their masculinities. The research illustrates the adaptive strategies of fishermen in this village in response to the change in law, and the impacts of the quick enactment of new laws on men and women.

* Corresponding author. Email address: paikhamnuan@gmail.com

Introduction

In 2015 the European Union (EU) issued a yellow card to the Thailand fishery sector as a warning against the illegal, unreported and regulated (IUU) fishing (European Commission 2015). Thailand was denounced for not taking sufficient action to monitor, control and sanction illegal fishing activities. In order to eradicate IUU fishing activities, Thailand had 6 months to release coping mechanisms and amend its domestic laws according to international standards (European Commission 2015). In response to the EU warning, the Thai government has amended the law and established a new division operated by the Thai Royal Navy called the Command Centre for Combatting Illegal Fishing (CCCIF) in collaboration with other departments such as Department of Fisheries, Department of Natural Resource, Department of Labour to deal with IUU practices, such as exploitative fishing, uncontrollable fishing equipment and unmonitored fishing fleets. Also, the Royal Ordinance of Fisheries (2015) has replaced the Fisheries Act 1947 as the principal fisheries law. With this swift change in regulation, push netting for *I-Kong* (*Acetes* spp.) for making Thai food ingredients called “dry shrimp” which is the staple source of income for Phan Thai Norasing fishing villagers, was completely banned in 2015. Unlike previous similar efforts of the government to ban this equipment, this time the law was actually imposed.

In previous studies, there was evidence that a change in regulations related to fishing disrupted the continuity of livelihoods in fishing communities and hindered men from conforming to the hegemonic traits of masculinities. This can affect fishermen’s perceptions of themselves due to the suspension of fishing which is predominately a men’s activity (Davis and Gerrard 2000; Hall 2004). Men in the fisheries sector may become enclaved in fishing that catches certain target species as their main source of income. When men cannot comply with that conventional trait, and hence be able to support their families, their sense of masculinity can be affected, leading to a new division of labour within their households (Davis 1993). Based on those ideas, the questions to be answered in this article are: if changes in the law affect the continuity of livelihoods in this village and men cannot fish, how does it affect those men who are expected to earn incomes through fishing? What are the coping strategies of those men? Does not the amendment of the laws affect women? The main hypothesis here is that reformed law could challenge the male’s sense

of masculinity when they cannot earn sufficient income from fishing, the main trait of their identity.

This paper studies the impacts following the vast and significant 2015 legal amendments in Thailand fisheries. The livelihoods of fishermen in Phan Thai Norasing and the relationship between men and fishing will be described to provide an overview of the fishing village, and also how gender is affected when fishing activities are disrupted by bans of equipment.

Methodology

The methodology of the study was qualitative, using in-depth interviews as a research tool. The interviews were undertaken with both men and women of 11 households which had fishing in their main livelihood portfolios in Phan Thai Norasing village. The interviews were applied to 10 men and 12 women in order to gather information concerning how they have been impacted by the recent legal reforms. The youngest male respondent was 32 years old and the eldest was 67 years old, and the youngest female respondent was 24 years old and the eldest 65 years old. Twenty out of 22 respondents were married; only 2 male respondents were bachelors. Most of the respondents obtained only primary school education. Only 2 female respondents had above the primary school level.

The interviews were initiated by interviewing the leader of Phan Thai Norasing fishing group, an officer of the provincial fisheries office and a leader of a small-boat group as key informants, in order to collect a broad base of information. The questions for in-depth interview consisted of three parts including the interviewees' livelihoods before promulgation of the new laws, gender roles and relations within a fishing household, and the impact of the new laws focusing on gender impacts. The questions for the leader focused mainly on an overview of the village historical changes and the catch species of fishermen in this village.

Snow-ball sampling was applied for the data collection. I tried to select people deploying different sizes of fishing vessels. The majority of villagers deploying small fishing vessels of not larger than 10 gross-tonnage (GT) and were classified as doing traditional fishing. There were only 2 boats larger than 10 GT still operational in this village. All interviews were conducted in the

fishermen's houses. Follow-up interviews were frequently deployed because the richness of data varied depending on the level of familiarity of the researcher with the respondent. Seven interviews were conducted with female and male respondents in the same households separately, but sometimes they preferred to be interviewed together.

To develop rapport with the villagers, the researcher needed to visit this village frequently to understand their daily-life and the characteristics of their fishing activities as well as to conduct follow-up interviews. To a large extent, such observations could be used to visualize the concentration of men and women in particular activities. Data collection was made more difficult because several fishermen spoken to were suspicious that University students would write about their occupation in a negative way. Many fishermen believed that previous studies conducted by Thai universities had contributed to the legal reform and their current trouble.

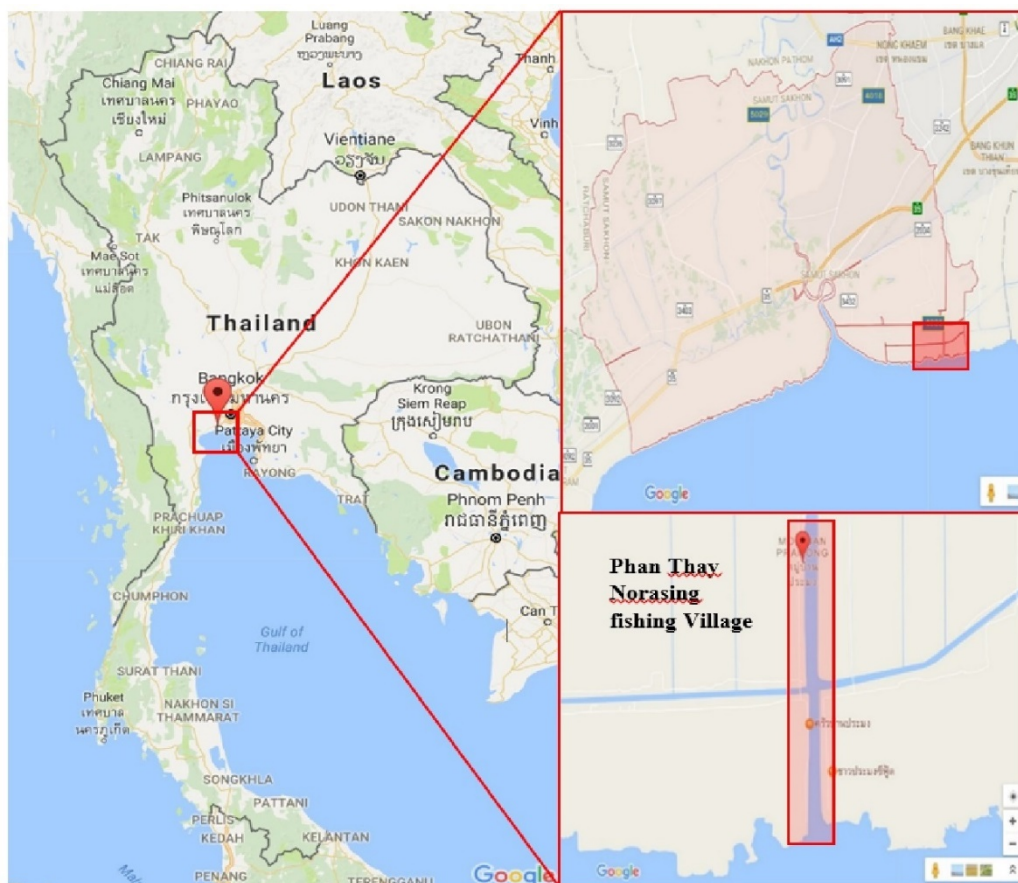
Results

The study Site: Phan Thai Norasing fishing village and its livelihood activities

The Phan Thai Norasing fishing village is located in Samut Sakhon province which is one of the most significant port provinces in the Gulf of Thailand. The geographic characteristics of the Gulf of Thailand seabed range from mud, sand and shell in the upper eastern area to silt in the estuary in the northern area where Samut Sakhon is situated (Phasuk 1987). Even though exact data regarding the population of the fishing village were not available, the data collected by the head of Moo (neighbourhood) 8 in the village estimated about 80 households. Meanwhile, in Moo 4, there were about 50 households based on estimation of each respondent. Interestingly, in the past, Moo 8 used to be a part of Moo 4. Due to the growth of the population, they have been split for public administrative reasons. In total, Phan Thai Norasing fishing village consists of 130 households.

Most of the people in Phan Thai Norasing fishing village earn their living through fisheries collecting growing green mussel (*Perna viridis* (Linnaeus 1758)) and recently fishing for mussels in small boats not larger than 10 GT. Only a few villagers have fishing vessels larger than 10 GT. In this

village, small boats are crucial for the inhabitant's livelihoods because these provide a way for commuting and generating income. Those fishermen using boats smaller than 10 GT call themselves traditional fishermen. Because of the short periods of fishing trips, the distance from the coast to the fishing grounds, and the limited capacity of their fishing gear, they participate only in small-scale fisheries (SSF).



Source: Google Map

Fig. 1. Map showing location Phan Thai Norasing fishing village located in Samut Sakhon province

As Béné et al (2007) state, the concept of SSF is complex in the sense that it can mean various sorts of fishing vessels ranging from single person canoes to more than 20 m trawlers, irrespective of the purpose of catching. The technology deployed to alleviate the labour intensity on board is the crucial aspect used to distinguish what is 'small-scale'. In Thailand, the terminology of SSF can be understood as traditional fisheries. Prior to law reform in 2015, the definition of traditional fisheries was quite obscure and did not differentiate

whether these should be distinguished by their deployed technology or size of boats. After the legal amendments, SSF has been clearly defined by the size of the boat, which must not exceed 10 GT whether using an engine or not. This is the definition from the Royal Ordinance of Fishery 2015 and the definition applied by the National Statistics Institution (NSI) (Lymer et al. 2008; Royal Ordinance of Fishery 2015).

The main catch species in this area are sergestid shrimp and fish, the latter in small proportions. According to villagers, the sergestid shrimp caught can be distinguished into two types, a smaller one called in Thai “Keuy” which can be processed to shrimp paste and the one called “Keuy Kong” or “I-Kong” which can be processed into dried shrimp (Fig. 2). Each of these species is caught using different equipment.

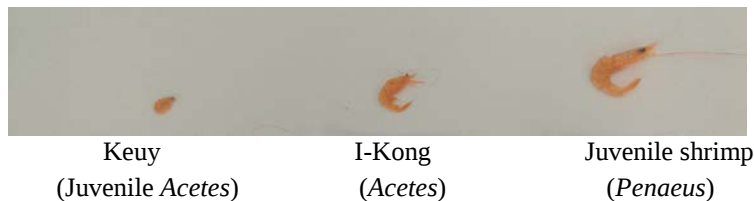


Fig. 2. The difference in size of Keuy, I-Kong (both *Acetes* spp.) and juvenile penaeid shrimp.

Two types of push nets deployed in this area can be distinguished, according to the target species, the locally known green or blue net for catching the “Keuy” (*Acetes* spp.) for processing into shrimp paste and the red net for catching the “I- Kong” (*Acetes* spp.). In this village I-Kong is the staple income resource (Fig. 2).

The nets differ in the knots they use. The green net has no knots and its meshes are small to prevent *Acetes* shrimp from escaping (as in a mosquito net). Boats using these nets cannot move quickly. A boat deploying a green net for a long time or moving too quickly risks tearing the net due to the water pressure within the bag. The red net, by contrast, has larger meshes and knots which enable the fishing vessels to move slightly more quickly so they can reach the I-Kong which swim faster than the Keuy. It is noteworthy that a main reason that I-Kong is the most crucial income resource is their availability. In comparison to the sergestid shrimp for making shrimp paste which are abundant from June to November, I-Kong are found year round, and are most abundant from April

to September. Gill nets are not normally utilized in this village. They are considered as a sideline rather than the staple income earning activity.

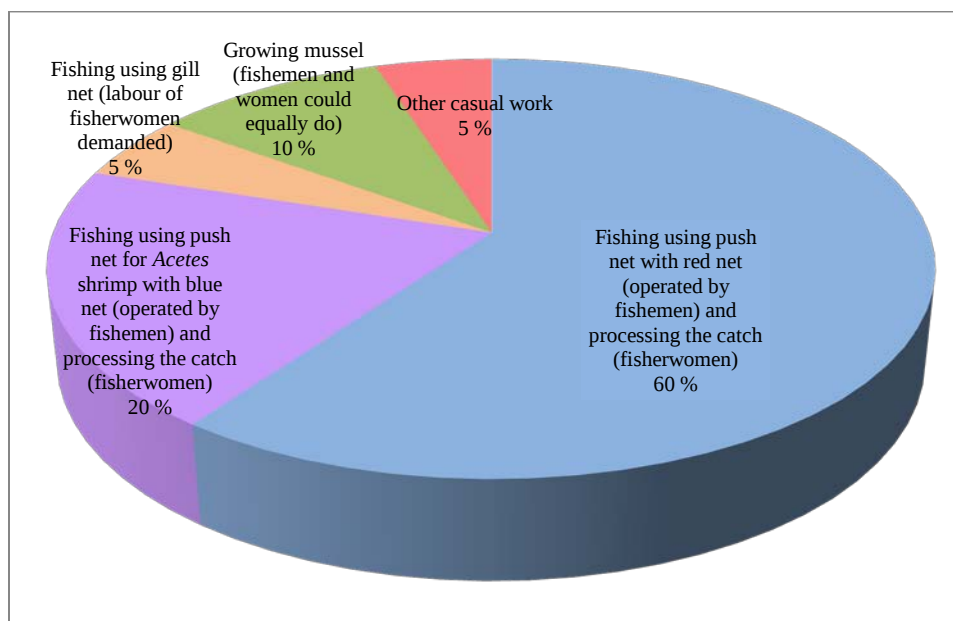


Fig. 3. Proportion of incomes earned by each equipment measured, based on 5 small-scale fishing households using push nets.

Due to the similarity between sergestid shrimp and penaeid shrimp (Fig. 2), outsiders mistakenly think that the villagers are catching juvenile Penaeid shrimps, challenging staff of Department of Fisheries and fishermen on the species. As the head of fishermen groups shared:

“A board member of the Department of Fisheries came to this area and alleged that we caught juvenile shrimps because sergestid shrimp and juvenile penaeid shrimp are very similar. Then, I dared him to bring sergestid shrimp to Bangkok and grow them. If it can grow up and becomes a big Penaeid shrimp, we would stop catching them altogether. Yet, definitely it cannot, because sergestid shrimp and Penaeid shrimp are different species.”

Besides the sergestid shrimp and finfish fisheries, the village is also well-known for growing mussels on bamboo poles along the coastal seabed and in the grand canal next to their houses. For growing mussels, fishermen need a concession from the local government and are taxed for using the area. However, for the small-scale fishermen, growing mussels are not the main income earning activity. Not everyone can take up this activity, because of its

demands of high investment. For instance, if they invest 20,000 THB (Thai Baht) or USD 588 for the bamboo poles, they could potentially gain around 50,000 THB or USD 1,470, after deducting costs of harvesting, cleaning and sorting. This income does not enable them to survive for the whole year with this single activity.

It is worth noting that breeding natural mussels through using bamboo poles not only generates additional income for the villages, but can also mitigate bank erosion which used to be one of the village's main problems. Besides its function as preventive a tool, the bamboo poles in the coastal area can stand as a reef which can shelter juvenile marine species, because the fishermen cannot fish the area. Fishermen believe that this mussel growing field can perform two functions by being a shelter for marine creatures and an alternative income resource.

In addition, the fishing and mussel growing generate additional jobs related to processing paste or dry shrimp, crews working for large fishing vessels, net weavers, retail ice sellers for products landed, casual labourers who plant and repair bamboo poles for mussels and so on. For instance, processing small shrimp to paste is demanding of labour and generally carried out by women. At first glance, it looks easy but is not in practice. Once the sergestid shrimp is transferred from the boat, it needs to be salted and sorted and strained. Subsequently, it needs to be dried in sunlight. While drying, it has to be flipped over to ensure that the small shrimp is thoroughly dry. When it is completely dry, stains and dust must be removed before grinding and being fermented for about 6 months. These processes cannot be achieved by only one person; hence, women from other households are usually called to finish this back-breaking work.

Despite the availability of income earning activities, the jobs are unpredictable and seasonal. Most of the respondents encountered difficulty in calculating their exact incomes earned by each activity. Unpredictable weather conditions and water pollution were considered the main challenges. Samut Sakhon province is a hub of manufacturing which can affect the quality of water owing to the release of waste water from the factories to the stream which accumulates and passes through the grand canal in their village. Thus, fishermen need to be familiar with seasonal changes, actively aware of the

unpredictable arrivals of their catch species and able to deploy suitable fishing nets to make the catch. Ultimately, they always need to prepare their boats, nets and their bodies to be in a good shape for fishing trips. The survival of fishing households depends on the ability of men to catch sergestid shrimp and the efficacy of women to manage the household finances as well as process the catch of their husbands.

Traditional fishermen who use fishing boats smaller than 10 GT lack cutting-edge devices such as sonar and radar. Furthermore, their boats cannot withstand extreme high tides, winds and fluctuating weather condition of the coastal area. Thus, for those traditional fishermen, experience in fishing, familiarity with the coastal area, peer networks through which they share information of the availability of sergestid shrimp and fish schools, and even luck are necessary for the success of each fishing trip. Larger boats, in contrast, have various fishing equipment such as radar, sonar and mechanized cranes along with large boats that enables them to remain safe at sea and reach targeted catch species comfortably.

Living under difficult circumstances

The actual circumstances of people living in small-scale fishing communities tend to be overlooked by the government and their needs ignored (Ellison and Allis 2001). Moreover, the fishing-dependent community itself is considered a poor community and one in which the members are hampered by limited natural resources (FAO 2007). The level of income is not a sufficient measure for understanding poverty (Kabeer and Whitehead 2001; Allison and Horemans 2004). Poverty, especially in small-scale fishing communities, is related to exclusion from various basic services, being politically rejected, and experiencing the social reality of being invisible at the policy level (Allison and Ellis 2001; FAO 2007; Robbles-Zavala 2014). The Phan Thai fishing community is an excellent example of this. Only recently did infrastructure such as electricity, concrete roads and running water reach this village. Locals over 30 years old recall having to buy fresh water from a foreign boat, and, even though the water quality was questionable, they had to drink it or stay thirsty. Mr Kim (60) mentioned:

“In the past, this area did not look like nowadays. In my lifespan, I have never imagined having running water in my home. I used to carry water with a big bucket for drinking and, after crossing a great bridge, by the time I reached home only a half of it remained in the bucket. In summer, I had to take a bath with sea water and clean my body again with a little fresh water. If it rained, it was as if God blessed us because it was moist. Later on, there was a boat carrying water that was sold in this village. However, the water was not clean enough for drinking. Sometimes, it was red like blood. Local government tried to drill wells to find underground water but their equipment during that time was not advanced enough. Just like water, electricity also did not reach this area, so we relied on lamps”.

Similar to Kim, the younger generation people also had the same experiences. Mr. King (30) informed:

“When I was young, I remember a boat coming along the canal to sell water in this village. For those households located at the back of the village, water was saltier and was more dirty. I had to go to school by boat because cars could not reach my home at that time. The road during that time was just two concrete sheets placed on the ridge of the fish pond and secured by ropes. The road needed to be repaired once a year. Villagers would contribute their own money and labour for fixing the road. Fresh fruits and vegetables were difficult to find as well. They would have a boat carrying foods such as vegetables and snacks only once in a while. Every child including me would look forward to seeing that boat. The current good-looking concrete road has just been constructed in the last 2 years”.

Feelings of being abandoned by their government were widespread among the traditional fishermen of Phan Thai Norasing. Ms. Leaw (60 years old), leader of a small-boat group, reflected after she achieved a meeting with the government to compromise on prohibition of red nets after enactment of the IUU-related laws:

“Uncle Montree joined the meeting arranged by the Department of Fisheries with me. He would talk on our behalf because a person like me, who did not even conclude primary education, would not be believed. In the meeting, they talked only about commercial fisheries which applied to big

boats. Finally when uncle Montree went to talk about our problem from the strict enforcement of IUU-related regulation, they (the organizers) just shut uncle Montree's microphone off and told him that time's up".

Besides the historical difficulty and their weak voice in negotiations with the government, the fishermen's lives also face the challenge in earning their living due to the scarcity of the necessary capital enabling them to diversify their livelihood portfolios. In Phan Thai Norasing fishing village, the villagers do not have land titles that would enable them to plant cash crops. Most of the respondents received only primary school education, and this was not sufficient to empower their upward mobilisation. These fishermen have little feasible chance of finding alternative work and they tend to turn to the sea as their last resort, and the place with which they are familiar.

Men and fishing in Phan Thai Norasing fishing village

To understand the relation between men and masculinities in this fishing village, masculinities are considered as "the social roles, behaviours and meanings prescribed for men in any given society at any one time" (Kimmel and Aronson 2004: 503). This term, as with the definition of gender, emphasizes not only the biological destiny but also the perceived masculinities as social production constructed by social institutions (Kimmel and Aronson 2004). Within this idea, masculinity per se cannot be understood in the singular, but rather they are diverse and hierarchical. On top of the hierarchy, there is a hegemonic masculinity pattern which is "the currently most honoured way to be a male" (Connell and Messerschmidt 2005).

In fisheries, men and women are clustered in different fishing activities. According to FAO (2014) men are frequently understood as fishers who sail out to fish in the sea; whereas, women occupy the on-shore activities such as fish processing, trading the catch and conducting other necessary reproductive works. Similar to such notions, gender roles in Phan Thai Norasing fishing village conform to such patterns where men go to fish out to a distance allowed by their fishing boats and gears. Women, in contrast, mainly play the role of sergestid shrimp processors enabling them to juggle their productive and reproductive work within their communities. Women go along with their male counterparts on fishing trips only when their labour is in demand.

Native men learn how to fish when young, usually from their fathers or their male relatives both in traditional and commercial fishing. They also learn how to use the stars to navigate, when the weather changes and the need to be familiar with the geography of the coast to avoid rocks and shallow areas which can damage their boats. Fishermen have to look after their boats regularly and deliberately because they are the most crucial equipment for gaining a living. The knowledge related to fishing is not systematically taught in any educational institution so traditional knowledge of fishing techniques is passed down from father to sons in each household. Sometimes, fishers' sons do not use the same boats as their fathers.

After following their fathers or their male relatives for a time, young males start fishing alone. The first time when a man goes out by himself is a memorable experience as Kim (65 years old) who has been working as a fisherman since the age of 14, reflected:

“I was excited when I fished alone. Before that, I needed to accompany my uncle. Whatever he had asked me to do, I had to comply. Yet, if I went alone, I can say that I catch those fish by myself through solely my skill from this place and that place”.

“Freedom” and “No employer” are key words to explain specific characteristics of fishermen, especially traditional fishermen in the Phan Thai Norasing area. Even though many men from fishing households decided to work in different kinds of factories outside the village at some time in their lives, tight regimentation could drive them back to work as fishermen who could decide whenever and wherever they would sail out to fish. A traditional fisherman called Mai, who used to work in a factory outside the village, shared what drew him back to the village:

“After 5 years of working outside, I decided to come back to the village to work as a traditional fisherman. I like the sense of freedom and I feel that I have autonomy to choose when I should work. No one will point their fingers at you and order what you have to do. If you are hard-working, you will have money”.

In Phan Thai Norasing fishing village, the ethic of working hard has been given the highest value among the men. Men are expected to be appropriate breadwinners who earn sufficient income through fishing for their households. Female respondents' answers confirmed that this factor is a quality taken into account when selecting a husband. However, it does not mean that working as a fisherman looks "cool" from the women's perspectives, but rather that it connotes economic security. Meanwhile, in this village, fishing and other occasional fishing-related labours such as repairing boats, nets or processing harvested mussels are other sources of incomes. It could be said that their main sources of income rely on their boats, the sea and their physical strength.

In the fishing community, fishing has been given the highest priority, over even education. Connell and Messerschmidt (2005) highlight the hierarchical characteristics of hegemonic masculinity over other forms of masculinities. In the context of the Phan Thai Norasing fishing village, hegemonic masculinity could be understood as a fisherman who could sail out independently to conduct fishing without the restriction of the rules, and be his own boss. This notion has been reflected in the following quotes:

"My son, as soon as he finished his primary school, he told me that he decided to drop out from school and enroll for non-formal education because he did not want to study. He wanted to sail out. Some people here might have their bachelor degree, but have decided not to go to any other places because they want to be their own boss". (Now, female, 40 years old)

Similar to Now (female, 40 years old), Aye (male, 39 years old) said that:

"Most of the children would work on their own fishing boats because most houses in this area have a fishing boat; mostly they preferred not to be an employee. If I have to do other work, it might make me suffer because I am used to the boat. In the village, there were people who have a bachelor's degree who sail out to fish as well".

As native fishermen learn fishing from their relatives, they have advantages over those who move from the inland to the coast. Those who have been fishing since they were young are able to intuitively recognise the availability of target species. They are adept at controlling the engine and their

push nets simultaneously. On the contrary, new arrivals need time to reach that level of skill. Na (female, 35 years old) shared her stories of assisting her husband in fishing trips:

“I did not originally grow up in this village. It took us years before we could be skilled. When I helped my husband, I needed to leave my house around 4.00 p.m. and returned around 6.00 a.m. of the following day. I had to accompany my husband because we are not originally from this village. The locals could sail out to fish alone, but my husband and I needed to help each other”.

For the new inhabitants in the village, the labour of women is sometimes necessary when sailing out to fish. These women help their husband to operate the engine while their husbands are fishing. New fishermen are expected to catch fish in amounts at least equal to their neighbours. Due to the small size of this fishing village, news related to their success or failure is circulated easily. Men are compared for their target species catches.

Due to the absence of electronic technologies in small fishing boats fishermen must manually locate the target species, and for this peer networks are necessary. Whenever a fisherman successfully finds a school of sergestid shrimp, he informs his friends by mobile phone. Because small boats are vulnerable to fluctuating weather conditions (tides, winds), fishermen whose boats get into trouble, e.g., capsize, need peer help to deal with such unexpected circumstances. In addition, rituals and religious beliefs highlight physical and behavioural self-discipline to mitigate the impacts of these uncertainties.

For fishermen, drinking is prohibited during Buddhist holy days. They also have to undertake social work, e.g., cleaning temples, donating food to the monks, and praying at the shrine for successful fishing trips. King, a fisherman who consistently follows these practices shared the reason behind this:

“Our work (fishing) is a sinful work because we need to kill other living things to gain our living. So, we need to make a merit in order to reduce our sins”.

On fishing trips, rules of respect for the goddess of the sea “Mae Ya Nang” are followed. Some of the rules are: a call to the goddess to board the

boat (ritual performed only by males); taking off shoes before boarding; and abstaining from sexual intercourse on-board. Any infringement of the rules can affect the catches or even risk having a fatal accident at sea. In some areas of Thailand the beliefs concerning the goddess of the sea completely forbids women from working on boats. But in this village, women can accompany men on fishing trip and can help their husbands or their male relatives in fishing trips when their labour is needed.

Effects of IUU-related regulations on the fishing community

In 2015, when Thailand was issued a yellow card by the EU, the Thai government responded harshly. The Thai military rulers decided to abolish the prior Fisheries Act established in 1947 and replace it with the Fisheries Act 2015, and subsequently, the Royal Ordinance of Fisheries 2015. These new laws have been strictly enforced. The new law characterises traditional fisheries based on the size of boats, which must not exceed 10 GT, and other specific definitions with respect to fishing gear. The Thai Royal Ordinance of Fisheries 2015, coupled with the regulation of the National Council for Peace and Order 24/2015, clearly outlaws “Push net utilized by mechanised boats except push net for small shrimp with mechanised boats in accordance with the formats of tools, sizes of boats, fishing techniques and fishing ground determined by the relevant regulation of the Command Center for Combating Illegal Fishing (CCCIF)”. By this definition of the regulation, it is clear that any kind of push net is no longer legally permitted. Nevertheless, in 2016 a compromise was made on the use of the blue net for catching *Acetes* (small shrimp) to make shrimp paste from May to December. This, however, does not compensate for the income loss owing to the ban of the red net. In other words, since the rapid change in the law in 2015, the fishing households in Phan Thai Norasing Fishing village cannot conduct fishing with the red net any longer. It directly affects the incomes earned by small-scale fishing households in Phan Thai Norasing fishing village.

Small-scale fishermen’s incomes fluctuate in response to weather conditions, availability of the target species and water conditions. In order to estimate the economic impacts, the researcher asked the respondents from each household to estimate the losses from their income through an imaginary scenario in which the respondents estimated their income based on the peak time in which the targeted species were the most abundant, and the weather

conditions were perfectly suitable during every feasible fishing trip. In addition, the measurement is based on the imaginary circumstance where all target species are available at the same time in a month, which is impossible in reality. In consequence, it is ultimately needed to bear in mind that the income measurement was conducted in an ideal imaginary scenario. In fact, the income of the fishing households is lower than the estimation in the Table 1.

Table 1. Estimates of the change in monthly income for Household 3 before and after the implementation of new fisheries laws

Activities	Contributor	Income before the ban in USD (1 USD=34 THB)	Decrease in household's income due to the ban in USD (1 USD=34 THB)
1. Fishing with push net (red net)	Male	1102.9	-
2. Fishing with blue nets	Male	165.5	165.5
3. Fishing with the gill net	Male	73.5	73.5
4. Growing mussel	Male/Female	122.3	122.3
5. Working in the mussel processing station	Female	7	7
6. Working in the small shrimp paste processing station	Female	14.7	14.7
	Total	1485.9	383

Source: In-depth interview to household 3, 2016

The yellow card and the military enforcement capacity of the government enabled the government to swiftly promulgate the new laws in order to legally abolish the push net. The government thus successfully controlled use of push nets after their first failed effort to control and abolish this fishing equipment in the 1980s (Nettasna 2014). However, the sudden change in the laws without consultation with the villagers and without mitigation measures for the small-scale fishermen affected has been a shock to this fishing village. Male traditional fishermen who are expected to earn sufficient income from fishing to support their households might be adversely affected by their inability to conform to the expected gender roles. Moreover, their capability to alter their livelihood portfolios is constrained by their low levels of education and the absence of other necessary capital such as land, cars and money.

When a fisherman cannot conform to his hegemonic trait

The failure to comply with the prevailing trait of masculinities can drive male fishermen to perceive themselves as incomplete men as King (male 32 years old) mentioned :

“The expectation of this community on the men is to earn sufficient income to support the family. When I cannot sail out to fish, I feel anxious [...] I feel like I am an incomplete man and feel so bad about myself”.

Even so, those men still make a huge effort to comply to the masculine standard by taking up casual labour such as harvesting shell in other people’s ponds located near their village, fixing other people’s boats or processing mussels when available. The capacity to earn some income would help them to maintain their sense of masculinity and maintain conventional gender roles in which males are income earners and women are nurturers. The men’s efforts to do so, and their feasibility of diversifying their livelihoods are also constrained as expressed in group interviews of the 3 members of a fishing household:

Husband: “They told us to change our occupation without saying what should be an alternative. They just told us to change”.

Wife: “Tell them (the government) to give us some land! I will plant some vegetables”.

Elder daughter: “The fishing ponds around this area do not belong to the villagers”.

Nevertheless, feelings of unease could occur when a man has to leave the role of provider to the wife’s hands as stated by Aye (male, 39 years old) whose wife ran a small noodle shop and a small grocery nearby the shrine in the village. For him, relying on his wife’s income brings him shame:

“I help my wife with running her shop, but I feel bad. I don’t know how to explain it but it is different from when I can catch fish by myself”.

Traditional fishermen's coping strategies

Among the fishermen in this fishing community, the coping strategy which is the most pervasive is to persist at fishing with the illegal red net to catch *I-Kong*. Due to the illegal status of this activity, fishermen needed to fish in a group and turn lights off while doing so at night. This demands familiarity with the geographical setting of the area, as Mod (male 39 years old) explained:

“I just turn the light off and just be in hurry. I am not afraid of the reef because I could remember the reefs because of sailing out when the sea water is down”.

In addition, those fishermen need to be vigilant for any sound, as King (male 32 years old) mentioned:

“Once, I heard the engine of a boat. I needed to venture as quickly as possible and hide in the mangrove forest nearby for the whole night until I was sure that they left”.

Even though they try their best to cope with this problem, it does not necessarily mean that they regain their incomes on a par to before the ban. Thus, male fishermen needed to find alternate income earning activities, such as fixing other people's boats or other jobs which allowed them to fish and avoid police surveillance. Leaw (Female 60 years old) mentioned his son's alternative income earning activities:

“My son would repair other people's boats. He will go to Mahachai dock (about 10 km from the village) and ask if the work is available. He might go about 1 or 2 weeks and receive about 2,500-3,000 Baht depending on how much they will give him. Or in the worst case, he might use the rod to fish on the bridge to get 100-200 Baht”.

Apart from illegal fishing with red nets, fishing with gill nets is more frequently practiced. For fishing with gill nets, women's labour is needed. Nevertheless, income earned through fishing with gill nets is not high.

Fishermen with limited education and property must carry out physically demanding labour to earn income. Not all of them have the same level of

physical capacity and the weaknesses in their bodies as well as age can cripple their possible options as Dang (male, 56 years old), who has back pain that limits his capacities to carry out labour intensive work said:

“Currently, I cannot conduct any heavy work like road construction and other activities which require me to bend my back because I fell from the bridge twice [...] Even though I want to work in a factory, but who will accept a guy at this age?”

Unexpected impact on women

Without it being noticed, the extensive illegal fishing has also adversely affected women in different ways. For example, to clandestinely and safely conduct illegal fishing activities, information from the shore is needed to inform of the location of the police. Here, the women assist the fishermen at sea. The role, however, puts an extra burden on women and deprives them of their rest at night time. Lew (female, 60 years old) and Nong (female, 33 years old) mentioned their inability to sleep during the night due to their husband's choice of conducting illegal fishing:

“When my son goes to fish in the night time, currently it is not only he who is deprived of sleep, but also people on-shore like me cannot sleep as well. I lay down and get up very often during the night time. I check my mobile phone all the time to be ready for the time when my sister (living in the village in which the patrolling boat anchors) informs me that those guys have moved. Then, I will call my son who is at the sea to tell his friends to come back as soon as possible. If he reaches home safely, then I will be able to sleep”. (Lew, female, 60 years old)

“When my husband decides to sail out to fish, I cannot sleep at all. I am afraid that he will be detained by the police. If he gets caught by the police, what will I do? I do not have such money. I will feel relieved when I see my husband back in our home. Then, I will process the catch of my husband. [...]. Sometimes, my husband asks me if I have slept. Yet, you know who will be able to sleep. It is like I do not sleep, like my husband”. (Nong, female, 33 years old)

When their male counterparts are detained by the police for illegally fishing, women also need to carry the burden of getting bail for the detainees and it can directly lead to their exhaustion, as Now (female, 42 years old) mentioned:

“During that incident (when her husband was caught by police), I felt so exhausted by the struggle. I had to find the bailor because I cannot pay for the required money in cash because money is not what can be easily earned (around 50,000 THB or USD1470). In every procedure, it requires money, from going to the police station to the court”.

Discussion

Changes in economic structure, law and regulation, and natural resource degradation are important factors challenging conventional gender patterns (Davis and Gerrard 2000; Hall 2004; Haque and Kusakabe 2005; Skaptadotiir 2000). In the context of fishing communities, the scenario in Newfoundland studied by Davis (1993) showed how the new policies were considered to favour the large companies instead of the village fishers, resulting in chronic unemployment among the local people. The boundary between men/sea and women/shore collapsed, men found themselves in circumstances in which they failed to perform tasks on their own. Instead of finding other sources of income, most unemployed men decided to stay at home and began doing housework which is traditionally considered a feminine job.

For fishing households in Phan Thai Norasing fishing village, fishing is not only the main source of income, but also the source of identity in which males and females construct their senses of masculinity and femininity through fishing activities. Such a notion is reflected by the identity as “*sea people*” utilized to highlight the relation between the villagers and the seas. Even though the government had permitted push nets for *Acetes* shrimp (blue nets), the loss to household income was still large. Men could not earn the same amount of income that they could before the enactment of the laws. The shortage of capital to enable fishermen to diversify their livelihood activities was accompanied also by their attachment to fishing as their job.

To cope with the shock of losing their jobs, men and women in the same households, including in fishing households, tend to have different adaptive strategies (Siar 2003; Hapke and Ayyankeri 2004; Hapke 2012; Bee 2016). In Phan Thai Norasing village, the men decided to pursue fishing with red nets despite their illegal status and its risks. They seemed to be struggling to retain the local hegemonic traits of masculinity, especially as alternative livelihood options were not available and they obtained no assistance to adjust. The women also performed a role in enhancing the men's ability to continue fishing, albeit illegally, even though they needed to sacrifice themselves in favour of the men. Here, the hegemonic pattern of femininity that Connell and Messerschmidt (2005) called the "emphasized femininity" had emerged.

Conclusions

The survival of fishing households in Phan Thai Norasing fishing village relies massively on fishing related activities in which catching *I-Kong* (*Acetes* spp.) for processing dried small shrimp is a staple resource. Fishing in this village, regardless of types, is labour-intensive and male-dominated work. The cases illustrate how men in the village emotionally or occupationally associate with fishing; it becomes an important part of their identity. Those male fishermen construct their sense of masculinity through fishing.

Restriction of fishing nets by IUU-related regulation resulted in a remarkable decrease of household income. The fishermen's incapacity to earn sufficient income is perceived as a failure according to their conceptions of masculinities. This causes those males to perceive themselves as incomplete men. In order to cope with the shock led by the laws, coupled with the shortage of capital, these fishermen opted for illegal fishing activities as their main pervasive adaptive strategies. Other income earning activities were considered as supplementary only. Surprisingly, women have played an important role in maintaining the male's role as a fisherman although it has cost them exhaustion and extra burdens.

Acknowledgements

To be honest, I do not know how to express my gratitude to the many ladies who support me all the time. I decided to set off based on the fact that

this paper was a part of my master thesis, so, first of all, I want to say thank you to Professor Kyoko Kusakabe for every cordial support she gave such as her encouragement to push me to submit this paper and her helpful advice which was given very frequently whenever I had a problem. Also, I would like to pass on my gratitude to Dr. Nikita and Dr. Williams for their support during GAF6 that taught me a lot in terms of how to work effectively and professionally. Later, I would like to thank Dr. Gerrard for her recommendation and sharing a long list of papers which really helped me when I tried to frame my proposal. Finally, I want to say thanks to my mom and sister for being by my side all the time, even though they have never read my work and cannot read my work. Yet, still they always respected my decision and encouraged me to work.

References

- Allison, E. H. and B. Horemans. 2004. Poverty alleviation, sustainable livelihood and management in small-scale fisheries. International workshop on the implementation of international fisheries instruments and factors of unsustainability and overexploitation in fisheries. FAO, Siem Reap, Cambodia. 31pp.
- Allison, E. H. and F. Ellis. 2001. The livelihood approach and management of small-scale fisheries. *Marine Policy* 25: 377-388.
- Bee, B. A. 2016. Power, perception, and adaptation: Exploring gender and social–environmental risk perception in Northern Guanajuato, Mexico. *Geoforum* 69: 71-80.
- Connell, R. W. and J. W. Messerschmidt. 2005. Hegemonic masculinity: Rethinking the concept. *Gender and Society* 19: 829-859.
- Davis, D. L. 1993. When men become "Women": Gender antagonism and the changing sexual geography of work in Newfoundland. *Sex Roles* 29: 457-475.
- Davis, D. and S. Gerrard. 2000. Introduction: Gender and resource crisis in the North Atlantic Fisheries. *Women's Studies International Forum* 23: 279-286.
- European Commission. 2015. EU acts on illegal fishing: Yellow card issued to Thailand while South Korea & Philippines are cleared. http://europa.eu/rapid/press-release_IP-15-4806_en.htm. Accessed 25 September 2016.
- FAO. 2007. Increasing the contribution of small-scale fisheries to poverty alleviation and food security. FAO, Rome, Italy. 125 pp.

- FAO. 2014. The State of world fisheries and aquaculture: Opportunities and challenges. FAO, Rome, Italy. 223 pp.
- Hapke, H. M. and D. Ayyankaril. 2004. Gender, the worker-life course and livelihood strategies in a South Indian fish market. *Gender, Place and Culture* 11: 239-256.
- Hapke, H. M. 2012. Capturing the complexities of globalization in fisheries: Gendered divisions of labour and divisions of labour and difference. *Asian Fisheries Science* 25S: 75-92.
- Haque, M. M. and K. Kusakabe. 2005. Retrenched men workers in Bangladesh: A crisis of masculinities? *Gender, Technology and Development* 9:185-208.
- Hall, V. G. 2004. Differing gender roles: Women in mining and fishing communities in Northumberland, England, 1880–1914. *Women's Studies International Forum* 27: 521-530.
- Kimmel, M. and A. Aronson. 2004. Men and masculinities: A social, cultural, and historical encyclopedia. ABC-CLIO, England. 892pp.
- Lymer, D., S. Funge-smith, P. Khemakorn, S. Naruepon and S. Ubolratana. 2008. A review and synthesis of capture fisheries data in Thailand – Large versus small-scale fisheries. RAP Publication 2008/17. FAO Regional Office for Asia and the Pacific, Bangkok, Thailand. 51 pp.
- Nettasna, C. 2014. Review of Thai laws in relation to trawl fisheries, bycatch management project “Strategies for trawl fisheries bycatch management”. Southeast Asian Fisheries Development Center (SEAFDEC). Bangkok, Thailand. 36 pp.
- Phasuk, B. 1987. Marine fisheries in Thai waters, The future of Thai Fishery: The report of co-conference between Government and private sector June 4-6th 1987. Southeast Asian Fisheries Development Center (SEAFDEC) Bangkok. 323-404.
- Robles-Zavala, E. 2014. Coastal livelihoods, poverty and well-being in Mexico : A case study of institutional and social constraints. *Coastal Conservation* 18: 431-448.
- Siar, S. V. 2003. Knowledge, gender, and resources in small-scale fishing: The case of Hond Bay, Palawan, Philippines. *Environment and Management* 31: 569-580.
- Skaptadóttir, U. D. 2000. Women coping with change in an Icelandic fishing community: A case study. *Women's Studies International Forum* 23: 311-321.
- Whitehead, A. and N. Kabeer. 2001. Living with uncertainty: Gender, livelihoods and pro-poor growth in rural-sub-Saharan Africa. IDS Working paper 134. Institute of Development Studies, England. 31 pp.