Less is More
How Policy and Technology can Impact the Thai Labour Market for Work in Fishing
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Introduction and Summary

Thailand is one of the largest economies in Southeast Asia and a leader in the global seafood trade. It ranks behind only China, Norway and Vietnam in the value of seafood exports. The strength of its export industry depends overwhelmingly on fish caught outside Thai waters because largely unstructured and under-regulated growth in the Thai commercial fishing industry since the 1960s led to devastation of Thai fish stocks. This collapse has forced vessel owners to venture further afield for fish.1 This combination of factors, plus price pressure from an increasingly competitive global trade in seafood, has fuelled demand for a low-wage workforce from countries such as Cambodia and Myanmar.

The Thai commercial fishing workforce is now overwhelmingly dependent on migrant workers. In 2018, approximately 90 percent of the industry’s approximately 60,000 fishers were from Myanmar and Cambodia. Most of these migrant fishers were spread across the 5,500 commercial fishing vessels — many of them traditional wooden vessels — with gross tonnage (GT) of 30 GT or more.2 Average earnings for these fishers in 2018 was less than USD 400 per month.

At these wage levels and under prevailing working conditions, the Thai fishing industry's leaders struggle to recruit enough workers. This combines with overfishing and a chronic lack of investment in labour-saving technologies — some of them available now for decades — to increase pressure on Thai vessel owners. Some vessel owners in turn squeeze their crews and this has contributed to forced labour in the Thai fishing industry.

The hypothesis of this report is that a healthy industry would respond to these pressures first by making pay and working conditions more favourable, thereby retaining workers and attracting new ones. Second, the industry would also make capital investments to reduce its demands on the labour market. Neither has yet occurred on a large-enough scale to overcome the deep dysfunction in the Thai fishing labour market. The national vessel owners’ industry association has instead called on the Thai government to buy up and decommission thousands of their vessels, and to bring tens of thousands of new workers to them via labour migration agreements with neighbouring countries.3

This paper explores the reasons for the labour market dysfunction and possible responses by the Thai government and employers, including capital investments that can help redress the chronic labour market imbalance and improve the economic viability of the Thai commercial fishing industry.

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2 Data from the Department of Fisheries, December 2018.

The report has three sections. First is an exploration of the demand for migrant workers in Thai fishing and the impact of migrant admission policies on the industry. This section details the numbers of vessels by type and fishers by country of origin. This labour demand is contrasted with recent calls for up to 53,000 new fishers, and the apparent lack of interest among large numbers of migrant workers for work in Thai fishing. Finally, this section examines the fit between apparently conflicting policy goals — namely, the hiring of more migrants for work in fishing and reductions in the size of the fishing fleet.

The second section posits a possible policy response to the dysfunction in the labour market via a case study of a Thai commercial fishing vessel reconfigured in 2019 to reduce labour demand. The study demonstrates that an investment of THB 1.75 million in simple hydraulic ‘power block’ systems and an upgrade in on-board catch refrigeration systems can simultaneously reduce demand for fishers by 37 percent and win higher prices for the catch. These labour savings and higher catch value make possible immediate improvements in the wages and working conditions of fishers. The return on investment is attractive and, if paired with loan guarantees, can help offset the reluctance among Thai commercial or public banks to lend to the industry. This section details the reconfiguration costs based on the refitting of a 91-gross tonnage purse seiner in Pattani province and demonstrates how the reconfiguration costs can be offset in a little over one year.

The paper concludes with specific recommendations for government and employers to bring balance to the labour market and decent work to the industry through investments in simple vessel technologies. The recommendations are also designed to help improve the industry’s sustainability and improve pay and working conditions for workers.

The conclusion also addresses the key question—How can employers afford the investments? — with recommendations for a loan guarantee programme that supports Thai commercial lending to vessel owners who consistently comply with Thai labour standards. A soft loan programme for purse seiner reconfigurations of THB 1.5 - 2 million could allow fishing operators, with support from public and private lending institutions, to make these improvements and comfortably repay loans in approximately two years. A loan guarantee programme that supports USD 5 million in lending, for example, can help reconfigure 80 - 100 vessels in a two-year cycle.

The report is the product of interviews conducted in five Thai fishing ports—Samut Sakhon, Chonburi, Rayong, Songkhla, and Pattani — between 2017 and 2019 with vessel owners, representatives of provincial fisheries associations, trade unions and civil society organisations, large commercial fish suppliers, and spokespersons for various Thai government agencies including the Ministry of Labour and Department of Fisheries. The lead researchers on this project were Thomas Harré (section one), Nattakarn Sumon (section two), Anyamanee Tabtimsri, Vasu Thirasak, and Jason Judd.

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Background

In 2014, international media reports detailed extensive labour abuses in Thailand’s fishing industry. In the same year, the U.S. State Department, in its Human Trafficking Report, downgraded Thailand to the bottom rung: Tier 3. In 2015, the European Commission (EC) issued Thailand a “yellow card” for illegal, unregistered, and unregulated (IUU) fishing practices.

With the threat of sanctions against its fishing industry a possibility, Thailand proceeded to implement measures aimed at reducing and eliminating abuses in the fishing and seafood sectors, and to conform with the International Labour Organization’s (ILO) Work in Fishing Convention (No. 188, 2007). In January 2019, Thailand ratified the Work in Fishing Convention (No. 188, 2007), and became the first country in Asia to ratify the Convention, strengthening minimum labour standards for fishers employed on vessels at sea.

These measures have met with some success. In June 2018, the U.S. State Department upgraded Thailand in its human trafficking report from a “watch list” to Tier 2, and in 2019, the EC lifted the yellow card after judging that Thailand had successfully addressed gaps in its fisheries legal framework and its monitoring and surveillance systems.

Former Thai Labour Minister, Police General Adul Sangsingkeo, who delivered the ratified Work in Fishing Convention to Director-General Guy Ryder in the Geneva headquarters of the ILO, stated that, “The Royal Thai Government’s ratification of the Convention reflects its strong political will to ensure that the working conditions in its domestic fishing industry meet ILO standards. It underlines Thailand’s full commitment to raising the standards of labour protection for both Thai and migrant workers and eliminating forced labour, in line with the Sustainable Development Goals.” The Convention will come into force in Thailand on January 30, 2020, twelve months after its ratification.

The ratification of C. 188 met with opposition from local fisheries groups, who argued that changes to Thai law designed to comply with the government’s C. 188 obligations would increase the financial burden on small- and mid-sized operations. In addressing these concerns, Labour Minister Adul stated that the Convention would likely apply only to large fishing vessels measuring 30 GT and above, engaging just over 5,000 vessels. Furthermore, the Labour Ministry stated that existing fishing vessels do not need to be reconfigured to meet the Work in Fishing Convention requirements.

The Thai government encoded these standards and more in the Protection of Labourers in Fishing Act, which came into force in November 2019. Some measures were already part of Thai labour laws, such as minimum working age, medical insurance, maximum working hours and rest periods, written work agreement, regular pay (via bank account transfer for fishers), safety equipment for work, and compensation for work-related deaths or injuries. New measures in the Act include annual health check-ups, repatriation from a foreign port to Thailand, and social security-type benefits.
I. Labour Market

The 2017 and 2018 deadlines for the expiration of temporary work permits, or “pink cards”, prompted the Department of Fisheries to exercise its power under Article 83 of the Royal Ordinance on Fisheries BE 2558 (2015) to issue work permit extensions to migrant fishers for two more years until September 30, 2020. Article 83 has been inserted into this Ordinance at the request of the Department of Fisheries and allows the Director-General of the Department of Fisheries to issue Seabooks to migrant workers instead of temporary pink cards. This Ordinance contains a provision under which the Thai government is able to regularise groups of migrant workers and is designed to be used in extreme situations where there is potential for large groups of migrant workers to become irregular, due to the expiration of pink cards or previously-held documentation.

In the processes discussed above, only the MOU (Memorandum of Understanding signed between Thailand and neighbouring countries on labour migration since 2002) processes allow for the ongoing employment of migrant workers. The Article 83 exception to this policy is considered by the Department of Fisheries to be an emergency process only — envisaged to be used only for two years.

Understanding Employer Demands for Labour

Among the vessel owners interviewed during the course of this research, the common theme that emerged was a deep disappointment with the way that the Thai government is perceived to have dealt with the yellow card. This is a point of view that framed much of the vessel owners’ discussions for this paper.

For the vessel owners interviewed, issues of labour migration are inextricably bound to issues of IUU. These interviewees did not distinguish between the regulatory environments relating to either issue, but instead understood all new regulations as being obstacles to the effective operation of their businesses.

For the employers interviewed for this report, five key elements were said to influence their demands for migrant workers.

1. A perceived labour deficit in the fishing sector;
2. Cost of wages;
3. Necessity of paying advances to employees;
4. Costs associated with compliance; and
5. Costs of capital investment.

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5 Royal Ordinance on Fisheries BE 2558 (2015), art 83.
6 Interview with Department of Fisheries, Bangkok.
7 Interview with Department of Fisheries, Bangkok.
Each of these elements is discussed as follows:

1. Labour deficit in the fishing industry

Many interviewees stated that there is a labour deficit in the industry, although estimates of the need have fallen radically in recent years. The Thai Department of Fisheries’ 2014 Plan of Action reports a need for over 300,000 workers to fulfil demand in Thailand’s inshore and distant water fleet. In 2017, the National Fisheries Association of Thailand stated that there was a demand for more than 61,000 Thai workers in the industry. The government and industry’s 2018 estimates of the need are 30,000 to 53,000 workers.

For context, the table below attempts to capture the Thai government’s July 2019 figures for work in commercial fishing. These are gross figures collected over 12 months and do not reflect the fall-off or turnover in employment of fishers:

Table 1: Fisher employment by province, July 2019.

<table>
<thead>
<tr>
<th>Province</th>
<th>Fishers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trat</td>
<td>6,028</td>
</tr>
<tr>
<td>Chanthaburi</td>
<td>997</td>
</tr>
<tr>
<td>Rayong</td>
<td>8,444</td>
</tr>
<tr>
<td>Chonburi</td>
<td>3,883</td>
</tr>
<tr>
<td>Chachoengsao</td>
<td>66</td>
</tr>
<tr>
<td>Samutprakarn</td>
<td>2,830</td>
</tr>
<tr>
<td>Samutsakorn</td>
<td>4,116</td>
</tr>
<tr>
<td>Samutsongkram</td>
<td>1,643</td>
</tr>
<tr>
<td>Petchburi</td>
<td>1,561</td>
</tr>
<tr>
<td>Prachuap Khiri Khan</td>
<td>5,147</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>68,921</strong></td>
</tr>
</tbody>
</table>

11 Department of Fisheries, Report on background and fingerprint for migrants with seabooks, July 2019. The DOF total is higher than the ILO estimate of workers employed on commercial fishing vessels as it includes fishers who have left the industry or are not active.
In order to understand this demand for fishers, vessel owner respondents were asked about the levels of crew turnover on the fishing vessels that they own. With the exception of a few respondents who suggested extremely high numbers of crew turnover per year, the majority of the vessel owner respondents noted that the vast majority of their fishers fulfilled their entire contract. In group discussions, there was a lot of talk of high numbers of fishers who are jumping ship. However, in the written responses, these numbers varied significantly. Many vessel owners reported none or very few fishers jumping ship. This low figure is supported by other interviews carried out with industry associations, and based on the findings in the ILO’s 2018 Baseline Research Findings on Fishers and Seafood Workers in Thailand, the migrant fishers reported having stayed in the industry for an average of four years and planning to stay in Thailand for another 4.5 years.

The issue of supply versus demand of labour should also be briefly addressed. As noted, interviewees for this report stated that there is a significant shortage of labour in the industry. It appears that there are three possible scenarios relating to this:

1) First, it is possible that the industry requires more labour, but simply does not have the financial capacity to pay for it. That is, some elements of the industry are speculating — against the evidence of industry consolidation and low fish stocks — that Thai commercial fishing is recovering, but cannot increase wages to levels that will attract new workers, and therefore cannot operate this basic labour market mechanism.

2) Another possibility is that there is not so much a labour deficit, but an oversupply of fishing vessels. During interviews, a number of people suggested that there are too many vessels in the industry at present, and a reduction in the fleet would reduce the number of fishers required.

3) A third possibility is that the industry does not need the 30,000 – 60,000 new fishers — the upper figure represents a wholesale replacement of the current fishing workforce — but seeks a larger pool of migrant fishers to help insure against short-term shortages and to relieve upward wage pressure.

2. Effect of wage price on vessel owners

To help discern which of the above dynamics are at work in the industry, vessel owner interviewees were asked about labour costs on board the vessels, particularly in the context of the proposed changes to the minimum wage. A common theme amongst all the vessel owner interviewees was that they were feeling squeezed out of the industry by the high cost of compliance with policy. This point was often illustrated by reference to the minimum wage in the industry. Vessel owner respondents suggested in 2017 interviews conducted for this research that if the minimum wage was raised to THB 12,000 they would either choose to completely remove incentive payments made to their fishers, or they would choose to leave the industry altogether.
Vessel owners reported that at the current time it is not affordable for them to increase wages. It was reported that on average, the industry is making a (self-reported) profit margin of 8 – 10 percent, and that the regulated reduction in fishing days is having the effect of reducing these levels of profit. Provincial-level vessel owner associations nonetheless proposed THB 12,000 as a base wage for fishers in 2018 when the Thai and Myanmar governments discussed on new migration policy for work in fishing, and reported average pay among fishers in 2019 showed real wage growth.12

3. Advances paid to fishers
According to the ILO’s 2018 Baseline Research, 52 percent of workers reported borrowing an average advance of THB 7,770 from their employer. The highest amount reported to be borrowed was in the Andaman region, where THB 9,840 was advanced (the equivalent of one month’s salary).13

In general, salary advances are paid so that fishers are able to afford the costs associated with migration and starting a new job. Understood in this sense, salary advances are a facilitator of migration. However, vessel owners interviewed for this report took a negative view of the practice. It was reported by vessel owners that migrant workers in the fishing sector were exploiting the vessel owners through requests for advances, and that vessel owners felt that they cannot decline migrant worker requests for advances on their salaries. Advances can also be understood as a mechanism by which vessel owners encourage or pressure workers to work to the end of the season.

4. Policy compliance costs
Compliance costs were also raised by vessel owners as an issue of importance to them. Vessel owners were particularly concerned about changes to vessel monitoring system (VMS) regulations, requiring vessel owners to pay extra for a secondary system to supplement and replace a system which is already in place. Vessel owners reported that the cost of operating has doubled and that the new government policy has increased costs for vessel owners without making any provision for increasing the economic efficiency of the industry.

Many vessel owner interviewees reported that rapid change in policy is very difficult for the industry to adapt to. It was suggested by one interviewee that the standards set by the government regulatory framework are too high for the industry. To this end, vessel owner interviewees provided anecdotal reports of vessel owners who had failed to adapt in time to new regulations, and had been fined millions of Thai baht, effectively forcing them out of business. A common theme among vessel owners is that the Thai government “isn’t synchronised”14 in its approach to regulation in the industry. Vessel owners want new changes to be properly researched, to support the industry, and to be consulted when the rules are changing. Vessel owners are highly concerned about the use of special government powers (Article 44 in the military government of 2014 - 2019) to pass laws in this sector with no time given for the industry to make the necessary changes. As one vessel owner told us: “We just have to agree and comply with tears”.

14 Interview with Songkhla Provincial Fisheries Association.
5. Capital investment in the fishing sector

On the basis of the interviews conducted with vessel owners, and data provided by both the Thai Department of Employment and Department of Fisheries, it appears that the Thai fishing sector is in a difficult position.

In a healthy industry in which labour market signals — wage demands and crew turnover, for example — are relatively undistorted, a tight labour market would drive investment in new technologies which would lead to increased mechanisation of the fishing fleet, and a consequent reduction in the level of labour required. Malaysian commercial fishing uses a system that reportedly requires only 50 percent of the number of fishers needed on Thai vessels, and Taiwan (with its more mechanised fleet) is similar. The National Fisheries Association of Thailand noted in interviews for this research that the Danish fishing fleet uses similarly sized vessels to Thailand, but needs only one quarter of the fishers.

However, Thai vessel owners interviewed for this research reported that the Thai fishing fleet is comprised of vessels not suited to adopt new fishing technologies, and that in order to take up labour-reducing technologies, vessel owners reported that they would need to purchase new vessels. This is patently not the case for purse seine vessels, as the following study demonstrates, which make up 909 (or 17 percent) of the approximately 5,500 vessels in the Thai commercial fishing fleet over 30 GT.15 The rejection of vessel upgrades by owners more likely reflects a lack of informed debate among vessel owners about available technologies, costs and means of financing capital investments. More to the point, one interviewee reported that under the current regulatory framework, “the ground feels like it’s constantly shifting”.16 Vessel owners contemplating capital investments in Thai fishing want predictability and evidence of prospects for profitability. Commercial lenders, likewise, look for predictability. Thai bankers familiar with the fishing industry interviewed for this paper reported that lending to the Thai commercial fishing industry contracted abruptly after 2014 when global attention focused on forced labour in Thai fishing.

The Department of Fisheries stated that there are long-term plans to decrease the size of the commercial fishing fleet with buy-backs of vessels, but has not disclosed specific goals. To date, 305 vessels have been bought by the government from Thai vessel owners.17 The Department of Fisheries also reported plans to increase the use of labour-saving technologies in the Thai fleet, which in turn would reduce the requirements for fishers. To help inform and advance this policy discussion, this paper provides a 2019 case study of the reconfiguration of a traditional Thai purse seiner that reduces fishers size and improves liveability on board while delivering positive net revenue in year two following the reconfiguration, and thereafter.

15 Department of Fisheries, Commercial fishing vessel data report. December 2019.
16 Interview with Aphisit Techanitisawad (November 2017).
II. Case Study: Vessel Reconfiguration

Due to the kind of equipment used on many Thai fishing vessels, particularly purse seiners and trawlers, fishing vessels in Thailand require a large of numbers of workers. For example, the purse seiners require as many as 30 - 40 fishers on board while trawlers require up to 22 fishers on board. The Thai purse seiner’s heavy labour demand comes from the enormous weight of the catch, which is pulled aboard in nets largely by hand.

The Department of Fisheries has coordinated with the Training Department of Southeast Asian Fisheries Development Center (SEAFDEC) and the Pattani Fishery Association in southern Thailand to design a more labour-efficient purse seiner. The SEAFDEC experts worked in 2018 - 2019 with vessel owners on the design and reconfiguration of a 91-GT purse seiner (Nor Larprasar 8) based in Pattani province.

Picture 1: The purse seiner after installing fishing equipment (Photo: SEAFDEC)

For this project, a crane, hydraulic system, power block, and a central cooling and refrigerating system were installed on the purse seiner. The crane and power systems are able to do much of the net hauling done by fishers, and the refrigeration system improved the preservation of the catch, thereby increasing its value at market.
Reconfiguration costs were shared, with SEAFDEC paying for the equipment and the vessel owner paying for the installation as well as new nets. The installation of the new equipment in late 2018 took two months due to extensive optional renovations. SEAFDEC estimates that a similar equipment installation on other fishing vessels would take less than a month to complete. SEAFDEC also reports that the technologies are readily available in Thailand and fishing vessel contractors in all major Thai fishing ports have the know-how to complete the installations.

**Cost–Benefit Analysis (before and after reconfiguration)**

Prior to the equipment installation, the vessel required around 30 fishers for each seven-to-ten-day fishing trip, yielding a catch that — based on the vessel owner’s pricing estimates and cross-checked with SEAFDEC experts — was worth about THB 475,000. This manning level meant that living space of 72 square metres (4 levels of 3m x 6m space) was shared among 29 fishers (the skipper sleeps in a different area). Each fisher had an average of 2.5 square metres of space on board before the reconfiguration.

Since the installation of the new equipment in early 2019, the purse seiner has seen an approximate 37 percent reduction in labour required. The power block, crane and hydraulic systems enable net hauling to be done more efficiently by far fewer men. In this case, the fishers needed on board has gone down from 27 to 17 men. The average time for hauling fishing nets is less than an hour and 30 minutes, down from more than two hours before reconfiguration. With more adjustments, SEAFDEC forecasts that eventually, the manning will come down to 14 or 15 men, about half of the original fishing crew.

The total labour costs per year will come down as well, from THB 4,117,133 per year to THB 3,242,987 in the second year after reconfiguration, even with an increase of monthly wages for fishers to THB 12,000 per month, which is on par with past policy proposals by Thai vessel owners and workers’ organisations. Worker permitting costs will fall along with the overall workforce by 45 percent (to approximately THB 79,000) over two years. Even accounting for increases in base pay for fishers, supervisors and skipper, the total labour cost savings are significant — approximately 21 percent.
The central cooling and refrigeration systems have proven to reduce the number of lower-quality fish — that is, fish caught on the first few days at sea and lose value as they deteriorate — from 34 percent down to around 10 percent. This means that 90 percent of its catch can be sold at the full market price (up from 70 - 80 percent prior to the installations), increasing revenue by roughly 10 percent from THB 475,000 to THB 522,500 on average per trip.

The work area on board for fishers has seen a significant increase. After the boat reconfiguration the 72-square metre living area is now shared by only 17 fishers (excluding the skipper), hence each fisher now has 4.23 square metres of work space versus 2.48 square metres before. This means that the fishers no longer work in such a crowded space, and in a notoriously dangerous industry, this means safer work.

Fuel costs are largely unchanged after the reconfiguration. The vessel owner notes that any increases in fuel usage due to the addition of the crane is offset by the reduction in the number of fishers on board. SEAFDEC is planning changes to the configuration of the refrigeration system in late-2019 that its engineers believe will reduce energy costs. In regards to engines used in the industry, more efficient fuel-injection engines in use elsewhere are not available in Thailand, and are three times the cost of traditional engines. As a result, Thai vessel owners have reportedly shown little interest in lower-carbon engines.

Finally, the owner and SEAFDEC estimate that the resale value of the vessel after the reconfiguration is about THB 10 million, an increase of two-thirds from its THB 6 - 7 million value before the changes.

Interviews with the vessel’s fishers support the preliminary findings in this case. Mr. Ko Oo, a migrant fisher from Myanmar, used to work on a trawler in Indonesia. After three fishing trips, Ko Oo said,

"Even though this is my first time working on a purse seiner, it is very easy to work on this boat and the hauling of fishing nets is also very easy. I don't even need to tow the fishing nets, and I have more time to rest and more space to sleep comfortably on this boat."

Picture 4: Ko Oo repairs fishing nets at the dock.
(Photo: Nattakarn Sumon)

Mr. Say Ya Laing is another migrant fisher from Myanmar. He has worked in the fisheries sector for nine years. He said that when he worked aboard other purse seiner, all 26 men had to be on deck to haul the fishing nets. Working on this vessel, he stated,

"This is a lot more comfortable and with more rest time."

Picture 5: Say Ya Laing on a lunch break.
(Photo: Nattakarn Sumon)
The improvements in working conditions have reduced the fishers’ turnover rate from 30 percent to effectively zero in the months since the reconfiguration.

The case demonstrates that the installation of basic power-hauling equipment on purse seiners can help alleviate labour shortages and improve the conditions of those working and living on vessels.

The total cost of the comprehensive reconfiguration carried out on this vessel (excluding new nets) is THB 1.75 million. This includes the central cooling system, refrigerating system, installations, and the core reconfiguration: crane, power block and hydraulic system.

The investment cost for the ship’s reconfiguration is relatively high for the smallest commercial fishing companies — owners of one or two vessels. However, SEAFDEC advised that investment costs can be reduced; the core equipment changes needed are crane, power block and hydraulic system. The central cooling system, the refrigerating system and the purchase of new purse seine nets are not necessary for the core reconfiguration, as vessel owners can make those additional improvements over time.

Assuming a ten percent increase in revenue per trip due to the enhanced cooling and refrigerating systems, from an average of THB 475,000 per trip to THB 522,500 per trip, at 30 trips per year, the increase in annual revenue in the second year after the reconfiguration is estimated at THB 1.425 million. This plus the labour-cost savings of THB 874,146 per year can easily cover the investment cost for the reconfiguration and instalment in less than one year.

Table 2: Summary of reconfiguration cost and benefits.

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehensive Reconfiguration Cost (excluding new nets)</td>
<td>THB 1.75 million</td>
</tr>
<tr>
<td>Estimate revenue increase per year after reconfiguration</td>
<td>THB 1.425 million</td>
</tr>
<tr>
<td>Labour-cost saving per year after reconfiguration</td>
<td>THB 0.87 million</td>
</tr>
<tr>
<td>Return on investment (estimated period)</td>
<td>Less than 1 year</td>
</tr>
</tbody>
</table>

There are more than 100 fishing vessels with similar tonnage and fishing equipment as this vessel in Pattani alone. The Thai Department of Fisheries reported in 2019 that there are 909 purse seiners of 30 GT and more in Thailand (of which 738 are 60 GT or more). A loan programme for purse seiner reconfigurations of THB 1.5 - 2 million per vessel can allow fishing operators to make these improvements and comfortably repay loans in one to two years.

However, any lending programme must evaluate borrowers for compliance with the ILO’s core labour standards and Thai labour and fisheries law. The Pattani port in which this vessel lands its fish has a chronic wage-withholding problem that, until verifiably ended, would require a lending programme to bar vessel owners from participation.
### Table 3: Reconfiguration cost–benefit calculations.

<table>
<thead>
<tr>
<th>Year</th>
<th>Vessel Cost-benefit</th>
<th>Year 1 (before reconfig.)</th>
<th>Year 2 (reconfig.)</th>
<th>Year 3 (reconfig. +1)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Cost (THB)</td>
<td>Years (deprec.)</td>
<td>Cost per year (THB)</td>
<td>Years (deprec.)</td>
</tr>
</tbody>
</table>

#### 1.0 Fixed costs

<table>
<thead>
<tr>
<th>Item</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boat</td>
<td>10,000,000</td>
<td>30</td>
<td>333,333</td>
</tr>
<tr>
<td>Boat gear (transmission)</td>
<td>500,000</td>
<td>15</td>
<td>33,333</td>
</tr>
<tr>
<td>Radar</td>
<td>4,000,000</td>
<td>10</td>
<td>400,000</td>
</tr>
<tr>
<td>Sonar</td>
<td>300,000</td>
<td>10</td>
<td>30,000</td>
</tr>
<tr>
<td>VMS</td>
<td>40,000</td>
<td>10</td>
<td>4,000</td>
</tr>
<tr>
<td>Total</td>
<td>450,000</td>
<td>10</td>
<td>45,000</td>
</tr>
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</table>

#### 1.1 New fixed costs

<table>
<thead>
<tr>
<th>Item</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fishing nets (for use with crane)</td>
<td>400,000</td>
<td>10</td>
<td>40,000</td>
</tr>
<tr>
<td>Crane (second-hand)</td>
<td>160,000</td>
<td>7</td>
<td>22,857</td>
</tr>
<tr>
<td>Engine for hydraulic system</td>
<td>280,000</td>
<td>5</td>
<td>56,000</td>
</tr>
<tr>
<td>Hydraulic System Equipment</td>
<td>150,000</td>
<td>10</td>
<td>15,000</td>
</tr>
<tr>
<td>Reconfiguration Cost (crane and power block)</td>
<td>100,000</td>
<td>7</td>
<td>14,286</td>
</tr>
<tr>
<td>Engine for cooling system</td>
<td>200,000</td>
<td>7</td>
<td>28,571</td>
</tr>
<tr>
<td>Cooling tubes</td>
<td>50,000</td>
<td>3</td>
<td>7,143</td>
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<tr>
<td>Refrigerating and cooling system</td>
<td>560,000</td>
<td>7</td>
<td>80,000</td>
</tr>
<tr>
<td>Total new fixed costs</td>
<td>5,750,000</td>
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</table>

#### 2.0 Variable costs

<table>
<thead>
<tr>
<th>Item</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour costs</td>
<td>15,590,000</td>
<td>875,667</td>
<td>17,340,000</td>
</tr>
<tr>
<td>Compensation (min.)</td>
<td>3,963,600</td>
<td>2,904,000</td>
<td>3,168,000</td>
</tr>
<tr>
<td>Shipper</td>
<td>3,963,600</td>
<td>2,904,000</td>
<td>3,168,000</td>
</tr>
<tr>
<td>Boatswain (chief)</td>
<td>2,362,317</td>
<td>1,617,893</td>
<td>1,972,963</td>
</tr>
<tr>
<td>Engineer</td>
<td>1,000,000</td>
<td>1,000,000</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Cook</td>
<td>1,000,000</td>
<td>1,000,000</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Deckhand</td>
<td>1,000,000</td>
<td>1,000,000</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Freezer (additional)</td>
<td>1,000,000</td>
<td>1,000,000</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Ice picker (additional)</td>
<td>1,000,000</td>
<td>1,000,000</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Rock dropper (additional)</td>
<td>1,000,000</td>
<td>1,000,000</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Total labour costs</td>
<td>4,117,133</td>
<td>2,978,987</td>
<td>3,242,987</td>
</tr>
</tbody>
</table>

#### 2.2 Trip material costs

<table>
<thead>
<tr>
<th>Item</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel</td>
<td>61,275</td>
<td>41</td>
<td>1,838,250</td>
</tr>
<tr>
<td>Hydraulics</td>
<td>2,050</td>
<td>14</td>
<td>55,350</td>
</tr>
<tr>
<td>Dry food</td>
<td>3,750</td>
<td>27</td>
<td>112,500</td>
</tr>
<tr>
<td>Fresh food</td>
<td>10,000</td>
<td>10</td>
<td>100,000</td>
</tr>
<tr>
<td>Total trip material costs</td>
<td>1,180</td>
<td>30</td>
<td>35,400</td>
</tr>
</tbody>
</table>

#### 2.3 Maintenance cost

<table>
<thead>
<tr>
<th>Item</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boat motor maintenance</td>
<td>700,000</td>
<td>700,000</td>
<td>700,000</td>
</tr>
<tr>
<td>Fishing gear maintenance</td>
<td>1,000,000</td>
<td>1,000,000</td>
<td>1,000,000</td>
</tr>
<tr>
<td>VMS fee</td>
<td>14,400</td>
<td>14,400</td>
<td>14,400</td>
</tr>
<tr>
<td>Fishing license</td>
<td>10,000</td>
<td>10,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Total maintenance costs</td>
<td>10,503,350</td>
<td>9,074,845</td>
<td>9,572,725</td>
</tr>
</tbody>
</table>

#### 2.4 Fish selling costs

<table>
<thead>
<tr>
<th>Item</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Porter</td>
<td>20,000</td>
<td>30</td>
<td>600,000</td>
</tr>
<tr>
<td>Selling fee</td>
<td>3,000</td>
<td>30</td>
<td>90,000</td>
</tr>
<tr>
<td>Total selling costs</td>
<td>23,000</td>
<td>30</td>
<td>690,000</td>
</tr>
</tbody>
</table>

#### 3.0 Total costs

<table>
<thead>
<tr>
<th>Item</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating costs (operating + fixed)</td>
<td>9,627,683</td>
<td>7,939,607</td>
<td>8,572,037</td>
</tr>
<tr>
<td>Total net profit (catch - overall cost)</td>
<td>3,746,650</td>
<td>5,032,665</td>
<td>5,967,725</td>
</tr>
</tbody>
</table>
III. Conclusions and Recommendations

This paper presents three conclusions followed by specific recommendations designed to introduce new dynamics that will help counter labour market dysfunction and worker exploitation in Thai commercial fishing. The recommendations are addressed variously to the Thai, Myanmar, and Cambodian governments, Thai vessel owners and their representatives and buyers — both Thai and overseas — workers’ organisations, and donor agencies committed to change and sustainability in Thai commercial fishing.

We lead with conclusions and recommendations on vessel reconfiguration because implementation of these recommendations is more tangible and—if implemented at scale—can change the dynamics in the labour market and help improve working conditions and pay for migrant fishers in the Thai industry.

1. The Thai fishing industry fleet has failed in the aggregate to invest in labour-saving technologies. This puts more pressure on an already dysfunctional labour market.

The Thai commercial fishing fleet is overdue for modernisation to improve labour-, energy-, and cost-efficiency. Modest investments in power-hauling equipment reduce the size of fishing crews and thereby help bring the labour market into balance. In other sectors, reducing the workforce can produce conflict between workers and employers — and their representative organisations — but the fishing industry, with poor working conditions and low wages, will continue to face chronic labour shortages. Long-term solutions that reduce demand for new workers, and improve working conditions and wages can satisfy in the aggregate both workers and vessel owners.

**Recommendations:**

- The Thai government and vessel owners should pair the existing DOF vessel buy-back programme with a pilot plan to upgrade vessels using the technologies described above.

- SEAFDEC can provide technical support on vessel reconfiguration plans and the scaling-up of reconfigurations in key Thai fishing ports. The ILO can advise on labour provisions in a lending plan that helps ensure compliance with Thai labour law and makes needed improvements to working and on-board living conditions as well as wages. SEAFDEC can help DOF determine how labour-saving technologies might apply to other vessel types.

- The Thai government and employer organisations should campaign actively in early 2020 in at least five major fishing ports to build support for upgrades using the detailed findings — on technologies, costs, savings and new revenue — presented in this paper. The campaign should make explicit the connection between reconfiguration support from a programme with independently verified compliance with Thai labour law.
2. There is a lack of financial credit to the fishing industry. Lenders want guarantees to re-enter an inherently risky industry.

Thai commercial bank lending to vessel owners has fallen to near zero with the global exposure of labour abuses in Thai fishing and the subsequent uncertainty in the industry. A programme of reconfiguration will prompt threshold questions from vessel owners: “Who will lend me the money?” and “What will happen if I cannot pay it back?” Commercial lenders will ask, “Which institutions will guarantee loans to qualified borrowers?” and “Will the proposed lending programme be big enough to make development and marketing of a new lending product for vessels worthwhile for the bank?”

Recommendations:

• The Thai government, EU, and ILO should explore possible partners to support a lending facility. Scale and flexibility of use for funds is important so that private commercial banks can participate alongside public lenders. A loan guarantee programme that supports USD 5 million in lending, for example, can help reconfigure 80 - 100 vessels (10 - 15 percent of the total fleet over 60 GT) in a two-year cycle.

• Transparency of lending decisions and use of donor funds is also crucial. These two requirements can help ensure that lenders — whether private or public — will rely on market-standard models rather than political considerations in their evaluation of borrowers. Favouritism in lending or tolerance for labour abuses must lead to exclusion from (or an end to) the programme.

• A lending facility donor must build into the programme a mechanism for evaluation of compliance with Thai fisheries and labour laws that is independent of the interested parties: the Thai government, vessel owner representatives and lenders. The independent assessment of labour compliance should be company-specific and dispositive — that is, vessel owners that do not have an independently-verified record of labour compliance in their fleet (as opposed to a single vessel) cannot receive support from the programme or its partners.

• The independent labour and fisheries compliance assessment should be updated at least twelve months from the date of the lending decision. If the vessel owner has fallen out of compliance, the loan guarantee(s) for that vessel owner should be automatically withdrawn.

3. There is a wide-ranging absence of high-quality information.

The interviews conducted for this report all pointed to the need for more effective, regular, and public communication between governments (both Thai and foreign), vessel owners, recruitment agents, and migrant workers.

Governments in Cambodia and Myanmar lack reliable aggregate data about working conditions in the Thai fishing industry. As a result, they struggle to determine policy direction for their nationals working in the Thai fishing industry. The ILO’s 2018 Baseline Research was the first available to them since the introduction of reforms in Thai fishing in 2015.
And though new rules have taken hold and MOU recruitment and employment mechanisms are getting more use, there is a lack of information about recruitment practices in Cambodia and Myanmar. The Cambodian government has not reached an agreement on migration for work in fishing in Thailand, but thousands of Cambodian ‘MOU fishers’ have been employed, according to the Thai government. This points to a lack of effective controls on Cambodian recruitment agencies and their Thailand-based counterparts, including chieu (crew supervisors) who act as recruiters through family-and-friends networks in their countries of origin.

Effective communication between the Thai government and employers is critical for industry planning but vessel owners interviewed for this report testified that when the Thai government makes policy, it is not effectively communicated to the industry. Seafood suppliers and their industry associations repeated the complaint. An urgent example is vessel owners’ concern that the government wants to reduce the size of the industry by up to 50 percent. Thai Department of Fisheries planned a first round of vessel buy-backs totalling 305 vessels (or six percent of the commercial fleet over 30 GT), and owners see no training pathways for them to do anything else.

Whether a cause or result of the communication problem described above, persistent misinformation among vessel owners about reform efforts, including provisions and possible impacts of ratification of the ILO Work in Fishing Convention (C. 188), has made the government’s task more difficult.  

**Recommendations:**

- The Cambodian and Myanmar governments should seek reliable independent data on working conditions in Thai fishing and changes over time. This will make for more data-driven discussion with Thai authorities about migration policy and labour enforcement results in Thai fishing.

- States parties to the MOU should implement an annual or biennial MOU survey, the cost of which is shared between sending and receiving countries.

- Information available to migrant workers must be increased. The Ship to Shore Rights/Myanmar Ministry of Labour, Immigration and Population (MOLIP) pre-departure orientation for Myanmar fishers in Kawthaung, Myanmar, launched in 2019, provides a useful model. Workers’ organisations should lead training to help ensure its quality with a focus on rights, recruitment, contracting, legal standards, and fishers’ safety and health.

- The Cambodian and Thai governments should agree on the terms for migration for work in fishing or prohibit employment of new migrant workers from Cambodia as fishers. The role of the chieu (or crew supervisor) as recruiter should be regulated.

- The Thai Ministry of Agriculture should disclose the policy and detailed criteria for vessel buy-backs to minimise confusion among vessel owners and bring transparency to vessel-level decision-making. The Department of Fisheries should consult with the Ministry of Labour, Port In/Port Out (PIPO), and workers’ organisations to ensure that vessel owners engaged in serious labour abuses are not permitted to participate in the buy-back programme.

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18 See for example Keams, Madelyn, *Seafood Source*, 19 Sep 2019, ‘Thai fishing group lobbies government to relax reforms, leaving NGOs, retailers, and suppliers troubled’. [https://tinyurl.com/ss2goc8](https://tinyurl.com/ss2goc8).
In closing, it is important to note that the Thai legal framework for work in fishing (and other sectors) does not fully comply with international standards. Thai law does not allow migrant workers to build and lead unions. The denial to migrant workers of this fundamental right is a contributor to the Thai fishing industry’s forced labour problem, and relates to several of the recommendations above. One, organized fishers have more and better access to information about minimum legal standards for work in fishing. Two, migrant fisher unions can be a source of valuable information for governments and industry as they attempt to identify and eliminate forced labour. Three, fisher unions are indispensable partners for effective tripartite discussion of policy and implementation issues.

The Thai government should ratify ILO Conventions 87 and 98 in 2020, and extend effective protections to migrant workers for organising and collective bargaining rights in accord with Thailand’s long-standing obligations as an ILO member state.
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SHIP TO SHORE RIGHTS PROJECT
of the ILO Country Office for Thailand, Cambodia and the Lao People’s Democratic Republic

FUNDER
European Union

PROJECT DURATION
February 2016 – December 2019

TARGET BENEFICIARIES
Women, men and children working in the fishing and seafood sectors and enterprises along the seafood supply chain

GEOGRAPHICAL FOCUS
22 coastal provinces in Thailand, with particular attention in Chonburi, Chumphorn, Pattani, Phan Rang, Phuket, Ranong, Rayong, Samut Sakhon, Songkhla, Surat Thani and Trang

Some activities are operating in Cambodia, the Lao People’s Democratic Republic and Myanmar.

PARTNERS
Ministry of Labour, Ministry of Agriculture and Cooperatives, Ministry of Social Development and Human Security, Royal Thai Navy, workers’ and employers’ organizations, industry associations, civil society organizations and buyer and retailer groups

PROJECT OBJECTIVES
Strengthen the legal, policy and regulatory framework in the fishing and seafood sectors by raising labour standards and facilitating more legal migration in these sectors.

Enhance the capacity of government officers, including the labour inspectorate, to more effectively identify and take action against forced labour and other labour rights abuses in the fishing and seafood sectors.

Improve compliance with the Fundamental Principles and Rights at Work (ILO core labour standards) in the fishing and seafood sectors through implementation of good labour practices and help scale up a complaints mechanism with increased awareness and ownership across the supply chain.

Increase access to support services for workers and victims of labour abuses, including women and children, through engagement and empowerment of civil society organizations and trade unions.