Laboring for less so supermarkets profit more:

How Western supermarkets are shortchanging consumers and farmers – driving down worker incomes and conditions





This report provides an analysis of field-based research in Vietnam's shrimp sector, conducted from July 2023 through May 2024, with primary research done by three independent research teams in Vietnam, who remain anonymous to protect some worker identities. The research, including the market component, analysis, and report-writing were completed by Dr. Katrina Nakamura of the Sustainability Incubator.

The Sustainability Incubator conducts primary research worldwide to stand up to modern slavery in fisheries and aquaculture, with awareness that respecting human and labour rights is a constant challenge in commodity sectors like seafood because market prices and working conditions are linked and ever-changing.

Executive summary

This report presents new findings confirming a direct relationship between wholesale prices in shrimp aquaculture and working conditions.

These new findings suggest that the global business model of supermarket shrimp could be causing adverse effects to the working lives of shrimp workers and producers, even in the most advanced part of the shrimp sector in Vietnam. The findings are drawn from over 150 interviews with workers and producers at each tier of the shrimp supply chain in Vung Tau, Bac Lieu, Can Tho, Soc Trang, and Ca Mau districts. Forced labour was not found. However, the sample data are cross-cutting and suggest that a steady and serious deterioration could be occurring due to successive cycles of lost income for shrimp producers from the extraordinarily low prices being offered by the market.

In summary, workers said their earnings are down 20-60% and their costs of work are significantly higher. Asked about changes in conditions since the pandemic, shrimp workers said they had good jobs before the pandemic and were earning enough today only to eat, sleep and repeat. Overall, producers said they were experiencing successive losses or barely breaking even and earning enough only for immediate bills and not maintenance or depreciation. This appeared to be inexplicable as global demand for shrimp has recovered. Through the pandemic, Vietnam led the shrimp sector and fared better than other shrimp producing countries thanks to prior investments in innovation, modernization and in highly skilled workers.

What is happening in the market that the world's most efficient shrimp producers are not winning on price? Is there a price gap between shrimp producers and the market? Prices, costs and earnings data were collected from shrimp producers and workers and also from trade data and instore supermarket prices. The numbers were mapped across the tiers of the shrimp supply chain. The results demonstrate an especially large chasm between the farmgate prices paid to producers in Vietnam and the retail prices that consumers are being charged for shrimp in supermarkets in Europe, the United States, and the United Kingdom.

At the market end of the supply chain, retail shrimp prices for consumers are high and supermarket profits reportedly "staggering". At the production end of the supply chain, producers are being paid historically low prices and shrimp workers are laboring more for lower earnings. The numbers suggest that shrimp workers could be subsidizing supermarket profits. Some large supermarket firms were linked to interview data (by customs records and customers listed by export plants). The supermarkets publicly assert that they are sourcing farmed shrimp sustainably and with respect for labour and human rights. However, their procurement practices might be drawing profit from working conditions. This is not in view due to high retail prices and consumer messaging, for example, the consumer prices offered by their online stores for Product of Vietnam shrimp did not appear to be indexed to the wholesale prices. In fact, some supermarket shrimp prices rose when wholesale prices were falling during the study period (October 2023-July 2024). For a small sample of instore price checks, store personnel cited inflation and higher wholesale prices as reasons for higher shrimp prices.

The conditions described by shrimp producers and workers in Vietnam do not match what the same supermarkets have said about their procurement practices, about sourcing shrimp sustainably and with respect for human and labour rights. Pricing/profit gamesmanship is not proven here with certainty, but the effects are being felt by producers and consumers. However, the results of this research deliver a new view of who is profiting from the current shrimp business model and at whose expense.

Gibson D: Shrimp margin for US retailers at staggering 40% in 2023. Undercurrent News, July 26, 2023. https://www.undercurrentnews.com/2023/07/26/shrimp-margin-for-us-retailers-at-staggering-40-in-2023/



A photo of an intensive shrimp farm in Bac Lieu Province, Vietnam. The image shows a large, rectangular pond used for farming vannamei shrimp. The farm is equipped with pumps and waterwheels to circulate and aerate the water, essential for maintaining the health of the shrimp in this high-density environment. Photo credit: © Angel Marie Ysik

Key findings

- **Decline in Worker Earnings:** Take-home earnings for shrimp workers in Vietnam show a steep income decline of 20-50% since the pandemic, with reduced wages, earnings losses from reduced or discontinued bonuses, overtime, employer coverage for health insurance and in some cases for necessary protective equipment. The majority are earning only the living costs of a single person and cannot save or change jobs. Producers for their part reported higher costs of production, lower earnings from shrimp, and labour spending capped at 5-7% of production costs.
- Producer Pressure from Concentrated Procurement: Shrimp purchasing appears to be highly integrated and consolidated on the market side of the supply chain and farmers appear to be squeezed from both ends. On one side, export-processing plants raise the specifications required by overseas customers and supermarkets while lowering the prices they pay for shrimp. Farmers (and fishers-for-meal) said they earn higher prices (3-5%) selling directly to processing plants but increasingly are required to sell to the plants' hired agents at lower prices. On the other side, large feed firms are also raising prices on feeds and drugs (60-80% of production costs). A relatively small number of large integrated firms and global distributors also exercise a large influence on prices through private efficiencies which may allow them to more successfully profit by procuring higher quantities for lower prices, and sell inputs to producers at apparently over-market prices through payment terms such as loans to weather payment delays.
- Traceability does not appear supported by trade numbers. Customs records show large supermarkets regularly place orders for several consignments each of 18-22,000 kg of frozen raw shrimp. Only 60 shrimp farms are currently certified by the Aquaculture Stewardship Council in Vietnam² and 614 by Best Aquaculture Practices³ and appear to cover mostly farming areas of 1-10 hectares/4-40 acres while the output of a large exporting plant runs to several thousands of metric tonnes per year. Trade numbers did not appear to support that supermarket orders are comprised of traceable shrimp but rather suggested that orders consist of shrimp from multiple, anonymous sources due to the normal ways shrimp are purchased by plants through harvest agents for economies of scale. This is not problematic in itself. Rather, a disconnect in occurs where a supermarket represents all of its shrimp purchases as certified or fully traceable.
- Market inefficiencies might be preventing recovery of farmgate prices. This report finds that Vietnamese producers are efficient, and it is the market that has become inefficient and is becoming irrational. Shrimp from Vietnam is more expensive by weight than shrimp from Indonesia, India and Ecuador and farmers in those countries are producing shrimp for even less money. Markets analysts and actors should understand that asking for more efficient production in Vietnam means asking for corporate profit subsidies from shrimp workers.

² Aquaculture Stewardship Council 2024: Find an ASC Certified Farm. https://asc-aqua.org/find-a-farm/, accessed July 16, 2024 with the search criteria: Country=Vietnam, Certified Status, and Whiteleg Shrimp (Litopenaeus vannamei).

³ Global Seafood Alliance 2024. Find a BAP Producer. https://www.bapcertification.org/Producers, accessed July 16, 2024 with the search criteria: Country, Shrimp, Farm and separately for 1*, 2*, 3*, and 4*.



Recommendations

- Supermarkets must pay prices for shrimp that reflect the true cost of producing shrimp while meeting the mandatory requirements of Vietnam's Labour Code, about 1.5x current prices.
- 2 Supermarkets should pay prices for shrimp that meet international labour standards, about 2x current prices.
 - Supermarkets making general statements about respecting human rights and traceability in the shrimp sector should rephrase those statements to be specific about how they are achieving it while sourcing shrimp at the lowest price. Supermarkets should publish the names of the processing plants they purchase shrimp from and maintain current information on their websites. Supermarkets should engage with key unions and civil society to become better educated about tracking the effects of their purchasing pattern and understand how to revise their procurement terms to avoid causing exploitation and so that workers are paid for their work and respected.



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Previous page: A photo of a woman sun-drying shrimp in Soc Trang province, Vietnam. She is a member of the Hoa De Cooperative, where women work together to produce value-added products like dried shrimp to augment their income. The image captures the woman carefully spreading shrimp out on large drying racks under the sun. The background shows small shrimp farm located in Soc Trang province.

Photo credit: © Angel Marie Ysik

Photo of a feed meal worker in the mask to prevent feed dust from er Vung Tau. The worker is wearing a pr s in the final stage of feed meal product feed is being carefully packed in h larae stacks of filled sacks and m background, indicating the scale of the Photo credit: © Angel Marie Ysik

Introduction

The purpose of this research was to learn about working conditions in Vietnam's shrimp supply chain and how they are affected by low prices in the market and the sector's business model. Approximately 600,000 shrimp farms are operating in the Mekong River delta of Vietnam, representing about 30% of an estimated two million farms across Asia, most between one and four hectares in size. Shrimp has emerged as one of the world's fastest-growing food products over the past twenty-five years and Vietnam's independent shrimp farmers were among the first to modernize, becoming very efficient. Today's 70-billion-dollar global shrimp industry⁴ benefits from farming innovation in Vietnam and competition across Asia, producing nearly 2 million metric tonnes of low-cost shrimp per year.

Competition among shrimp buyers in the same 25 year period has dwindled. Vietnam is the worst hit of all major shrimp producers from a global oversupply⁵ and there could be more to the story because shrimp prices have declined to the level it costs to produce shrimp and below. A consistent reduction in shrimp market prices is often a red flag for labour exploitation, because buyers paying wholesale shrimp prices at-cost or below encourage unsustainable production. Independent, smaller-scale, producers cannot stop paying bills for energy and inputs like shrimp larvae and feeds, but they can reduce their labour spending, and the business model may afford little or no choice.

Shrimp profits were described as 'staggering' this year for USA supermarkets⁶ in a second red flag for labour exploitation. Retail shrimp prices for consumers grew higher in 2022, 2023 and 2024 at grocery stores in the United Kingdom, Europe and the United States⁷, at 8-10% each year, while wholesale shrimp prices fell dramatically. As Vietnamese farmers reported successive losses⁸, Tesco reported profits of 160%⁹, while the UK Grocer Code Adjudicator reported that Tesco and Aldi were using aggressive procurement tactics like demanding that cost-prices decrease forcing suppliers to operate at a loss¹⁰. Sky-high supermarket prices are a result of competitive advantages for dominant grocery chains¹¹, the US Federal Trade Commission announced in March 2024, and elevated supermarket profits might reflect the use of pandemic supply chain disruptions as an opportunity¹².

In Vietnam, farmers were adopting new models and techniques when shrimp prices peaked at \$11/kg in 2018, but began running out of cash as prices started to drop¹³. Working conditions at that time largely appear to have been informal. Most workers were not provided with written contracts, social protections and documentation such as pay slips, but rather were paid per piece/weight at rates that varied with the price of shrimp. The aquaculture sector relied on the labour of nearly 30,000 children, according to the Government of Vietnam¹⁴. Export prices for shrimp were lower than the cost of sustainable production because workers lacked job and information security, which economic theory says are vital to a free market¹⁵.

- Analysts have calculated the value of the global shrimp industry to be in the range of USD 69 to 72.6 billion, with USD 43.4 billion attributed to whiteleg or vannamei; see Global Market Analysis 2023. Shrimp Market Size, October 2023. https://www.gminsights.com/industry-analysis/shrimp-market and IMARC Group 2024. Shrimp Market Report, March 2024, https://www.imarcgroup.com/prefeasibility-report-shrimp-processing-plant
- ⁵ Shrimp Insights 2024. Shrimp trade data update May 2024. 20 May 2024. https://www.shrimpinsights.com/blog/shrimp-trade-data-update-may-2024.
- Gibson D: Shrimp margin for US retailers at staggering 40% in 2023. Undercurrent News, July 26, 2023. https://www.undercurrentnews.com/2023/07/26/shrimp-margin-for-us-retailers-at-staggering-40-in-2023/
- Wilson B: Seafood prices up a tick; sales remain solid. Supermarket News, April 27, 2023. https://www.supermarketnews.com/seafood/seafood-prices-tick-sales-remain-solid. See also, Blank C 2022. US shoppers buying less fresh seafood due to inflation. SeafoodSource News, August 24, 2022. https://www.seafoodsource.com/news/foodservice-retail/shoppers-buying-less-fresh-seafood-due-to-inflation
- 8 Vietfish 2023. Price of shrimp material slump, farmers empty ponds. July 2023. Vietfish Magazine. https://vietfishmagazine.com/markets/dbscl-price-of-shrimp-material-slump-farmers-empty-ponds.html
- ⁹ Dodds W 2024. Tesco pre-tax profits nears £2.3bn after 160% year-on-year increase. Food Manufacture, April 2024. www.foodmanufacture.co.uk/Article/2024/04/10/tesco-pre-tax-profit-nears-2.3bn-up-160-on-last-year
- ¹⁰ The Grocer 2023, Groceries Code Adjudicator accuses supermarkets of 'warfare' on suppliers, September 28, 2023.
- US Federal Trade Commission 2024: Pandemic-induced disruptions disproportionally impacted smaller firms, as larger companies sought to protect market share, power. FTC Report on Grocery Supply Chain Disruptions, March 21, 2024.
- ¹² EU 2024. Fighting against unfair trading practices: European Commission gathers views from farmers and operators in the food supply chain. February 27, 2024. Directorate-General for Agriculture and Rural Development, European Union, Brussels.
- 13 Wamucii, S 2024. Shrimp and prawns price in Vietnam. https://www.selinawamucii.com/insights/prices/vietnam/shrimps-prawns/
- ¹⁴ ILO and the Ministry of Labour, Invalids and Social Affairs of Viet Nam, 2020. Viet Nam National Child Labour Survey 2018: Key findings, International Labour Organization, Geneva.
- Jahan S, Mahmoud A and C Papageorgiou 2014. What is Keynesian Economics? International Monetary Fund. https://www.imf.org/external/pubs/ft/fandd/2014/09/basics.htm

Today, shrimp prices in Vietnam have fallen to an average of \$5.00/kg¹⁶ and conditions for shrimp workers are more challenging and production less sustainable than in 2018. Market analysts have attributed the sharp fall in wholesale shrimp prices to producer inefficiency^{17,18,19} but perhaps that is not the full story because the business model is focused sharply on market profitability²⁰. Market forces have shaped shrimp aquaculture²¹ and set up fierce competition among shrimp producers to sell at low prices. Scant attention is paid to market inefficiencies like aggressive purchasing and financing arrangements by large firms that economic theory predicts could drive even hyper-efficient producers into operating in the red. Shrimp from Vietnam costs more by weight compared to other shrimp producing countries. Vietnamese shrimp lost a disproportionate share of export value in 2023, falling 30% in value to \$2.8 billion from \$4 billion in 2022²² producing far less money for producers and workers than in 2018.

Farmers and workers appear to be carrying most of the risk in the shrimp business model. This report presents findings from extensive research undertaken in 2023/24 in Vietnam's shrimp supply chain. The primary objective of the research was to better understand the working conditions in Vietnam and their relationship to concentrated, transnational arrangements of large firms in the market. The research also explored whether grocers in the United States, United Kingdom and Europe could be taking profits at levels that are creating more labour exploitation than before the pandemic and a business model reminiscent of plantation-era conditions.

- ¹⁶ Wamucii, S 2024. Shrimp and prawns price in Vietnam. https://www.selinawamucii.com/insights/prices/vietnam/shrimps-prawns/
- ¹⁷ Global Seafood Alliance 2023. Annual farmed shrimp production survey: A slight decrease in production reduction in 2023 with hopes for renewed growth in 2024 Responsible Seafood Advocate. October 9, 2023. https://www.globalseafood.org/advocate/annual-farmed-shrimp-production-survey-a-slight-decrease-in-production-reduction-in-2023-with-hopes-for-renewed-growth-in-2024/
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- ²¹ Rubel et al 2019: A Sustainable Approach to Sustainable Shrimp Production in Vietnam, Boston Consulting Group for the Gordon and Betty Moore Foundation.
- 22 Shrimp Insights 2024. Shrimp trade data update May 2024. 20 May 2024. https://www.shrimpinsights.com/blog/shrimp-trade-data-update-may-2024



A photo of the drying area for shrimp products in Bac Lieu Province, Vietnam. The image captures rows of drying racks spread out under the sun, with shrimp products laid out to dry.

Photo credit: © Angel Marie Ysik

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Methodology

The primary research was done by three research teams in Vietnam. Support and coordination for the field-based interviews were provided by the Sustainability Incubator in Honolulu, which also supplied market research and analysis.

Shrimp workers were interviewed in Vietnamese between October 2023 and April 2024 by eight qualified and experienced interviewers using a validated survey instrument. Workers reported their job recruitment process, observed changes since the pandemic, and other areas of concern, including their wages, costs of work, and earnings. Shrimp workers were interviewed in the workplace with the employer on the premises²³. Consent forms were collected from the shrimp workers and employers who participated in the interviews.

The first stage involved 131 interviews in shrimp workplaces that included (1) trawl vessels fishing for fish for meal for shrimp feeds, (2) a fish meal manufacture plant for shrimp feed, (3) hatcheries, (4) shrimp farms, (5) harvest teams, and (6) shrimp processing plants for export.in Vung Tau, Bac Lieu, Can Tho, Song Trang, and Ca Mau districts. The second stage involved interviews with 20 shrimp peelers working at four peeling facilities in Soc Trang district.

Table 1: Interview Summary

Shrimp Supply Chain Stage	Vietnam
Shrimp Feeds	19
Hatchery	24
Farms	53
Processing	42
Government, auditors, civil society and surrounding community	13
Total interviews:	151

Employers were interviewed and included fishing vessel owners, fish meal plant owners, hatchery directors, shrimp farmers, harvest agents, and processing plant directors as well as certification auditors and industry experts who provided insights into shrimp labour conditions, trends and areas of concern. The employers are also shrimp producers, who provided their prices, costs as well as current and pre-pandemic net earnings from 2018 and 2019.

Shrimp prices for exports from Vietnam, imports to the USA, the UK and Europe were collected from trade reports, company websites, and customs records. Prices were sought for whiteleg shrimp size 40 for comparative purposes. Retail prices were collected from the online and in-person stores of supermarkets. Major sources included the Vietnam Association of Seafood Exporters and Producers (VASEP), trade media like Supermarket News and SeafoodSource.com, and ImportYeti, a database of US imports and customs as well as other public databases of shrimp prices. These findings were combined with the interview results to reveal the conditions that the shrimp business model affords for labour (Figure 1). Limitations on this study's findings include the sample size, location of worker interview (with employers present), and the proprietary nature of wholesale shrimp prices. The overall findings are not statistically representative but are accurate to the interview data.

²³ Readers will note that workers may be inhibited from revealing poor conditions in interviews that are conducted in the workplace, or if the employer is on the premises. Most worker interviews were conducted in small groups away from employers for some privacy and to provide a cross-check on the details of wages and conditions that are provided.

Figure 1: Research conceptual framework

Conceptional framework

For research into the shrimp business model and the working conditions it affords

Working conditions were identified in the shrimp value chain from 151 interviews in workplaces for:

- 1. Fishing for fish for meal,
- 2. Fish meal manufacturers for shrimp feed,
- 3. Hatcheries,
- 4. Shrimp farms,
- 5. Shrimp harvest teams,
- 6. Shrimp peeling facilities,
- 7. Shrimp processing plants for export,

Workers and employers shared conditions, their earnings, and changes since the pandemic.

Findings were combined to learn what conditions the business affords.

In this way, the conditions afforded by each actor in the supply chain are revealed, including the supermarkets selling shrimp to consumers.

Market prices for shrimp were collected for.

Farmgate prices (unofficial prices from middlemen and published prices), Wholesale export, Wholesale import, and Retail at supermarkets in

Prices for 30 pieces/kg,
40 pieces/kg and
50 pieces/kg
Pacific White-leg/
Vannamei shrimp were
collected from trade reports,
company websites and
customs records.

1. Current working conditions in the shrimp supply chain in Vietnam, 2023/24

The reports of shrimp workers are representative of working conditions at each tier of production in the Vietnam shrimp supply chain. Working conditions were identified for (1) fishing for fish for meal, (2) fish meal manufacture for shrimp feed, (3) hatcheries, (4) shrimp farms, (5) shrimp harvest, (6) shrimp peeling, and (7) shrimp processing for export in Vung Tau, Bac Lieu, Can Tho, Song Trang, and Ca Mau districts.

One major finding is that workers' incomes have declined 20-60% since the pandemic (Figure 2). Wages in 2023/24 averaged \$222/month down from \$277/month in 2019. Shrimp workers reported that take-home earnings have declined 20-60% due to reduced wages, lost overtime, lost employer coverage for health insurance and even necessary protective equipment, and bonus payments have been significantly reduced or eliminated. A majority of shrimp workers said they do not have knowledge of their wages and employers are not disclosing the salary in advance or how it is calculated, despite the requirements of Vietnam's Labour Code²⁴. A shrimp peeler in Vietnam reported,

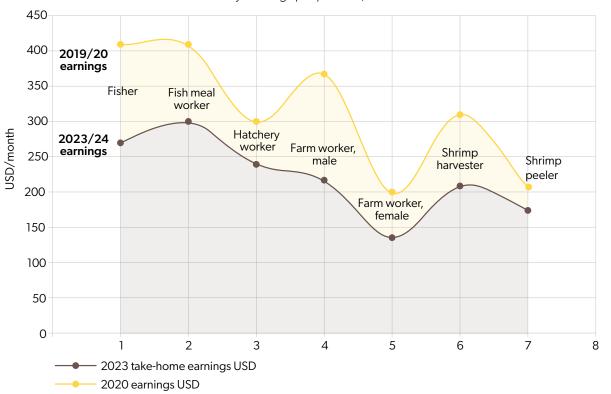


There is no agreement about wages, the supervisors just weigh the quantity and then calculate the money. The company tells us the number of kilograms of shrimp we peeled, but not the price they are using to calculate our wages, and we wish they did.

Figure 2 Monthly earnings for Vietnamese shrimp workers

Decline in worker earnings since the pandemic in the shrimp supply chain in Vietnam

Monthly earnings per position, in USD



In 2024, wholesale shrimp prices in Vietnam are near $5.00/kg^{25}$ which is significantly lower than peak prices in 2018, at $11/kg^{26}$. As wholesale prices and profits declined, so did the opportunity for shrimp workers to advance to higher wage rates with skills and seniority and earn overtime, bonuses, and benefits that could double their earnings. This trend runs against the efforts of Vietnam's government, which in 2019 and 2021 amended the country's Labour Code redefining seasonal job contracts under 12 months as definite term contracts, providing for more overtime, and giving workers the right to terminate their contract for mistreatment or delayed wages. Have major shrimp buyers counter-acted these changes?

When evaluated for mandatory labour protections, the quantitative data collected in interviews suggests that major shrimp buyers do appear to be leveraging the reverse effect. Workers at every tier of production, other than at hatcheries, recounted the benefits and securities they had before the pandemic and said that for the most part they are not receiving them now. Workers reported earning considerably less and said they have significantly less job security and mobility (the ability to leave the job or to move up in the job). Seventy-two percent of the jobs did not provide a written contract. Ninety-seven percent said they are paid wages based on the yield and market prices, instead of a regular salary (Figure 3). The earnings data (plotted in Figure 2) confirms that wages are linked to declining shrimp prices. Wages are falling to the level of regulated minimum wages and below which are not a living wage. The collected data shows shrimp is being produced unsustainably.

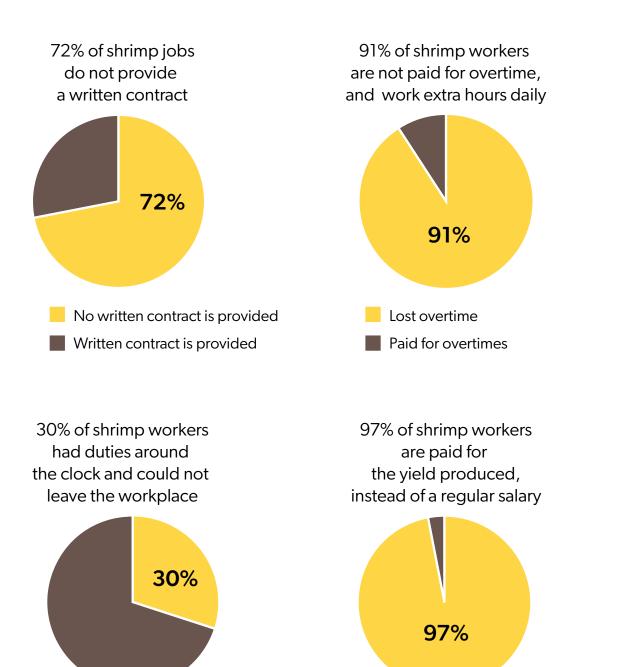
Workers' standing is reversing in Vietnam. There are signs that working conditions are deteriorating and that jobs are breaking down into crude arrangements – despite supermarkets earning record-high profits from shrimp. This is an important insight into the shrimp business model, and the goals of its largest firms because the Vietnamese shrimp supply chain represents the most advanced and mature part of the global sector. It almost appears like seems as if the market is raiding shrimp production and taking by any means anything of value, as though the market exists apart from the legal framework and outside the reach of labour, anti-trafficking and anti-trust laws.

²⁴ Vietnam's New Labor Code (2019) defines seasonal job contracts under 12 months as definite term contracts, provides for overtime, and recognizes employees' right to terminate a contract with notice. Amendments in 2021 require employers to provide written contracts for all including temporary workers.

Wamucii, S 2024. Shrimp and prawns price in Vietnam. https://www.selinawamucii.com/insights/prices/vietnam/shrimps-prawns/

²⁶ Wamucii, S 2024. Shrimp and prawns price in Vietnam, 2018. https://www.selinawamucii.com/insights/prices/vietnam/shrimps-prawns/

Figure 3: Sample of working conditions in Vietnam's shrimp supply chain, (n=113 workers)



Irregularly paid wages

Regularly paid wages

1.1 Workers' voices from across the shrimp supply chain

151 field interviews were conducted across the shrimp supply chain in southern Vietnam in October 2023 and May 2024. In October, shrimp workers were interviewed in the workplace with the employer on the premises. In May, twenty shrimp peelers were interviewed off-premises. The shrimp workers reported how they got the job, changes since the pandemic, and areas of concern in addition to their wages, costs of work, and earnings.



1. Fishers catching fish destined for fish meal:

Fishers go to sea to catch fish for shrimp feeds, living and working on trawl vessels for 1 - 7 months depending on their fishing success. Fishers reported their earnings have fallen 34% since 2020.

Fishers aged 37-43 were interviewed in Vung Tau. They hail from Quang Ngai, Quang Binh, and Binh Dinh. Most completed grade 9, one primary school and one high school.

How workers got the job:	Changes since the pandemic:	Areas of concern:
"I followed others here from my hometown and to get the fishing job, I needed an advance to pay for fisheries certification, which costs \$368.68 to attend" (1.5 months earnings)."	"Before this year, we could earn \$400/month by sharing the profit. There is less profit shared between vessel owners and fishermen because the cost of fuel has increased, and there are fewer fish."	Monthly salaries are preferred because sometimes there's no catch at all.



2. Fish meal plant workers:

Workers at fish meal plants operate machines and pack meal to produce fish meal that is sold to feed manufacturers as the main source of crude protein for shrimp feeds. Workers reported that their bonuses, meals, accommodation and insurances have been largely eliminated, and overtime wages reduced, since 2020 because fish supplies are down by 30-40%.

Fish meal plant workers aged 19-55 were interviewed in Vung Tau and hailing from Soc Trang, Bac Lieu, and Da Nang. Most had moved to the area and remitted money to families in their hometowns. The workers had completed up to grades 5, 7 and 9 and the person in charge of machine maintenance had completed technical vocational school.

Wages depend on the yield produced

Wages are fixed

How workers got the job:

"We moved because working here paid better than in our hometowns."



Changes since the pandemic:

"We no longer have regular overtime or accommodation at the plant."

"Before, we earned bonuses and could support a family. Now, wages support only a single person's costs."

Areas of concern:

"My salary is stable but there's no saving. I want to increase my income."

"I cannot leave this job because other companies are shutting down."



CAMBODIA Ninh Thuan Province Phan Thiet Vung Tau Soc Trang So

3. Workers at shrimp hatcheries:

Hatchery workers cultivate shrimp larvae in tanks until large enough to be sold as 'post-larvae' (PLs) to shrimp farms. Each worker might be in charge of 10 tanks with groups of 2-4 taking care of the ponds. The jobs at hatcheries attract educated workers and labour conditions appeared to be the best in the shrimp supply chain.

Hatchery workers aged 24-51 were interviewed in Can Tho and Ninh Huan. All 18 had finished high school or were college graduates.

How workers got the job:

"I got the job after interning here as a college student."

"I used to farm shrimp but now work at the hatchery."

Changes since the pandemic:

"The company provides food and accommodation, good salary. The job is not too difficult."

"We can have a contract after 6 months and the salary is \$163-246/month with bonuses."

"Each year salary is reviewed and could rise by \$20/month."

Areas of concern:

Starting wages were below the minimum wage but workers voiced no concerns about hatchery conditions.





4. Farm Workers:

Farm workers stay on the farm to feed shrimp 3 or 4 times during a 24-hour period. They earn a base wage and a proportion of the harvest, if the crop is successful.

29 farm workers aged 18-52 were interviewed on farms in Soc Trang and Bac Lieu and ranged in education from 5th grade to college graduates.

How workers got the job:	Changes since the pandemic:	Areas of concern:
"We are from Bac Lieu and this is the work that is available."	"We buy our own protective equipment and pay insurances for ourselves."	"My income depends entirely on volume. I can't save any money from my earnings."
	"Before we could help our husbands with farming but now must earn income. We make fish cake, shrimp cake and dry shrimp and our earnings are about \$123/month. Together with our husbands our earnings are only sufficient for daily spending."	

PHNOM PENH HO CHI MINH CITY Vung Tau Soc Trang Bac Lieu Of Thailand Soluth China Sea Soluth China Sea Soluth China Sea Figure 100 km Soluth China Sea

5. Shrimp harvesters:

Shrimp is harvested by a middleman's team of harvest workers. They work on call and when summoned by the agent go to farms via motorcycle to harvest shrimp from the ponds on the farm and then on to the next farm until the order is filled from the processing factory, normally 10-15 truckloads. Harvest workers are divided in teams per pond. They prepare the net, harvest the shrimp and carry them to load into the truck. Harvesters working for middlemen are among the lowest paid workers in shrimp production.

14 harvesters were interviewed, aged 33-55 and educated in primary school or high school.

How workers got the job:	Changes since the pandemic:	Areas of concern:
"I used to farm but work for an agent now."	"The middleman does not pay any bonus." "I pay for my motorcycle and fuel to go to the farms. I pay my accommodation and meals, the shrimp stunning machine, gloves and protective gear myself. I pay health insurance myself and it costs about \$33/year. I cannot afford it so I do not pay for social insurance (aged 33)." "I pay for my health insurance and for social insurance that costs \$330/year (aged 59)."	"I cannot have savings from this job. The payment is just enough to cover the expenses for the family." "I cannot earn enough to save in this job so I have another job in construction."



6. Shrimp peelers

Shrimp peeling jobs are filled by women who work 10-14 hours per day to earn money for family expenses. The peelers interviewed had the option of a written contract but 16 of 20 reported working without one to be able to take a day off. Peelers over 40 chose written contracts for health and social insurance. Employers do not disclose their wage, peelers reported, but they earned approximately \$0.10/kg of shrimp peeled or \$9/day depending on their speed. Overtime was not provided and bonuses are offered only for working over 20 days per month or every day of the month.

20 peelers aged 19 to 59 were interviewed in Soc Trang with educations from unschooled to high school.

How workers got the job:	Changes since the pandemic:	Areas of concern:
"I followed my mother into this job." "I was recruited by my friends." "My commute is about 45 minutes."	"The company gives the number of kilograms of shrimp but not the price. With experience we can earn \$0.14/kg from peeling small shrimp and \$0.07/kg from large shrimp, but this goes down if the shrimp price falls." "I don't have enough savings because I have to worry about sending my two children to school."	"There are no savings from this job. The salary is enough to cover some family expenses for the month." "I'd like to recommend that the person running our area try to bring benefits to workers like the other areas, but he is not daring to propose to superiors any consideration of bonuses or better benefits.





7. Shrimp workers at processing plants.

About 80% of the processing positions in shrimp plants are filled by women. Their job involves sorting, preparing and packaging shrimp. Most of the workers interviewed were from the local area and for many it was their first formal job with a contract and a set salary. Shrimp processing work is done in teams, and each team earns a bonus that is divided according to a specific rate for each person based on their experience and efficiency. The plants pay the employer's share of health insurance and provide a lunch allowance but not accommodation.

20 processing workers were interviewed, aged 19-45 and educated from primary school to college.

How workers got the job:	Changes since the pandemic:	Areas of concern:
"I live in the local area."	"During the pandemic many of us could not work and it became very hard." "I earn not too much now. It is enough to cover daily expenses, and save a bit for rainy days."	"For married people, the payment is sufficient to cover daily expenses, but not much to save. For unmarried people, most of them give the money to their parents to keep, so they save aside all of their money." "We stand for 8 or 9 hours a day and have 4 days off a month. At first, it was a bit problematic to stand for so long, but I got used to it."

Shrimp are peeled by women who yield 60-90kg/shrimp in a workday, six or seven days a week. The work involved in peeling shrimp is important to acknowledge because there is an extreme inconsistency between the very high speed, skill and care required on this job and the very low wage and security. From our interviews, we learned that women are peeling shrimp on an assumption that they could earn near the minimum wage if they work as fast as they can.

However, they do not know what they will earn until they are actually paid, which could be weekly or biweekly depending on the employer's discretion, or monthly if they have been offered a contract.

Many of the female shrimp workers are young mothers rising at 4.00am and returning at 6pm, with the exception of pregnant women and new mothers, who can stop one hour earlier. The work day for peelers consists of standing in a refrigerated and disinfected room and working extremely rapidly with a knife while taking care not to make a mistake. Workers are closely supervised and subject to penalties. Wage rates are generally undisclosed. Personal earnings are also affected by the group's yield. Sometimes they obtain minimum wage, many times they do not. These factors place all of the risk of lost profit, waste and low shrimp prices onto peelers. Peelers working for harvest agents have additional insecurity because the facility they are working in is untraceable. These peelers are the least visible workers in the shrimp supply chain and possess no protection from labour exploitation (Box 1).

Box 1: A Shrimp Peeler's Story

Ms. Nguyen (name has been changed), came to work in Vietnam's shrimp supply chain from a small commune in My Xuyen district, Soc Trang province, is a shrimp peeler for a shrimp company in Soc Trang. She is 22 years old and married and has two children. Her family's income sources are from

her wages from shrimp peeling and her husband's seasonal earnings from repairing petrol engines in the rice harvesting season. Her family circumstance is quite difficult because her parents work as hired labourers with unstable income. Therefore, after finishing grade 9, she dropped out and companioned her mother to a shrimp company.

... the labourers equip themselves by purchasing protective gear from the company. The working room is cold and slippery, and she tries to go fast so sometimes she cuts her hand.

It was easy to get this work, she submitted a photocopy of her $\ensuremath{\mathsf{ID}}$ card and her photo and started her job on the following

day. She was first assigned to classify shrimp by size and paid around \$2.63/day. Some days after sorting shrimp, she was instructed to peel and dissect the shrimp and take the penaeidin (black thread) out. Because the payment was based on volume her payment was only around \$6.06 for 10-12 hours of work each day and still below the regional minimum wage. After one year, she worked faster and her wages increased to \$10.08/day. Being a labourer paid by volume, Ms. Nguyen makes an effort to work as much as possible to earn income to cover for her family expenses so her working day is quite intensive. She is normally picked up by the company bus at 4:00 am and works until 4pm. She can leave early because women who are pregnant or have babies may leave one hour before the others who work until 5:00pm or later if there are shrimp to process. As for the working conditions, the labourers equip themselves by purchasing protective gear from the company. The working room is cold and slippery, and she tries to go fast so sometimes she cuts her hand.

In summary, the results of interviews with shrimp workers indicated that lower wholesale shrimp prices have translated to lower wages, lost bonuses, lost overtime and the cost of personal protective equipment. Nearly all of the shrimp workers were in a position of vulnerability and need to trust that they will be paid fairly for their efforts. Shrimp workers in Vietnam are being exploited but conduct themselves with dignity. Shrimp workers did not report wrongdoing by their employers in interviews. Rather, they described that the situation has become difficult and foremost they hoped their wages could improve, taking it upon themselves to work faster and longer, only to earn

less than before. Large firms in the market, like first tier distributors and supermarkets, appear to be exploiting their good faith and need to work by buying shrimp extremely aggressively with procurement practices that are breaking their jobs down into parts. It is not clear that the exploitation can be stopped without dealbreakers for market actors for ensuring fair procurement terms down the supply chain.

2. The shrimp business model and the market's influence on shrimp work

Perhaps the most alarming finding from over 150 interviews about working conditions in the shrimp supply chain is that exploitative conditions are good for the business model's largest firms. Shrimp producers in Vietnam reported a steep decline of 30-150% in their earnings alongside the severe decline in wholesale prices for shrimp from Vietnam, in 2024 falling to an average of $5.00/kg^{27}$ from about 1/kg in 2018^{28} . Retail prices increased in supermarkets in the United States, United Kingdom and Europe when wholesale purchasing prices for Vietnam shrimp fell sharply, and continued to fall.

To investigate the large gap between wholesale and retail shrimp prices and their opposite trend, shrimp employers were interviewed at the seven tiers of production for shrimp exports from Vietnam and included fishing vessel owners, owners of fish meal plants, hatchery directors, harvest agents, supervisors and directors of processing for multinational exporters, and farmers supplying shrimp to the export-processing firms Stapimex, Taika Seafoods, Sao Ta Foods, Truong Phu Seafood, and Minh Phu Hau Giang. In interviews, shrimp producers reported their earnings, costs and selling prices (Figure 4) and provided details about how they recruit workers, changes since the pandemic and their concerns (Table 6).

According to farmers and fishing vessel owners, the plants obligate them to sell their raw materials to middlemen, instead of selling directly to the plants as they have in the past. This reduces the plants' costs of procurement, essentially requiring production of shrimp using exploitative conditions because the middlemen offer lower prices to producers. This is a way of passing down losses the plants agreed to take in negotiating with grocery-retailers at the end of the supply chain, either directly or through middlemen intermediaries hired in turn by the supermarkets.

The larger export-oriented processing and packing firms are not the only firms in the shrimp sector that are leveraging lower prices for raw materials in the shrimp supply chain, in turn influencing working conditions. Other large firms, notably feed manufacturers, are requiring lower prices from suppliers and using middlemen to get them, extracting capital from production and from workers' earnings. The major finding is that breaking-even is as good as producers can hope for in today's shrimp business model. As one Vietnamese producer has said:



Many of us have suffered consecutive losses since 2019. I really need capital but cannot continue to borrow money from the bank because the bank does not mortgage the operation so I have to advance money from middlemen. At this point, I must also advance fuel money from the middleman. Today we are also losing our sales to middlemen. Now the plant requires us to sell to their middleman. Fuel and costs have increased by 30-40%. Orders are down and our total amount of production has decreased by 30-40%.

Shrimp producers reported that operating at low prices on-and-on is extracting the working capital from the production system. Today's business model for shrimp affords a maximum of 5-7% spending on labour and no budget (or very little) for maintenance, depreciation, re-investment and taxes. Since 2021, demand for products has declined, farmgate prices fell 20%, and production costs rose 25-30%. Feed prices have increased 15-25% for farmers and 50% for hatcheries. Utility costs increased 5-6%. They require energy and feeds to operate, thus the extra value is being extracted from wages, safety and mobility, and even from information security.

²⁷ Wamucii, S 2024. Shrimp and prawns price in Vietnam. https://www.selinawamucii.com/insights/prices/vietnam/shrimps-prawns/

 $^{{}^{28}\}text{ Wamucii, S 2024. Shrimp and prawns price in Vietnam.} \\ \underline{\text{https://www.selinawamucii.com/insights/prices/vietnam/shrimps-prawns/nterms.}}$

The Shrimp Sector in Vietnam since the Pandemic

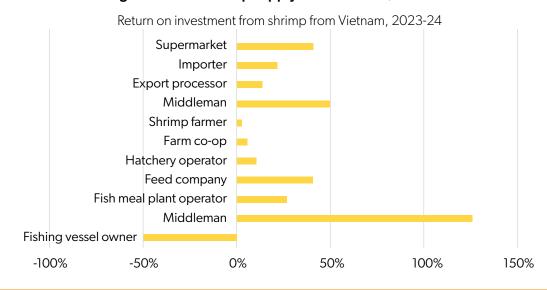
Shrimp producers in Vietnam reported in interviews that they are operating at a loss or around the break-even point today. Following the pandemic, people resumed eating out in market countries and demand for shrimp began to reduce global oversupply. Yet, shrimp buyers bought less from Vietnamese producers than before, switching to lower-cost shrimp from India and Ecuador²⁹. The picture today is very different than in 2018 when Vietnamese shrimp set the standard in the sector. Vietnamese shrimp farmers were modernizing³⁰ and an accelerated transition was underway for cultivating the largest export product more intensively, whiteleg shrimp (*Litopenaeus vannamei*) in plastic lined ponds ("semi-intensive") and super-intensive above-ground circular tanks by replacing natural earthen ponds (Table 2). Most shrimp is being grown intensively in Vietnam today (Table 3) due to the producers' investments in disease-resistance and efficiency³¹.

Table 2: Shrimp farm production overview for Vietnam

Shrimp exporting country:	Total area (ha) in shrimp production	Extensive farms	Semi-intensive farms	Intensive farms
Vietnam	600,000 hectares and 600,000 farms	20% of extensive farms provide 2 jobs/ha on 1-5ha	50% of farms provide 1 job/ha on 3-8ha semi-intensive farms	20% of farms provide 0.5 jobs/ha on 7-25ha semiand intensive farms;
				10% of farms provide 0.25 jobs/ha on 25ha+ intensive farms with robotics

Semi- and intensive shrimp farms are highly susceptible to disease which obligates farmers to use formulated feeds, chemicals and medicines that cost 60-80% of the farmgate price they can earn for shrimp. In this and other ways, shrimp producers in Vietnam are part of a business model that is focused sharply on market profitability³². Their peers are the hundreds of thousands of small business shrimp producers in Asia who are competing to sell farmed shrimp to a small number of buyers while purchasing expensive larvae and feeds from large, integrated firms.

Figure 3: Producer earnings across the shrimp supply chain in 2023/24



²⁹ Shrimp Insights 2024. Shrimp trade data update May 2024. 20 May 2024. https://www.shrimpinsights.com/blog/shrimp-trade-data-update-may-2024.

Concentration in the market appears to be driving producers into the red

In Vietnam, farmers are highly efficient compared to other shrimp producing-countries. The successive losses experienced by Vietnamese producers since the pandemic might be driven instead by concentrated, transnational arrangements like aggressive purchasing and financing arrangements that are drawing profits from production for wider profit margins for large firms.

Competition among buyers in the market has dwindled and further consolidation is predicted³³ in a business model for shrimp aquaculture that is shaped by market forces³⁴ and comprised of the inter-linking business and transnational relationships between large firms. When there is a market slump, analysts have blamed producer inefficiency^{35,36,37} and pay little attention to levers and inefficiencies at the market end of the business.

The numbers provided by shrimp producers demonstrate that prices are very close to what their product costs to make at several places in production including shrimp farming (Table 3), fish meal production (Table 4), and even processing (Table 5).

Table 3: Prices, costs and earnings provided by Vietnam shrimp farmers, whiteleg/vannamei, size 40

Location:	Input costs:	Buyer:	Gross earnings:	Net earnings after taxes, maintenance & depreciation:
BAC LIEU Farm Co-op, Semi-intensive farming system for whiteleg/ vannamei shrimp, size 40	\$1.80-2.04/kg for CP feeds, \$0.005 per larvae. It costs \$3.46/kg to grow the shrimp.	The co-op sells some shrimp directly to a plant for \$4.49/kg and the rest for \$4.27/kg to agents for STAPIMEX and Thai Minh Long,	\$0.81-\$1.03/kg	\$0.21-0.43/kg
BAC LIEU Independent farmer/ harvest agent, Super- intensive farming system for whiteleg/ vannamei shrimp, size 40	\$1.23-2/kg feed, 0.46 medicines, 0.23 labor. It costs Input costs are \$3.26/kg to grow the shrimp.	The farmer sells to agents for Minh Phu & Stapimex for 3.46/kg,	\$0.20/kg	-\$0.40/kg
SOC TRANG Farm Co-op, Semi- intensive farming system for whiteleg/ vannamei shrimp, size 40	Input costs for size 40 shrimp are approximately \$3.00/kg.	Farmers sell to agents for \$3.26/kg	\$0.26/kg	-\$0.34/kg

³⁰ Wamucii, S 2024. Shrimp and prawns price in Vietnam. https://www.selinawamucii.com/insights/prices/vietnam/shrimps-prawns/

³¹ Boston Consulting Group 2019: A strategic approach to sustainable shrimp production in Vietnam.

³² Asche F, Anderson J, Botta R, Kumar G, Abrahamson E, Nguyen L and Valderrama D 2021. The economics of shrimp disease. Journal of Invertebrate Pathology 186:107397, https://doi.org/10.1016/j.jip.2020.107397

³³ The Fish Site 2023. Consolidation predicted in the global shrimp sector. The Fish Site. January 27, 2023. https://thefishsite.com/articles/consolidation-predicted-in-the-shrimp-sector

³⁴ Rubel et al 2019: A Sustainable Approach to Sustainable Shrimp Production in Vietnam, Boston Consulting Group for the Gordon and Betty Moore

³⁵ Global Seafood Alliance 2023. Annual farmed shrimp production survey: A slight decrease in production reduction in 2023 with hopes for renewed growth in 2024 Responsible Seafood Advocate. October 9, 2023. https://www.globalseafood.org/advocate/annual-farmed-shrimp-production-survey-a-slight-decrease-in-production-reduction-in-2023-with-hopes-for-renewed-growth-in-2024/

³⁶ Shrimp Insights 2024: Shrimp Trade Data Update. Shrimp Insights website. April 18, 2024. https://shrimpinsights.com/blog/shrimp-trade-data-update-april-2024

Table 4: Prices, costs & earnings provided by Vietnam producers in the shrimp feeds supply chain:

Fishing vessel operator	Middleman buyer for the fish meal plant	Fish meal plant operator	Shrimp feeds company
VUNG TAU Selling fish to a middleman for \$0.24/kg or \$0.27-30 to a fish meal plant	Middleman buys fish at sea with a carrier vessel and transports it to the plant, selling it for \$0.45/kg.	Mills and packages fish meal, sells meal with 60% protein content for \$1.22/ kg to CP Feeds & Green Feeds	Feeds company formulates feeds combining the meal with other ingredients (some feeds are medicated)
Earns -\$0.23/kg gross, successive losses net with mounting debt	Earns \$0.30/kg gross, \$0.17-20/kg net	Earns \$0.37/kg gross, breaking-even with some losses net	Agents sell feeds to farmers for \$1.20-2.20/kg, earnings unknown

Table 5: Prices, costs & earnings provided by Vietnam processors combined with pricing from trade data, whiteleg/vannamei, size 40

Harvest agent:	Peeling:	Processing plant:	Western supermarkets from customs records, online & instore prices-USD
BAC LIEU Middleman hired by Minh Phu, Stapimex and Camimex grade shrimp on farms then bring harvest teams & trucks to fill plant orders (ex. 5-10 trucks/50 farms) Earns \$0.0712/kg gross, \$0.0305/kg net	Cost of peeling shrimp is about \$0.04/kg, paid by the plant in-house or to harvest agents offering peeling	Labor cost is \$653/tonne to prepare and package the shrimp Less buyers in Europe now so shifting away from selling for \$4.50-6.00/kg to the West to up to 9.50/kg in Asia. Earns about \$0.80/kg gross, \$0.15-0.60/kg net	STAPIMEX to WALMART \$17.12/kg MINH PHU to US distributor (ex. Aqua Star) to TARGET \$19.80/kg CAMIMEX to SAINSBURYS \$27.72/kg CAMIMEX to METRO \$19.30/kg

Before the pandemic, working conditions were informal as they are today however, workers shared in profits and did not frequently bear the costs of work, like protective gear. Workers earned bonuses and extra overtime rather than regularly contributing extra hours. That has now changed and the new constraints imposed on shrimp production by market actors are constraining working conditions in turn with lower wages. Employers are not making money, and described a variety of ways that the new constraints are caused by aggressive procurement and sales by large firms and not global over-supply alone.

Table 6: Large firms are squeezing shrimp producers at every tier of production in the shrimp supply chain

Employer in the shrimp supply chain:	Changes in the shrimp business model since the pandemic:	Areas of concern:
Fishing vessel owners	"Many vessels have suffered consecutive losses of 500 million/ year. Today we are also losing our sales to middlemen." Since 2020, earnings are down 134% for vessel owners We are paid about \$0.25/kg for fish by middlemen. Before we got a better price selling directly to fish meal plants, but plants are switching their buying to middlemen. "The fish selling prices has decreased by 20%, fuel and food prices increased by 40%, and the total amount of fish catch has decreased by 30-40%. We were already losing business to Vietnam's IUU yellow card, Covid19, and increased gasoline prices."	"I am 100% pressured by rising fuel and food prices and falling fish prices." "We must also advance fuel money from the middleman and deduct it from the fish sales, making our earnings lower still."
Fish meal plant owners	"We have increased our purchases of trash fish from middlemen to 80-90% over direct purchases from fishing vessels (trawlers), up from 30% before the pandemic." "Our company is trying for certification due to market requirements for sustainable sources of fishmeal. The factory is applying for IFFO/Marine Trust certification. However, the application process is difficult in the fishing vessel sector due to incomplete fishing log records and a risk of forced labour from the long time at sea."	"Raw material is lacking at only 50 tonnes/day (before 240 tonnes/day)."

Employer in the shrimp supply chain:	Changes in the shrimp business model since the pandemic:	Areas of concern:
Hatchery directors	"Feed prices have increased by 50%." "We employ 24 full-time workers and sometimes hire part-time workers in peak season for packing and transportation. We cannot reduce and universities send students for internship or completing graduation thesis. After the internship they can be accepted to work for the company."	"Profit has dropped since the pandemic but our labour cost is still 20-30%. High input costs, low production due to diseases, and unchanged labour costs are reducing the profit of the company."
Farmers	"Since the pandemic, we have had to reduce our workforce and their bonuses." "We earn less and have loans to pay. Input costs increased by 20% while the shrimp price dropped to 30%." "We receive \$5.81/kg for size 30 shrimp if the crop is successful. Since the pandemic we are operating at the break-even point." "For each new crop, we spend around \$4.32/kg for post-larvae, feed, chemicals and medicine, and another \$0.50/kg each for energy and labour, totaling \$5.32/kg" (before maintenance, administration, depreciation, or borrowing costs for loans or feed on credit)."	"The price is another 20% lower now than during the pandemic when we lost \$0.52/kg. "We have no plans to modernize because it's a huge investment." "I took a loan and have invested USD \$670,000 (17 billion VND) for the overall construction on the 14 ha farm. I have 20 years of experience and my income should be \$286,592/year and a 10% return. But last year I did not do well."

Employer in the shrimp supply chain:	Changes in the shrimp business model since the pandemic:	Areas of concern:
Harvest agents	"We are busy. Our teams harvest around 250,000kg/month and earnings are \$15,350/month. I earn about \$0.06/kg net for size 30 shrimp, after costs." (A medium sized agent with 10 trucks)	"I used to farm but stopped shrimp farming 1 year ago because the price is low. Now I earn \$410/month in this job down from \$1024/month with a bonus \$20.50/1000 kg." (A new harvest agent with one truck.)
Processing plant directors	"The profit has gone down. Each of the input cost (feed, electricity, packaging) has increased by 5-6% while the shrimp price has decreased. The labour cost is \$614-696/tonne ('000kg) of shrimp and has also increased. The company must bear a lot of external cost: sub-contract for processing shrimp, harvesting, transportation fee." "Now the company is also short of orders as the orders from the European buyers are less than before. Shrimp from Myanmar and India are selling for very low prices." "We did not change labour much since the pandemic, even in the price pressure, and the benefits for workers stay the same. The company has to keep the incentives so that the workers will not leave."	"This year the factory only operates 80% of its capacity." "We have 4-5 international buyers and our customers are changing – more to Asia after losing orders to Europe. Our company buys shrimp to fill its order through a middleman, or directly from farmers, as well as by importing some shrimp supplies." "We need more workers but cannot recruit enough. Young people want city jobs."

Farmers and fishing vessel owners reported that processing plants are requiring primary producers to sell their products to intermediaries at lower prices than published market rates. Farmers stated that shrimp processing plants had stopped buying shrimp from them directly and were requiring them to sell their products to middlemen at prices 5% lower than farmgate prices. Fishing vessel owners reported that fish meal plants had stopped buying their fish-for-meal directly and now required them to sell their catches to middlemen at 5-10% lower prices. The intermediaries, or middlemen, operate largely without paperwork and have the power to set lopsided terms favoring the plants and their specifications. The products purchased by middlemen can be delivered without paperwork, middlemen reported, raising a question about whether that lack of traceability could be part of the service value that they provide (Box 2). Of the plants getting the raw materials at cheaper prices, export-processors in turn were selling shrimp at lower prices. By contrast, feed companies had raised feeds prices 15-50%, according to farmers and hatchery operators. This might illustrate the advantages of very large firms and how market inefficiencies can form.

Box 2: The middleman's role in the shrimp supply chain

The shrimp supply chain in Vietnam appears to be structured around four relationships between large firms and the middlemen they hire. Harvest agents are hired by processing plants to procure and deliver a large volume of shrimp from a large number of farms, for example, or a large volume of fish from a large number of fishing vessels.

Harvest agents are also employers. To fill an order from a plant, they travel with a team from farm to farm to grade, harvest, and pack shrimp into their

trucks, or from fishing vessel to fishing vessel at sea to pack fish into their container vessels. They may provide additional services to processing plants to have the shrimp scaled (peeled) or fish processed before delivering it to the plant. Harvest agents are typically large enough businesses to operate a fleet of 10-20 trucks or a containership. Shrimp from multiple farms are mixed together in this process on behalf of the plants, making co-mingling of shrimp an unavoidable and untraceable part of shrimp procurement. A harvest agent reported that,

... I call the harvest team leader to contact the members of the harvest team. They meet us at the farm and we work until the harvest is completed. I don't pay tax for this business. No documents or requirements are needed when delivering the shrimps to factories.

"We don't make agreements with the farmers. If they agree on the price then I pay the farmer on the day of harvesting.

Sometimes I allow a cash advance. The plants do not ask for paperwork. On my team I have 14 members and 2 women who scale and clean the shrimp.

No, I wasn't aware of changes to the Labour Code. My business is not affected."

Another reported that, "I have been operating as a middle for 5 years and have contracts with factories in Soc Trang, Ca Mau, Bac Lieu for white leg shrimp (80%) and black tiger shrimp (20%). When farmers are ready to sell their shrimp, I get a sample of shrimp from the farm and send it to the processing plant for quality assurance. If they approve it, then I call the harvest team leader to contact the members of the harvest team. They meet us at the farm and we work until the harvest is completed. I don't pay tax for this business. No documents or requirements are needed when delivering the shrimps to factories."

Hatchery agents are hired by larvae genetics firms to sell their shrimp seed to hatcheries and farmers. Feeds agents are hired by large feed companies to sell feeds, drugs and other chemicals to hatcheries and farmers. Like harvest agents, the hatchery and feeds agents tell their customers their prices and terms, which could include credit for financing their purchases at significantly higher prices and rates far higher than bank loans. The high costs of loans and advances offered by hatchery and feeds agents to farmers could be opportunistic, given they reportedly coincide in timing with the farmers' need to restock ponds.

Consolidation in Vietnam's shrimp supply chain by large firms

Although the shrimp sector is very highly consolidated, because the large firms procure raw materials from middlemen and a diverse source of farms, paradoxically, they do not deliver traceable shrimp to markets. In Vietnam, Minh Phu Corporation is a public company that is a large vertically integrated firm with hatcheries, farms and plants. The company produces about 4% of the shrimp that it processes and exports³⁷ and procures the rest from multiple sources. FIMEX, or Sao Ta Foods Joint Stock Company, is also a public company that is vertically integrated and purchasing shrimp through harvest agents. The major shrimp exporters in Vietnam procure the majority of the shrimp they need from farmers through harvest agents, that is processed and exported from their facilities. These firms include Stapimex, Truong Phu Seafood, Nha Trang Seafood and Taika Seafoods, or Tai Kim Anh Seafood Joint Stock Corporation, and Camimex.

Feeds and shrimp seeds are highly consolidated in Vietnam. Charoen Pokphand Foods controls approximately 25% of the total shrimp seedstock (post-larvae) produced from CPF hatcheries and 25% of the grow-out market. CPF is considered to be the number one shrimp breeding (genomics) company in the world. Genetic improvement has been the driver to their expanding shrimp business and leveraging sales of feeds and post-larvae to farms. Viet UC is diversifying into feed manufacture in addition to operating a centralized distribution system for post-larvae in Vietnam. Viet UC has been operating a shrimp genetics program (with government science agency CSIRO in Australia) for several years. Feed and seed (larvae) manufacturers are exerting significant influence on farming and hatchery costs by influencing the margins and selling prices of larvae and feeds, which are considerably lower risk to produce than shrimp farming.

The shrimp exports are distributed to the USA, UK and Europe through a relatively small number of distributors, according to customs records. The imports markets appear to be highly integrated and consolidated, with some of the bigger supply-side firms in Vietnam also playing a role in distribution. Minh Phu, for example, has wholesale divisions based in the West and appears to distribute shrimp in the US through M Seafood and through its customers Export Packers and Aqua Star. Product of Vietnam shrimp was found at the retailer Target, an Aqua Star customer, for example. FIMEX, or Sao Ta Foods Joint Stock Company, is also a public company that is vertically integrated. Recent custom records show that its shrimp was imported to the USA by Tampa Bay Fisheries and Chicken of the Sea Frozen Foods.

Major exporters of shrimp from Vietnam include Stapimex, Truong Phu Seafood, Nha Trang Seafood and Taika Seafoods, or Tai Kim Anh Seafood Joint Stock Corporation, and Camimex. They operate processing facilities and have some horizontal integration but are not vertically integrated. Camimex in Vietnam sells shrimp to Sainsbury's supermarket in the UK and to Guigel, Co-op and Trans Gourmet and Swiss Prime Taste in Europe, based on recent custom records and the company websites. Tesco imports some shrimp from Nha Trang Seafood. USA-based shrimp distributors Eastern Fish, Sunnyvale and Harvest of the Sea (Ore Cal) have recently imported shrimp to the USA from Truong Phu Seafood.

³⁷ Intrafish 2024. Vietnam shrimp farmer plans large jump in exports, Intrafish Media, April 23, 2024. https://www.intrafish.com/shrimp/vietnam-shrimp-farmer-plans-large-jump-in-exports/2-1-1631526

Farmed Vietnamese shrimp is straightforward to track being sold in grocery stores across the United States³⁸. Shrimp exported by Vietnamese processors Stapimex, Taika Seafoods, and Sao Ta, for example, has been resold at Walmart, Target, HEB, Costco, <u>Food Service Direct</u>. (Unilever) and Instacart³⁹, for example, often through a distributor like Harvest of the Sea, Aqua Star, High Liner Foods, Mazzetta, Chicken of the Sea, Sunnyvale, SSC, Seattle Shrimp and Fish Company, and Tampa Bay Fisheries. This shrimp is linked to the same facilities where the peeler interviewees are working currently (Table 7) and to the working conditions that they described.

Table 7: Shrimp peeled at interviewees' workplaces was tracked to US and UK grocery stores

Importer's Name (US, UK or EU):	Exporter's Name:	Certifications:
Harvest of the Sea (Ore Cal) ⁴⁰ Chicken of the Sea Frozen Foods High Liner Foods Export Packers Eastern Fish Seattle Shrimp and Seafood SeaWorld Source: ImportYeti	Stapimex An Hiệp, Sóc Trăng	 ASC Certification by SGS ASC-C-03599 Exp January 19, 2025 Source: ASC CoC holders 12/2023 BAP Certification by Intertek, Site P10327 Exp February 19, 2022 BRC Certification by SGS, Site 1706081 Exp August 7, 2021 IFS Certification by Bureau Veritas, ID 34299 Exp March 26, 2022 Source for above certificates: Stapimex website. Accessed March 24, 2024
Harvest of the Sea (Ore Cal) ⁴¹ Chicken of the Sea Frozen Foods ⁴² Aqua Star Mazzetta SSC Sunnyvale Eastern Fish ⁴³ Source: ImportYeti	Tai Kim Anh Seafood Joint Stock Corporation (Taika Seafoods) An Hiệp, Sóc Trăng	ASC Certification by Bureau Veritas, ASC-C-01945 Exp August 10, 2020 Source: ASC CoC holders 12/2023

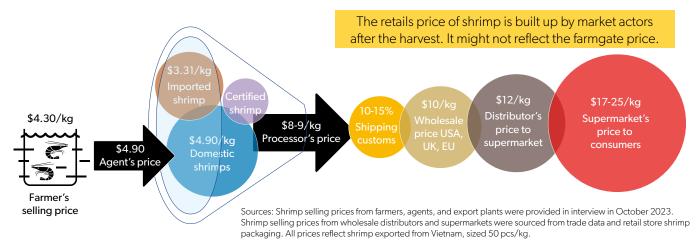
³⁸ US International Trade Commission, Frozen Warmwater Shrimp from China, India, Thailand, and Vietnam (Inv. Nos. 731-TA-1064 and 1066-1068 (Third Review), USITC Publication 5432, June 2023)

Royal Greenland NH Case Hanwa Source: Hai Tri website, accessed March 25, 2024 Source: Minh Dang Seafood website, accessed 25/3/2024	Hai Tri Seafoods An Hiệp, Sóc Trăng	BRCGS Certification Food Safety Site 10007472 Exp November 10 2023 IFS Certification Site 84067 Exp November 10, 2023 Source for above certificates: Hai Tri website. Accessed March 25, 2024
Chicken of the Sea Frozen Foods ⁴⁴ Tampa Bay Fisheries ⁴⁵ Source: ImportYeti	Sao Ta Foods Joint Stock Company (FIMEX Vietnam) An Hiệp, Sóc Trăng	Certifications listed (without IDs or details): ASC farms, BRC, BAP, BSCI, SMETA-Sedex Source: Fimex VN website
Aqua Star (Target) Export Packers M Seafood Source: ImportYeti	Minh Phu Seafood Corp.	ASC and BAP (Global Aquaculture Alliance) are noted as partners on the Minh Phu website.
Sainsburys (UK) Guigel (France) Co-op, TransGourmet, Swiss Prime Taste (Switzerland) Source: Camimex website, accessed 25/3/2024	Camimex Joint Stock Company,	ASC Certification by Control Union (2 sites) ASC0001970 ASC00609 multisite without IMS, valid until 12/2026 (found by searching the ASC website; certificates on the Camimex website are 2018-2021 & expired)

Aggressive supermarket procurement appears to be expanding labour insecurity

Human and labour rights have been steadily eroded in the shrimp industry as a direct result of the damaging effects of buying shrimp at extremely low wholesale prices. The retail price of shrimp does not reflect today's realities in shrimp production as economic theory would predict in a free market (Figure 5). Rather, the price and cost data suggest that high retail prices reflect interlinked competitive advantages that are being taken by firms on the market side of the supply chain. This is illustrated in Figure 5 with the trading prices in the global market (March 2024) for shrimp from Vietnam. The efficiencies that are being taken by large market actors, including supermarkets, have created major inefficiencies in production by sustaining downward pressure on farmgate prices that are also normalizing corporate disrespect for labour and human rights.

Figure 5: Today's supermarket prices are far out of step with farmgate prices



⁴⁴ 2024 bills of lading for OOLU2729073330 for 17,663kg, December 30, OOLU2728887820, December 22

Supermarkets were identified by tracking shrimp through its distributor. Shrimp imported from Vietnam to the USA by Aqua Star, for example, was tracked to exporters Taika Seafood and Vietnam Fish One by using a customs database, ImportYeti, and to a supermarkets Sam's Club, Walmart, Target, Jewel, Stop and Shop, Whole Foods and Amazon Fresh by using the company's store locator (Aqua Star (USA) Corp. Store Finder: https://www.aquastar.com/store-locator/). Shrimp imported from Vietnam was also tracked to supermarkets by searching shrimp sold under a distributor's brand, for example Mazzetta's Seamazz brand.

^{40 2024} Bills of lading OOLU4114632590 for 17,680kg and OOLU4114632580 17550kg on February 5, OOLU4114621081 17550kg January 30, HDMUSGNM07546800 17550kg and HDMUSGNM34909100 17550kg on January 5.

¹ 2024 bill of lading OOLU2729403150 for 18,574kg, January 16

^{42 2024} bills of lading for ASC shrimp MAEU234582964, 18,724kg, February 19, OOLU2730678890, 18,711kg, February 12, HDMUSGNM48130400, 19,596kg January 13, OOLU2730570590,19,632kg January 13, Non-ASC: HDMUSGNM73966600, 19,596kg January 30, MAEU233848860, 18,711kg, January 22.

⁴³ 2024 bill of lading for BAP shrimp: HDMUSGNM46503901 for 15,472kg, January 14

^{45 2024} bills of lading OOLU2728063910, 17,962kg, December 28, OOLU2727658890, OOLU2727658840, 17,962kg, 17,962kg, December 21

Supermarket customers for shrimp exported from Vietnam have product specifications, price expectations and supplier codes of conduct mentioning sustainability and human rights. However, when asked for their criteria by the US government, shrimp importers said that their main procurement criteria for shrimp imports are quality, availability of supply, and price⁴⁶. Certifications appear to be required by supermarkets Walmart, Kroger, Publix and Costco in the USA, Sainsburys and Tesco in the UK, Aldi in Germany and Carrefours in France, according to the commitments they have made to procuring ecolabeled shrimp, found on their websites⁴⁷ (without certificate identification numbers and locations), and most also state respect for human rights⁴⁸.

In turn, the major exporting plants in Vietnam list the certifications on their websites. Stapimex, for example, has acquired a group certification from the Best Aquaculture Practices (BAP)⁴⁹ where a subset of the total number of farm sites is audited to represent all of the shrimp on quality criteria. FIMEX/Sao Ta Foods has also published certificates for Best Aquaculture Practices and Aquaculture Stewardship Council, and Taika Seafoods for Aquaculture Stewardship Council. The research found certificates listed for one or two farm sites only, accounting for an extremely small amount of shrimp relative to the plants' output. Furthermore, only sixty shrimp farms in Vietnam are currently certified by the Aquaculture Stewardship Council⁵⁰ and 614 by the Best Aquaculture Practices ecolabel⁵¹. This means most of the shrimp exported from the plants could not be linked to certified farms because the output of just one of Vietnam's large exporting plants runs to several thousands of metric tonnes per year while most shrimp farms in Vietnam average 1-4 hectares in size yielding 1-10 metric (1000-10,000 kg) tonnes per hectare.

Of the 2 million shrimp farms operating currently in major producing countries of India, Indonesia, Ecuador, Thailand, Bangladesh and Vietnam, only 0.05% or about 1000 (991) are currently certified by either of the Aquaculture Stewardship Council ecolabel (234^{52}) or the Best Aquaculture Practices ecolabel (1802). This means most of the shrimp procured and resold by large supermarkets purchasing 20,000 kg or more per month from these countries cannot all be from certified farms, again because the yield from most certified shrimp farms is very small.

Despite some investment in certifications, Vietnam has lost considerable demand from US, UK and European markets since the pandemic. Shrimp exports to the US from Vietnam fell by 46% in 2023 and 23% in 2022, while in the United Kingdom, the greatest decline in shrimp imports was from Vietnam with a decline of 24.2% in 2023 compared to 2022⁵⁴. The UK, Europe, Japan and especially the US market imported more shrimp from India and Ecuador at cheaper prices. This is reflected in the total volume of shrimp imported to these markets remaining flat in 2023 while prices dropped and the value of exports from India, Vietnam, Indonesia and Ecuador fell as well⁵⁵.

The reason for this decline in shrimp exports from Vietnam is likely that Vietnamese shrimp sell for slightly higher prices than competitors⁵⁶. Soc Trang Seafood Joint Stock Company, or STAPIMEX, is the Vietnamese company in

46 Ibid, ITC 2023.

the lead for supplying this demand and accounting for 37% of shrimp exported from Vietnam to the US⁵⁷, according to the Association of Seafood Exporters and Producers (VASEP), with Minh Phu Hau Giang ranked second and accounting for 6.5% followed by Sao Ta.⁵⁸

The grocery-retailer firms in the shrimp value chain may also be suppressing consumer demand and the sector's recovery by holding retail prices high when wholesale prices are in a freefall, and as this is extremely lucrative for supermarkets there are few signs they will alter their course⁵⁹. Market states, consumer organizations, and human rights authorities might consider whether supermarkets enlarging their profit margin from shrimp should be held to account for conditions of labour exploitation, where a portion of the profits could be subsidized by workers.

⁵⁹ Holland H: Rabobank predicts shrimp farming's difficulties will continue in 2024. Seafood Source, January 22, 2024. https://www.seafoodsource.com/news/premium/aquaculture/rabobank-shrimp-farming-woes-showing-no-signs-of-letting-up



A photo of a hatchery crew packing shrimp seeds. The scene shows two groups working in coordination. The first group is carefully removing shrimp seeds from a large container using a fine net. They transfer the seeds into a small basin beside them. The second group is engaged in scooping a portion of the shrimp seeds from the basin into a transparent plastic bag. Another crew member adds water to the bag, ensuring the shrimp seeds are well-packed. Finally, the bags are securely sealed, ready for transport or distribution. The setting is lively and focused, with each person diligently performing their task. Photo taken in Nam Hai Hatchery in Ninh Thuan Province.

Photo credit: © Angel Marie Ysik

⁴⁷ Many of the largest supermarket chains say that they operate with a commitment to procuring ecolabeled shrimp, for example, Walmart, Kroger, Costco, Lidl and Sainsbury's. See the commitments on the supermarket websites; for Walmart at https://one.walmart.com/content/responsiblesourcing/home/approved-third-party-audit-programs.html, Kroger at https://www.kroger.com/blog/food/seafood-sustainability-at-kroger, Costco at https://www.costco.ca/connection-sourcing-seafood-may-june-2022.html, Lidl at https://www.lidl.com/quality-standards/seafood, and Sainsbury's at https://www.sainsburys.co.uk/gol-ui/groceries/dietary-and-world-foods/sustainable-seafood/c:1019242

⁴⁸ A commitment to respect human and labour rights when sourcing products is posted on supermarket websites typically. See, for example, the Kroger Vendor Code of Conduct (updated Dec. 2022) at https://www.thekrogerco.com/, ALDI Social Standards in Production at https://corporate.aldi.us/, Costco Supplier Code of Conduct (Nov. 2018) at https://www.costco.com/, or Walmart Standards for Suppliers, at https://corporate.walmart.com/.

 ⁴⁹ Global Seafood Alliance 2016: Vietnamese Shrimp Farms First To Earn BAP Group Certification, https://www.globalseafood.org/blog/tag/stapimex
 50 Aquaculture Stewardship Council 2024: Find an ASC Certified Farm. https://asc-aqua.org/find-a-farm/, accessed July 16, 2024 with the search criteria: Country=Vietnam, Certified Status, and Whiteleg Shrimp (Litopenaeus vannamei).

⁵¹ Global Seafood Alliance 2024. Find a BAP Producer. https://www.bapcertification.org/Producers, accessed July 16, 2024 with the search criteria: Country=Vietnam, Bangladesh, India, Ecuador, Thailand, or Indonesia, Shrimp, Farm and 1*, 2*, 3*, and 4*.

⁵² Aquaculture Stewardship Council 2024: Find an ASC Certified Farm. https://asc-aqua.org/find-a-farm/, accessed July 16, 2024 with the search criteria: Country=Vietnam, Bangladesh, India, Ecuador, Thailand, or Indonesia, Certified Status, and Whiteleg Shrimp (Litopenaeus vannamei).

⁵³ Global Seafood Alliance 2024. Find a BAP Producer. https://www.bapcertification.org/Producers, accessed July 16, 2024 with the search criteria: Country, Shrimp, Farm and 1*, 2*, 3*, and 4*.

Seafish 2023. Import overview: latest quarterly UK Seafood trade update, June 2023. https://www.seafish.org/insight-and-research/seafood-trade-data/latest-quarterly-uk-seafood-trade-data/#imports

⁵⁵ Shrimp Insights 2024: Shrimp Trade Data Update. Shrimp Insights website. April 18, 2024. https://shrimpinsights.com/blog/shrimp-trade-data-update-april-2024

⁵⁶ Farmgate prices for shrimp exports sized 50 per kilogram were estimated to be \$4.90/kg in Vietnam, \$4/kg in Indonesia, \$3.65/kg in India and \$3/kg in Ecuador in March 2024 at the Hawaii Aquahack event hosted by Hatch Aquaculture in April 2024.

^{57 ...}and subject to US anti-dumping tariffs of 1.69%-196%, as of April 1, 2024, see USA Federal Register, https://www.federalregister.gov/documents/2024/04/01/2024-06846/frozen-warmwater-shrimp-from-the-socialist-republic-of-vietnam-preliminary-affirmative

⁵⁸ STAPIMEX is also the largest Vietnamese shrimp exporter to Japan, followed by Sao Ta and Minh Phu, see Tuoi Tre News 2024: Japan ranks third among importers of Vietnamese shrimp in January-February. March 10, 2024 online edition. https://tuoitrenews.vn/news/business/20240310/japan-ranks-third-among-importers-of-vietnamese-shrimp-in-january/78689.html

Conclusion

This research concludes that **shrimp producers are operating with a very small labour budget that does not allow for formal employment conditions, like written contracts and health insurance, and no longer provides workers with bonuses, due overtime pay and required items like protective equipment.** Additionally, shrimp workers are steadily losing earnings and security while contributing more labour so that they might retain a job. This is not business as usual nor can it be explained by global over-supply of shrimp or even by the practice of shrimp buyers switching suppliers often in pursuit of the lowest price. Rather, a major drawing-down of value from the system of production appears to be occurring through transnational arrangements to dominant supermarkets and the shrimp sector's largest firms. Staggering profits from shrimp for shareholders in large firms are being subsidized by workers earning only enough to eat.

The shrimp business model is fatefully imbalanced, with a widening earnings gap between market and production tiers along with a divergence between the actions of supermarkets and their claims to respect human rights. Shrimp procurement is not traceable, overall, nor is shrimp being sustainably produced. There is a real danger that working conditions could be misrepresented and concealed by voluntary corporate social responsibility measures like supermarket codes of conduct and some certification assurances⁶². Current wholesale prices are too low to pay for the sector's minimum labour costs and buyers insisting on discounts are necessarily disrespecting Vietnam's Labour Code and the human rights of shrimp workers in Vietnam.

Dealbreakers are needed for supermarket shrimp industry-wide. Arguably the most important is the need for a red line in shrimp procurement prohibiting dominant supermarket companies in the USA, UK and Europe from procuring shrimp at wholesale prices lower than what it costs to produce shrimp. This is a direct cause of the widespread labour insecurity and unsustainable production. Without a redline labour insecurity appears to be weakening even Vietnam's efficient shrimp supply chain, despite the maturity of the country's producers and security of its legal framework. Supermarkets must be held accountable to the trade and anti-trafficking laws in their home countries as well as the labour laws in shrimp producing countries like Vietnam. Such regulatory accountability is required to stop the procurement practices that are routinely causing labour exploitation in the shrimp sector yet are still considered to be good business.

⁶² In Vietnam, a shrimp industry expert in corporate social responsibility said that when hired to audit shrimp farms for the Aquaculture Stewardship Council ecolabel that they operated under instructions to exempt farm workers from questions in the social audit which would reveal they were working without written contracts. In order to exempt shrimp workers from the questions, they were instructed to categorize them as farm owners.

