

Human rights for dinner:

Supermarket shrimp and the business of exploitation



This report provides an overall assessment of research results from field-based research in Vietnam, Indonesia and India, research into the business model in the major producing countries for whiteleg shrimp (*Litopenaeus vannamei*), and quantitative analysis of prices and costs at every tier of the shrimp supply chain, August 2023 through July 2024. India research was conducted by the Corporate Accountability Lab, Indonesia by Akatiga and Atmajaya, and Vietnam by the Center for Development and Integration and independent experts (Ha Noi, An Giang) and the Sustainability Incubator. The overall research, including the market component, analysis, and report-writing were done 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

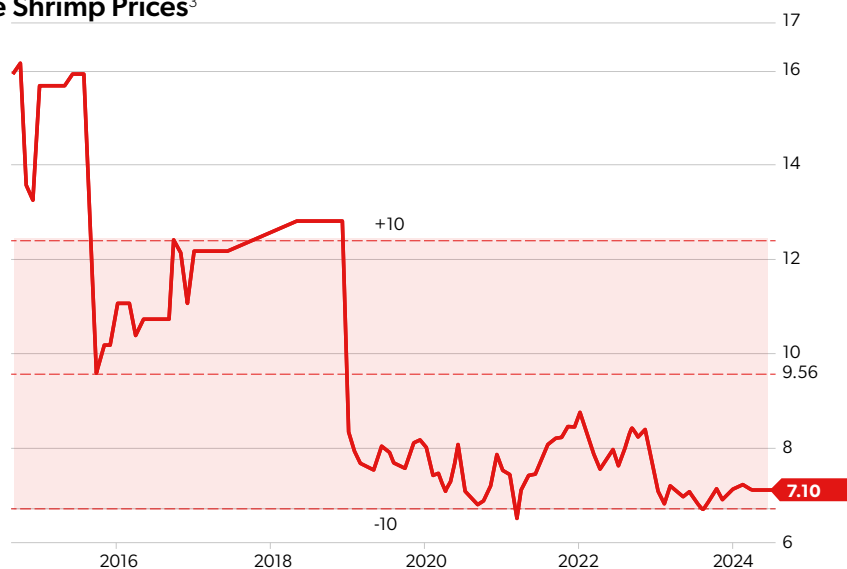
Today, there is a severe disconnect in the shrimp marketplace. Supermarkets in the United States, United Kingdom and European Union have made public commitments to human rights. However, it would appear they are preferentially buying shrimp at prices lower than production costs, that could not be made without labour exploitation. It is a failed market in which made-to-order shrimp is purchased by supermarkets at historically low wholesale prices and then resold to consumers as ethical in stores that include Target, Walmart and Costco in the USA, Sainsbury's and Tesco in the United Kingdom, and Aldi and Guigel in Europe.

Since the pandemic, working conditions in the shrimp sector have worsened. Shrimp workers across Southeast and South Asia provided their current earnings, and what they made pre-pandemic for the same work. The data shows a 20-60% decline in earnings. Shrimp workers are performing unpaid labour to keep their jobs, and reported earning enough only to sleep and eat. Forced labour and child labour persist in some areas as a profit-making enterprise in the shrimp aquaculture industry¹. These findings call into question that human rights are being respected by shrimp buyers.

Instead, findings from the market-based component of this research suggest that supermarkets have fundamentally changed the ways they procure shrimp since the pandemic. Rather than collaborate with shrimp aquaculture suppliers to address unpaid labour, wage theft, forced and child labour, hazardous working conditions, and debt bondage in their supply chains, this report finds an association between supermarkets' purchasing practices and deteriorating worker conditions at every tier of the shrimp aquaculture supply chain.

This multi-country investigation combines qualitative data from more than 500 field investigation interviews in India, Indonesia, and Vietnam, supplemented with secondary data collected from other shrimp-producing countries, with quantitative analysis of shrimp prices and production costs in each tier of the supply chain in India, Indonesia, Vietnam, Thailand, Bangladesh, and Ecuador. Global wholesale shrimp prices have decreased 45% since 2018². The resulting analysis finds extreme price pressure in the shrimp supply chain from the market's largest firms – distributors and supermarkets – drawing a stark contrast with the commitments they have made to respect human rights that are posted on their websites.

Global Wholesale Shrimp Prices³



¹ Shrimp from Bangladesh and Cambodia are associated with significant child labour and shrimp from Myanmar are associated with significant forced labour (with Thailand removed from both lists in 2024) on the List of Goods Produced by Child Labour or Forced Labour and in the Trafficking in Persons report, See Department of Labour-International Bureau of Labour Affairs, List of Goods Produced by Child Labour or Forced Labour, <https://www.dol.gov/agencies/ilab/reports/child-labor/list-of-goods>

² Gurufocus 2024. Global price of shrimp. https://www.gurufocus.com/economic_indicators/2854/global-price-of-shrimp. Accessed August 1, 2024

³ Gurufocus 2024. Global price of shrimp. https://www.gurufocus.com/economic_indicators/2854/global-price-of-shrimp. Accessed August 1, 2024

In India, Indonesia and Vietnam – providing about 70% of the shrimp in the world’s top four markets⁴ -recent research demonstrates shrimp farmers and peelers are suffering significant labour exploitation, including unpaid work in almost all cases but also forced and child labour in some cases. Essentially, shrimp workers are subsidizing low wholesale prices and working today at lower base wages (indexed by their employers to wholesale prices) and without the bonuses that previously provided much of their earnings. Their contributions are benefiting supermarkets. Supermarkets are benefiting with higher profits from their contributions while also appearing to have a hand in lowering wholesale prices. Additionally, supermarkets raised consumer prices in 2022, 2023, and early 2024 despite their substantially lower costs. These findings provide a real-world demonstration of the core economic concepts that predict labour exploitation in an industry, such as oligopsony pricing power, concentrated distribution networks, unequal access to information, lopsided power dynamics between the market and producers and a blatant abuse of vulnerability, and lax government regulation.

Significant contributions of this investigation include a new Southeast Asian and South Asian perspective that demonstrates that labour exploitation in shrimp aquaculture industries is not company, sector, or country-specific. Instead, it is the result of a hidden business model that exploits people for profit.

It is one of the first studies to document the deterioration of working conditions in the shrimp industry after the pandemic. And where possible, it traces the shrimp supply chain from the evidence of plantation-era conditions to supermarkets.



Caption here xxxxxxxx. Photo credit: © xxxxxxxxxx

⁴ While the total volume of imported shrimp remained flat in 2023 in the world’s four largest markets of the USA, UK, Europe and Japan, prices dropped and reflected a drop in the value of the exports from India, Vietnam, Indonesia and Ecuador. See Shrimp Insights 2024: Shrimp Trade Data Update. Shrimp Insights website. April 18, 2024. <https://shrimpsights.com/blog/shrimp-trade-data-update-april-2024>

Key findings

1 Supermarkets drive unsustainably low pricing. The global shrimp market is highly integrated and consolidated. The UK Groceries Code Adjudicator explains a changed power dynamic in which supermarkets aggressively resist wholesale price increases or demand price decreases, a relationship described as ‘warfare’ on suppliers.⁵ To meet the supermarkets’ pricing requirements, even the most efficient shrimp producers describe their “new normal” as operating with successive losses and cutting corners to reduce input costs. This significantly increases vulnerability to labour exploitation as set out in finding 2.

- The retail price of shrimp reflects today’s realities of market leverage. Government watchdogs in the UK, USA, Australia, and New Zealand each found that supermarkets increase producers’ expenses by imposing costly requirements, such as certification programs. At the same time, they demand wholesale price reductions. Further, the pricing power of supermarkets ignores the cost inflation faced by suppliers.
- In 2018, shrimp prices averaged \$9.33-12/kg on the global market (down from a \$16.09 high in 2015). Prices fell to \$6.50/kg in 2024, breaking the record low⁶.
- Competition among shrimp buyers has dwindled and procurement is concentrated in fewer hands and vested in procurement arrangements, depressing shrimp prices. The number of transnational relationships in the shrimp sector is relatively small allowing for downstream pricing leverage.
- Since the pandemic, middlemen are also extracting disproportional profits from shrimp producers. Shrimp farmers report that middlemen have increased prices for inputs, such as feed, and decreased farmgate prices when purchasing and aggregating shrimp for processors, shrinking their earnings by 10-25% since the pandemic. Since the increased costs cannot be passed on in price, it further destabilizes production.
- Shrimp farms, which are reducing or withholding worker compensation to continue production, have the lowest profit margins in the supply chain (0-17%). Meanwhile, supermarket retailers that influence both wholesale and consumer prices, have the highest profit margins (up to 43%).
- Price and cost data suggest that high retail prices reflect interlinked competitive advantages held by firms on the market side of the supply chain.
- Shrimp producers in India, Indonesia, and Vietnam report that sustained low prices have depleted their working capital. To cover operation costs for energy and feed, they cut expenses elsewhere, leading to reduced or unpaid maintenance, taxes, and wages, compromised safety, and neglected information security. Interviewees described deteriorating facilities at every tier of the shrimp supply chain across countries. Extracting value from these critical areas to sustain production worsens already precarious working conditions and undermines industry stability.

⁵ The Grocer 2023. Groceries Code Adjudicator accuses supermarkets of ‘warfare’ on suppliers. September 28, 2023.

⁶ An overall trading price in the global market was \$9.33-12/kg in 2018 and \$6.50/kg in 2024 according to statistics published by the International Monetary Fund. Shrimp prices vary by size and position in the supply chain. Global market prices are significantly higher than farmgate prices, for example, which were recently estimated to be \$4.90/kg Vietnam, \$4.00/kg Indonesia, \$3.65/kg India, \$3.00/kg Ecuador for raw 50 pcs/kg in week 12 of 2024, Source: Hawai’i Aquahack 2024.

2 Low wholesale shrimp prices result in increased labour exploitation as shrimp producers seek to break even or minimize losses. Supermarkets are increasingly aware of the labour exploitation and abuses in shrimp aquaculture caused by their purchasing practices. However, there is little to indicate that they have adjusted procurement practices to address violations in their supply chains. Quite the opposite: when Thailand's shrimp suppliers addressed widely publicized labour abuses, supermarkets sought cheaper shrimp from other countries without investigating how the shrimp there is produced for less.

- The business model for shrimp production squeezes farmers from both ends, forcing cost reductions in labour expenses. Today's investment in labour for shrimp aquaculture has plummeted to 5-7% of total production costs, down from 10-15% pre-pandemic. Essential production work must either be done within that budget or it goes unpaid and creates significant labour exploitation.
- The typical working conditions in India, Indonesia, and Vietnam, as described in more than 500 recent interviews, include 9 to 14-hour workdays for 20-60% lower earnings than before the pandemic, no payment for overtime, and lost bonuses and benefits. Wage theft and deception have become a normal practice. Employers have offloaded costs, such as deducting charges for protective gear from worker wages.
- The reported abuses are often life-threatening or life-altering. During this research, one Indonesian interviewee tragically died after several days of untreated illness while confined to a company compound, where he worked virtually unpaid in exchange for shelter and food. The company did not provide needed urgent access to first aid or medical treatment and did not adequately provide hygiene, sanitation or food to meet the workers' basic needs. While the severity of abuses vary, worker exploitation is prevalent in all countries, across sectors, and in companies of all sizes.
- Abuse of vulnerable migrant populations is prevalent in 2024. Debt bondage appears to be expanding across the business model. Forced and child labour appear to be growing problems in many geographies. Legal protections are absent or unenforced.
- Shrimp buyer procurement continues to focus primarily on the lowest-priced shrimp available in a race to the bottom. In 2023, exports increased from the lowest-price producers in Ecuador and India, while exports shrunk by 25% and 10% respectively in Indonesia and Vietnam.⁷
- Prices to farmers would be at least 200% higher than today if the shrimp sold in Global North supermarkets was made at minimum wage rates and in compliance with applicable domestic laws for labour, workplace health, and safety. This would not necessarily mean higher consumer prices, because supermarkets are already profiting at existing consumer prices.

⁷ Shrimp Insights 2024: Shrimp Trade Data Update. Shrimp Insights website. May 20, 2024. <https://www.shrimpsights.com/blog/shrimp-trade-data-update-may-2024>

3

Murky supply chains and certification programs shield supermarkets from association with abusive labour. The complexity of the global shrimp market isolates beneficiaries of labour exploitation from traceability to the heinous labour practices. Inadequate certification programs allow retailers to market shrimp as ethical, giving consumers a false sense of confidence while only increasing production costs for shrimp producers.

- Most of the shrimp sold at supermarkets in the U.S./UK/EU are not from certified farms. Only around 1000 farms of 2 million shrimp farms located in the major producer countries in the research scope, or 0.05%, are certified by the Aquaculture Stewardship Council program or Best Aquaculture Practices standards. According to the Best Aquaculture Practices Find-a-Producer website, zero shrimp exports from Thailand, India, Indonesia, Vietnam, Bangladesh or Ecuador have certified traceability (no BAP 2, 3 or 4 star certificates were found in a search for certified shrimp from these countries). With the yield from most certified shrimp farms being very small is mathematically impossible for certified farms to produce enough shrimp per month to supply all of the supermarkets that boast commitments to purchasing certified shrimp.
- Working conditions in shrimp production are not traceable or transparent. Fundamental to the business model for the industry is aggregating shrimp from many small farms. The average farm is 1-4 hectare (1 hectare = 2.47 acres) and only yields 1-10 metric tons per hectare. Yet, exporting plants run thousands of metric tons of shrimp annually, requiring the combining of shrimp from multiple sources. The bulk flow of export-oriented shrimp from Asia is not traceable to farms, even though retailers use labels and certifications to give this appearance.
- Middlemen and aggregators in the supply chain appear to be used purposefully to reduce corporate risk and responsibility. Export processors, required to provide discounts and meet corporate buyers' requirements, acquire raw materials at lower prices than the published market prices, mixing them together and eliminating traceability.
- Certification programs are designed to demonstrate corporate responsibility. Despite claims of verifying "social accountability," certifications programs cannot guarantee human rights and labour rights compliance, as these programs fail to trace the informal, undocumented sector by which the majority of the world's shrimp is produced. Instead, the certification labels mask the harsh realities faced by hundreds of thousands of labourers.
- Post-pandemic certification reports for shrimp from India, Indonesia, and Vietnam fail to describe changing conditions as shrimp prices have fallen.



Recommendations:

Supermarkets and buyers:

- Supermarkets must be required to publish conformance disclosures filled with their procurement and purchasing details and not filled with corporate social responsibility jargon and aspirations.
- Divest from certification programs making indefensible claims such as “no forced labour,” “no child labour,” or “no debt bondage” for predominantly informal workforces; and from shrimp marked as socially responsible simply because it is part of an environmental labeling program.
- Do not publish corporate social responsibility statements that are not applied in practice for all shrimp procurement. Where the supermarket posts information about sustainable sourcing it should publish its actual procurement strategy and details, making public a continuously updated listing of suppliers, and publish any additional evidence of transparency and traceability throughout the supply chain.
- Supermarkets wanting to halt the adverse effects of aggressive procurement practices demonstrated here should internally review their shrimp specifications and price pressures on suppliers and identify the follow-on adverse effects for shrimp workers. Reconsider profit goals to avoid further exploiting power dynamics preventing decent work and living wages in the shrimp sector.
- By 2024, all supermarkets should have a publicly available human rights due diligence process/roadmap that applies to all seafood supply chains and is aligned with the UN Guiding Principles on Business and Human Rights and the International Labour Organization’s Declaration on Fundamental Principles. This involves identifying adverse effects and having a management strategy for ceasing, preventing, or mitigating actual and potential adverse impacts on people in its seafood supply chains.
- Supermarkets wanting to make claims about social responsibility should first negotiate binding agreements with shrimp producer associations and representative worker organisations (including unions where applicable) to ensure labour rights compliance and trusted pathways for workers to communicate their reality, including adverse effects, and ensuring an effective response. Claims about working conditions must be independently verified by workers.

Market state governments:

These findings and data could be crucial for enforcing anti-trafficking legislation more effectively. The example of shrimp makes it clear that conditions of modern slavery are created by the pricing and purchasing practices of large firms with few competitors.

- Labour exploitation is often created by the pricing and purchasing practices of large firms with few competitors, like supermarkets. Regulators could more effectively uphold and implement laws prohibiting the importation of goods made with forced labour or child labour by tracking prices and costs in sectors which have been associated with significant forced labour, child labour and debt bondage, like shrimp aquaculture.

- Understand the role of the market in labour exploitation, include white-collar crime and price/cost manipulation when analyzing root causes of forced labour and child labour in supply chains (modern slavery). Supermarkets should be mandated to publish disclosures that detail their procurement and purchasing details. This requires updating or replacing strategies that depend on asking supermarkets to take action voluntarily.
- Add large supermarkets to monitoring and enforcement programs for modern slavery and for trade to ensure imports are produced above the cost of sustainable production. If large food importing and reselling corporations cannot guarantee this, then governments should take action to ensure the corporations are not profiting from unpaid labour in their supply chains.
- When considering tariffs and trade measures, monitor conditions in supply chains for goods being resold by retailers at very high consumer prices while the wholesale prices they are paying are very low. Changes in profits and profit-taking practices in the market countries could create pressures that predictably and routinely result in unpaid labour in the producer countries. Punitive measures against producer countries potentially contribute to, rather than prevent, forced and child labour and potentially to breaking other federal laws.
- Monitor and regulate the market's role in labour exploitation as a direct consequence of price pressure and purchasing practices. Regulators can follow and expand the European Unfair Trading Practices Directive, for example.
- Require due diligence and reporting on human rights throughout the entire supply chain. The new Corporate Sustainability Due Diligence Directive in the European Union, for example, requires companies to report on steps taken to ensure compliance to human rights throughout their whole supply chain, even if they do not have a direct contractual relationship with all actors in the supply chain.
- Strictly regulate and oversee certifications and auditing companies to rule out indefensible claims about working conditions, particularly those that do not incorporate an active role for workers in monitoring.

Governments in shrimp exporting countries:

- Ensure that all workers in the shrimp supply chain, including informal sector workers, are covered by formal employment requirements and labour laws for minimum wages, overtime pay, and health and safety like protective gear and medical coverage for workplace accidents.
- Ensure labour inspectorates are adequately resourced and inspect the lower tiers of industries such as shrimp, where labour exploitation is more likely to be found.
- Improve labour laws and standards in line with the International Labour Organisation, particularly ensuring that the ILO core conventions are implemented fully and in tandem with workers and also ensuring a fit to physical conditions in the shrimp sector.
- Develop and adopt due diligence legislation, requiring large companies with more power within the industry to report on supply chain traceability and compliance to human and labour rights standards down the supply chain.

Financiers and Insurers

- Recognize the high financial risk that stems from public association with forced labour and other labour crimes in the shrimp sector and implement policies and practices, including due diligence, accordingly.

Civil society

- Human rights authorities should take note of the market's role in expanding labour exploitation in shrimp supply chains and include white collar crime in their analyses of root causes of forced labour and child labour in supply chains ('modern slavery'). Furthermore, it is recommended that strategies which had depended on supermarket 'asks' to take action voluntarily should be abandoned.

Shrimp made in facilities by shrimp workers interviewed in this report have recently supplied the following companies:

- USA retailers Walmart and Costco recently sourced house-branded shrimp from India's largest integrated shrimp companies—Penver Products and Devi Fisheries, respectively. USA retailer Target recently sourced shrimp from Minh Phu of Vietnam, which distributes shrimp in the USA through M Seafood and its customers Export Packers and Aqua Star.
- In the UK, supermarkets Sainsbury's and Tesco recently purchased Vietnamese shrimp from Camimex and Nha Trang Seafood.
- Shrimp is often supplied transnationally by very large consolidator-distributors that include Chicken of the Sea Frozen Foods, owned by Thai Union Group. Large distributors like Aqua Star, Mazzetta and Chicken of the Sea are reselling shrimp from multiple countries and suppliers that include Apex in India, Mega Marine Pride and PT Sekar Bumi in Indonesia, and FIMEX in Vietnam.



Caption here xxxxxxxx. Photo credit: © Xxxxxxxxxxxx



Caption here xxxxxxxx. Photo credit: © xxxxxxxxxxxx

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Introduction

Over the past 25 years, shrimp has emerged as one of the world's fastest-growing food products. Since 1998, competition among tens of thousands of small producers in Asia has fostered ideal conditions for global markets to capitalize from the availability of shrimp in ever-increasing volumes at low wholesale prices. Market forces have shaped shrimp aquaculture over this period⁸ to create a business model that is focused sharply on market profitability⁹ and competition among shrimp producers, while competition among buyers in the market has dwindled. Today, supply and demand appear disconnected from one another, with low wholesale prices but higher than ever prices for consumers at grocery stores in the United States, United Kingdom, Europe, New Zealand and Australia despite continuously low wholesale prices.

Today's 70 billion USD industry¹⁰ relies on two million largely independent farmers to cultivate shrimp in mangrove areas and backyard ponds in the Mekong Delta, Indonesia and across South Asia, producing tens of thousands of metric tonnes of low-cost shrimp each year that are sold profitably by a fairly small number of distributors, feed companies and supermarkets. In a market slump, producer inefficiency is blamed^{11,12,13} and less attention is paid to levers at the market end of the business and to consolidation and aggressive purchasing by large firms. Attention is due, however, because purchasing practices – like sourcing beneath the costs of production and failing to incorporate considerations around wages into commercial contracts – are key drivers of forced labour in global supply chains¹⁴.

In interviews, shrimp producers reported such practices and that they are operating with successive losses, driving even the hyper-efficient towards bankruptcy. One producer in Vietnam 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. 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 I sell to requires selling 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%. We hoped for recovery, but since the pandemic selling prices are decreased by 20%."

Large actors in the shrimp supply chain, by controlling a large share, have a significant influence on the key aspects of production such as prices, costs and earnings affecting workers most. For example, an exporting plant that sells thousands of metric tonnes per year into the market has more influence on shrimp prices than does a shrimp farm of 1-4 hectares yielding 1-10 metric tonnes per hectare. The processor can pay lower prices by hiring a middleman to offer farmers a discounted price, for example. A feed company can increase the farmer's costs of shrimp farming by hiring a middleman to sell feeds to the farmer at an inflated price.

When large firms use their leverage like this to gain advantages, the direct effect is to degrade labour conditions. Ultimately, business models that are configured to maximize profits for the largest players may be using forced labour by evading legal minimums and continually reducing operating costs, or by leveraging their size to pay less for goods while also demanding more expensive specifications. All this leads to longer hours, wage reductions and pay deductions for workers for necessary costs of work like accommodation, transportation, and other costs¹⁵.

⁸ Rubel et al 2019: A Sustainable Approach to Sustainable Shrimp Production in Vietnam, Boston Consulting Group for the Gordon and Betty Moore Foundation.

⁹ 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>

¹⁰ 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>

¹¹ 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/>

¹² Shrimp Insights 2024: Shrimp Trade Data Update. Shrimp Insights website. April 18, 2024. <https://shrimpsights.com/blog/shrimp-trade-data-update-april-2024>

¹³ 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>

¹⁴ Re:Structure Lab 2021. Forced Labour Evidence Brief: Commercial Contracts and Sourcing (Sheffield: Sheffield, Stanford, and Yale Universities).

¹⁵ Re:Structure Lab 2021. Forced Labour Evidence Brief: Commercial Contracts and Sourcing (Sheffield: Sheffield, Stanford, and Yale Universities).

Positioned at the top of the shrimp aquaculture pyramid, supermarkets hold power over working conditions through their purchasing practices. It is important to take stock of working conditions in the shrimp sector today given that supermarkets were briefed for 10 years on the persistent association between farmed shrimp and significant forced labour and worst forms of child labour¹⁶ before witnessing hardships for shrimp workers and producers during the pandemic. Holding this information, did supermarkets voluntarily take action to respect human rights in the shrimp supply chain, or as the declining wholesale prices suggest, assign this duty to their vendors while also demanding price cuts?

Recent government findings in the U.S, UK, New Zealand and Australia report that supermarkets are earning much higher profits since the pandemic by widening the gap between high consumer prices and low wholesale prices, for example by changing sources for a lower price and requiring suppliers to provide discounted prices for goods made to expensive specifications. Respect for human rights was not among the purchasing criteria listed by supermarket procurement executives for buying shrimp, which were price, availability, and meeting the specifications¹⁷. In the text of supermarket commitments about respecting human rights in their supply chain¹⁸, typically certifications are featured, but are not a guarantee. Only 0.05% of shrimp farms the global supply without mentioning that the supermarket may be necessitating cost-cutting by shrimp producers that is lowering wages and labour standards and rendering shrimp workers little able to express grievances or organize for better wages and working conditions.

This report provides results from three deep field-based investigations in India, Indonesia and Vietnam, supplemented with secondary data collected from other shrimp-producing countries, into the extent to which shrimp is being made with unpaid labour today – a market failure according to economic theory – and the market drivers in the shrimp business model which could be linking profits to unpaid labour by design .



Caption here xxxxxxxx. Photo credit: © xxxxxxxxxx

¹⁶ Shrimp from Bangladesh and Cambodia are associated with significant child labour and shrimp from Myanmar are associated with significant forced labour (with Thailand removed from both lists in 2024) on the List of Goods Produced by Child Labor or Forced Labor and in the Trafficking in Persons report, See US Department of Labor-International Bureau of Labor Affairs, List of Goods Produced by Child Labor or Forced Labor, <https://www.dol.gov/agencies/ilab/reports/child-labor/list-of-goods>

¹⁷ Shrimp importers who were surveyed by the US government in 2023 said that price, availability, and specifications were their main criteria when sourcing imported shrimp. See, US International Trade Commission 2023. Frozen Warmwater Shrimp from China, India, Thailand, and Vietnam. Publication 5432.

¹⁸ 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/>.

¹⁹ Das RJ 2014. Low-Wage Capitalism, Social Difference, and Nature-Dependent Production: A Study of the Conditions of Workers in Shrimp Aquaculture. Human Geography 7:1 <https://doi.org/10.1177/194277861400700109>

Methodology

This report presents the results of extensive, multi-country field research conducted by 10 teams in India, Indonesia and Vietnam combined with trade research into shrimp production in India, Indonesia, Vietnam, Thailand, Bangladesh and Ecuador. Field interviews were conducted with 480 shrimp workers in India, Indonesia and Vietnam and with approximately 100 shrimp producers, community representatives, industry exporters, experts and auditors. Shrimp workers depicted their working conditions, wages, costs of work and net earnings. Shrimp producers provided the prices they sell their products for, the costs to produce the product, and their net earnings at seven tiers of the supply chain that include: (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. Wholesale and retail shrimp prices were identified from trade reports, company websites, customs records, and from product packages at supermarkets.

These findings are presented in two sections. In the first section, the status of working conditions is summarized for export-oriented shrimp supply chains in Indonesia, India and Vietnam, based on primary data, and in Bangladesh and Thailand based on interviews and secondary data. In the second section, the business structures comprising the export supply chain are the focus. The regional business model for shrimp production is depicted from interviews with shrimp producers, industry experts and secondary research.



Products made by the Hoa De Cooperative in Soc Trang, Vietnam, where women work together to produce value-added products to augment their income.
Photo credit: © Angel Ysik

1. Working conditions in the shrimp supply chain, 2023/24

Working conditions in the shrimp supply chain were identified from 480 field-based interviews with shrimp workers and producers in India, Indonesia and Vietnam, and from secondary data and interviews in Bangladesh, Thailand and Ecuador.

Primary research had two stages. In Indonesia, for example, the first stage involved interviews with 49 informal workers and 11 focus group discussions involving shrimp workers, and the second stage involved interviews with workers from 12 shrimp farms in six provinces. In Vietnam, the first stage involved 131 interviews in shrimp workplaces at seven tiers of the shrimp value chain in Vung Tau, Bac Lieu, Can Tho, Song Trang, and Ca Mau districts, and the second stage involved interviews with 20 shrimp peelers. In India, the research had eight stages and involved 150 interviews in Andhra Pradesh.

Table 1: Interview summary

Total: 480 interviews in the shrimp sector in Indonesia, Vietnam and India		
Following 150 interviews in India, 330 additional interviews were conducted in Indonesia and Vietnam to hear worker perspectives at all tiers of shrimp production.		
Shrimp Supply Chain Stage:	Indonesia	Vietnam
Shrimp Feeds (fishing work and fish-meal factory work)	8	19
Hatcheries	6	24
Farms	87	53
Processing factories	71	42
Government, auditors & representatives		13
Totals:	179	151

Shrimp is being produced on about 1.8 million hectares of land in Asia today, or 18,000 square kilometers, on farms that average one hectare in size. An estimated 1.8 million shrimp farmers are growing shrimp in Indonesia, India, Vietnam, Thailand, Bangladesh and Ecuador (see Table 2) for supermarkets and restaurants around the world. In order to succeed, shrimp farmers must operate workplaces that are compliant with applicable domestic labour laws while still producing shrimp for wholesale prices low enough for the market actors to profit from the business model. This necessity has consolidated shrimp work in the informal sector, even as farms have modernized and settled into a new pattern that is different from the past.



Caption here xxxxxxxx. Photo credit: © xxxxxxxxxx

Table 2: Shrimp production overview in Indonesia, Vietnam, India, Thailand and Bangladesh

Shrimp exporting country:	Total area (ha) in shrimp production	Extensive farms	Semi-intensive farms	Intensive farms
Indonesia	679,448 hectares ²⁰	87% of extensive farms provide 2 jobs/ha and 17% of the total production volume at 0.6 tonnes/ha/year	7% of semi-intensive farms provide 1 job/ha and produce 10 tonnes/ha/year	6% of intensive farms provide 0.5 jobs/ha and produce 30 tonnes/ha/yr
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 semi- and intensive farms; 10% of farms provide 0.25 jobs/ha on 25ha+ intensive farms with robotics
India	166,722.5 hectares ²¹	60% of farms provide 1 job per hectare ²² on 0.5-1.5 hectares or 2-6 acres of land	20% of farms are 1.5-5 ha or 6-20 acres; 10% of farms are 5-15ha or 20-60 acres	10% are corporate farms 50-75ha or 200-300 acres ²³
Bangladesh	263,026 hectares ²⁴	31% of production on 71,062 hectares of low-lying floodplain areas is for giant freshwater prawn (<i>Macrobrachium rosenbergii</i>) with an average yield of 714 kg/ha	60% of production on 191,964 hectares of coastal land is for black tiger prawn (<i>Penaeus monodon</i>) with an average yield of 358 kg/ha ²⁵	Freshwater prawns are grown out from fry collected in the wild in family-owned ponds and increasingly in rivers.
Thailand	80,000 hectares and 24,000 farms	50% to 65% of Thailand's mangrove habitats have already been converted and replaced by shrimp farms. Most farms are located next to estuaries connected to the ocean. <i>Litopenaeus vannamei</i> or whiteleg shrimp makes up 95% of Thailand's shrimp market, and <i>Penaeus monodon</i> is 5%.	80% of shrimp farms in Thailand are intensive. Most (70% of all shrimp farms) are less than 1.6 hectares in size; 60% of Thai shrimp farms are operated by small independent family businesses. Farmers use high stocking densities and their yield is 1 metric tonne of shrimp per 0.2 hectares ²⁶	Charoen Pokphand Group has a 30% share of large farms; Thai Union a 10% share

²⁰ Asian Development Bank 2022. Sector assessment: Shrimp aquaculture. Asian Development Bank.

²¹ MPEDA India 2021. State-wise Aquaculture Production, Marine Products Export Development Authority of India, https://mpeda.gov.in/?page_id=651

²² Brudney A 2024. Hidden Harvests: human rights and environmental abuses in India's Shrimp Industry. Corporate Accountability Lab, March 2024.

²³ International Labour Organization, Value Chain Analysis of the Food Processing Sector in Andhra Pradesh and Odisha, 2023, https://www.ilo.org/wcmsp5/groups/public/-asia/-ro-bangkok/-sro-new-delhi/documents/publication/wcms_877320.pdf

²⁴ Alum S 2024. Portraying the Bangladesh Shrimp Industry: A SWOT Analysis. Sustainability 18(3) 290; <https://doi.org/10.3390/su16031290>

²⁵ Bangladesh Department of Fisheries 2022. Yearbook of Fisheries Statistics of Bangladesh, 2020-2021; Fisheries Resources Survey System, Department of Fisheries, Ministry of Fisheries and Livestock (38)138; Dhaka.

²⁶ BCG 2019. A strategic approach to sustainable shrimp production in Thailand. Boston Consulting Group for the Gordon and Betty Moore Foundation.

Shrimp exporting country:	Total area (ha) in shrimp production	Extensive farms	Semi-intensive farms	Intensive farms
Ecuador	250,000 hectares and 3000 farms	<i>Litopenaeus vannamei</i> or whiteleg shrimp is the mainstay of the industry and native to Ecuador	Farms are extensive and ponds are still earthen largely. Farms utilize low density stocking and produce 1 metric tonne per 0.54 hectares	Ecuador is home to mega-farms including a 536-hectare farm operated by Omarsa and around 18,000 hectares operated by Santa Priscilla

1.1 Indonesia: Shrimp is routinely made today with deception and unpaid work

Primary research in Indonesia had two stages and was coordinated by a consortium of three Indonesian civil society organizations (Migunani, Akatiga, and ELSAM). In the first stage, interviews with 49 informal workers and 11 focus group discussions involved formal and informal workers and confirmed that informal status is a key predictor of problematic and abusive labour conditions. Unpaid production is exacted by: 1) formal businesses employing both formal and informal workers, and 2) informal businesses exclusively employing informal workers. In both schemes, overtime is unpaid and hours are excessive (the workday is 12-14 hours long) for wages that are lower than the minimum wage rate. Wage deception is prevalent as is the abuse of the workers' vulnerability and an absence of legal protection.

Informed by this finding, the team conducted the second stage of fieldwork and analysis to deep dive into the tiers in the supply chain where informal labour conditions are the norm. These workers were employed by smallholder farmers, hatcheries, peeling sheds, and other small enterprises, as well as by large Indonesian and multinational exporters, including Bahari Makmur Sejati, Sekar Bumi Tbk, Bumi Menara Internusa, Pabrik Lamongan PT BMI, Phillips Seafoods Indonesia, Japfa Comfeed Indonesia Tbk, Tri Mitra Makmur, Wirontono Baru, Bumi Pangan Utama, and Mega Marine Pride.

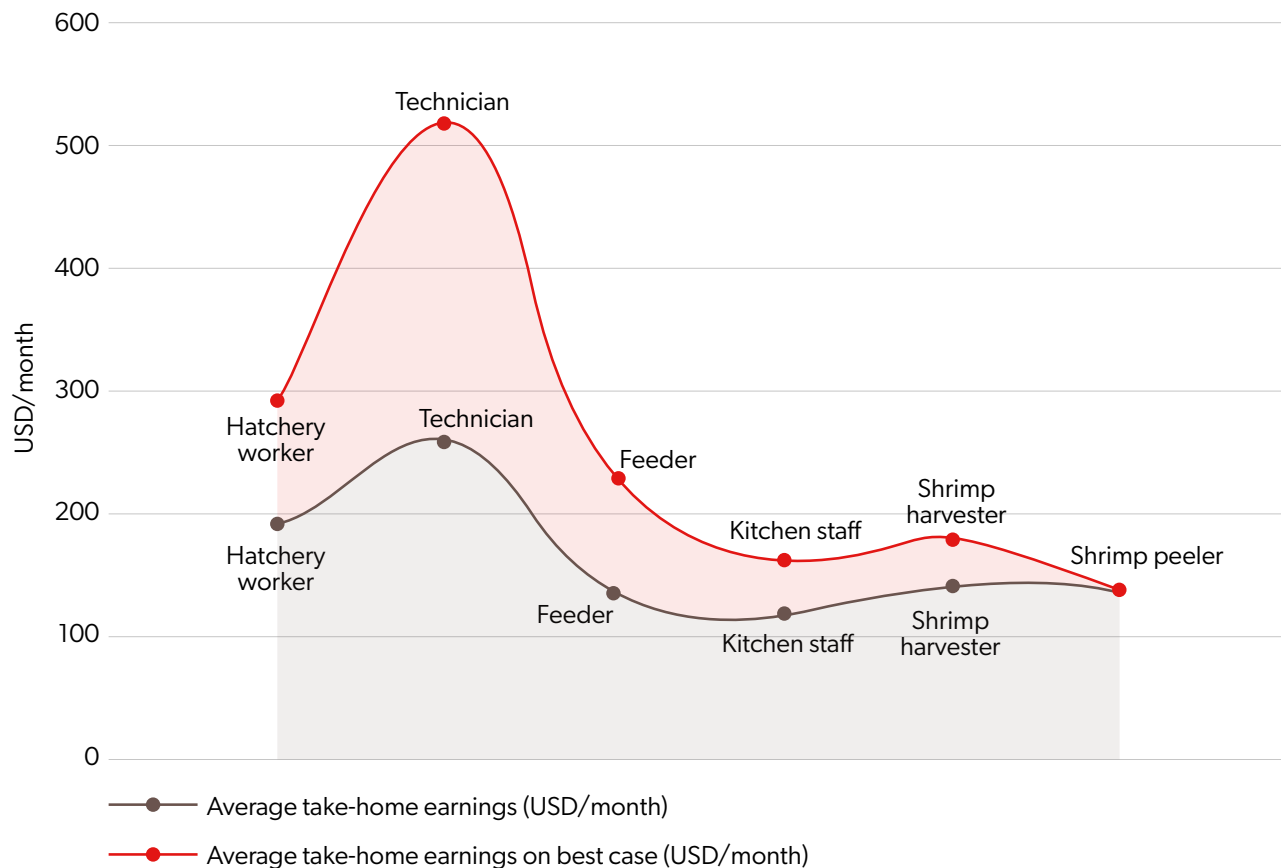
Interviews were conducted with workers from 12 shrimp farms in six provinces (West Java, South Sulawesi, East Java, Lampung, NTB, Bali), consisting of two traditional farms, three extensive farms, five semi-intensive farms, and two intensive farms. In all of these farms, there are gig workers, even in intensive farms. For instance, workers at Philips Seafoods and PT Bumi Menara Internusa (BMI) are compelled to accept permanent daily work positions due to their need for employment. The average honorarium for gig workers for 10-12 hours of work is 3.75 USD per day.

Wages have declined since the pandemic and today average \$160/month for shrimp workers in Indonesia (see Figure 1) is below Indonesia's minimum wage of \$170/month for Lampung²⁷, for example. Among the 11 ILO forced labour indicators²⁸, the study found that the prominent indications of forced labour include exploitation of individual and governance vulnerabilities, deception, and excessive overtime. Empirical data from the second round of fieldwork indicate that the prevalence of the 11 ILO forced labour indicators and forced labour itself are more pronounced in the production (shrimp farms, shrimp harvest, shrimp peeling) and early processing or peeling stages across the nine sample provinces in Indonesia. This is the largest part of the shrimp worker population and the conditions are representative of the informal sector and informal employment arrangements provided to most shrimp workers.

²⁷ ASEAN Briefing 2024: Doing business in Indonesia. ASEAN Briefing website. April 22, 2024. <https://www.aseanbriefing.com/doing-business-guide/indonesia/human-resources-and-payroll/minimum-wage#minimumwageincreaseHeader>

²⁸ International Labour Organization, Indicators of Forced Labour https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@ed_norm/@declaration/documents/publication/wcms_203832.pdf. The indicators are 1. Abuse of vulnerability, 2. Deception, 3. Restriction of movement, 4. Isolation, 5. Physical and sexual violence, 6. Intimidation and threats, 7. Retention of identity documents, 8. Withholding of wages, 9. Debt bondage, 10. Abusive working and living conditions, 11. Excessive overtime

Figure 1: Average monthly earnings for shrimp workers in Indonesia



Strong indicators of forced labour were found also in more formalized segments of the shrimp supply chain in Indonesia, in shrimp feed manufacture, at hatcheries, and at processing facilities for export. The research found that at shrimp seed halls in Bali, for example, hatchery work is done in a structural cage for workers, limiting their freedom of movement and leading to isolation, especially for those who live in the company's compound or are required to stay overnight on the farm during the production season. In shrimp peeling and processing at factories, it is most common for the payment scheme to be performance-based. Peelers are required to work at least 12 hours per day to meet minimum targets. The wage rates per kilogram are not revealed and processing workers are also expected to perform "loyalty hours" of unpaid overtime as proof of loyalty to the employer.

Shrimp farms have the lowest profit margins in the supply chain (10-17%) and supermarket retailers the highest (43%). When shrimp prices decline in the global market, the most vulnerable are exploited the most; migrant workers, for example, do not have relationships in the local area and have fewer survival options when there are no bonuses, insurance coverages or alternative livelihood opportunities. Abusive working and living conditions were the catalyst for the tragic death of a worker in East Java, a migrant from Nusa Tenggara Timur province who died after several days of untreated illness while residing at the compound. The company did not provide access to medical treatment and did not adequately provide hygiene, sanitation or sufficient food to meet the workers' basic nutritional needs.

These abusive conditions not only affect the workers but adversely impact their families. In another example, an early 2023 report by a district government hospital documented the case of a malnourished 18-month-old child treated by the hospital. The parents, both migrant workers, work in a shrimp farm with a combined monthly salary of \$97 USD per month. Exports of shrimp from Indonesia are routinely made with unpaid production because the sector relies on recruiting workers from marginalized groups who will do the job for very little money and in unsafe conditions.

1.2 India: Shrimp is routinely made with debt bondage today, confinement and intimidation

Primary research in India involved eight field visits between March 2021 and February 2024. The fieldwork was carried out by an investigative team of Indian advocates and journalists, coordinated by U.S.-based Corporate Accountability Lab, and took place in Andhra Pradesh where numerous hatcheries, a large proportion of India's shrimp farms, and much of the processing sector are located. The investigators interviewed more than 150 workers in the Indian shrimp industry. These workers were employed by smallholder farmers, hatcheries, peeling sheds, and other small enterprises, as well as by large Indian and multinational exporters, including Apex Frozen Foods, Avanti Feeds Limited, Devi Fisheries Limited, Nekkanti Sea Foods, and Sandhya Aqua. The field investigators also spoke with supervisors and executives at shrimp companies, farm owners, government officials, human rights advocates, union leaders, and local doctors.

The investigation revealed that unpaid labour may be prevalent in the Indian shrimp sector in multiple forms, as under-minimum wages, unpaid overtime, wage deductions for costs of work, and significant debt bondage. The highest risk of forced labour in the Indian farmed shrimp supply chain is in the processing sector, in both peeling sheds and processing plants. Migrant workers are especially vulnerable to forced labour and particularly migrant women who live in employer-provided housing. Local workers and those who do not live on company facilities are less likely to be subjected to forced labour, although they also experience abuses in the workplace.

Debt bondage is prevalent in the Indian shrimp work because loan systems tie workers to their jobs. Processing companies employ recruitment agencies to bring migrant workers from Odisha and West Bengal, one manager said, and they look for workers in rural areas who need money desperately. Recruitment agency agents provide loans to workers and transport them to the company premises on condition that they be allowed to leave only after the loan and interest are cleared. Individuals are recruited into debt bondage by the recruitment agent, and the agent may give a loan to a group of workers on behalf of their client, rather than to only one person. In that scenario, if one person defaults on the group loan, the others will become responsible to repay it and the whole group remains in debt and must keep working. Shrimp workers who are recruited from a different area are bound to the company for a period. Some women workers say the loan provides them with a way to access loans in their community that they could not otherwise, and other workers reported simply being in debt.

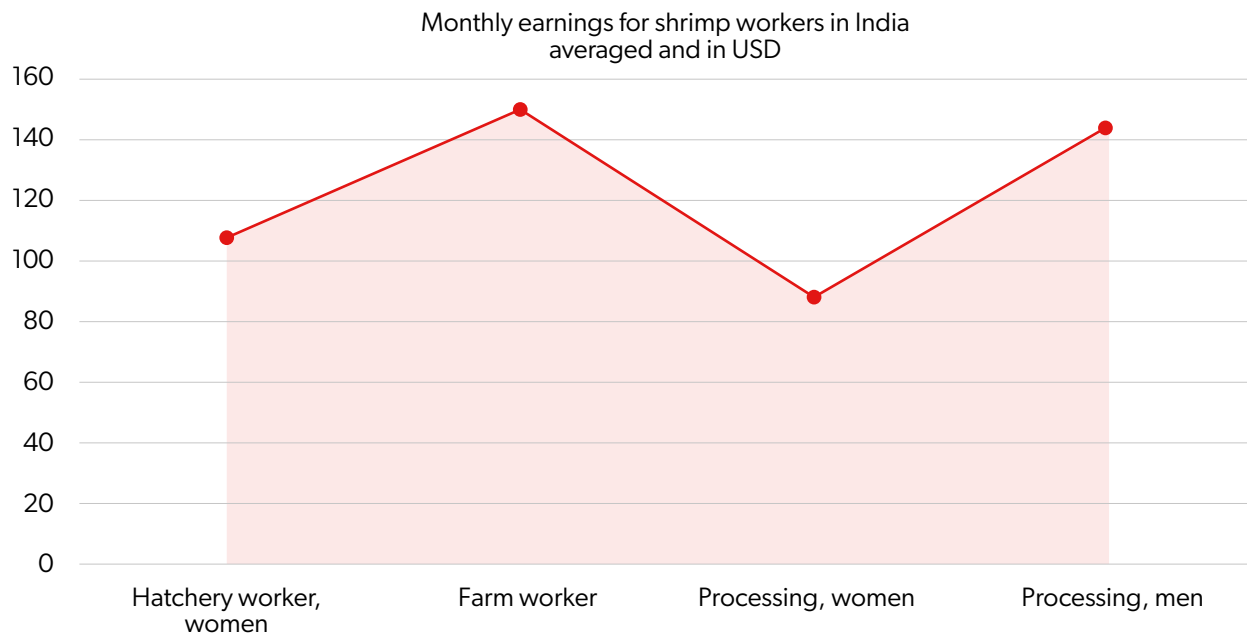
Once on the premises, migrant workers who live in company-owned hostels in processing facilities are allowed to leave the hostels once or twice a month only – men generally can more often than women – and that guards or wardens control access into and out of the hostels. Some workers reported video cameras in the hallways of women's dormitories and restricted access to their own phones. Once on the company premises, freedom of movement of shrimp workers in India appears to be severely restricted.

Wages have declined since the pandemic and today average \$122/month for shrimp workers in India (Figure 2). Other working conditions and freedoms have also deteriorated since the pandemic as shrimp prices have fallen. Workers in hatcheries are expected to always be on the clock, those interviewed said. They work extremely long hours and there is often no distinction between work and non-work hours. While processing shrimp, they reported experiencing intimidation from many directions from recruiter, supervisors, and company representatives, including guards. Supervisors abuse workers verbally during working hours, often over meeting targets.

Both men and women reported that supervisors scold, shout at, and otherwise verbally abuse workers for working too slowly. Supervisors instruct workers to avoid speaking to each other, even when they work near each other all day doing repetitive tasks. Married couples often have to live separately and may not work near each other and may have very limited interactions. The guards' presence made workers fear speaking with investigators and labour advocates. A union organizer explained they had recently been approached by a distressed migrant worker near the entrance of a shrimp factory who said he wanted to go home, but the company guard approached and verbally abused the worker until he returned inside.



Figure 2: Monthly earnings for shrimp workers in India



There has been a noticeable curtailment of freedoms since the pandemic. Workers previously could leave the premises of the processing facilities for recreation once a week, but that freedom has been restricted; with a warden deciding who enters and leaves. In many cases, women workers are not allowed to travel on her own. For example, if a woman worker is sick, the supervisor will call the recruiter. The recruiter will either come pick up the worker and bring them to the hospital or will send someone who will go to the hospital with the worker. Some workers reported that even transit drivers who take them to buy necessities on their days off track their movements.

1.3 Vietnam: Shrimp is routinely made today with unpaid production

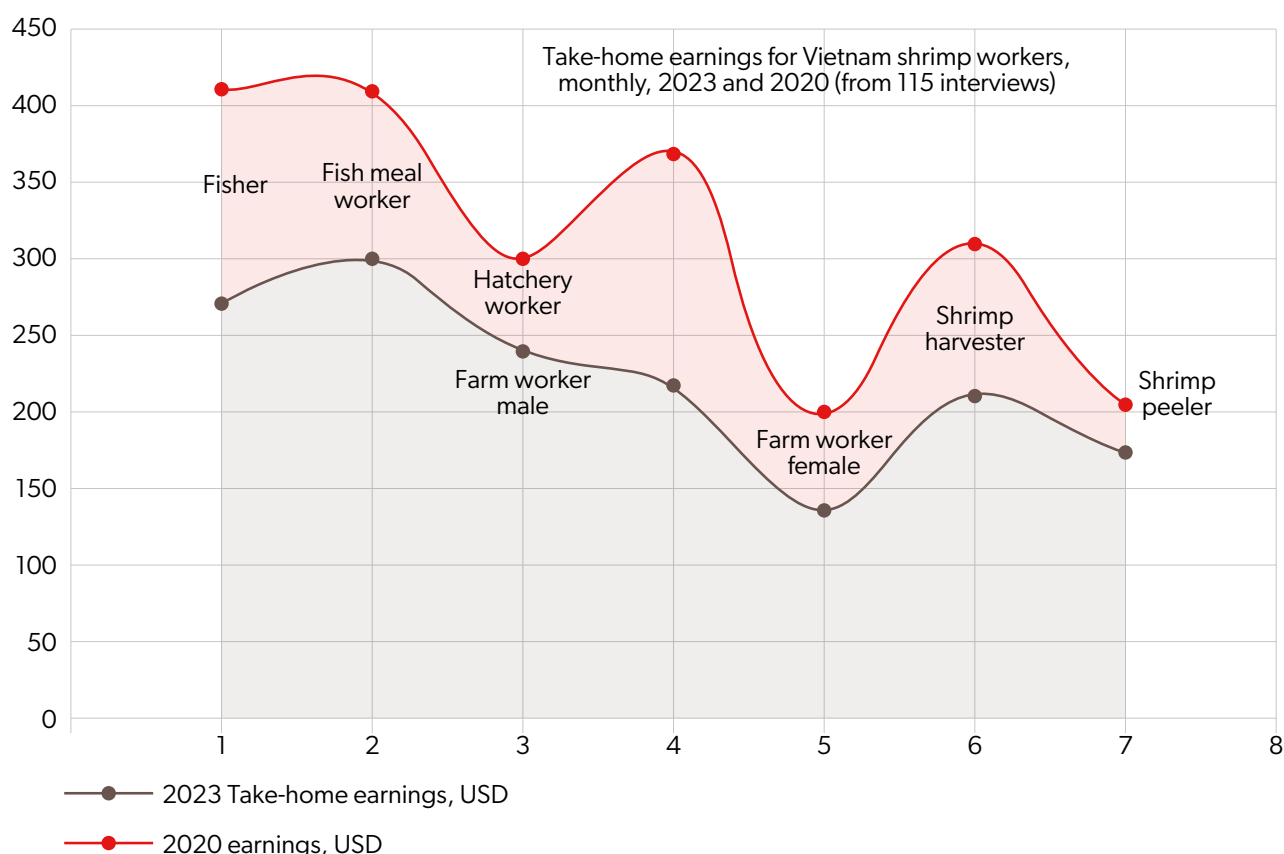
Primary research in Vietnam involved two stages between August 2023 and March 2024. The fieldwork was carried out by three investigative teams of Vietnamese researchers and experts, and coordinated by U.S.-based Sustainability Incubator. The scope of the inquiry included operations at seven parts of the shrimp value chain in Vung Tau, Bac Lieu, Can Tho, Song Trang, and Ca Mau districts of Vietnam. Field interviews were conducted with 115 shrimp workers and their 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. The field work also included interviews with 23 operators of fishing vessels, fish meal plants, hatcheries, shrimp farms, harvest teams, peeling facilities, and processing plants as well as 13 interviews with industry auditors and experts who provided insights into shrimp labour conditions, trends and areas of concern.

The results identify the working conditions that are prevalent in the industry currently and which are representative of each tier of production. The results include prices, costs, and earnings information for shrimp producers and workers at each tier. These workers were employed by smallholder farmers, hatcheries, peeling sheds, and other small enterprises, as well as by large Vietnamese and multinational exporters, including Stapimex, Taika Seafoods, Sao Ta Foods, Truong Phu Seafood, and Minh Phu Hau Giang.

Wages have declined since the pandemic and today average \$222/month for shrimp workers in Vietnam, and down from \$277/month (Figure 3). Take-home earnings for shrimp workers show a steep income decline of 20-60% with reduced wages, unpaid overtime, lost employer coverage for health insurance and even necessary protective equipment. Before the pandemic, shrimp workers in Vietnam often earned bonuses and overtime pay, and received protective gear. Many received meals and accommodation on the job and stipends for transit to the facility. Workers advanced to higher wage rates as they gained skills and seniority, and many had broader options to choose written contracts and social insurance.

The new normal is a longer working day where the workers are paying the costs of work and earning only enough to cover living costs. Shrimp workers who are working on farms, harvesting or peeling shrimp, and in processing plants described conditions which could be deceptive because they were unaware of their wage rate. Some indicators of forced labour were present, mainly excessive overtime and abuse of vulnerability.

Figure 3: Monthly earnings for shrimp workers in Vietnam



Shrimp workers say they have lost their job bonuses and benefits since 2020, and have lost overtime pay, employer contributions to health and social insurance, meal and accommodation benefits. Seventy-two percent of the jobs did not provide a written contract and 91% of the jobs were paid on the basis of yield. Shrimp workers say they are working longer hours to produce more but earn less. Nearly all of the shrimp workers were in a position of vulnerability.

Shrimp producers in Vietnam say they are operating at a loss or around the break-even point today. Vietnam's labour regulations require their compliance with mandatory provisions in the Labour Code for a minimum wage, overtime pay, and written employment contracts for all workers, including temporary and seasonal workers²⁹. However, most of the work in shrimp production is informal and since 2020 has been further stripped down by the removal of overtime pay, workplace injury coverage and protective gear, accommodation, meals and transit and lower bonuses for most workers.

The shrimp value chain is currently structured around four middlemen relationships where working conditions vary at the discretion of the middlemen. This occurs either directly on the harvest teams working for the middleman or indirectly on fishing vessels, farms and in peeling sheds where the middleman is the buyer and is offering below-market prices on behalf of either the fish meal plant or the shrimp processing plant. This arrangement puts shrimp producers under constant financial strain. Shrimp workers in Vietnam continue to work very hard for a smaller return on their investment of time and effort, and have adjusted to conditions that abuse their vulnerability.

²⁹ Vietnam's New Labour 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.

1.4 Bangladesh: Shrimp is routinely made with debt intimidation

In Bangladesh, more than 260,000 hectares of land are used for growing shrimp, most of it black tiger or *Penaeus monodon*. Bangladesh's shrimp export fell by 26% to \$300 million in 2023, according to data from the Bangladesh Export Promotion Bureau, with about 85% going to Europe³⁰. Since 2020, Bangladesh's *monodon* farming has experienced very low output, due to a combination of droughts, floods and viral outbreaks. The combination has led to bankruptcy for many smallholder farmers³¹. Shrimp income had represented about 46% of the total household income for higher-income households, according to household survey data from 264 households in six villages in Mongla, but just 26 and 8% for middle- and lower-income households³².

Generally, farmers are obliged to sell their products directly to a single wholesale depot, or aratdar, where raw shrimp are acquired by exporters through commission agents and then loaded into refrigerated containers and shipped by barges to the Port of Mongla or Chittagong for loading onto feeder vessels to Singapore. Processing factories employ an estimated 30,000 non-management workers, according to the Bangladesh Frozen Foods Exporters Association (BFFEA). The commission agent contacts the exporter-processors on behalf of local depots, sub agents and paikar, and receives a commission fee for shrimp sales from the exporters. Commission agents are the financier in the shrimp marketing chain. They are typically medium- to large-size entrepreneurs who provide conditional loans to middlemen aggregators who agree to contractual exclusivity. Farmers tend to receive below-market prices due to carrying loans with agents and operate indebted to traders and middlemen, or paikar. Shrimp production in Bangladesh is leveraged by debt. This business model provides a livelihood to people living in poverty, but a difficult one.

The industry faces challenges owing to market fluctuations, trade barriers, diseases and climate-induced disruptions³³. Farmers carry most of the risk while being unable to profit sufficiently to reinvest in their operations to improve their productivity and profitability. Collusion keeps prices to farmers low and high for traders in a debt intimidation model; if farmers try to breach contractual conditions to earn market-based prices, a trader may intimidate the farmers because he is also locked into similar arrangements with regional wholesalers and subjected to the same forms of abuse³⁴. Traders can earn a profit by issuing conditional loans and by purchasing shrimp from farmers without grading or by underestimating by measuring the dry weight of shrimp and then pricing and reselling the shrimp after soaking it in water to increase the weight. Despite not adding any value to the product, each trader along the chain adds substantial margin to the shrimp.

Shrimp is produced with significant child labour in Bangladesh, according to the U.S. government³⁵. Children work with their families to produce a cash crop, so child labour may be normalized in the sense that shrimp producers do not have the agency to effect a change and the environment affords few options. During and since the pandemic, the amount of child work in hazardous conditions has increased and forced labour is significant for collectors of fry from the wild³⁶. Fry are available in natural waterways only for a short time each year when fry brokers will pay fry collectors under one U.S. dollar per day.

³⁰ Shawkat A 2023. Shrimp exports sink as western consumers tighten spending The Business Standard. August 5, 2023. <https://www.tbsnews.net/economy/industry/shrimp-exports-sink-western-consumers-tighten-spending-677066>

³¹ Khan Z 2024. Giant river prawns: a fresh hope for Bangladesh's aquaculture sector? The Fish Site, April 5, 2024. <https://thefishsite.com/articles/giant-river-prawns-a-fresh-hope-for-bangladeshs-aquaculture-sector>

³² Abdullah AN, Myers B, Stacey N, Zander KK and ST Garnett 2017. The impact of the expansion of shrimp aquaculture on livelihoods in coastal Bangladesh. *Environment, Development and Sustainability* 19:2093-2114.

³³ Alum S 2024. Portraying the Bangladesh Shrimp Industry: A SWOT Analysis. *Sustainability* 18(3) 290; <https://doi.org/10.3390/su16031290>

³⁴ Accenture 2013. Exploitative Labour Practices in the Global Shrimp Industry. April 29, 2024, Mother Jones website (automated pdf).

³⁵ US Government 2022. List of Goods made with Forced or Child Labour, US Department of Labour website, April 22, 2024, <https://www.dol.gov/agencies/ilab/reports/child-labour/list-of-goods-print>.

³⁶ Successive findings by the US government suggest that illegal forms of child work are prevalent in harvesting and processing shrimp (U.S. Embassy- Dhaka. Reporting. January 14, 2021, January 16, 2020, February 13, 2018).

1.5 Thailand: Ten years later, improved oversight but challenges continue

There are two types of shrimp farm in Thailand: corporate and family-run. Corporate farms in the Surat Thani area are very large and operated by large Thai firms like Charoen Pokphand, the world's largest shrimp farming enterprise. Family-run farms in Phang Nga are quite small at 0.5 to 4 hectares. Many Thai shrimp farms range in size from four to 10 ponds per farm and are located next to estuaries connected to the ocean. Sharing the same estuary, farmers do batch stocking and harvesting by waiting for a good tide and conditions to fill their reservoirs. For biosecurity, they then use this water for zero water exchange for the first month of production. After 30 days, water exchange is increased to up to 50% per day for super intensive systems.

Reportedly, farms in Thailand have slowed operations due to very low prices on the global market. Today, a significant proportion of the shrimp produced in Thailand are also distributed and sold in Thailand. Exporters have been shifting sales targets and exported about 10,000 metric tonnes each to China and Japan between January and April 2024, with only a negligible amount to Europe and the UK and 6000 metric tonnes purchased by buyers in the U.S. Over the past 10 years, the business model for Thai shrimp has undergone successive shocks from disease and revelations of forced and child labour in production^{37,38,39,40}. Some improvements were made that include government inspections and investment in rural farming areas. Private firms also increased direct hire of workers into corporate farming and shrimp processing, which has reduced the burdensome costs that shrimp workers formerly had to pay to labour brokers. Greater oversight and higher transparency might have contributed to higher shrimp prices from Thailand with some shrimp buyers shifting their sourcing to lower-priced shrimp from Indonesia and India.

With the coup d'état in Myanmar, the causes of labour exploitation in the shrimp sector^{41,42} have shifted as more workers enter Thailand. On one hand, the Thai government improved the documentation system for migrant workers from Myanmar, but on the other the coup has interrupted the country-to-country arrangements, making it difficult especially to renew mandatory documentation, which can be a source of uncertain status and debt that is challenging for migrant shrimp workers to repay.

1.6 Ecuador: Shrimp is farmed extensively by big business with unregistered labour

In Ecuador, workers for shrimp farming and harvesting are hired weekly in cities, company representatives said, and transported to remote farm sites which may be 70km away. The work is considered temporary and the names of shrimp farming and harvesting workers are not registered with the government, which means they are excluded from the social security program and therefore ineligible for work-injury protection and unemployment assistance. They are eligible for work-injury coverage only if their employment is registered with the government by the employer, affiliated with the federal program and contributing 0.2% of gross earnings. The federal government operates a national registry, the SIIRS, to target needy families with income in the bottom 40% of all household incomes, but temporary workers must be registered to be affiliated with the federal program to receive a family cash transfer of \$50 a month paid to the mother; however, again, shrimp farming and harvesting workers are ineligible unless their names are registered.

The Ecuador shrimp farming system continues to expand in the same traditional earthen ponds, whereas the other shrimp countries have shifted to controlled intensive systems. Their advantage is that whiteleg shrimp (*Litopenaeus vannamei*) are native to Ecuador and its climatic conditions, consistent production and don't have the pond failures like other countries do. The farms discharge pond water to the environment and the estuary in 10 water exchanges

³⁷ Human Rights Watch 2018. Hidden chains: rights abuses and forced labour in Thailand's fishing industry. Human Rights Watch website, April 22, 2024, https://www.hrw.org/sites/default/files/report_pdf/thailand0118_report_web.pdf

³⁸ Thomson Reuters Foundation 2018. Trapped at Sea: Blood, Sweat, and Tears of Thailand's Fishing Industry, Reuters website, January 22, 2018. <https://www.reuters.com/article/idUSKBNIFC0Z5/>

³⁹ Issara Institute 2021. Top 5 Labour Conditions in 2019-2020: a field-based analysis of worker reporting and business responses in Thailand, January 2021 report. Issara Institute website. <https://www.issarainstitute.org/reports-and-data>

⁴⁰ Oxfam International 2018. Supermarket responsibilities for supply chain workers: continuing challenges in seafood supply chains and the case for stronger supermarket action. Oxfam repository. April 22, 2024. <https://oxfamlibrary.openrepository.com/handle/10546/620480>

⁴¹ US Department of Labour 2024. List of Goods made with Forced or Child Labour, US Government website. April 22, 2024. <https://www.feedinfo.com/our-content/insight-ecuadorian-shrimp-sector-now-confronted-with-multiple-challenges-after-years-of-strong-growth-part-1/371952>. Noting, shrimp from Thailand are made with significant forced labour and significant child labour.

⁴² US NOAA 2020. Report to Congress Human Trafficking in the Seafood Supply Chain Section 3563 of the National Defense Authorization Act for Fiscal Year 2020 (P.L. 116-92). National Ocean and Atmospheric Administration of the US Government.

per day, meaning a 100% exchange to the environment daily. The estuary gets the discharge, which reduces the water quality and income opportunity for other estuary users over time.

Before the pandemic of Covid-19, Ecuador's low price model produced frozen shrimp blocks for mainly China (70%). Ecuador shrimp farming producers are large businesses, rather than the family-owned farming enterprises typical in Asia. Ecuador's business model for shrimp has the lowest price for post-larvae, at \$2 per 1000 PL, the lowest farm gate prices in the world, and the lowest export prices in the global shrimp market. Export processors packed and froze raw, unpeeled shrimp in blocks and did not typically produce value-added shrimp products.

(What's a value-added shrimp product?)

Ecuador is the lowest-cost provider among the shrimp-producing countries and like the others appears to be undergoing a structural adjustment. The export value of farmed Ecuadorian shrimp contracted by 5.5% in 2023, according to Ecuador's National Chamber of Aquaculture, and the larger farms have increased market share at the expense of smaller farms that have either gone out of business or been acquired by the larger entities⁴³. The major firms are exporting 1,060,500 metric tonnes of shrimp per year from Ecuador. They include Santa Priscila, Omarsa, Songa, Promarisco (Nueva Pescanova), Empacreci, Exportquilsa, Cofimar, Propenmar, and EdPacif⁴⁴.

In what has been described as a large-scale land grab, Omarsa, Ecuador's second-largest shrimp processor, is developing a new 536-hectare (1,324 acre) shrimp farming facility in Ecuador's Guayas coastal province that is certified by the Aquaculture Stewardship Council⁴⁵. Mitsui, a Japanese firm, recently bought shares in Industrial Pesquera Santa Priscila (IPSP), the largest shrimp farming company in the world which accounted for six percent of global shrimp trade volume in 2022 and operates shrimp farms on 18,000 hectares in Ecuador (approximately 45,000 acres).⁴⁶

Up to 80% of the indigenous population in Ecuador lost their main source of nutrition due to mangrove destruction after the arrival of shrimp farming.⁴⁷ Local, mangrove-dependent populations – especially women – mobilized and have continued various forms of resistance against further expansion.⁴⁸ Mitsui has described the expansion of farms by Santa Priscila as part of its commitment to Wellness Ecosystem Creation, revealing just how differently people can view a situation as a crisis or opportunity, depending on what they stand to gain or lose.

1.7 The corporate structure of the shrimp industry and basis for working conditions

The shrimp business model is comprised of inter-linking business and transnational relationships between, on the one hand, vertically integrated firms and producers of shrimp or fish meal, and on the other horizontally integrated sellers and buyers of farmed shrimp. Working conditions on shrimp farms and lower-tier production facilities appear to carry most of the risk in this business model. They only break even or endure successive losses, in turn adversely impacting the workers that they hire.

Ecuador operates the most corporatized and extensive system of production among the shrimp-producing countries reviewed, with lower yields from larger areas of land in former mangrove areas that today are owned by very large firms after decades of battles with indigenous peoples. The largest firms in Thailand operate the most corporatized and extensive systems of distribution for sales of shrimp and shrimp inputs, holding major stakes in shrimp genetics, feeds, processing and distribution, and not just in Thailand but with large presences in India and Indonesia. A small number of very large Indian shrimp exporters distribute very large quantities of shrimp to the global market. Shrimp processing in India appears to rely on migrant workers, like in Thailand, and using some similar recruitment practices like debt bondage.

⁴³ Feed Info 2024. Ecuadorian Shrimp Sector Now Confronted with Multiple Challenges After Years of Strong Growth, February 23, 2024. <https://www.feedinfo.com/our-content/insight-ecuadorian-shrimp-sector-now-confronted-with-multiple-challenges-after-years-of-strong-growth-part-1/371952>

⁴⁴ Intrafish 2022. Here's a list of the top 10 Ecuadorian shrimp exporters. September 27, 2022. <https://www.intrafish.com/shrimp/heres-a-list-of-the-top-10-ecuadorian-shrimp-exporters/2-1-1303671>

⁴⁵ Farm Land Grab 2024. Ecuador's Omarsa secures \$20M loan to fuel 536 hectare shrimp farm plan, January 8, 2024. <https://www.farmlandgrab.org/cat/837>, re-published from the original in Undercurrent News

⁴⁶ Farm Land Grab 2023. Mitsui invests US\$360M in world's largest shrimp farming business. August 16, 2023. Re-published from the original in Global AgInvesting.

⁴⁷ Lahmann, E. et al. 1987. Structural Comparison of Mangrove Forests Near Shrimp Ponds in Southern Ecuador. *Interciencia* 12:240-243

⁴⁸ Bennett N, Lopez de la Lama R, Le Billon P, Eroto I, and E Morgera 2023. Ocean defenders and human rights. *Frontiers in Marine Science* 18:9, <https://doi.org/10.3389/fmars.2022.1089049>

Indonesian processing firms also distribute very large quantities of farmed shrimp to the global market and appear to rely on harvest agents who can aggregate and transport shrimp to plants from across vast areas of the country, which can dissociate the exported products from labour and environmental abuses in production, not least because labour and water laws are poorly enforced in shrimp production by the government. Vietnam's shrimp sector is mature, highly efficient, and small business farmers have invested in modernization. The government supports the industry and also passed 2019 and 2021 Labour Code amendments for mandatory written contracts and overtime pay. Still, the production system in Vietnam is showing signs of distress and deterioration from low farmgate prices and significantly lower demand, as foreign buyers shifted their purchasing after the pandemic to lowest-cost shrimp from India and Ecuador.



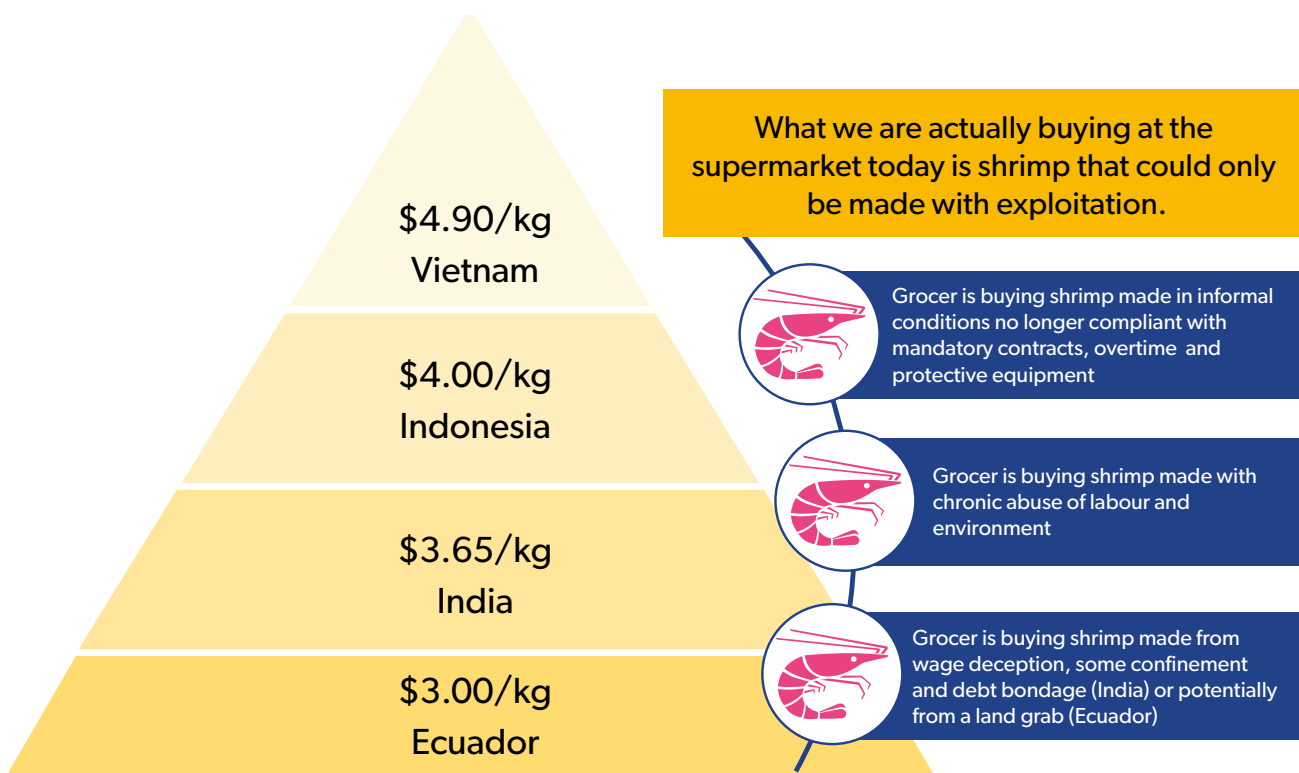
Caption here xxxxxxxx. Photo credit: © xxxxxxxxxx

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

There is a direct link between conditions for shrimp workers and the business structures comprising the export supply chain. The link is visible in findings from interviews, quantitative data collected and trade research performed in the multi-country study, the results of which reveal the levers that market actors can pull to influence shrimp production. The research results show that working conditions are reasonably well indexed to wholesale shrimp prices and worsen with lower prices.

Essentially, the business model precludes sustainable production and international retailers require that shrimp are sold at or below what they cost to produce. Many and possibly most shrimp producers are operating with successive losses and obliging workers to participate in unpaid production if they want to keep their jobs. This is illustrated in Figure 4 with a pyramid that reflects the relative volumes of shrimp and working conditions that are associated with current wholesale prices in the global market.

Figure 4: At today's low prices, shrimp is being made with unpaid labour and exploitation



Source for shrimp prices (raw, 50 pcs/kg, farmgate prices for week 12 of 2024): Hawai'i Aquahack 2024

2.1 Drivers of shrimp production and prices before 2019

Technology has been a key part of the business model for shrimp production as shrimp farming has evolved along a general trend towards higher and higher stocking densities to increase production. Between 2002 and 2010, shrimp production in Southeast Asia increased from 1 million tonnes to 2.5 million tonnes, largely due to farms adopting technology to support growth and to meet growing demand from global markets. To a degree, shrimp production in Asia has matured symmetrically as new technologies and information became available. After 2010, shrimp farmers across Asia began to invest in modernization to boost their output and to mitigate challenges of shrimp disease with imported larvae, formulated feeds, medicines, lined ponds and water circulation systems; and taking on higher costs.

Over time this combination has, according to industry expert Robins McIntosh, pushed well past the limits of the growing system. By adopting technology, farmers could increase densities from 100/m² to sometimes over 300-400/m², requiring chemical disinfectants, probiotics, and medicated feeds and resulted in the loss of an environmental capability to support a healthy culture system, as well as creating substantially higher production

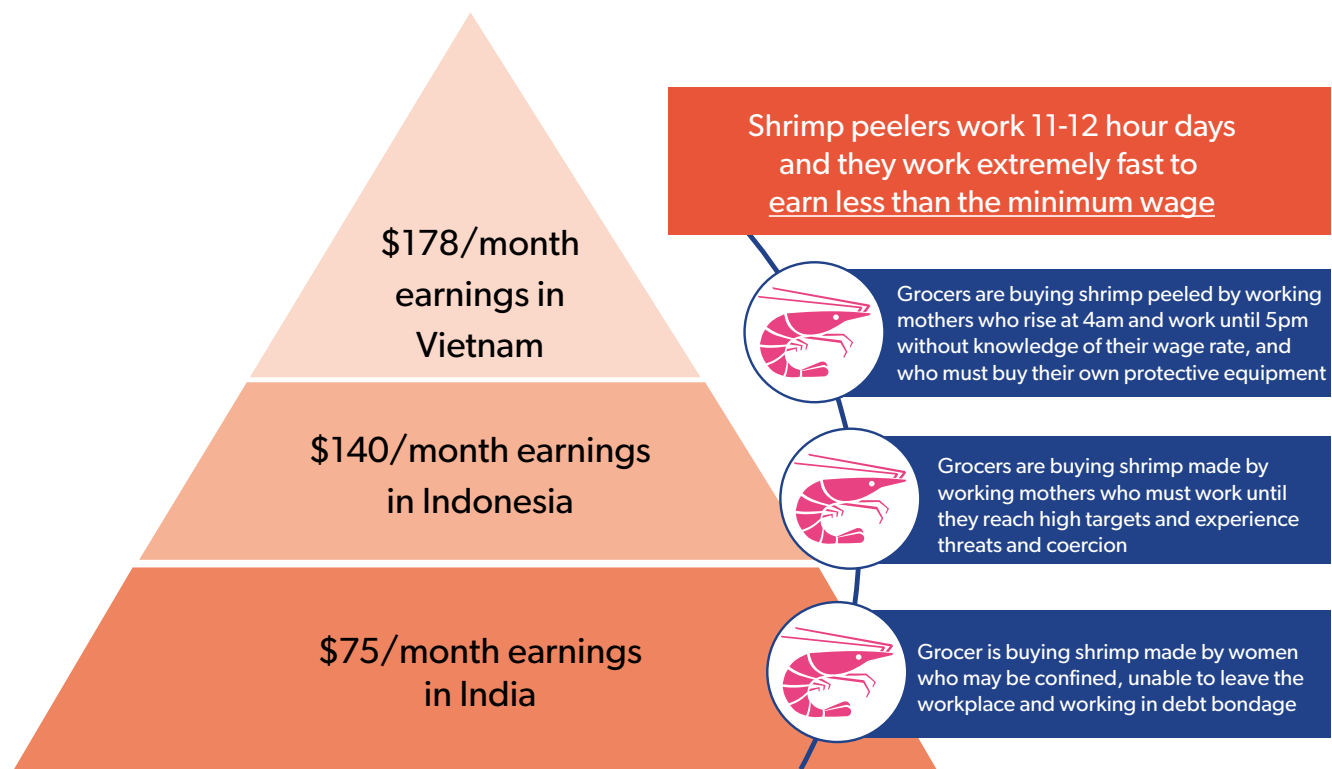
costs⁴⁹. The consequences of exceeding carrying capacity, according to McIntosh, are increased disease outbreaks and pathogen loads in Thailand, Vietnam, Malaysia and China.

By 2018, the region's large integrated companies were driving modernization. Shrimp farmers with access to capital were lining their ponds, installing shrimp toilets, and moving to semi-intensive systems while operating with razor thin margins. Profit margins in shrimp farming fell to 0-20% due to low farmgate prices from global oversupply and higher costs to produce shrimp that grow quickly and resist disease. Formulated feeds had become 50-80% of the cost followed by energy, post-larvae, maintenance and disease prevention, leaving little for labour and innovation.

Business disruptions still occur, whether from disease or exceeding the ponds' carrying capacity, or from asymmetric access to market prices and technologies, where for example smaller-scale backyard farmers have the least access. Earnings had dropped for producers, and wages in shrimp work were so low in 2018, according to Oxfam International, that more than 60% of women surveyed in Thailand were severely food insecure and their peers in Indonesia worked unpaid hours to hit targets like 19kg of shrimp peeled per hour.

In 2018, shrimp prices averaged \$9.33-12/kg on the global market (down from a \$16.09 high in 2015). Prices fell to \$6.50/kg in 2024, breaking the record low⁵⁰. Shrimp workers are earning significantly less in 2024 for the same work. This research collected wage and earnings data across the shrimp supply chain in each country, and at each tier, and the data revealed that exploitation of workers is structured into the shrimp business, particularly for farm workers, harvest teams, fishers – and most of all for shrimp peelers. This is illustrated in Figure X by the average monthly earnings of shrimp peelers according to the volumes of shrimp available today in the global market.

Figure 5: Shrimp peelers' wages reveal that exploitation is built into the shrimp business model



Source: Interviews with shrimp peelers in Indonesia, India and Vietnam

⁴⁹ McIntosh R 2024: The perils of over-intensification in shrimp farming, The Fish Site, January 10, 2024. <https://thefishsite.com/articles/the-perils-of-overintensification-in-shrimp-farming>

⁵⁰ An overall trading price in the global market was \$9.33-12/kg in 2018 and \$6.50/kg in 2024 according to statistics published by the International Monetary Fund. Shrimp prices vary by size and position in the supply chain. Global market prices are significantly higher than farmgate prices, for example, which were recently estimated to be \$4.90/kg Vietnam, \$4.00/kg Indonesia, \$3.65/kg India, \$3.00/kg Ecuador for raw 50 pcs/kg in week 12 of 2024, Source: Hawai'i Aquahack 2024.

2.2 Leveraged purchasing in the shrimp sector

In economic theory, wholesale commodity prices in a free market will reflect the balance of supply and demand, and retail prices will reflect wholesale prices. In today's shrimp sector, retail prices for shrimp have remained at historically high levels since the pandemic while wholesale shrimp prices have sunk to historically low levels and continue to fall. This phenomenon does not reflect shrimp production, or over-supply. It does not reflect the low demand or supply chain disruptions of the pandemic. Instead, it appears to mirror purchasing decisions by supermarkets. While maximizing profits is expected, the use of aggressive tactics to lower costs is not, because supermarkets are subject to grocer codes and anti-price fixing regulations. Supermarkets are being investigated in several countries for extracting savings from suppliers in ways that are inevitably forced down the chain.

Supermarkets are waging warfare on suppliers, the UK's Groceries Code Adjudicator (GCA) has said, by demanding cost-price decreases that force suppliers to operate at a loss⁵¹. The grocery retail industry seems to have used the pandemic as an opportunity to increase profits which remain elevated today, according to a European Union investigation into unfair trading practices and the abuse of bargaining power by buyers in the food supply chain⁵². The UK adjudicator said compliance by supermarkets has plunged, particularly by Aldi and Tesco, sharply contrasting with pledges like Tesco has made about working to end forced labour as a member of the Consumer Goods Forum's Human Rights Coalition⁵³.

In the United States, skyrocketing prices for groceries reflect competitive advantages that have been established by dominant grocery chains, according to March 2024 findings by the U.S. Federal Trade Commission⁵⁴. The Federal Trade Commission found that U.S. supermarkets are pressuring suppliers to favor them with lower prices after having "accelerated and distorted the negative effects associated with pandemic supply chain disruptions". The larger supermarkets used the pandemic to increase their market share, power and profit by imposing new requirements and cost-savings on suppliers and by raising consumer prices significantly, in spite of the savings they had gained. Cost-saving is the top priority, according to 65% of U.S. procurement executives surveyed recently by the Boston Consulting Group⁵⁵.

In Australia, the government announced in January 2024 that it is aware that larger supermarkets and wholesalers are able to use their buyer power to extract more favorable terms and conditions from suppliers than would otherwise be the case, potentially impacting the sustainability of their operations. The government proceeded to conduct an inquiry into Australia's supermarket sector and practices, including the relationship between wholesale and retail prices.⁵⁶ In New Zealand, Woolworths and Foodstuffs are being investigated for false and misleading shelf pricing and non-compliance with the Fair Trading Act⁵⁷. Supermarkets have devested from continued relationships with their suppliers and appear to be creating an unfair playing field due to their huge power in the market⁵⁸.

The largest companies can depress farmgate prices by telling suppliers what the price will be, by stopping their purchasing, and by imposing terms that add significant costs to producers that are not recovered in the sales price. When farmgate prices are leveraged downward, the result is less working capital available in shrimp production for wages. The farmers interviewed in this research said they are operating on the one hand with farmgate prices from the processors that are 10-20% lower, and on the other hand with sky-high feed and drug costs.

Across the region, middlemen are hired by processing plants to harvest and transport shrimp from farms to the plants. Farmers pay for that by earning a lower price for their shrimp (the farmgate price minus the middleman's

⁵¹ The Grocer 2023. Groceries Code Adjudicator accuses supermarkets of 'warfare' on suppliers. September 28, 2023.

⁵² 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.

⁵³ The Consumer Goods Forum 2024. The Consumer Goods Forum website, April 19, 2024. <https://www.theconsumergoodsforum.com/who-we-are/our-members/page/5/>

⁵⁴ US Federal Trade Commission 2024: Pandemic-induced disruptions disproportionately impacted smaller firms, as larger companies sought to protect market share, power. FTC Report on Grocery Supply Chain Disruptions, March 21, 2024.

⁵⁵ Straight B 2024. 40% of procurement executives are ignoring sustainability. Supply Chain Market Review, April 4, 2024. <https://www.scmr.com/article/procurement-leaders-ignore-sustainability>

⁵⁶ ACCC 2024. Supermarkets inquiry 2024-25. Australian Competition and Consumer Commission. <https://www.accc.gov.au/inquiries-and-consultations/supermarkets-inquiry-2024-25>

⁵⁷ Consumer 2024. Commerce Commission investigates problematic supermarket pricing following Consumer NZ complaint. January 24,, 2024. <https://www.consumer.org.nz/articles/commerce-commission-investigates-problematic-supermarket-pricing-following-consumer-nz-complaint>

⁵⁸ The Grocer 2023. Groceries Code Adjudicator accuses supermarkets of 'warfare' on suppliers. September 28, 2023.

earnings). Shrimp processors said they procure 80-95% of the shrimp they need through an agent, and the rest by importing less expensive shrimp. Harvest agents are crucial to the shrimp business model. The processing plants can access more low-cost shrimp when the harvest agent is responsible for visiting farms to find shrimp that meets specifications that the plants need. To fill an order from a plant, the middleman tests the shrimp and offers farmers a price, and then harvests and packs the shrimp, moving from farm to farm until the trucks are filled with the volume of shrimp ordered by the plant. The harvest agents interviewed said they are not required by the plants to provide any paperwork to record the farm origins.

Before the pandemic, this leverage helped push farm earnings down to the break-even point in Vietnam and Indonesia. In Bangladesh, farmers are heavily indebted to traders and middlemen through their manipulation of payments. Farmers interviewed for this research said they earn a higher price for shrimp by selling it directly to the processing plant, but the plants preferred to work through a middleman harvest agent, who in turn pays the farmers lower prices to earn their commission.

Middlemen and aggregators are used deliberately to reduce risk of other corporates in the supply chain, including retailers, leaving little to no traceability and transparency, and limiting risk for retailers and processors. These efficiencies taken by processing plants are crucial to their profits and buffer against pricing swings in the global market. They also provide a buffer against controversies, because buying shrimp from middleman removes the shrimp's origins.

Facility managers and human resources supervisors said that the labour conditions on farms, hatcheries, and on harvest teams are not discussed in their positions or known to them. Working conditions were a black box. Some said their plant maintained a relationship with one or two certified farms that “had every label” but that did not produce a commercial quantity of shrimp. On the websites of the major exporters in the region, one or two farm site certificates were posted that accounted for a very low tonnage per year, although the plant output was very high. However, these efficiencies are based upon a commensurate loss of earnings for the shrimp producers and workers.



Product labeling and packaging are a crucial part of the shrimp business model. Clearly-labeled origins are a necessary first step to fixing the problem of modern slavery, or labour abuse in supply chains, because without them companies cannot identify where potential harms may occur. Often, the shrimp packaging viewed for this research did not state the shrimp's country of origin⁵⁹ even when the package carried the mark of an ecolabel. All of Walmart's Great Value shrimp packages viewed in its online store carried the 3.62

Aquaculture Practices ecolabel's logo, but most did not the state country of origin or any certification ID⁶⁰. The ecolabel communicates responsibility but the labeling does not provide information to track it.



INGREDIENTS: SHRIMP, WATER, SALT, SODIUM TRIPOLYPHOSPHATE (TO RETAIN MOISTURE).
CONTAINS SHRIMP.

⁵⁹ Eighty-two shrimp packages and online descriptions were examined at supermarkets Walmart, Insta-Cart, Amazon Express, Costco, Tesco, Aldi and Sainsburys. Generally, the country of origin was not stated online.

⁶⁰ A package of shrimp for sale on the Walmart website is labeled 'Great Value Peeled, Deveined, Tail-on, Size 26-30 Raw Shrimp' and the images include the Best Aquaculture Practices logo. However, the country of origin is not stated, no BAP details are provided, such as an ID code. There are no indications of the shrimp origins in the "About this item" text, which includes a disclaimer that the store has not verified the information. <https://www.walmart.com/ip/Great-Value-Frozen-Peeled-Tail-on-Extra-Large-Shrimp-12-oz-26-30-Count-per-lb/44391099?classType=REGULAR&athbdg=L1600&from=/search>, Viewed April 22, 2024.

Many of the largest Global North supermarket chains state on their websites that they have a commitment to procuring ecolabeled shrimp, and require it from their suppliers⁶¹. This would suggest that certified shrimp represents a very large proportion of the shrimp sold in supermarkets. Among the customs records reviewed for this multi-country research, a very small proportion of shipments were notated with the Aquaculture Stewardship Council name, approximately 5%, and none with Best Aquaculture Practices. Not much more information was posted on the websites of shrimp export-processors, which tended to show 1 or 2 certified farm sites accounting for an insignificant fraction of the plant's output.

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 the Aquaculture Stewardship Council ecolabel (234⁶²) or the Best Aquaculture Practices ecolabel (757⁶³). 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.

Labeling appears to be crucial to supermarkets like Walmart for communicating to consumers and regulators that the product is compliant and green. What the labeling on retail packaging does not communicate, however, is that working conditions are unknown in much of the shrimp supply chain – in hatcheries, shrimp harvesting and peeling – for ecolabeled shrimp. There is some disconnect between the message of eco-labeling and the way shrimp from multiple origins are mixed together during the harvesting and processing phases of the business, owing to the small size of the farms relative to the large size of the export plants. Ecolabeling implies that shrimp are sourced from single origins. Ecolabeling also gives the impression of loyal sourcing although there is little to prevent supermarkets from shifting their purchasing from one supplier to another and from one country to the next for lower-priced shrimp⁶⁴.

Supermarket websites state the company's respect for human rights⁶⁵, but not that the human rights obligations described might apply only to their suppliers and not their own buyers. Buyers may have instructions to procure the lowest-priced shrimp available meeting their size and quality specifications, and unless there is an exclusion, today that would include shrimp purchased at wholesale prices lower than what the shrimp cost to produce, making it almost certain that the supermarket is purchasing some proportion of shrimp made with unpaid production and exploitation⁶⁶. Vague commitments to source only sustainable seafood do not make it clear that cutthroat purchasing practices could likely make it impossible for suppliers to meet relevant social and environmental standards⁶⁷ consistently.

Feed, drug and genetics companies also leverage shrimp production to their advantage by selling dependency-forming products to farmers at very high prices that put farmers into the position of needing to finance their feed and drug purchases when crops fail, which some crops inevitably do. Feed and drugs comprise around 50-70% of the total cost of shrimp production today, and that cost rises by 20% when the farmer has to buy feed and drugs on credit. This efficiency taken by feed companies is crucial to their profits but again is paid for by a commensurate loss of earnings for shrimp producers and workers.

⁶¹ 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>

⁶² 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*).

⁶³ 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*.

⁶⁴ Shrimp exports from Vietnam dropped 21% in 2023 compared to 2022, due to lost sales to the USA and Europe, and 16% in 2022 from 2021. See, Vietnam.VN 2023. Shrimp exports in 2023 decrease by 21% compared to 2022. Vietnam Industry and Trade. December 12, 2023. <https://www.vietnam.vn/en/xuat-khau-tom-nam-2023-giam-21-so-voi-2022/>

⁶⁵ 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/>.

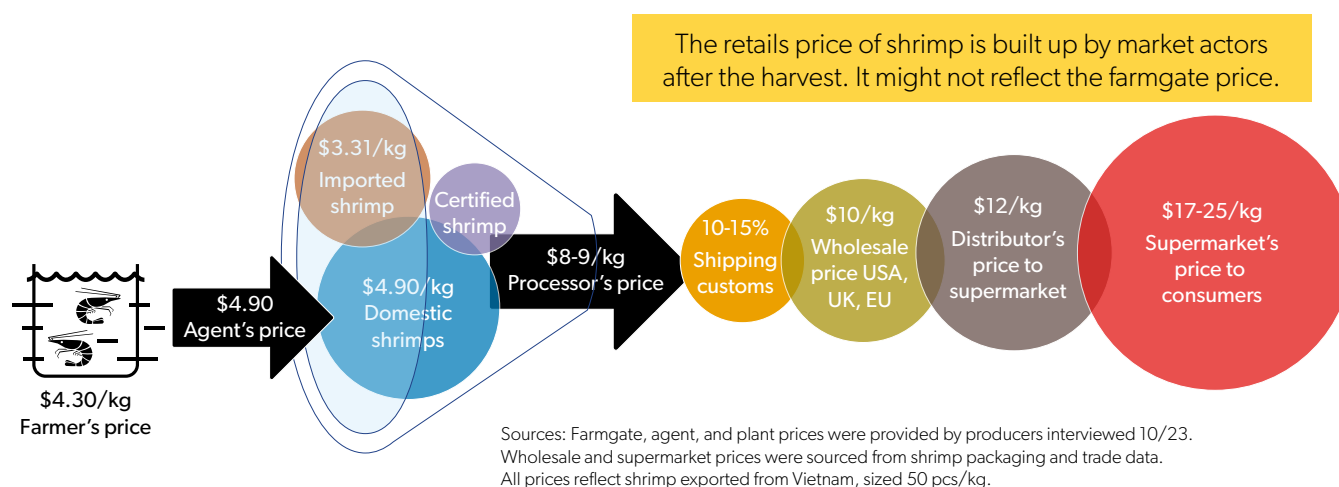
⁶⁶ Das RJ 2014. Low-Wage Capitalism, Social Difference, and Nature-Dependent Production: A Study of the Conditions of Workers in Shrimp Aquaculture. Human Geography 7:1 <https://doi.org/10.1177/194277861400700109>

⁶⁷ Re:Structure Lab 2021. Forced Labour Evidence Brief: Commercial Contracts and Sourcing (Sheffield: Sheffield, Stanford, and Yale Universities).

These market-based efficiencies are additive and boost the market's margins from trading wholesale shrimp at low prices at the cost of shrimp producers and workers. In Indonesia, for example, data from Shrimp Club Indonesia reported a decline in export prices, down to USD 3.62/kg in 2023 from USD 5.11 pre-pandemic. With the market price, the profit margin for exporters was lower, dropping from 163% to 72%. Transportation and customs cost exporters 10% on top of processing costs like labour, facility operations and management. The data showed they paid a further 12% to middlemen, but that is partially offset by the lower prices that middlemen can obtain from shrimp farmers. Shrimp producers and middlemen reported that lower prices are being offered to farmers at break-even levels, or less, resulting in delayed stocking, reduced density, postponed expansion, deferred investments, high interest debt, pond closures, and ultimately to reduced overall production. The median production cost of farming shrimp was \$1.83-2.54/kg with the largest portion (55-67%) spent on shrimp feed and labour cost at 6% of total production or \$ 9 cents per kilogram. Some farmers are continuing to operate by taking loans.

Data suggests 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 6 with the trading prices in the global market (March 2024) for shrimp from Vietnam. The efficiencies that are being taken by large market actors have created major inefficiencies in production. Downward pressure on farmgate prices is sustained and has been normalized, and this is eroding labour and human rights.

Figure 6: The consumer price no longer reflects the wholesale price of shrimp



Today's business model for shrimp production squeezes shrimp farmers from both ends, capping the labour budget at 5-7% of the cost of production. Production work that is essential must either be done within that budget or it goes unpaid. Processing workers in Indonesia said their employers required them to work unpaid "loyalty hours". Shrimp peelers in Vietnam said they worked overtime hours that were unpaid and today can earn a bonus only if they work every day of the month.

Wages on farms, on harvest teams, and generally in shrimp peeling are indexed to farmgate prices, and shrimp workers said they earn wages that are based on the yield — for example their wages depend on the number of kilograms of shrimp that they peeled, or the crop yield or tonnage harvested. The shrimp workers did not typically know their wage rate. Employers did not typically reveal it, and this can become wage deception where the worker does not have the information that is necessary to know if they are being paid fairly or as they had agreed.

A major takeaway from this research is a very simple truth. Shrimp producers are operating with a very small labour budget that does not afford formal employment conditions, like written contracts, health insurance and overtime pay. Shrimp producers provide largely informal working conditions. When wholesale prices fall, the conditions do not improve. In fact, labour conditions in shrimp production are deteriorating rapidly and significantly in 2023/24, according to the price, cost and earnings data collected for each country and tier. Supermarkets should never claim

⁶⁸ 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.

“good” or “improving” working conditions in shrimp production and certifications should close loopholes to avoid making misrepresentative claims⁶⁸.

2.3 Regional consolidation in the shrimp sector

Regional consolidation among integrated firms in the shrimp sector is another major influence on shrimp work wages and producer earnings. The largest processing companies are driving market integration around low farmgate prices without necessarily operating farms themselves. Vertically integrated firms with feeds and hatcheries are driving modernization on shrimp farms in Southeast Asia and South Asia towards the model of factory farming, like for poultry.

The life of a shrimp begins at a hatchery. Genetics is driving modernization and among the vertically integrated firms behind genetics is Charoen Pokphand Foods (CP Foods), a division of Charoen Pokphand Group, a public company headquartered in Thailand. It is considered to be the number one shrimp breeding (genomics) company in the world. CP Foods has shrimp farming and mostly hatchery operations in Thailand, India, Vietnam, Malaysia, Philippines, Indonesia, China and the U.S., according to the company’s website⁶⁹, and genetic improvement has been the driver to their expanding shrimp business. CP Foods has the size to leverage sales and prices of post-larvae to farms, shrimp feed and other products to the major shrimp producing countries in Asia. Charoen Pokphand Foods is also the world’s largest animal feed producer, with an agribusiness arm that operates in 17 countries. It is also one of the world’s largest poultry, swine and shrimp producers. The company has published a Human Rights Policy and an Employment and Labour Management policy on its website⁷⁰.

The other major driver of the shrimp business in Asia is shrimp processing for export. Thai Union, a public company based in Thailand, operates shrimp hatcheries, feed mills and processing plants. Shrimp falls under its frozen division, according to its organizational chart, and is distributed by Chicken of the Sea Frozen Foods to supermarket and other buyers. It is not clear whether Thai Union produces commercial quantities of shrimp in 2024⁷¹. Thai Union Group operates joint ventures for processing in Indonesia, Vietnam and India, and for shrimp feeds as well. Thai Union partner Avanti Feeds in India is involved in feeds and hatcheries and is producing 15 metric tonnes of shrimp for export on 500 hectares⁷². The company has published a framework for human rights due diligence and a living wage assessment⁷³.

In India, vertically integrated shrimp companies include Apex Frozen Foods, Penver Products, Devi Fisheries Limited, and BMR Industries, according to the company websites. Sandhya Aqua and Nekkanti Sea Foods are integrated shrimp companies with hatchery facilities. These companies are major suppliers to grocers in the United States, United Kingdom and Europe. For example, Walmart is a recent customer of Penver Products for shrimp imported from India, according to customs records, and Costco is a recent customer of Devi Fisheries. According to the company website, Apex Frozen Foods sells its shrimp in the UK and Europe as well as in America to Chicken of the Sea Frozen Foods, Ocean World Ventures LLC, and Pacific Sea Food Group.

In Indonesia, the vertically integrated shrimp companies are CP Prima, Japfa Comfeed Indonesia and Sekar Bumi in Indonesia. CP Prima, affiliated with CP Foods in Thailand, also operates in Indonesia as a vertically integrated company with its own feed mills, hatcheries, farms, processors and export facilities. Major shrimp exporters in Indonesia include Bumi Menara Internusa, Bahari Makmur Sejati, Sekar Bumi Tbk, Pabrik Lamongan PT BMI, Phillips Seafoods Indonesia, Tri Mitra Makmur, Wirontono Baru, Bumi Pangan Utama, and Mega Marine Pride. Bahari Makmur Sejati has recently supplied Indonesian shrimp to USA-based distributor Aquastar, according to custom records, and Mega Marine Pride and PT Sekar Bumi have supplied Chicken of the Sea Frozen Foods, Eastern Fish and Aquastar in the U.S.

⁶⁸ 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.

⁶⁹ See, <https://www.cpp.co.id/farm-hatchery/shrimp-hatchery>

⁷⁰ CP Foods 2024. Human Rights and Diversity. CPF website. April 22, 2024. <https://www.cpfworldwide.com/en/sustainability/people/human-rights-and-diversity>

⁷¹ See, for example, the organizational chart on the Thai Union website at <https://www.thaiunion.com/en/about/people/organization-chart>, a press release announcing the development of automated farms in Satoon and Trang provinces in a joint farming venture with Mitsubishi Corporation, at <https://www.thaiunion.com/en/newsroom/press-release/606/thai-union-frozen-subsidiary-entering-farming-jv-with-mitsubishi>

⁷² See, for example, <https://avantifeeds.com/division-farms/>

⁷³ See, for example, a press release by Thai Union, at <https://www.thaiunion.com/en/newsroom/press-release/1350/human-rights-due-diligence-framework>

In Vietnam, Minh Phu Corporation is a public company that is vertically integrated with hatcheries, farms and plants. The company produces about 4% of the shrimp that it processes and exports but with plans for expansion⁷⁵. Minh Phu appears to distribute shrimp in the U.S. through M Seafood and through its customers Export Packers and Aqua Star, which appears to supply Product of Vietnam shrimp to Target. 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 U.S. by Tampa Bay Fisheries and Chicken of the Sea Frozen Foods. Major shrimp exporters in Vietnam include Stapimex, Truong Phu Seafood, Nha Trang Seafood and Taika Seafoods, or Tai Kim Anh Seafood Joint Stock Corporation, and Camimex are also major shrimp exporters from Vietnam that operate processing facilities but are not vertically integrated. Camimex in Vietnam sells shrimp to Sainsbury's supermarket in the UK and to Guigal, Co-op and Trans Gourmet and Swiss Prime Taste in Europe, based on recent custom records and company websites. Tesco imports some shrimp from Nha Trang Seafood. U.S.-based shrimp distributors Eastern Fish, Sunnyvale and Harvest of the Sea (Ore Cal) have recently imported shrimp to the U.S. from Truong Phu Seafood.

The number of transnational relationships in the shrimp sector is relatively small, according to customs records for shrimp imports to the U.S., UK or Europe. The market appears to be highly integrated and consolidated, with some of the bigger supply-side firms also playing a big role in distribution, for example Apex and Minh Phu have wholesale divisions based in the West, while Thai Union's Chicken of the Sea appears to be a major purchaser of shrimp from all sources and is among the leading distributors of shrimp in the West.

At the crux of each of these trade relationships is a maximized profit margin, and this is reflected in the labour conditions in shrimp production that shrimp workers have described. Harsh working conditions are a side effect of this interlinking profit-maximizing business model that appears to leverage higher profits by squeezing on prices and costs in additive ways. Fish meal plant operators said wholesale prices they earn for fish-for-meal and logistics have declined to favor their feed companies customers, for example, and in turn they now need to lower their costs by buying fish from middlemen instead of directly from fishers. That results in lower earnings for fishing vessel owners and creating more fishing pressure.

Large processors offer farmers lopsided conditions and below-market prices, according to members of a shrimp farming co-operative who have invested in modernizing and increasing the scale of production. Large processors control the farmgate prices to allow for large orders at the low prices offered by foreign buyers, and to pay for requirements like certifications that Global North supermarkets demand while paying prices that require farmers to operate at a loss.

The data collected for this research show a clear pattern of market failure that is being implemented by the largest companies in the shrimp sector in Asia on behalf of supermarket retailers in the United States, United Kingdom and Europe. With their size and their actions, the data showed that these firms are forcing farmgate prices down to levels lower than shrimp which meets their specifications can be produced. This is allowed by weak governance on the supply side and by major gaps in enforcing the rule of law, particularly the prohibitions on forced labour in Indonesia and India and mandatory written contracts and overtime in Vietnam. Shrimp workers, and arguably consumers, are paying a steep price to increase the profits of international retailers first and foremost, but also first tier processors.

⁷⁵ 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>



2.4 Market levers on production and consequences for shrimp work at each tier

When large companies use their size and purchasing practices to require suppliers to sell products to them priced at the break-even point or lower, the supplier is pushed to seek out cheaper products and may use their size to leverage lower prices from producers that drain their working capital and reduce their labour budget. This extensive, multi-country research has revealed a few places in the shrimp supply chain where disproportional profits are taken by large market actors that appear to be destabilizing shrimp production and working conditions for shrimp workers. They include the places where middlemen procure shrimp or fish-for-meal on behalf of the large market actors – processing facilities, feed companies, distributors and supermarkets – insisting on low prices from their suppliers while also imposing higher costs on producers for costly requirements and specifications that cannot be recovered in the selling price.

Underpaying for production leads to cost cutting and abuses, including debt bondage and forced labour. Shrimp producers and shrimp workers are captured in a market failure and a pattern of market inefficiencies that have put a thumb on the scale. Market actors have in effect shorted the system of production to the degree that unpaid labour has become prevalent in the shrimp supply chain. Shrimp workers are unpaid or underpaid today for the same work they previously performed for earnings before the pandemic. Conditions of concern that appear to include indicators of forced labour are summarized in Table 3.

Table 3: Working conditions of high concern in the shrimp supply chain in 2024

Shrimp worker:	Areas of high concern in Indonesia
Fishers	Not reviewed on the basis that the Indonesian fish meal industry is a small contributor to export-oriented shrimp farms at this time
Fish meal plant workers	Potential abuse of vulnerability for not receiving minimum wages, health insurance, or for pay deductions for recruitment fees
Hatchery workers	No observable areas of concern: most accessible, most staff are in formal contracts with salary are equal or more than minimum wage
Farm workers	Wage deception occurs in payment schemes because wages are conditional to a successful harvest and reasonable farmgate prices (currently prices are very low). No withholding of wages found – but withholding the bonus is common. Working conditions are informal and employers have discretion to avoid mandatory requirements for providing health and social protection. Some physical restriction of movement was noted and workers remain on standby for 24 hours.
Harvest workers	Wage deception was observed in this employment relationship. Wages are performance-based but also conditional to reasonable shrimp prices (currently prices are very low).
Shrimp peelers	Wage deception was observed in this employment relationship and payment system. Wages of \$0.02/kg are performance-based but also conditional to reasonable shrimp prices (currently prices are very low)
Processing plant workers	Excessive unpaid overtime was observed. Intimidation and threats were reported and a coordinated response was observed to disputes raised by shrimp processing workers. Disputes were ‘solved’ by the company acting with the military regional unit, local government, company’s private investigator, and the police, for example dissolving trade union activity.

Shrimp worker:	Areas of high concern in India
Fishers	Not reviewed
Fish meal plant workers	Not reviewed
Hatchery workers	Abuse of vulnerability, restriction of movement, isolation, abusive living and working conditions, and excessive overtime
Farm workers	Abuse of vulnerability, abusive living and working conditions, excessive overtime, and debt bondage
Harvest workers	Abuse of vulnerability, abusive living and working conditions, excessive overtime, and debt bondage
Shrimp peelers	Abuse of vulnerability, abusive living and working conditions, debt bondage, excessive working hours, restriction of movement, isolation, and intimidation and threats
Processing plant workers	Abuse of vulnerability, abusive living and working conditions, debt bondage, excessive working hours, restriction of movement, isolation, and intimidation and threats

Shrimp worker:	Areas of high concern in Vietnam
Fishers	Unpaid overtime, isolation, restricted movement, possibility of debt bondage for fishers from their up-front costs to obtain a certification.
Fish meal plant workers	Bonuses have been removed by the plant operator citing low prices and fish meal plant workers are earning less for the same work as before
Hatchery workers	No observable areas of concern and most staff are in formal contracts with salary equal to or higher than the minimum wage
Farm workers	Large gender pay gap, some restriction of movement, bonuses and overtime pay are conditional to the success of the crop and reasonable farmgate prices for the shrimp (currently very low)
Harvest workers	Unpaid overtime, abuse of vulnerability, deception, possibility of debt bondage from needing to pay their own work costs
Shrimp peelers	Excessive overtime, deception, abuse of vulnerability, restriction of movement; possibility of threats and coercion
Processing plant workers	Excessive overtime and the possibility of deception, a gender pay gap, and abuse of vulnerability

Shrimp worker:	Areas of high concern in Thailand ^{76,77,78,79,80,81}
Fishers	Unpaid work, unpaid overtime, isolation, restricted movement, abuse of vulnerability, physical abuse, pay deductions, fee based recruitment, forced labour
Fish meal plant workers	Unpaid overtime, pay deductions, abuse of vulnerability
Hatchery workers	Unpaid overtime, pay deductions, abuse of vulnerability
Farm workers	Large gender pay gap, large migrant pay gap, wage deception, restriction of movement, excessive overtime, pay deductions, possibility of abuse of vulnerability, child labour
Harvest workers	Large migrant pay gap, unpaid work, wage deception, child labour, unpaid overtime, abuse of vulnerability, wage deception, possibility of debt bondage from needing to pay their own work costs
Shrimp peelers	Large gender pay gap, large migrant pay gap, unpaid work, wage deception, child labour, unpaid excessive overtime, wage deception, abuse of vulnerability, restriction of movement, threats and coercion
Processing plant workers	Excessive overtime and the possibility of wage deception, large gender pay gap, large migrant pay gap, and abuse of vulnerability

Shrimp worker:	Areas of high concern in Bangladesh ^{82,83,84}
Fishers	Large migrant pay gap, child labour, unpaid work, isolation, restricted movement, abuse of vulnerability, debt bondage
Fish meal plant workers	Possibility of abuse of vulnerability and unpaid work
Hatchery workers	Possibility of abuse of vulnerability and unpaid work
Farm workers	Large gender pay gap, large migrant pay gap, wage deception, restriction of movement, excessive overtime, pay deductions, possibility of abuse of vulnerability, child labour
Harvest workers	Large gender pay gap, large migrant pay gap, child labour, wage deception, excessive overtime, pay deductions, abuse of vulnerability, possibility of debt bondage from needing to pay their own work costs
Shrimp peelers	Excessive overtime, deception, abuse of vulnerability, restriction of movement; possibility of threats and coercion
Processing plant workers	Excessive overtime and the possibility of deception, a gender pay gap, and abuse of vulnerability

⁷⁶ Human Rights Watch 2018. Hidden chains: rights abuses and forced labour in Thailand's fishing industry. Human Rights Watch website, April 22, 2024, https://www.hrw.org/sites/default/files/report_pdf/thailand0118_report_web.pdf

⁷⁷ Thomson Reuters Foundation 2018. Trapped at Sea: Blood, Sweat, and Tears of Thailand's Fishing Industry, Reuters website, January 22, 2018, <https://www.reuters.com/article/idUSKBN1FC0Z5/>

⁷⁸ Issara Institute 2021. Top 5 Labour Conditions in 2019-2020: a field-based analysis of worker reporting and business responses in Thailand, January 2021 report. Issara Institute website, <https://www.issarainstitute.org/reports-and-data>

⁷⁹ Oxfam International 2018. Supermarket responsibilities for supply chain workers: continuing challenges in seafood supply chains and the case for stronger supermarket action. Oxfam repository. April 22, 2024, <https://oxfamlibrary.openrepository.com/handle/10546/620480>

⁸⁰ US Department of Labour 2024. List of Goods made with Forced or Child Labour, US Government website. April 22, 2024, <https://www.dol.gov/agencies/ilab/reports/child-labour/list-of-goods-print>. Noting, shrimp from Thailand are made with significant forced labour and significant child labour.

⁸¹ US NOAA 2020. Report to Congress Human Trafficking in the Seafood Supply Chain Section 3563 of the National Defense Authorization Act for Fiscal Year 2020 (P.L. 116-92). National Ocean and Atmospheric Administration of the US Government.

⁸² US Department of Labour 2024. List of Goods made with Forced or Child Labour, US Government website. April 22, 2024, <https://www.dol.gov/agencies/ilab/reports/child-labour/list-of-goods-print>. Noting, shrimp from Bangladesh is made with significant child labour, and illegal forms of child work are prevalent in harvesting and processing shrimp, cited to U.S. Embassy- Dhaka. Reporting. January 14, 2021, January 16, 2020, February 13, 2018 and emphasizing an increase in child work in hazardous conditions during the pandemic. In fishing, Rohingya boys are bonded labourers and work to pay off their parents' debts over a 9 month fishing season. (Reuters 2017, TIP Report 2020).

⁸³ US NOAA 2020. Report to Congress Human Trafficking in the Seafood Supply Chain Section 3563 of the National Defense Authorization Act for Fiscal Year 2020 (P.L. 116-92). National Ocean and Atmospheric Administration of the US Government.

⁸⁴ Verite 2016. Research on Indicators of Forced Labour in the Supply Chain of Shrimp in Bangladesh. Verite website, April 22, 2024.

Shrimp worker:	Areas of high concern in Ecuador^{85,86,87}
Fishers	Child labour, forced labour, unpaid work, isolation, restricted movement, abuse of vulnerability, debt bondage
Fish meal plant workers	Unpaid work in the form of unpaid overtime and wage deductions for protective equipment; medical coverage for workplace injury might not be provided and the possibility of wage deception
Hatchery workers	Unpaid work in the form of unpaid overtime and wage deductions for protective equipment; medical coverage for workplace injury might not be provided and the possibility of wage deception
Farm workers	Large gender pay gap, large migrant pay gap, wage deception, Unpaid work in the form of unpaid overtime and wage deductions for protective equipment; medical coverage for workplace injury might not be provided and the possibility of wage deception
Harvest workers	Unpaid work in the form of unpaid overtime and wage deductions for protective equipment; medical coverage for workplace injury might not be provided and the possibility of wage deception
Processing plant workers	Excessive unpaid overtime and the possibility of wage deception, large gender pay gap



A shack on a shrimp farm where workers live (Andhra Pradesh, India, 2024) . Photo credit: © XXXXXXXXXX

⁸⁵ See US Department of State 2021. Trafficking in Persons Report. "Traffickers exploit Ecuador adults and children in forced labour within the country, including in shrimp farming and fishing." (p.219)

⁸⁶ US NOAA 2020. Report to Congress Human Trafficking in the Seafood Supply Chain Section 3563 of the National Defense Authorization Act for Fiscal Year 2020 (P.L. 116-92). National Ocean and Atmospheric Administration of the US Government. Noting that Ecuador also carries a yellow card rating from the European Commission (October 30, 2019) for a lack of control of illegal fishing and processing plants exporting to the E.U.. US-NOAA has also notified Ecuador to reduce IUU fishing (September 12, 2019).

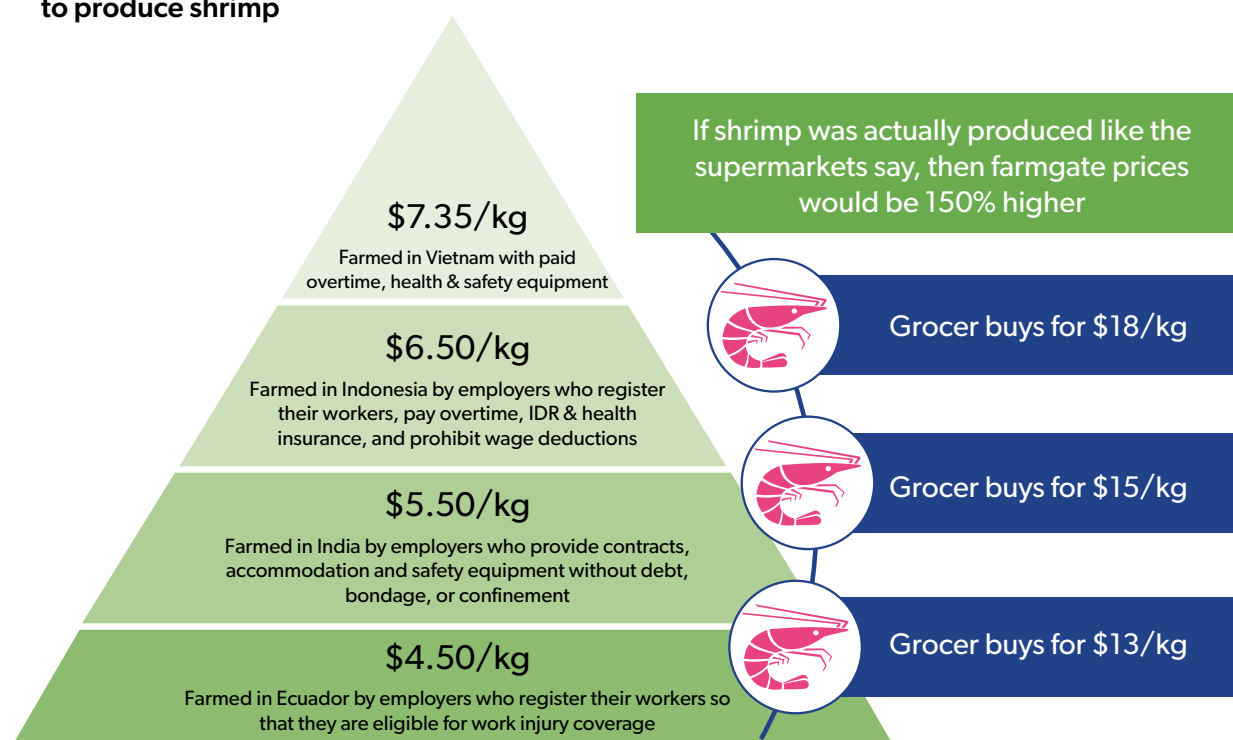
⁸⁷ Veuthey S and JT Gerber 2012. Accumulation by dispossession in coastal Ecuador: Shrimp farming, local resistance and the gender structure of mobilizations. Global Environmental Change 22:3:611-622

Conclusion:

Dealbreakers for supermarket shrimp

This research reveals an enormous disconnect in the food sector where grocery retailers are selling shrimp to consumers at very high prices and claiming to respect human rights, on one hand, and on the other hand are buying shrimp at wholesale prices below what shrimp costs to make⁸⁸, causing producers to operate with successive losses and workers to forfeit their rights. These results demonstrate a serious market failure in today's business model for shrimp. The data show that prices to farmers would be at least 150% higher if the shrimp sold in Global North supermarkets today was made at minimum wage rates and in compliance with applicable domestic laws for labour, workplace health and safety (Figure 5).

Figure 5: Wholesale shrimp prices would be 150% higher if farmers were paid what it costs to produce shrimp



Nearly 500 shrimp workers and producers across Asia reported that conditions are deteriorating. Unpaid labour has become prevalent at most tiers of the supply chain and purchasing pressures appear to be the direct and leading cause, according to trade and primary data and supporting details from interviewees. Pressure is building inside the supply chain because large firms are leveraging the competitive advantages afforded by their large share to extract as much capital from producers as they can, especially global feed companies and export-processors.

Conditions appear to be worse today than during the 2014-2018 period when significant forced and child labour became concerns. Based on relative earnings, supermarkets in the Global North appear to be playing a leading role in labour exploitation in shrimp aquaculture. Since significant forced labour in the

⁸⁸ Intrafish 2023. You have 100 pounds of shrimp trying to fit into an 80 pound bucket. Intrafish News. June 12, 2023. <https://www.intrafish.com/shrimp/you-have-100-pounds-of-shrimp-that-is-trying-to-fit-into-an-80-pound-bucket-dormant-us-shrimp-market-could-awaken-in-second-half-of-the-year/2-1-1460095>

shrimp sector came to light 10 years ago, and several governments have confirmed cutthroat purchasing practices in 2024, the time for faith in voluntary self-regulation has ended along with to-do lists for supermarkets that human rights organizations have prepared again and again in good faith.

Instead, dealbreakers are needed for supermarket shrimp, and they must be transparent and industry-wide. Arguably the most important is the need for a red line in shrimp procurement prohibiting dominant supermarket companies in the U.S., UK and Europe from leveraging wholesale prices at or below what it costs to produce shrimp, since this is a direct cause of the widespread unpaid labour that is prevalent in the global shrimp supply chain today. Besides causing more extreme labour exploitation where shrimp prices fall the lowest, for example in India, adulteration and other cost-cutting measures skirt the law.

Solutions can be achieved in a number of ways like standard contract provisions to prevent price gouging, annual benchmarking of shrimp worker earnings for every shrimp producing-country, and minimum prices/kg and rules for changing course when earnings decline. Supermarkets must reverse course and start rewarding contracts where good labour conditions prevail.

Caption here . Photo credit: © XXXXXXXXXXXXX





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