

# HIDDEN HARVEST

Human Rights and Environmental Abuses in  
India's Shrimp Industry



## **Hidden Harvest**

### **Human Rights and Environmental Abuses in India's Shrimp Industry**

This report was made possible through the hard work of dedicated investigators. These men and women tirelessly collected information about labor conditions in the Indian shrimp supply chain, interviewing over 150 workers and other stakeholders in the process. We are grateful to them for the time and energy they invested, both day and night, in this investigation and for sharing their extensive knowledge of the shrimp industry. While they remain anonymous, their work is the bedrock of this report and the reason so much evidence of exploitation in this supply chain came to light.

Corporate Accountability Lab (CAL) is an independent non-profit organization, with a mission to unleash the creative potential of the law to protect people and the planet from corporate abuse. CAL deploys innovative legal strategies to combat a wide range of egregious abuses – including forced labor and trafficking – by companies operating in the United States and abroad.

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All photos included in this report were taken by Corporate Accountability Lab field investigators.

Cover photo: Women workers in a shrimp processing facility (Andhra Pradesh, 2024)

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# Acronyms

<b>ASC</b>	Aquaculture Stewardship Council
<b>BAP</b>	Best Aquaculture Practices
<b>CAA</b>	Coastal Aquaculture Authority
<b>ESI</b>	Employees' State Insurance
<b>ILO</b>	International Labour Organization
<b>NGT</b>	National Green Tribunal
<b>NOAA</b>	National Oceanic and Atmospheric Administration
<b>PF</b>	Provident Fund
<b>SIMP</b>	Seafood Import Monitoring Program



# Executive Summary

Over the past decade, India has emerged as the United States' leading source of shrimp, the most consumed seafood in the country. However, this success is marred by a production process that relies on forced labor, dangerous and abusive working conditions, and environmental destruction to meet demands for ever-lower prices. While countries like Thailand, China, and Bangladesh have faced criticism for similar abuses, India, which supplies almost 40 percent of U.S. shrimp imports, has remained under the radar with little public scrutiny – until now.

This extensive, multi-year investigation exposes pervasive systemic abuses throughout the Indian shrimp supply chain, from hatcheries to shrimp farms to processing facilities. Standard practices include exploiting vulnerable lower caste and migrant populations to work under dangerous conditions, constraining worker movements through guarded company housing, fostering debt bondage, destroying essential mangrove and wetland habitats, and polluting community water supplies. That reality shapes the lives of countless workers, undermines their health and safety, and eviscerates their physical environment, all to serve the interests of those who seek to promote sales at the other end of the supply chain. Meanwhile, the Indian government has failed to take effective action to address these violations of its labor, health and safety, and environmental laws – as well as numerous international conventions.

## **1. For the past decade, India has been the leading exporter of shrimp to the United States.**

A significant trade shift began in 2009 when Indian shrimp producers gained permission to import *L. vannamei* (whiteleg) shrimp broodstock, the primary type of farmed shrimp consumed in the United States and globally. By 2013, India overtook Thailand to become the largest exporter of shrimp to the United States. Indian shrimp production, centered in Andhra Pradesh and the east coast of India, proliferated as the Thai shrimp industry struggled with shrimp disease and repeated findings of forced labor. When Thai labor practices improved and helped to drive up prices for Thai shrimp, U.S. importers quickly shifted to Indian shrimp due to its lower prices and abundant supply. During this period, the Indian shrimp industry's market share in the United States continued to expand, reaching 40 percent of all shrimp imports in 2023.

## **2. Employers in the shrimp industry exploit vulnerable workers across the supply chain.**

The Indian shrimp workforce is primarily composed of workers from Dalit, Adivasi, and fisher communities, many of whom are internal migrants and from regions with few employment options. Migrant workers are particularly vulnerable to exploitation because they are far from home, may lack social networks, and often have few other job opportunities. Through recruiters, companies prey on the vulnerability of those needing work. Recruitment loans tie workers to jobs, keeping them in debt bondage. Most workers in the Indian shrimp industry lack contracts with their employers, resulting in job insecurity and the absence of a formal connection to companies. These hidden, informal workers are at high risk for forced labor – especially those whose housing is tied to their employment, a common practice across the supply chain. Workers report an exploitative relationship with employers and feeling trapped in abusive jobs with few alternative means to earn a living. Child labor is also prevalent, with young teenage girls working in processing facilities to help support their families.

### **3. Forced labor and dangerous and abusive conditions are common in the Indian shrimp sector.**

Under international standards, forced labor occurs where work is conducted “under the menace of penalty” and is not voluntary, as occurs when Indian shrimp workers are held in debt bondage or restricted to guarded company property through housing. In addition, dangerous working conditions exist throughout the supply chain. For example, workers on shrimp farms handle hazardous chemicals without appropriate protective gear, leading to injuries. Workers in the processing sector endure frostbite and rashes from prolonged contact with frozen shrimp, chemicals, and brine – a problem exacerbated by the inability to take time off work to allow their injuries to heal. Working hours in the shrimp supply chain are also excessively long; in hatcheries and shrimp farms, workers report working more than twelve hours a day. In the processing sector, workers live in overcrowded and often unsanitary conditions under the careful surveillance of company guards. They are rarely allowed to leave the premises, sometimes as infrequently as once a month. When they do leave with express permission, it is for a limited time, often just a few hours. Workers, especially in the processing sector, describe excessive verbal abuse, and women experience gender discrimination and harassment. Workers report feeling intimidated and threatened, fearing retaliation if they speak to anyone outside the company.

### **4. The shrimp industry threatens nearby ecosystems, contaminates groundwater, and contributes to a decrease in fish yields.**

Shrimp production in India is causing severe environmental damage and impeding the sustainability of other industries near shrimp production facilities, including agriculture and fishing. Hatcheries and shrimp farms are often built along the coastline, sometimes replacing or harming mangroves, wetlands, and agricultural areas. This destruction of mangroves harms wild species that flourish within them, including juvenile fish, and makes the area more susceptible to major weather events. Hatcheries and shrimp farms also release sewage into the ocean and other waterways, polluting coastal waters and contributing to decreased fish yields, making it increasingly difficult for traditional fisher communities to earn a living. Discharged water from hatcheries and shrimp farms can contain contaminants from shrimp waste, feed, antibiotics, and other pollutants that are released into groundwater or other coastal estuaries, contaminating communities’ groundwater and causing health problems.

### **5. A lack of governmental oversight enables human rights and environmental abuses in the sector.**

The Indian and Andhra Pradesh governments have generally left the shrimp industry to monitor itself, with little enforcement of the relevant labor and environmental laws. Private certification schemes have emerged in the absence of government action. The farmed shrimp sector is primarily covered by two certification schemes: Best Aquaculture Practices (BAP) and Aquaculture Stewardship Council (ASC). These certification schemes purport to ensure that the farmed shrimp sold with their verification marks were ethically produced – meaning the producers complied with labor laws and that environmental impacts were minimized. While the standards in these voluntary industry programs are laudable, they are regularly violated, including in certified facilities. BAP and ASC function, as a practical matter, as little more than marketing ploys that fail to protect workers or the environment. The lack of regulation in the shrimp sector allows companies to slough off the costs of production onto vulnerable individuals and local communities who must deal with the contaminated water, ravaged mangroves, and polluted agricultural land.

The shrimp industry in India is at a crossroads. It is time that U.S. supermarkets, restaurants, and wholesalers – the big buyers of Indian-produced shrimp – work with producing companies to improve the working conditions and clean up the environmental harms associated with this industry. Indian shrimp producers must comply with Indian labor and environmental laws and international conventions, respect their workers, and allow them to work and live with dignity. The Indian government must monitor the shrimp sector, enforcing existing laws and passing stronger regulations – while the U.S. government must regulate shrimp imports to ensure all legal requirements are met. Shrimp produced with forced labor has no place competing in the U.S. market.

The conditions found in the Indian shrimp sector are not inevitable but instead result from cost-cutting and downward pricing pressure by U.S. supermarkets, restaurants, and wholesalers that “squeeze” producers to provide ever-cheaper shrimp. Human rights and environmental protections are non-negotiable in corporate governance. It is time to prioritize the well-being and dignity of workers and the environment over profit-making from America’s favorite seafood.



# Recommendations

## For Producing and Exporting Companies

Shrimp-producing and exporting companies in India must:

- 1) Abide by Indian labor, health and safety, and environmental laws, including but not limited to the Inter-State Migrant Worker Act, the Minimum Wage Act, the Factories Act, the Contract Labour Act, the Bonded Labour (Abolition) Act, and the Prevention of Atrocities Act.
- 2) Pay a living wage to workers, eliminate target-based payments, and ensure that workers are paid the total amount they are owed with no withholdings.
- 3) Hire workers directly as employees and comply with ILO Recommendation 203 by eliminating recruitment fees of all kinds, including to third parties, and paying back any recruitment fees already paid by workers.
- 4) Provide workers with written contracts with the company in a language they understand and with accurate pay slips each pay period, which should be at least once per month.
- 5) Enroll workers in and pay the Provident Fund (PF) and Employees State Insurance (ESI) to all workers, including daily workers.
- 6) Allow workers to leave company property outside of working hours, regardless of whether workers reside in company hostels or are otherwise housed by their employer and ensure that workers are not surveilled in their personal activities on or off company property.
- 7) Respect workers' right to freedom of association, including the right to organize, collectively bargain, and affiliate to an independent union of the worker's choice.
- 8) Abide by international laws and conventions, including but not limited to the International Labour Organization's (ILO) Fundamental Conventions.
- 9) Comply with the United Nations Guiding Principles on Business and Human Rights (UNGPs) by ensuring that a legitimate process is in place to identify, prevent, mitigate, and account for human rights impacts, and ensure that workers can receive remedy for harms.
- 10) Implement legitimate, accessible, predictable, equitable, transparent, and rights-compatible grievance mechanisms throughout the supply chain, consistent with Guiding Principle 31 of the UNGPs.

- 11) Implement a binding agreement with independent worker organizations to monitor working conditions in hatcheries, shrimp farms, and the processing sector to ensure workers' rights are protected.
- 12) Ensure that all shrimp hatcheries and farms in a company's supply chain mitigate environmental harm by processing and cleaning effluents in accordance with internationally recognized standards.
- 13) Provide adequate compensation, including potable water free of charge, to communities where hatcheries and shrimp farms in a company's supply chains have polluted groundwater and settle all pending judgments in a timely manner.

## **For U.S. Retailers, Restaurants, and Wholesalers:**

U.S. retailers, restaurants, and wholesalers must:

- 1) Implement a binding agreement with independent worker organizations to monitor working conditions in hatcheries, shrimp farms, and the processing sector to ensure workers' rights are protected.
- 2) Eliminate reliance on private certification schemes as the primary form of due diligence by working with independent worker organizations.
- 3) Pay the price for orders that covers the true cost of rights-respecting production and require supplier companies to pay their workers a living wage, mitigate environmental harm, and abide by all Indian labor and environmental laws.
- 4) Establish long-term and equitable contracts with suppliers, provide suppliers with a fair lead time to fill orders, and refrain from changing or cutting orders without warning.
- 5) Comply with the UNGPs to ensure that a legitimate process is in place to identify, prevent, mitigate, and account for human rights impacts, and ensure that workers receive remedy for harms.
- 6) Ensure that all shrimp hatcheries and farms in a company's supply chain mitigate environmental harm by processing and cleaning effluents in accordance with internationally recognized standards.
- 7) Provide adequate compensation, including potable water free of charge, to communities where hatcheries and shrimp farms in a company's supply chains have polluted groundwater and require all suppliers to settle pending judgments in a timely manner.

# For the Indian Government

The Indian and Andhra Pradesh Governments must:

- 1) Ensure that companies comply with Indian labor, health and safety, and environmental laws, including but not limited to the Inter-State Migrant Worker Act, the Minimum Wage Act, the Factories Act, the Contract Labour Act, the Bonded Labour (Abolition) Act, and the Prevention of Atrocities Act.
- 2) Implement robust monitoring of the shrimp sector, including labor conditions in informal parts of the supply chain such as peeling sheds and unregistered shrimp farms, and regulate environmental hazards associated with hatcheries and shrimp farms.
- 3) Require that workers have freedom of movement to enter and leave company-owned and controlled hostels.
- 4) Ensure that workers can exercise freedom of association and that companies respect workers' rights to organize and collective bargaining, and that workers are protected from retaliation.
- 5) Ratify and enforce all ILO fundamental conventions.
- 6) Improve the legal framework regulating child labor in India, including by ensuring that the Government categorizes work in the farmed shrimp sector as hazardous work prohibited for any child under the age of eighteen.
- 7) Implement and enforce the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act. Ensure that companies set up committees as required by law and that these have the legitimacy and capability to act as safe, fair, and functional grievance mechanisms.
- 8) Establish robust monitoring to ensure that hatcheries and shrimp farms process and clean effluents in accordance with international standards and provide enforcement mechanisms in cases in which farms and hatcheries fail to do so.
- 9) Implement comprehensive legal reform to better regulate the shrimp aquaculture sector, including by revoking the Coastal Aquaculture Amendment Act (2023) and enforcing laws previously in place, such as the 1996 judgment in *Jagannath v. Union of India & Ors.*
- 10) Ensure that shrimp hatcheries and farms provide adequate compensation to communities where they have polluted groundwater and remedy the damage, including settling all pending judgments from courts in a timely manner.

- 11) Stop all new construction of hatcheries and shrimp farms and remove hatcheries and shrimp farms illegally built on public lands.
- 12) Establish a region-wide study on the impact on communities from shrimp aquaculture, including polluted coastal and estuarine waters, groundwater, and the salinization of nearby lands.

## For the U.S. Government

The U.S. Government must:

- 1) Add shrimp produced in India to the Department of Labor's List of Goods Produced with Child Labor or Forced Labor.
- 2) Require all importing shrimp companies to fully trace their supply chains, from processor back to the farm and to the hatchery, and to make such information publicly available, pursuant to the requirements of the National Oceanic and Atmospheric Administration's (NOAA) Seafood Import Monitoring Program (SIMP).
- 3) Block all Indian shrimp entering the United States produced with forced labor, as required under Section 307 of the Tariff Act of 1930.
- 4) Improve information sharing between CBP and NOAA to enforce both SIMP and Section 307 of the Tariff Act of 1930 more effectively.
- 5) Require that audits under SIMP are carried out based on information about which importers present high risks of forced labor and other abuses, including Illegal, Unreported, and Unregulated (IUU) fishing.
- 6) Self-initiate one or more trade investigations to address the harmful impact on U.S. commerce of Indian shrimp produced under unreasonable conditions of labor rights violations and lax environmental regulation.
- 7) Ensure it is not buying shrimp produced with forced labor from India through public procurement.
- 8) Ensure strong implementation of the U.S. Food and Drug Administration's Food Traceability Final Rule, especially regarding food traceability, including imported farmed shrimp.

# I. Introduction

When Sabita finished tenth grade, she left home and traveled south to Andhra Pradesh to look for work.<sup>1</sup> With her family in debt and her father sick, Sabita hoped to reduce her family's financial burdens by working at a major shrimp company. When she arrived, Sabita found herself living with other young women in an overcrowded, guarded company hostel, where she was permitted to leave the company's property only once a month to purchase necessities.

Sabita and each of the tens of thousands of women like her spend eight hours every day peeling 60 pounds of frozen shrimp. They do this while supervisors harass them, yelling at them if they slow down. Because the ice and frozen shrimp are so cold, women like Sabita feel their skin hardening under the thin rubber gloves they are given as protection. If Sabita or her peers develop frostbite or open wounds from sustained contact with frozen shrimp, they could theoretically go to the hospital – but in reality, they cannot afford to take time off to allow the frostbite to heal. The INR 300 (USD 3.61) a day Sabita earns – about half of a living income in Andhra Pradesh – is essential income for her family.<sup>2</sup>

*“Look at my hands from peeling shrimp... Our hands burn and bleed from repeated exposure to the shrimp’s exoskeleton. I haven’t been well for the past four days. I have a fever, body aches and cough. ... If we don’t take care of ourselves, we’ll be too exhausted to work.”*

– Bina, a woman working in a peeling shed in Andhra Pradesh.



Although working in the farmed shrimp industry is dangerous, abusive, underpaid, and lacks job security, many workers have few other options. Andhra Pradesh and nearby states have become the epicenter for farmed shrimp production, pushing out rice paddies, other agricultural work, and traditional fishing along the coast.<sup>3</sup> Shrimp farms have taken over, along with the hatcheries that supply farms with juvenile shrimp and the peeling sheds and processing plants where workers process shrimp for export. As the physical landscape rapidly transitioned from fields of diversified agriculture and shores filled with fishing boats to unregulated, polluting shrimp ponds and hatcheries, the job opportunities for workers in the region became bleaker. The rapid expansion of India's shrimp industry is reflected in its capacity to

supply labor-intensive, hand-peeled shrimp to the largest market in the world, the United States. In 2009, India accounted for only 4.7 percent of the total volume of peeled shrimp imports, and Thailand was the largest supplier to the United States with a 34.7 percent share.<sup>4</sup> By 2013, India had nearly quintupled its share to 22.9 percent and surpassed Thailand as the largest exporter of shrimp to the United States.<sup>5</sup> In 2015, the Thai shrimp industry faced two existential challenges: shrimp disease, especially Early Mortality Syndrome (EMS),<sup>6</sup> and repeated allegations of forced labor.<sup>7</sup> As the Thai industry addressed human rights violations – increasing costs in the process – U.S. companies quickly looked elsewhere for cheap shrimp, often choosing India. By 2017, India accounted for 47.0 percent of all peeled shrimp imports into the United States, and in 2019, it supplied an incredible 60.3 percent of peeled shrimp imports.<sup>8</sup>

India's sudden competitiveness with countries known to use forced labor should have sounded alarm bells. The industry bears many tell-tale signs of exploitation: a workforce rendered especially vulnerable to exploitation based on caste, migration status, and gender; unrealistic price pressures on suppliers; poor enforcement of regulations; and an unquestioning market with high demand for labor-intensive, cheap goods. A closer look reveals that the Indian shrimp sector is rife with human rights and environmental abuses, impacting an estimated 1.2 million families who directly or indirectly rely on the sector for income.<sup>9</sup>

Workers in the shrimp sector, especially internal migrants, are at a high risk of forced labor.<sup>10</sup> Primarily from regions in India with few alternative jobs, workers often have few other employment options. Many workers live in overcrowded and sometimes unsanitary company hostels, where they are confined and not allowed to leave the premises without express permission, often for only a few hours at a time once or twice a month. Guards keep workers from leaving and outsiders from entering. Workers report being verbally abused, intimidated, and threatened; many avoid speaking to anyone outside the company due to fear of retaliation and job loss. Through recruiters, who are often long-term workers, companies recruit workers; workers often pay recruitment fees or receive loans that entrap them in debt bondage, making it difficult, if not impossible, for them to leave the job.

***“As there are no other employment opportunities, we are forced to work under these exploitative conditions.”***

-Sahaja, a woman working at a processing plant in Andhra Pradesh



*A shrimp farm near the Coringa Forest Reserve  
(Andhra Pradesh, 2024)*



Workers, both local and migrant, are subject to dangerous and degrading working conditions throughout the supply chain. On shrimp farms, workers handle dangerous chemicals, often without appropriate protective gear, leading to rashes and other injuries. Women workers in the processing sector develop frostbite from holding and peeling frozen shrimp for hours at a time; they also suffer from skin inflammation and rashes from handling chemicals and brine. Unable to afford to take time off to allow their injuries to heal, these injuries worsen over time. Workers in hatcheries and shrimp farms report working excessively long hours, often upwards of twelve hours a day. Across the board, workers reported being yelled at and verbally abused.

**Workers pay the price of a system that generates millions of dollars of profit for large companies. While conditions vary across the supply chain and by company, the sector’s human rights and environmental abuses are systemic, driven by an incessant push to cut costs. U.S. retailers and buyers squeeze exporters, who in turn squeeze their workers and shrimp farmers. This drive to save money – and thus to profit – leads companies to violate an array of Indian labor, health and safety, and environmental laws, as well as numerous international conventions.**

*A Sandhya Aqua processing plant (Andhra Pradesh, 2024)*



Shrimp produced in India – hatched, grown, de-headed, and peeled by an exploited workforce – ends up on tables in the United States, cooked in shrimp scampi, eaten at parties as shrimp cocktails, and enjoyed in gumbo. Companies like Apex Frozen Foods, Avanti Feeds Limited, Devi Fisheries Limited (and its subsidiary Satya Sea Foods), Nekkanti Sea Foods, and Sandhya Aqua – as well as U.S. retailers such as Aldi, Costco, Hannaford, Kroger, Stop & Shop, Walmart, and Whole Foods, chains such as Red Lobster and the Cheesecake Factory, and local restaurants that buy shrimp from Sysco, U.S. Foods, and other national sellers – generate profit off of shrimp produced cheaply at the expense of workers and the environment.<sup>11</sup> **These companies buy shrimp from India because it is cheap. But it is cheap because producers underpay their workers, subject them to dangerous working conditions, and pollute the local environment.** Forced labor at the source is the culmination of relentless cost-cutting pressure at the buying end of the supply chain.

This report is one of the first to provide an overview of labor and environmental conditions in the Indian shrimp industry. It aims to act as a catalyst for change in the sector: pushing governments and companies, both Indian and U.S., to make systemic changes to the shrimp supply chain and governmental oversight, including paying a fair price for shrimp and fair wages to workers.

*Peeled shrimp in a peeling shed (Andhra Pradesh, 2022)*



# II. Methodology

This report is the culmination of three years of research and investigations into the Indian shrimp sector. It relies primarily on information collected during eight field visits between March 2021 and February 2024.<sup>12</sup> The fieldwork was carried out by an investigative team of Indian advocates and journalists and took place in Andhra Pradesh. The region is the epicenter of the shrimp industry in India, where numerous hatcheries, a large proportion of India's shrimp farms, and much of the processing sector are located.<sup>13</sup>

The information in this report is based on conversations and interviews CAL's field investigators carried out with workers in hatcheries, on shrimp farms, and in peeling sheds and processing plants,<sup>14</sup> as well as with members of local communities impacted by environmental harm from hatcheries and shrimp farms. The field investigators also spoke with supervisors and executives at shrimp companies, farm owners, government officials, human rights advocates, union leaders, and local doctors.<sup>15</sup> Collecting this information was sometimes challenging. CAL's field investigators were denied entry to company hostels, hampering access to workers. In some cases, they faced difficulty gaining the trust of workers who feared losing their jobs. CAL changed or anonymized names to protect workers who provided interviews and information from company retaliation.

Despite these difficulties, CAL's investigators interviewed over 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.

Due to the scarcity of written material on labor conditions in the Indian shrimp industry, our fieldwork is the primary source for this report.<sup>16</sup> However, a few key sources touch on different aspects of the industry. In May 2023, the social auditing company ELEVATE<sup>17</sup> published a human rights impact assessment for supermarkets Kroger and Lidl that examined Indian shrimp production.<sup>18</sup> The report found numerous indicators of forced labor and violations of Indian labor laws on farms and in the processing sector.<sup>19</sup> While private social auditing schemes that are not worker-driven often fail to identify sensitive labor abuses, in this case the auditors were able to find clear indicators of forced labor.

The International Labour Organization (ILO) also published a report in 2023 analyzing the food processing sector in Andhra Pradesh and Odisha, looking specifically at the shrimp industry.<sup>20</sup> Although it focuses on areas for industry growth, the ILO's report provides detailed information on the value chain that confirms many of CAL's findings. Similarly, a 2020 report by Boston Consulting Group (BCG) examines how to improve sustainability in the Indian shrimp industry while continuing to grow the sector.<sup>21</sup> While that report clearly emphasizes how to make the industry more efficient for companies, it also includes valuable information on the supply chain.<sup>22</sup> Our analysis also draws on several informative academic articles focused on the economic impact of the COVID-19 pandemic on the industry.<sup>23</sup> There is significantly more information on the environmental impacts of the shrimp production process in India, including information specifically on Andhra Pradesh. Several studies in India since the



1990s have highlighted the harms caused by shrimp production to coastal waters and land use, as well as land dispossession of fisher communities in the coastal belts.<sup>24</sup> Academic articles have also examined the environmental impacts,<sup>25</sup> as have studies by Indian government agencies.<sup>26</sup>

The present report provides one of the first overviews of labor conditions in the industry. Much of this information has not previously been documented publicly. While this report attempts to touch on as many facets of the industry as possible, much more remains to be researched. This report aims to provide a stepping stone to further research, as well as to improvements in working conditions, and an end to environmental harm resulting from the production of shrimp in India.



*A shrimp farm near the Coringa Forest Reserve (Andhra Pradesh, 2024)*

# III. The Indian Shrimp Industry: An Overview

## A. 2009-2023: Growth and Expansion

Across the United States, consumers can buy farmed Indian shrimp at grocery stores and restaurants for as little as \$7.00 a pound.<sup>27</sup> With more than 90 percent of all shrimp consumed in the United States imported,<sup>28</sup> and about 40 percent of imported shrimp coming from India,<sup>29</sup> cheap Indian farmed shrimp dominates much of the U.S. shrimp market. This dominance of Indian shrimp is a relatively recent phenomenon, the result of fifteen years of corporate investment in the sector as well as artificially low costs of production.<sup>30</sup>

Prior to 2009,<sup>31</sup> India was a minor player in the global shrimp industry, the seventh largest producer for the U.S. market – far behind Thailand, Ecuador, China, Indonesia, and other countries.<sup>32</sup> Policy changes in 2009 opened up imports of broodstock into India for a new species, *l. vannamei* (whiteleg shrimp), one of the most-consumed shrimp species in the United States.<sup>33</sup> Within a few years, India's farmed shrimp sector was booming, having become the second-largest producer of *l. vannamei* globally,<sup>34</sup> behind China (which primarily produces for Chinese consumption).<sup>35</sup> By 2013, India was the largest exporter to the United States, outstripping Thailand.<sup>36</sup> Since then it has continued on an upward trajectory, with some fluctuation in the last couple of years. Although 2020 saw a slight downturn due to the COVID-19 pandemic, in 2021, India produced 1.49 billion pounds of shrimp,<sup>37</sup> nearly one out of every six shrimp eaten by consumers worldwide.<sup>38</sup>

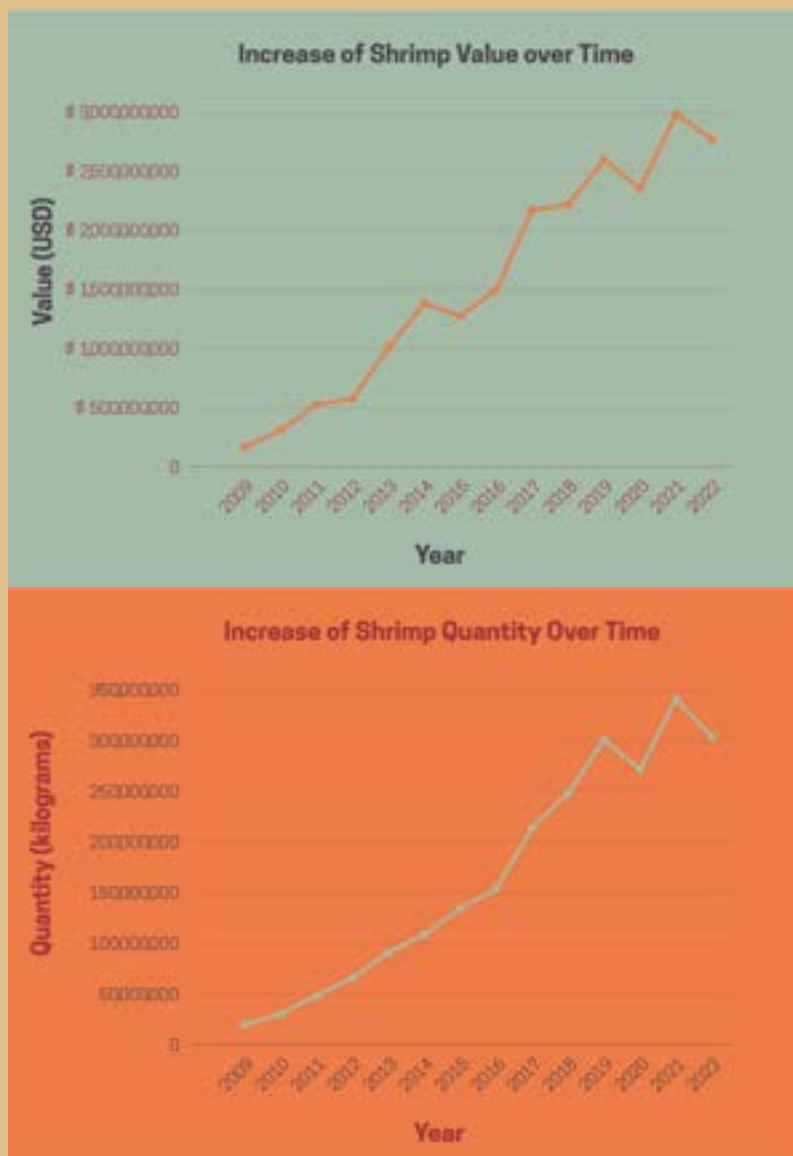
The introduction of the *l. vannamei* shrimp species to India revolutionized the Indian shrimp industry. Prior to 2009, India produced a different species of shrimp, *p. monodon* (black tiger shrimp). However, production remained at low levels.<sup>39</sup> *L. vannamei* has certain advantages that helped it to take off quickly and effectively. First, *l. vannamei* grow in columns in shrimp ponds, taking up less space and allowing more shrimp to grow at any given time.<sup>40</sup> (This contrasts with *p. monodon*, which grow on the bottom of ponds, limiting how many shrimp can grow at once.) Second, *l. vannamei* is hearty and less finicky than other species and can adapt to different temperatures and salinities.<sup>41</sup> Third, its taste is familiar to U.S. consumers, making it an easy sell in the United States.<sup>42</sup>

Much of the shrimp produced in India is exported to the United States, with the rest sent to the European Union, Japan, and other markets. Many Indian companies produce primarily for the U.S. market, as U.S. consumers eat more shrimp – an average of five pounds a year<sup>43</sup> – than consumers in any other country. Very little of the shrimp farmed and produced in India is consumed in India – despite India being the most populous country in the world.<sup>44</sup> As a result, many Indian producers are heavily dependent on the U.S. market, and suppliers to U.S. brands are subject to those companies' pricing demands.

Some major players from the Thai shrimp sector are also active in the Indian market. This includes both Thai Union and Charoen Pophkand (CP) Foods India, a subsidiary of Charoen Pokphand Group, a privately held Thai company.

In 2015, the Associated Press reported that Thai Union had been supplying shrimp produced with forced labor to U.S. supermarkets.<sup>45</sup> Despite that report, Thai Union continues to sell large quantities of shrimp to U.S. buyers. In addition, the company has expanded into shrimp production in India, investing in Avanti Feeds Limited in 2016.<sup>46</sup>

Thai Union has also invested in Red Lobster, the largest seafood chain in the United States, acquiring a minority share in 2016.<sup>47</sup> In 2020, it increased its ownership share in the chain, joining “with a group of investors to acquire the remaining stake from private equity group Golden Gate Capital.”<sup>48</sup> In 2023, Red Lobster offered unlimited shrimp for \$20 – a deal that led to the \$11 million in losses reported in the third quarter of 2023 for the company.<sup>49</sup>



*The production of shrimp in India increased significantly between 2009 and 2022.<sup>50</sup>*



## B. The Shrimp Production Process

Farm-raised shrimp pass through multiple owners during their short lives and subsequent processing. As shrimp grow and are readied for sale, they are shuttled along the supply chain, increasing in value at each stage. Beginning as broodstock, they grow in hatcheries into juvenile shrimp before being sold to agents who sell them to shrimp farmers. Once they grow to the desired size in the shrimp pond, farmers sell them to distributors. Distributors, in turn, sell them to peeling sheds who then sell them to processing plants. Once they have been processed – heads removed, peeled, deveined, possibly cooked, breaded, or seasoned, and packaged – they are exported to wholesalers who sell them to retailers and restaurants.



*The value of shrimp increases at each stage of the production process.*<sup>51</sup>

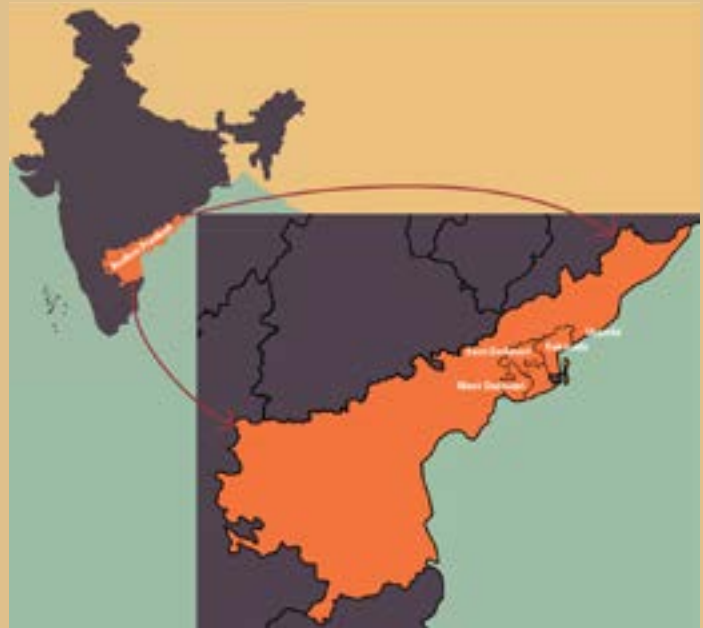
Most actors – whether individuals, small companies, or large exporting companies – specialize in a single node of the supply chain, with the majority investing in either processing plants or hatcheries. Companies that invest in more than one part of the supply chain still usually outsource farming operations – the riskiest part of the business – focusing on hatcheries and processing.<sup>52</sup> A few companies, including BMR Group, are vertically integrated and own their own farms.<sup>53</sup> But even vertically integrated companies are unlikely to own enough shrimp ponds to produce the amount of shrimp they export, and thus remain reliant on buying additional shrimp from the large number of smallholder shrimp farmers.

## 1. Hatcheries

Shrimp begin their life cycle as broodstock, which is imported into India.<sup>54</sup> In the case of shrimp, broodstock consists of reproductively mature adult shrimp that spawn eggs.<sup>55</sup> The eggs then grow in the hatchery for fifteen to 21 days until the juvenile shrimp are ready to be sold to shrimp farmers.<sup>56</sup> Poor breeding practices in hatcheries can lead to less valuable shrimp, including making shrimp more susceptible to disease or breeding shrimp that lack the homogeneity needed for export.

Hatcheries have proliferated in Andhra Pradesh, especially along the coast. As of 2023, there were 314 registered hatcheries in India,<sup>57</sup> but there are many more that are unregistered.<sup>58</sup> Within Andhra Pradesh, the East Godavari district is a center for shrimp hatcheries<sup>59</sup> with at least 150 hatcheries lining the coast near Uppada.

About 40 percent of hatcheries are owned by small or mid-sized companies.<sup>60</sup> Many have one or two units, often with fifteen to 30 workers per unit. A few larger companies also operate hatcheries and either own a few independent hatcheries or own hatcheries with multiple units. As of 2020, BMR Group, for instance, controlled 20-25 percent of shrimp hatcheries,<sup>61</sup> while a handful of other companies controlled an additional 35-40 percent.<sup>62</sup>



*A lab in a hatchery where shrimp seeds are cultivated (Andhra Pradesh, 2021)*



*Tubs for phytoplankton blooming in a hatchery in Uppada (Andhra Pradesh, 2021)*



*Containers for zoo- and phytoplankton reproduction in a hatchery in Uppada (Andhra Pradesh, 2021)*



*Feeding tanks in a hatchery in Uppada (Andhra Pradesh, 2021)*

## 2. Agents

Agents, often independent contractors working informally, provide shrimp farmers with juvenile shrimp, feed, and other inputs.<sup>63</sup> Because start-up and input costs for shrimp farming can be expensive, agents have proliferated as key players in the shrimp production process.<sup>64</sup> Farmers often buy feed and inputs from agents on credit, hoping to pay off the debt after selling the shrimp – either directly to processors or to the agent, who, also acting as the distributor, may have “the first right of refusal to a harvest.”<sup>65</sup>

## 3. Shrimp Farms

Shrimp farming is the midpoint of the shrimp production process. Between the time shrimp enter farms as juveniles and when they are harvested 120 days later, they grow to the required size for the export market.<sup>66</sup> *L. vannamei* can be grown and harvested year-round<sup>67</sup> and are usually harvested in three seasons each year.<sup>68</sup>

### The Cycle of Shrimp Farming

Once the shrimp farms have been stocked with shrimp seeds, workers carry out the same tasks at the same time each day.

First, workers feed the shrimp. Shrimp must be fed three to four times per day.<sup>69</sup> In smaller ponds, workers throw pellets of shrimp feed in an arc to ensure that shrimp throughout the pond receive equal amounts of food. In larger ponds, workers pull a raft across the pond and drop food at regular intervals into the pond.<sup>70</sup>

Second, workers monitor the shrimp’s health a couple of times a day.<sup>71</sup> This includes monitoring overall growth, the condition of their shells, and their digestion process. Workers provide medications and probiotics, change the quantity of feed, or improve the quality of water.<sup>72</sup>

Third, workers ensure the pond has the correct levels of acidity, dissolved oxygen, and aeration duration for shrimp to remain healthy.<sup>73</sup> They also ensure that lights, generators, and fencing are working properly.<sup>74</sup>





*A shrimp farm aerating the water (Andhra Pradesh)*

Shrimp farming is dominated by smallholder farmers, with about 90 percent of shrimp farms owned or run by small or midsize players.<sup>75</sup> Smallholder farmers often have shrimp farms ranging from one to three hectares.<sup>76</sup> Many smallholder farmers either own the land they farm, or they lease land to farm. Leases are often informal, with no written contracts between the farm owner and the tenant.<sup>77</sup> Some larger companies own their own shrimp farms, although this is less common. BMR Group and other large companies control only about 10 percent of shrimp farms.<sup>78</sup> These larger shrimp farms spread across 200-300 acres.<sup>79</sup>

Shrimp farmers often invest in aquaculture because they believe they can earn a better living from it than from traditional agricultural farming,<sup>80</sup> despite the shrimp market's volatility. Over the past few decades, traditional farmers across India – in agriculture rather than aquaculture – have lived precariously, threatened by increased costs and decreased profits. During this period, suicide of farmers in India has increased significantly, especially for Dalit farmers.<sup>81</sup>

Shrimp farming promises farmers greater rewards than traditional farming – but it also carries risk. Larger companies have outsourced the greatest risk in the supply chain to shrimp farmers,<sup>82</sup> including the danger of shrimp disease, which can decimate an entire season's yield, the risk of extreme weather events such as cyclones, and the risk of a dive in the price of shrimp – due to, for example, a global pandemic or a recession.<sup>83</sup> Shrimp farmers can lose everything in a single season from a bad harvest.

## Risks to shrimp are risks for farmer livelihood

Shrimp disease poses a special economic risk to shrimp farmers. Monoculture – in this case, the focus on a single shrimp species, *L. vannamei* – is especially susceptible to disease. In 2020, the Central Institute of Brackishwater Aquaculture (CIBA), an Indian government agency, found that shrimp farms were affected by the pathogen *Enterocytozoon hepatopenaei* (EHP), the Infectious Myonecrosis Virus (IMNV), the White Spot Syndrome Virus (WSSV), and the Hypodermal Hematopoietic Necrosis disease.<sup>84</sup> Taken together, these led to losses for farmers of as much as USD 760 million per year.<sup>85</sup> When disease hits a shrimp farm, farmers are often left on their own to handle the crisis, while processors – often much larger companies – turn elsewhere to fill their orders.

Smallholder shrimp farmers are squeezed at both ends, buying feed and juvenile shrimp, often on credit, and selling the grown shrimp for thin margins. If farmers' profit margins are too slim, they will not have the income to pay hired workers. Shrimp farming is less labor intensive than traditional agriculture. Some farmers can do all the necessary work with the help of family members or hire a small number of workers.<sup>86</sup> **However, while the number of workers on each individual farm is low, until farmers consistently and reliably earn enough to pay their workers, this industry will remain unsustainable and have a high risk of labor and environmental abuses.**

## Antibiotics in Shrimp Production

Antibiotic use in the Indian shrimp industry is a recurring theme of public discussion. Monterey Bay Aquarium Seafood Watch, a reputable online ranking of seafoods' sustainability, lists *L. vannamei* shrimp from India as an "Avoid," its lowest ranking.<sup>87</sup> This rating is due to consistent violations of regulations about establishing shrimp farms, the Indian government's failure to control antibiotic sales for use on shrimp farms and the "demonstrated illegal use of these drugs beyond exceptional cases."<sup>88</sup> Such findings are indicative of a lack of enforcement of environmental and industry regulations and laws.

Antibiotic use is not only potentially detrimental to human health, leading to increased resistance to antibiotics, but it also helps to explain the Indian shrimp industry's focus on national markets with fewer regulations and less monitoring of imported shrimp: China and the United States. While the European Union samples 50 percent of shrimp from India for antibiotic traces,<sup>89</sup> the United States tests 0.1 percent.<sup>90</sup> The minimal testing combined with the huge quantity of shrimp entering the United States means that there is a high risk of shrimp with traces of antibiotics entering the U.S. market from India.

## 4. Distributors

Like agents, distributors fill gaps in the production process created by outsourcing shrimp farming to smallholder farmers.<sup>91</sup> Distributors buy shrimp from farmers to sell to processors,<sup>92</sup> often acting informally.<sup>93</sup> In some cases, agents and distributors are the same individual, selling feed to the farmer on credit and taking the harvest of shrimp as payment.<sup>94</sup> In other cases, a distributor – referred to as an aggregator – simply buys shrimp from a variety of farms to sell to a processor.<sup>95</sup>

In some cases, farmers maintain standing agreements with specific processors to sell all their shrimp.<sup>96</sup>

While this can mitigate risk to farmers by guaranteeing a buyer, it also leaves farmers dependent on that processor's pricing.<sup>97</sup> However, without guaranteed buyers, farmers may not be able to sell their entire harvest of shrimp when it is ready, leading them to lose money while their shrimp remain unsold.<sup>98</sup> The result is that farmers are left with a slew of bad options, needing both a high price and guaranteed buyers for each harvest.



*Shrimp being transported for processing (Andhra Pradesh, 2024)*

## 5. Peeling Sheds and Processing Plants

Large corporations, both Indian-owned and multinational, control the processing sector. Shrimp increases in value through processing, especially by peeling, cooking, breading, seasoning, or otherwise cooking (a process known as value-addition). The companies that process shrimp are the commercial engine of the shrimp industry and exert control over shrimp farming and hatcheries. These larger companies – such as Apex Frozen Foods,<sup>99</sup> Avanti Feeds Limited,<sup>100</sup> and Devi Fisheries,<sup>101</sup> Nekkanti Sea Foods,<sup>102</sup> and Sandhya Aqua<sup>103</sup> – often have direct relationships with buyers in the United States.



*Deveined and cleaned shrimp ready to be shipped to a processing plant (Andhra Pradesh, 2022)*



The processing sector includes both peeling sheds and processing plants, which play distinct yet overlapping roles. Exporting companies often outsource the lower-value, labor-intensive processing tasks to peeling sheds, including de-heading, peeling, and deveining shrimp by hand.<sup>104</sup> Although a few large companies own their own peeling sheds, most are operated by small enterprises, either individuals or small companies. Like processing plants, many peeling sheds have set working hours. However, some only operate when they receive a shipment of shrimp, adding flexibility that proves economically advantageous.

The typical peeling sheds are simple constructions with open sides and cement floors, frequently located in secluded coastal areas like the backwaters of Tallarevu in Andhra Pradesh. In contrast, processing plants owned by larger exporting companies serve as official buildings that auditors can enter and showcase to foreign buyers. These buildings are usually sanitized and temperature controlled, and workers are provided with protective gear, including aprons, head-covers, facemasks, gloves, and gumboots. This personal protective equipment, however, functions only to keep the shrimp sanitary; it does not protect workers from frostbite or other injuries sustained from the work.



*Workers in a large processing plant (Andhra Pradesh, 2022)*



*Workers in a peeling shed (Andhra Pradesh, 2022)*

Most processed shrimp from India is exported as Individually Quick Freezing (IQF), either to be sold to retailers and wholesalers or to be shipped overseas for further processing (value-addition). Peeled shrimp is a common final product for export; more than 60 percent of imported peeled shrimp in the United States came from India in 2019.<sup>105</sup> Peeled shrimp requires extensive labor. Companies have capitalized on a large and cheap labor force in India to corner this market.

Even with low labor costs, minimally processed shrimp, such as peeled shrimp, is less profitable than shrimp that has been further processed. One report found that frozen shrimp “with minimal processing” earned an 8 percent EBIT margin (based on total income before interest and taxes), while “value-added processed shrimp” earned close to a 20 percent EBIT margin.<sup>106</sup> Indian shrimp companies are just beginning to invest in value-addition. As of 2020, Vietnam remained a prime location for value-addition, receiving about 30 percent of Indian shrimp for further processing.<sup>107</sup> China also carries out value-addition for Indian shrimp, subsequently re-exporting it.<sup>108</sup> By adding value to the shrimp, these companies significantly increase their profits.





*Processed shrimp packed and ready to be shipped to North America (Andhra Pradesh, 2022)*



*The port in Visakhapatnam from which shrimp is exported overseas (Andhra Pradesh, 2024)*

## **6. Wholesalers**

Wholesalers are large corporations that connect processors exporting Indian shrimp to retailers purchasing shrimp to sell to consumers at grocery stores or restaurants. Wholesalers often make a large profit, adding half again as much value to shrimp products.<sup>109</sup>

Wholesale companies often buy from multiple processors and sell to multiple retailers. For example, Aqua Star, has bought from both Nekkanti Sea Foods and Devi Seafoods. Aqua Star then sells to supermarkets, including Sam’s Club, Walmart, Target, Jewel, Stop and Shop, and Amazon Fresh.<sup>110</sup> Many other wholesalers, such as AZ Gems Inc., Censea Inc., Eastern Fish Co., and Pacific Coral Seafood, similarly buy from multiple Indian processors and sell to a variety of U.S. retailers.<sup>111</sup>



*Shrimp produced in India is sold across the United States.*<sup>112</sup>

### The Seafood Import Monitoring Program (SIMP)

The U.S. National Oceanic and Atmospheric Administration’s (NOAA) Seafood Import Monitoring Program (SIMP) regulates the importation of thirteen seafood species, including shrimp, into the United States.<sup>113</sup> SIMP was implemented “to combat illegal, unreported, and unregulated-caught and/or misrepresented seafood from entering U.S. commerce.”<sup>114</sup>

Importers of farmed shrimp must provide information on the “harvest event” for all seafood, including the address of the aquaculture facility and when the shrimp was harvested.<sup>115</sup> However, there are exceptions for farms that deliver less than 1000 kilograms of shrimp per day to a single collection point or processing facility<sup>116</sup> – likely the case for most smallholder shrimp farmers in India.<sup>117</sup> In such cases, aggregators can create an “aggregated catch certificate,”<sup>118</sup> which requires that importers only list the state of jurisdiction and the processing facility (where the shrimp was aggregated), making traceability to farms impossible.<sup>119</sup> This loophole in reporting, combined with the fact that SIMP skips hatcheries altogether, significantly decreases SIMP’s efficacy for aquaculture.

From our investigation, it seems unlikely that most importers can provide traceability information accurately, in part due to the vital role agents and distributors play in transferring shrimp to and from farms. Since so much of the shrimp is aggregated before moving to the next step, traceability is all but impossible in many cases. This inability to trace shrimp again signals the lack of oversight in the sector and a lack of interest in traceability by companies.



## 7. Retailers

U.S. supermarkets and restaurants are the tail end of the imported shrimp supply chain. These companies, especially grocery stores and food supply companies, hold significant power as the major buyers of farmed Indian shrimp. Retailers dominate supply chains and “hold most of the power in these negotiations.”<sup>120</sup> In cases in which suppliers do not comply with retailer demands, “stores can pull the product from shelves and push their cheaper in-house brands. Vendors’ preferred products may also get worse placement on an aisle, less promotion and higher prices on shelves.”<sup>121</sup>

Farmed Indian shrimp can be found in grocery stores across the United States.<sup>122</sup> Nekkanti Sea Foods proudly touts that its shrimp is sold at Kroger, Aldi, Ahold Delhaize stores, Costco, Walmart, Sam’s Club, and Safeway, as well as to Sysco, U.S. Foods, and Darden Restaurants (including Olive Garden).<sup>123</sup> Similarly, Avanti Frozen Foods, a subsidiary of Avanti Feeds Limited, has sold shrimp to Whole Foods for its private label 365 brand, as well as to Meijer, Ahold Delhaize, and Albertsons for their private labels.<sup>124</sup> Avanti Frozen Foods also imports Indian farmed shrimp for the brand Chicken of the Sea, a subsidiary of Thai Union (with whom Avanti Frozen Foods has a joint venture in India).<sup>125</sup> Devi Fisheries Limited has sold shrimp to Ahold Delhaize stores, Dollar General, Family Dollar, Food Lion, Piggly Wiggly, Walmart, Winn Dixie, and many more under Beaver Street’s label, Sea Best.<sup>126</sup>

Retailers have the final say on how much shrimp they require at any given time. Many large companies use their leverage to mandate the price they are willing to pay. Retailers at the end of transnational supply chains like this one squeeze suppliers in numerous ways;<sup>127</sup> they often insist on short-term contracts and short lead times for orders, and make last-minute changes to orders, resulting in suppliers either hurrying to supply the requested amount – perhaps requiring workers to work overtime – or laying off workers if the last-minute change decreases the order.<sup>128</sup> Retailers have gained so much power within the supply chain that they can force one-sided contracts onto suppliers – contracts that allow retailers, but not suppliers, to withdraw if retailers are not making enough profit from the product.<sup>129</sup> In some cases, retailers have insisted on paying a price below the cost of production, making it all but inevitable that suppliers will have to cut costs.<sup>130</sup> Retailers have also been known to require suppliers to pay for storage or distribution costs, have asked “for additional cash payments from suppliers,” and have even “demand[ed] retrospective discounts from suppliers.”<sup>131</sup> Retailers are also fickle, switching suppliers to buy from the cheapest source, thereby driving down the price across the board as suppliers compete to sell their products.<sup>132</sup> Shrimp retailers have thus turned to new sourcing regions – especially India – as the price of shrimp elsewhere rose.<sup>133</sup>

Retailers have even more control over goods sold under private labels.<sup>134</sup> While shrimp is sold under brand names, such as Chicken of the Sea, many supermarkets also sell shrimp under private labels: Kirkland Signature at Costco, 365 at Whole Foods, Great Value at Walmart, Good & Gather at Target, as well as the many eponymous private labels.

These strategies by retailers to save money create an ecosystem in which suppliers are continuously squeezed and often forced to cut costs to stay in business. The result is a litany of human rights and

environmental abuses, with workers and local communities bearing the brunt of lower wages, unpaid overtime, shortcuts that cause environmental harm, informal contracts, and even forced labor. Processors in turn pay shrimp farmers a low price for shrimp harvested, leading farmers to cut costs and increasing the likelihood that they, too, will engage in labor and environmental abuses. **The result of this cost-cutting is that, according to a 2018 Oxfam report, shrimp workers in aquaculture receive less than 1 percent of the price consumers pay for shrimp.**<sup>135</sup>



*Farmed shrimp from India is sold in supermarkets around the country (2024)*



# IV. Daily Work And Abusive Conditions

## A. Discrimination: “There are no jobs available for Dalits like us in Odisha.”

Workers in the Indian shrimp industry are vulnerable to workplace exploitation and abuse due to several factors. Caste, migration status, and gender play significant roles in the labor relations in the shrimp sector. Most workers across the Indian shrimp supply chain are from Dalit, Adivasi, or fisher communities.<sup>136</sup> In India, caste-based discrimination remains a driver of labor abuses, including forced labor.<sup>137</sup> Members of Dalit and Adivasi communities are particularly vulnerable to abuse due to historical marginalization and discrimination.<sup>138</sup>

Differences in caste and class between workers and owners create a power dynamic and hierarchy.<sup>139</sup> As India has liberalized and manufacturing and production for export have increased, caste relationships have continued to shape opportunities for different groups. Marginalized lower caste groups face exclusion from well-paying jobs and hurdles in accessing education and healthcare. Social exclusion, caste-based physical violence, and the fear of retaliation deter lower caste group members from asserting their rights and improving their social and economic status.

Many workers in the Indian shrimp sector are also internal migrants, often from other regions of Andhra Pradesh or from nearby states such as Odisha or West Bengal. Internal migrants face many of the same barriers as cross-border migrants, including language barriers, social isolation, discrimination, and harassment, making them especially vulnerable to exploitation and forced labor.<sup>140</sup> In India, a country with 22 official languages,<sup>141</sup> language barriers are common. From conversations with workers, it was clear that migrant workers and local workers from Andhra Pradesh often do not have a common language. Local workers primarily speak Telugu, the primary and official language in the region.<sup>142</sup> Migrant workers mainly speak languages from other regions, making communication between the two groups a challenge. One woman worker from Andhra Pradesh explained that she cannot speak to the migrant workers because they have no common language. Such language barriers isolate migrant workers further.





In numerous interviews, workers shared that their traditional farming families lacked employment options in their home regions due to environmental changes: “There are no jobs available for Dalits like us in Odisha. We don’t have land for farming. Many are giving up farming due to losses incurred by climate change. Eventually, we aren’t getting work as a daily wager. So, we had to migrate.”<sup>143</sup> Forced to leave their home regions for job opportunities elsewhere, migrant workers accept available employment for low compensation. As one worker explained,

We have to work because there is no other option in this village. Farmlands are converted into shrimp farms. Additionally, whatever farmland is present, migrant workers are ready to work for lower wages. Eventually, our parents aren’t getting any jobs. So, we are forced to work in the shrimp industry. And [elderly] parents won’t be able to work in the shrimp industry due to its hazardous conditions. So, I have to go for a job.

The economic precarity and lack of alternative employment options make workers more vulnerable, as they may feel compelled to accept dangerous and exploitative working conditions. A worker in a processing plant explained, “[T]here are no job opportunities outside here in my village. However, the current job is not honoring our rights. We are low-paid and exploited.” This feeling was exemplified by another worker, who explained that “something is better than nothing.” For many workers, employment in the shrimp industry is a last resort, the job they accept to feed their families. They frequently expressed a desire to leave the industry, highlighting the difficult choices they face in the absence of alternative employment opportunities. As one migrant worker from Odisha explained: “Unemployment and poverty pushed me to migrate to Andhra. I will move out from this company if some good offers come.”



*Peeling sheds in Tallarevu (Andhra Pradesh, 2022)*



## B. Informal Work: “I am like a ghost worker.”

Much of the Indian shrimp sector functions within the informal economy. Very few workers have employment contracts, pay slips, or official relationships with their employers. This lack of formality is especially clear in the processing sector, where companies rarely provide their employees with contracts, timesheets, or pay slips, and workers have no access to formal logs of working hours – if they exist. Workers receive below the minimum wage and do not receive benefits that they are entitled to.

Recruiters are the crucial link between the companies and workers. These long-term shrimp industry workers act as agents for companies, recruiting workers as needed. Also known as middlemen, recruiters usually recruit from their hometowns or villages: “Most of the time, a middleman will be a worker who [has worked] in the company for more than two years and [has] access to villages from where workers can be recruited.” One woman who works at a crab processing unit next to a shrimp peeling shed explained:

*“[W]hen the company requires people to work, it lets a [middleman] know of the demand. The [middlemen] then reach out to their sources in states such as Maharashtra and Odisha with a proposal to bring girls to work at [the] unit. The sources in the village then negotiate with the contractor and ensure on the payment, food, safety, [accommodations]. Once they are satisfied with the facility, the girls are allowed to go.”*

Recruiters commonly charge workers recruitment fees, either paid upfront or for each day of work. Multiple workers reported paying their recruiters an entire month’s salary as a recruitment fee. Additionally, companies usually pay recruiters a daily commission of INR 10 (USD 0.12) per secured worker, although some recruiters receive INR 7 (USD 0.08) or INR 5 (USD 0.06). No matter the cut, these recruiters are incentivized to ensure that workers show up for work each day.

Supervisors, who are often men, keep informal attendance logs of who works each day, calculating wages based on these logs. Workers are paid either in cash or directly into bank accounts at the end of the month. The lack of proper record keeping in the payment process leaves many workers unaware of their proper wages, especially for overtime, and incapable of disputing discrepancies. As one woman worker explained: “They don’t keep proper salary books. We can’t argue with these contractors on overtime. If we question the missing overtime hours, then they will tell us not to come the next day.”

Although many women work at a particular peeling shed or processing plant for years, they remain “daily wage laborers.” One woman who works at Satya Sea Foods explained, “I am like a ghost worker,” meaning that she has no contract, no formal relationship with the company, and no health insurance, social security, or vacation days.

## The ILO Declaration on Fundamental Principles and Rights at Work

The ILO Declaration on Fundamental Principles and Rights at Work provides that all ILO members have a duty to “respect, to promote and to realize, in good faith and in accordance with the Constitution, the principles concerning the fundamental rights which are the subject of those Conventions.” Those principles include:

- (a) freedom of association and the effective recognition of the right to collective bargaining;
- (b) the elimination of all forms of forced or compulsory labour;
- (c) the effective abolition of child labour;
- (d) the elimination of discrimination in respect of employment and occupation; and
- (e) a safe and healthy working environment.

The right to “a safe and healthy working environment” is the most recent addition to the core rights under the ILO Declaration on Fundamental Principles and Rights at Work.<sup>144</sup> Added in 2022, it is binding on all ILO members. As members of the ILO, both India and the United States are bound by the principles underlying it. All ILO members, “even if they have not ratified the Conventions in question, have an obligation, arising from the very fact of membership in the Organization, to respect, to promote and to realize, in good faith and in accordance with the Constitution, the principles concerning the fundamental rights which are the subject of those Conventions.”<sup>145</sup>

Under the ILO’s Standards on Occupational Safety and Health, workers “must be protected from sickness, disease, and injury.”<sup>146</sup> Occupational health and safety is a vital aspect of ILO conventions; “The ILO has adopted more than 40 standards specifically dealing with occupational safety and health, as well as over 40 Codes of Practice. Nearly half of ILO instruments deal directly or indirectly with occupational safety and health issues.”<sup>147</sup>

## The Informal Economy

The “informal economy” consists of “all economic activities by workers and economic units that are – in law or in practice – not covered or insufficiently covered by formal arrangements.”<sup>148</sup> These activities either operate “outside the formal reach of the law,” are not covered by the law in practice (often in cases in which “the law is not applied or not enforced”), or “the law discourages compliance because it is inappropriate, burdensome, or imposes excessive costs.”<sup>149</sup>

In India, the informal economy is the primary economy, encompassing over 86 percent of India’s workforce and an even higher percentage in rural regions.<sup>150</sup> More than 80 percent of working women in India hold informal jobs.<sup>151</sup> Despite the numerous legal frameworks for regulating labor in India,<sup>152</sup> the lack of government oversight results in most workers in the informal sector, including in the shrimp industry, working in conditions that violate many national and state statutes.

Moreover, most workers earned below the minimum wage, and very few reported having Provident Fund (PF) and Employees’ State Insurance (ESI) cards, even though workers in the sector are entitled to these benefits according to Indian law.<sup>153</sup> The PF is compulsory for all factories with more than twenty workers and for all workers who earn under INR 15,000 (USD 180.59) per month.<sup>154</sup> Similarly, the ESI scheme applies to workers in factories with more than ten workers (in some states, the threshold is still twenty

workers) and to employees who earn under INR 21,000 (USD 252.83) per month.<sup>155</sup> With hundreds, and in some cases thousands, of workers in processing facilities, many of whom earn between INR 8,000 (USD 96.38) and INR 12,000 (USD 144.57) per month, workers should be receiving both the PF and ESI. Yet workers consistently said they did not receive either. In fact, one woman worker explained that she earns INR 9,000 (USD 108.36) each month but that the company’s human resources department instructed her to tell anyone outside the company that she earns INR 15,000 (USD 180.59). This may be because a monthly income of INR 15,000 (USD 180.59) is the threshold above which the company does not have to pay a worker’s Provident Fund (PF).<sup>156</sup>

Keeping most workers as informal workers benefits companies by allowing them to pay workers less and save on the cost of benefits. A manager at a Devi Fisheries processing plant explained that “Workers who have ESI/PF get INR 450-500 (USD 5.41-6.02) per day. And workers who don’t have ESI/PF, the daily wagers get only INR 300-350 (USD 3.61-4.21).” Similarly, “official” workers have additional benefits, including bonuses for working many days in a row. One recruiter explained, “There are no holidays. However, if a worker works for 25 days continuously, the company gives three days extra salary. This is only for PF and ESI card holders.”



*A peeling shed in Tallarevu (Andhra Pradesh, 2022)*

Raadhi, a 55-year-old from Andhra Pradesh, shoulders the responsibility of providing for her family – three school-aged children and a disabled husband with heart problems. As the sole breadwinner for her family, Raadhi began processing shrimp for Satya Foods two years ago, earning INR 300 (USD 3.61) per day without a formal contract, PF or ESI. Since then, Raadhi has recruited 55 workers to the company who work under similar conditions. Although she lacks a formal relationship with either the workers she recruited or with the company, Satya Sea Foods pays her an additional INR 550 (USD 6.62) each day for acting as a recruiter, INR 10 (USD 0.12) for each person she recruited who works. Raadhi earns more than many workers, but her processing job and recruitment work are emblematic of India’s informal economy that leaves workers vulnerable to exploitation.

### **Migrant Workers: Hidden From Sight**

In some instances, migrant workers are not just working informally but are also intentionally hidden. A man who supervises women workers at a Nekkanti Sea Foods processing facility explained: “When officers come for inspection, the company will take migrant workers for a trip outside so that they aren’t found by the inspection officials.” A government official in Andhra Pradesh alluded to this practice, explaining that “Despite [Devi] having the license to recruit 3,000 workers, it has only 736 working members in its register.” This suggests that a large number of migrant workers are unofficially working for processing companies, leaving these workers deliberately hidden from authorities.<sup>157</sup>

Hidden workers are even more vulnerable to abuse and exploitation. Their invisibility enables unscrupulous employers to subject them to unfair labor practices, unsafe working conditions, and wage exploitation without fear of accountability.

### **Local Workers in Peeling Sheds**

Hired informally by recruiters to work at processing facilities, local workers have a range of views on this informality. Some complained about the low pay, not knowing how overtime is calculated, and not having PF and ESI. But some women who work in peeling sheds appreciate the flexibility.

One woman explained why she chose to work at a peeling shed instead of at a larger processing plant: “We can’t move in and out of the [processing plants] during working hours even if we wished to. There is a biometric system to enter and exit the facility. We would be questioned on why we aren’t working efficiently even.” In contrast, “In smaller units, we are able to manage both our housework and company work. If we were to go to [a large company], we would have to be out the door by 7:00 am. Who will take our [young] children to school then? We have to cook and prep before we can head out for work. That’s why the smaller units are better suited for us and we go there.” For some local workers, the flexibility and ability to decide when to go to work makes it a better option for them, even if the working conditions are, in some cases, more abusive and insecure than jobs in processing plants.



## **C. Dangerous and Abusive Work: “When they work continuously in processing frozen shrimps, their skin first turns red, then white and blue due to the stoppage of blood flow.”**

Work in the shrimp supply chain presents various on-the-job risks. On shrimp farms, workers face physical and chemical hazards, coupled with potential ergonomic and other injuries.<sup>158</sup> One farm supervisor said: “Day or night, the safety of workers at shrimp farms and ponds is at risk.” The same supervisor claimed that workers do not receive any safety gear, even when handling chemicals or electrified power supply lines. He explained that “Sometimes we develop rashes while handling chemicals and cleaning the farms. But what to do? We have to adjust.” A farm technician who works for Devi Fisheries confirmed working under such conditions, explaining that he was not provided the proper protective equipment for his job, including gloves: “As chemicals are used on farms, when we continuously are in touch with water, then we develop rashes. But the company is [not] bothered about it.” The technician also told CAL’s field investigators that he is only allowed to take time off, even if he is sick, by finding someone to replace him. Because he almost never can, he rarely has any days off.



*A shrimp farm (Andhra Pradesh, 2024)*

Working conditions in the processing sector are also often dangerous and abusive. Cold temperatures are maintained in processing plants to keep shrimp from spoiling, causing discomfort and health issues for workers. One woman worker described her experience: “Your back starts hurting, body aches as well. Some women complain of headaches, it’s a cold working environment.” The low temperatures can aggravate lung and breathing-related conditions, such as sinusitis and asthma.<sup>159</sup>

The cold environment exacerbates injuries from handling frozen shrimp continuously for hours during long shifts. The shrimp are usually brought to processing facilities on ice. Workers directly handle frozen or near-frozen shrimp to de-head, peel, devein, and sort them. Although most companies provide workers with thin rubber sanitation gloves, these gloves do not protect their hands from the cold. One woman worker explained that the gloves they are given tear and that workers have cuts from using blades to cut shrimp. In some facilities, workers are given one pair of gloves a day and expected to use them for the entire shift, even if they tear or are cut. Some workers do not wear the gloves provided, as they believe they can peel shrimp more easily without them.

Whether they wear gloves or not, workers have recounted developing rashes, sores, frostbite, ulcers, and more severe injuries due to prolonged contact with frigid shrimp, brine, and ice. A doctor in Andhra Pradesh who sees workers from processing facilities reported:

“During the winter season, women workers who work in [processing] come to us to get treated for different kinds of skin allergies. When they work continuously in processing frozen shrimps, their skin first turns red, then white and blue due to the stoppage of blood flow. And in some cases, this condition turns into ulcers too.”

The most common remedy in cases of frostbite is to avoid contact with cold surfaces until the symptoms subside, which can take weeks.<sup>160</sup> However, given the fact that workers only receive payment for the days they work, workers rarely take time off and their injuries worsen over time. According to the doctor, “[U]nfortunately, these workers may take [only] a day or two rest and again return to work....”

The same doctor explained that workers have skin allergies from the chemicals and brine used in the processing sector. Prolonged contact with cold brine causes rashes and itching on their hands, feet, and abdomens. Although workers in processing plants are given protective gear, including rubber boots, workers in peeling sheds are usually not. Workers in some peeling sheds work barefoot or wear sandals, resulting in their feet touching water on the ground. Workers likely lean against the tables while working, bringing their abdomens in contact with brine and other chemicals on the tables. As with frostbite, workers with skin allergies usually first try home remedies to avoid hospital bills and losing income from taking time off.

***“The working hall will be cold. The shrimp [is also] frozen. Additionally, we deal with many chemicals during the work. So, this salary isn’t worth risking our health.”***

***-Meena, a worker in a peeling shed***





*Workers in a large processing plant (Andhra Pradesh, 2022)*



Workers also mentioned witnessing women faint frequently at work. One woman worker said she sees two or three women faint each week: “When someone falls, the resident doctor or nurse will come. They will check our vital conditions and if not serious, will advise us to take rest for a few minutes. ... [But] rest is maximum for ten minutes. The supervisors don’t allow more than that.” A doctor working at a Government Hospital in the region explained:

Fainting cases are due to improper food [intake]. Almost all women who come here [and] claim to be workers at shrimp industry look anemic. They look weak. They are poor. Additionally, they are forced to stand and work at peeling [stations]. And some women are tired during menstruation periods. This all compounds to weaken them.

Working in the processing sector is arduous work. One woman explained, “We have to eat well to deal with the nature of this work. If we don’t take care of ourselves, we’ll be too exhausted to work.” Women workers also mentioned that it is taxing on their eyesight to focus intensely on shrimp all day. They complained of migraines from the bright lights and from staring at small shrimp in their hands.

If a worker is injured at work, company personnel often accompany them to a local clinic or, if the injury is serious, to the district hospital. Some companies pay these medical expenses, at least initially. Others, especially peeling sheds, may not pay any medical bills. However, as one worker explained, even those that pay for care only do so initially: “If the medical expenses are high, they will wash ... their hands by sending us on unpaid leave.” But because workers are paid based on the number of days they work, when they do not work – even due to injuries sustained on the job – they are not paid.



*Workers in a peeling shed near Kakinada (Andhra Pradesh, 2023)*

Raised by a single mother, Prakash left home at the age of sixteen. The shift from agriculture to aquaculture in his home region had forced his mother out of a job. Prakash supports his mother by working in a shrimp processing plant for Satya Sea Foods, earning about INR 10,500 (USD 126.41) each month. However, his work is arduous, and he endures verbal harassment and physical pain. A supervisor persistently shouts at the men for perceived slow work. Prakash explains his lack of other options, “We suffer shoulder pain while doing the same job continuously. But here in the village, we neither have the facility to study nor any opportunity to earn a decent job. So, we have to suffer this pain.”

Ammonia leaks also pose a risk in shrimp processing facilities.<sup>161</sup> Ammonia is a gas used as a coolant in large cold storage facilities, including in shrimp processing facilities. Companies often use ammonia as a refrigerant because it is both efficient and cheap.<sup>162</sup> But ammonia can also be incredibly dangerous and cause an array of short- and long-term injuries, including nausea; vomiting; burns and/or frostbite; abdominal pain; burning in the mouth, throat, esophagus, and stomach; lung damage and breathing issues; eye irritation; and blistering and inflammation.<sup>163</sup>



In 2016, an ammonia leak at a Nekkanti Sea Foods facility reportedly sickened 44 workers and caused long-term injuries to some of these workers.<sup>164</sup> A 2017 leak of ammonia and other poisonous gasses at an Ananda Aqua Sea Exports facility in Andhra Pradesh reportedly killed five workers.<sup>165</sup> While these leaks occurred in larger facilities, ammonia leaks are more common in smaller peeling sheds. As a trade union member explained,

“Every year, at least a couple of ammonia gas leak tragedies happen in the shrimp factories in and around Kakinada. Workers will get admitted to the hospital. The company won’t allow us to talk to them. The police will also deny [us] the opportunity ... to talk to workers.”

A worker at Satya Sea Foods reported that when an ammonia leak occurs, the company takes injured workers to the hospital to be treated. According to the worker, Satya Sea Foods covers the cost of immediate treatment but fails to compensate workers for missed work. While some workers injured from ammonia leaks may return to work quickly, those with long-term injuries may be permanently disabled and unable to work again.<sup>166</sup>



*Demands made by Centre of Indian Trade Unions (CITU) workers after an ammonia leak in 2016*

## Men in Processing Work

Work in the Indian shrimp industry is highly gendered. Hatcheries and shrimp farms mainly employ men, although hatcheries hire women for domestic work, such as cleaning, on site. In contrast, processing companies primarily hire women to de-head, peel, and sort shrimp, while men do the heavy lifting. Men move shrimp – often carrying 50-60 boxes in a day, each weighing 30 kilograms – between different points in an assembly line, unloading, loading, and packing crates of shrimp. Men also move shrimp into plant freezers to be stored while waiting for market rates to increase or to collect for export. This work is physically taxing and often leads to shoulder and back pain and injury. Men also reported being verbally abused by supervisors if they worked too slowly. One worker explained: “On my floor, there are eight members, in eight hours we move 1,000 boxes. Each box weighs 30 kilograms. We suffer shoulder and back pain. We have to work because there is no other option in this village.”

## The COVID-19 Pandemic

In March 2020, India went into its first lockdown, bringing much of the economy to a standstill until June 2020. With exports stopped, shrimp farming decreased, and processing facilities closed. Often traveling in trucks or by train, workers returned to their homes of origin. With processing workers gone, farmers were unable to sell much of their shrimp. As one exporter explained, “During the first lockdown, the entire industry was shut down. Our stock, reserved for export, also got damaged. The entire cycle of shrimp industry business got disrupted.”

Workers returned to work in the fall of 2020, before vaccines were available and after tens of thousands had died in India.<sup>167</sup> As the second wave – worse than the first – began, workers were frustrated with their employers’ lackadaisical approach to health and safety. Many companies remained open during the second COVID-19 wave. Workers complained that they were not given adequate personal protective equipment (PPE) and had to stand too close to each other each day. One worker remarked that “[D]uring the COVID-19 second wave when the company was open, there was no proper social distancing ... maintained. Many [workers] contracted the disease after coming to work. But the company won’t be closed. Those who have symptoms will be told to take leave and remain at home.”

There are reports that working conditions have deteriorated since the COVID-19 pandemic first began. Workers had previously been paid a set amount each day for peeling shrimp; since the pandemic, some companies have shifted to paying piece-rate, decreasing pay for most workers. For instance, workers reported that prior to the pandemic, Nekkanti Sea Foods had paid women workers INR 300 (USD 3.61) a day to peel shrimp; at some facilities, workers complained that Nekkanti Sea Foods now pays based on how much shrimp they peel, decreasing many workers’ income to INR 250-275 per day (USD 3.01-3.31). A 56-year-old widow said that she “hates” target-based work, explaining: “Peeling is now target based. If we get a lot of big shrimp, then we can achieve the target, which is kilogram-based. When it is small shrimp, it takes a lot of time to reach the kilogram-based target.”

Workers also reported that some companies have become more restrictive for workers living in company hostels. Prior to the COVID-19 pandemic, workers were allowed to leave hostels once a week to go to town or buy necessities. Workers, especially women, have reported that they are now only allowed to leave hostels once a month, on their payday or the day after. This change increases the company’s control over workers and significantly decreases workers’ rights and freedom.

## D. Excessively Long Work: “[P]eople work continuously to earn money.”

Workers in the shrimp supply chain report working long hours as well as working for weeks in a row with no days off – often without being paid for the overtime they work or without being paid the legally mandated double pay for overtime.<sup>168</sup> In hatcheries, there is often little to no distinction between work and non-work hours, with many workers on call twenty-four hours a day. The work required to keep a hatchery functioning continues round-the-clock, with workers ensuring storage tanks are clean, feeding the shrimp larvae, and collecting and packaging the juvenile shrimp when they are ready to be sold. The need to keep hatcheries functioning – combined with understaffing – means that workers must always be working or be available to work.



*A shrimp seed lab in a hatchery (Andhra Pradesh, 2022)*

Workers on shrimp farms also report long hours, in some cases upwards of twelve-hour days. Several workers described working from 6:00 am to 9:00 pm – a fifteen-hour workday.<sup>169</sup> In one study carried out by the auditing firm ELEVATE, workers said that they worked “up to 80 hours per week,”<sup>170</sup> far more than the maximum number of hours permitted under Indian law.<sup>171</sup> In its audit, ELEVATE found that “workers reported being disciplined if they refused overtime work,”<sup>172</sup> and that some workers are subject to “forced overtime without compensation...”<sup>173</sup>

Companies do not always compensate workers for overtime work.<sup>174</sup> Numerous workers – especially women workers in the processing sector – confirmed that they are not paid overtime, even when they work an entire month with no days off. For example, a worker at Nekkanti Sea Foods explained that she and the other women work 30 days in a row with no days off and receive neither overtime pay nor leave. This is a violation of Indian law, which requires workers to be given at least one day off a week (with minor variation) and paid double for overtime.<sup>175</sup> Another woman explained that if she were to ask for the overtime pay she is owed, she would be fired. Yet workers still work weeks at a time, because, as one worker explained, “people work continuously to earn money.”

False and inadequate records, including timesheets, are also a problem across the supply chain. ELEVATE found that while some facilities kept timesheets, many are “inaccurate with no indication of overtime.”<sup>176</sup> The audit report explained that the facilities often know the law “but may hide certain practices to evade detection and maintain high production levels.”<sup>177</sup>

ELEVATE found that at some sites, “timecards are not actually used and only exist for audit purposes. In other locations, the timecards presented were signed and information appeared in English, although workers at the site did not speak English and many could not read or write in local languages either.”<sup>178</sup> This is in line with CAL’s findings. Workers – both men and women – repeatedly mentioned that they did not understand how their wages were calculated and did not have a way of keeping track of their hours, such as timesheets.

## **E. Gender-Based Violence and Discrimination: “Sexual harassment of women workers is rampant; but they do not complain because of the fear of losing their jobs.”**

Women workers throughout the shrimp supply chain are vulnerable to sexual abuse and harassment and gender-based violence.<sup>179</sup> On shrimp farms, where women sometimes live with their families or work as cooks for shrimp farmers on or near shrimp farms,<sup>180</sup> there have been reports of sexual harassment and abuse against women. “Workers, especially women at shrimp farms and ponds, face a different kind of risk,” a farm supervisor explained to CAL’s field investigators: “We have heard cases of migrant workers’ women being abused physically by shrimp farm and pond owners, too.”

There are also indications of women being sexually harassed in the processing sector. According to a union leader with knowledge of the sector, “Sexual harassment of women workers is rampant; but they do not complain because of the fear of losing their jobs.” This is confirmed by ELEVATE’s human rights impact assessment, which found that “Sexual harassment and abuse are reportedly prevalent in the region and across the industry, particularly for domestic migrant workers from other states who report unwelcome sexual remarks or physical contact more frequently.”<sup>181</sup> The impact assessment also found “reports of physical violence and sexual harassment at sites visited, and some workers reported feeling unsafe, specifically in the dormitories.”<sup>182</sup>



## **The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Rules, 2013**

The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Rules, 2013 (POSH Act) became law in December 2013, creating a legal framework that extended the Vishaka Guidelines the Supreme Court of India had issued in 1997.<sup>183</sup> The POSH Act covers all workers “employed at a workplace for any work on regular, temporary, ad hoc or daily wage basis, either directly or through an agent, including a contractor, with or without the knowledge of the principal employer..”<sup>184</sup> It prohibits “sexual harassment at any workplace,” which it defines broadly as:

- (i) implied or explicit promise of preferential treatment in her employment; or
- (ii) implied or explicit threat of detrimental treatment in her employment; or
- (iii) implied or explicit threat about her present or future employment status; or
- (iv) interference with her work or creating an intimidating or offensive or hostile work environment for her; or
- (v) humiliating treatment likely to affect her health or safety.<sup>185</sup>

The POSH Act is strongly worded, but implementation has been weak. The Act mandates that every workplace with more than ten employees have an Internal Complaints Committee,<sup>186</sup> which has the authority to receive complaints and redress them. In practice, few companies have set up Internal Complaints Committees. According to a group of women workers at Devi Fisheries, should issues arise, they have been instructed either to file grievances with their supervisors, who are men, or to speak to their recruiters. Multiple shrimp processing companies have grievance mechanisms on paper. Yet these companies, with hundreds and even thousands of employees, report no grievances were filed in the past year.<sup>187</sup>

The Indian Government must invest in enforcement to verify that companies set up effective and independent Internal Complaints Committees that can provide an outlet for women to report harassment and abuse and can provide remedies.

Investigating sexual harassment is always a challenge, as workers often do not want to discuss it for a variety of reasons – stigma, embarrassment, fear of retribution, or fear of their families’ no longer wanting them to work. The need for a job is a powerful incentive to ignore sexual harassment, abuse, and gender discrimination.<sup>188</sup> Although field investigators heard indications and rumors of sexual harassment and abuse in processing facilities, more information is needed.

## **The Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW)**

India is party to the United Nations Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), which provides that “States Parties shall take all appropriate measures to eliminate discrimination against women in the field of employment,”<sup>189</sup> which includes “the right to protection of health and to safety in working conditions..”<sup>190</sup> As the UN Committee on the Elimination of Discrimination against Women explained, “[e]quality in employment can be seriously impaired when women are subjected to gender-specific violence, such as sexual harassment in the workplace.”<sup>191</sup> India must take additional steps to eliminate discrimination against women at work.



*Women working in a peeling shed (Andhra Pradesh, 2022)*

Gender discrimination can also take the form of verbal abuse, especially if men create a harmful working environment by asserting their control over women. Sexual harassment exists when workers are subjected to “an extremely hostile work environment where women are derided, screamed at, spoken down to, humiliated, treated as inferior or incompetent by virtue of being women.”<sup>192</sup> Numerous women workers described hostile work environments in which supervisors – all men – verbally abused them for any number of things, including working too slowly, speaking to nearby co-workers, or spending too much time in the restroom.

Numerous women workers reported issues around accessing and using the restroom during working hours, explaining that if they took extra time in the bathroom, supervisors – who are all men – would knock on the bathroom door or yell at them to hurry up. As one woman worker explained, “[E]ven if we had a few additional seconds in the toilet, the supervisor would yell at us.” This verbal abuse disrespects women’s right to sanitation, privacy, and dignity, and it may be shaming to women. Such harassment is especially harmful to women workers who are menstruating and may need additional time in the restroom, making them feel stigmatized by their supervisors. The right to clean restrooms – and the right to use them when needed, even at work – is a core tenet of gender equality and human dignity.<sup>193</sup>

## F. Hazardous Child Labor: “The migrant workers get on the workstation as pairs. One cleans, while the kids do the cutting.”

Hazardous child labor is common in the Indian shrimp sector, with teenage girls especially likely to work in the processing sector. As one woman from a fisher community near Kakinada in Andhra Pradesh explained, poverty pushes teenage girls and young women to work at shrimp processing facilities. She explained that girls as young as twelve or fourteen who want to get married but do not want to burden their families leave school to work processing shrimp. Two young women in Kakinada, ages nineteen and 21, explained that they had been working in peeling sheds since they were sixteen and fifteen years old. The 21-year-old explained that she began working at age sixteen to support her family. With a father who drinks too much and a younger brother to support, she found work at a nearby peeling shed. There are also reports of young women and girls from tribal communities working overnight shifts in shrimp processing plants.

### The Legal Framework: Child Labor

Under the current legal regime in India, children ages fourteen and older can legally work.<sup>194</sup> While children under the age of eighteen are prohibited from working in certain hazardous jobs, only jobs listed explicitly in the Child Labour (Prohibition & Regulation) Amendment Act 2016 qualify as “hazardous,” with many additional hazardous kinds of work missing from the list – including work in the farmed shrimp sector.<sup>195</sup>

The Child Labour (Prohibition & Regulation) Amendment Act 2016 is a small step forward. The Act provides for maximum hours for children – meaning anyone under the age of fourteen. Under the Act, children must take a one-hour break after three consecutive hours of work.<sup>196</sup> Children may not work – including their hour off – more than six hours in a day<sup>197</sup> and must be given one day a week off from work.<sup>198</sup> Children are prohibited from working overtime<sup>199</sup> and from working at night, between the hours of 7:00 pm and 8:00 am.<sup>200</sup>

Although India is party to the ILO’s Worst Forms of Child Labour Convention, 1999 (No. 182) – which prohibits “work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety or morals of children”<sup>201</sup> – the Convention relies on national laws to define hazardous work. As explained above, in this case that definition is lacking and allows for children to engage in dangerous shrimping work. Similarly, the ILO’s Minimum Age Convention, 1973 (No. 138), which India became party to in 2017,<sup>202</sup> establishes the minimum age for work as fifteen – but there is an exception for member states “whose economy and educational facilities are insufficiently developed.”<sup>203</sup> Such countries can, as India has done, “initially specify a minimum age of 14 years.”<sup>204</sup> India must improve the legal framework that regulates child labor, including hazardous child labor.

One peeling shed in East Godavari in Andhra Pradesh, locally referred to as the “Police Raju shed,” is well-known for using children in its shrimp processing operations. **Even the supervisor at the shed confirmed that the children, whose parents are migrant workers from West Bengal, work full-time peeling shrimp and do not attend school.** According to a worker at a nearby peeling shed, “The migrant workers get on the workstation as pairs. One cleans, while the kids do the cutting. Young

children also work at his shed.” CAL’s field investigators verified that several children – some of whom looked to be as young as twelve – worked at the Police Raju peeling shed.

There have also been media reports of hazardous child labor in the shrimp sector. In 2023, the Andhra Pradesh government raided a processing facility and found children processing, grading, and packing shrimp.<sup>205</sup> Many of the workers were girls under the age of eighteen and had traveled to Andhra Pradesh from other states.<sup>206</sup> One girl explained: “My father abandoned my family, and my mother suffered from illness. So, I came to Andhra Pradesh to feed my family.”<sup>207</sup> Another girl explained that she had come to Andhra Pradesh from West Bengal to work: “I don’t know how much my pay is. The owner will not pay me directly but remit it to my parents.”<sup>208</sup>



*Workers in a peeling shed (Andhra Pradesh, 2023)*



# V. Forced Labor

## A. Debt Bondage: “The worker, including his family, will be forced to work, even in adverse climate conditions, until the debt is cleared without any pay.”

Although India made bonded labor illegal in 1976,<sup>209</sup> it remains a common form of forced labor in India.<sup>210</sup> Recruiters in the shrimp sector often target individuals from disadvantaged backgrounds: “The scheduled castes and scheduled tribes as well as the children of migrant laborers are particularly vulnerable to trafficking and bonded labor.”<sup>211</sup> As a result, within the shrimp sector, debt bondage primarily impacts migrant workers, the majority of whom are also Dalit or Adivasi. Migrants are particularly vulnerable to exploitation because they are far from home, may lack social networks, often have few other options, and may have taken on loans, locking them into the job.

### Forced Labor Under International Law

The ILO defines forced labor as work conducted “under the menace of penalty” and that is not done voluntarily.<sup>212</sup> The ILO’s eleven indicators of forced labor, listed below, help to analyze whether a specific situation rises to the level of forced labor:<sup>213</sup>

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

\* The existence of forced labor does not require all eleven ILO indicators to be present; in some instances, simply one indicator is sufficient to determine the existence of forced labor.<sup>214</sup> Therefore, an analysis of the relevant labor context is essential to determining whether a situation rises to the level of forced labor.

Many of the conditions workers reported also align with the ILO’s indicators of forced labor: underpayment of workers, non-payment of pensions, dangerous working conditions, sexual abuse and harassment, intimidation of workers, excessive control over workers’ movements, and dirty living arrangements. These abuses, acting together, create conditions of forced labor.

## Forced Labor Under Indian Law

Indian law uses a broader definition of forced labor than international law. Under Indian law, forced labor may occur through physical force as well as through economic coercion. The Indian Supreme Court has found that “[t]he word ‘force’ must . . . be construed to include not only physical or legal force but force arising from the compulsion of economic circumstances which leaves no choice of alternatives to a person in want and compels him to provide labour or service even though the remuneration received for it is less than the minimum wage.”<sup>215</sup> The conditions workers reported often rose to the economic coercion level contemplated by Indian law.

Additionally, The Scheduled Castes and Scheduled Tribes Act, commonly referred to as the Prevention of Atrocities Act, was passed in 1989 to “prevent the commission of offences of atrocities against the members of the Scheduled Castes and the Scheduled Tribes.”<sup>216</sup> It prohibits “compel[ing] or entic[ing] a member of a Scheduled Caste or a Scheduled Tribe to do ‘begar’ or other similar forms of forced or bonded labour other than any compulsory service for public purposes imposed by Government.”<sup>217</sup> Forced labor of Dalit and Adivasi workers could also be a violation of the Prevention of Atrocities Act.

Through recruiters, companies have established networks that target vulnerable populations for recruitment. A manager at Nekkanti Sea Foods explained that “Recruitment agencies employed by us bring migrant workers from Odisha and West Bengal. They look for workers in rural areas who need money desperately. These recruitment agency agents will provide the money to the workers and bring them to our company on the condition that they will be allowed to leave only after the loan and interest are cleared.”

Various companies acknowledged the existence of loan systems that tie workers to their jobs. A worker at Devi Fisheries Limited highlighted the prevalence of such practices, explaining how recruiters in Odisha utilize sub-agents to provide individuals in surrounding villages with large loans – perhaps as much as INR 100,000 (USD 1,240). In return, the individual agrees to work for the shrimp company until the loan and interest have been paid back from the worker’s salary.

Similarly, a human resources manager at Devi Fisheries Limited described a variation of the manipulation of vulnerable populations through loans: “The middlemen give loans to the workers. But they don’t give it to one person. They form a group of workers and give the loan so that if one makes a default, others will become responsible to repay the loan.” As a result, if an individual in the group cannot repay the loan, the whole group remains in debt and must keep working.

Local workers reported a similar system for loans. Once a worker “joins” a company – that is, agrees to work for that company’s recruiter – the recruiter could provide a loan of up to about INR 25,000 (USD 300). The company then deducts the loan repayment from the salary each day. Local women use this structure to access loans not otherwise available to them. Women reported that they are generally satisfied with this structure, as it provides them with a way to access loans. Yet, it also binds these workers to the company for a period. That women see this set-up as a positive likely demonstrates their inability to access loans from more official sources such as banks. This loan system, therefore, provides a helpful alternative – even as it is also exploitative and binds women to undesirable jobs until the debt is repaid.<sup>218</sup>

Other workers reported simply being in debt. Many workers had taken loans – for a sister’s or daughter’s wedding,<sup>219</sup> to pay for a healthcare issue, or to build a house. For these workers, work in the processing plants was an avenue to repay other accrued or existing debts due to the higher wages paid in the industry compared to other jobs open to these women.

Debt bondage is not restricted to the processing sector; there are also reports of debt bondage on shrimp farms. A civil society activist in the region reported that shrimp farm owners sometimes provide large loans to migrant and local workers, taking advantage of workers’ vulnerable situations: “The worker, including his family, will be forced to work, even in adverse climate conditions, till the debt is cleared without any pay.” These workers are further restrained through intimidation and “physical and mental harassment in this sector.” There are additional reports of migrant workers taking loans and agreeing to work on a shrimp farm for a season, usually three or four months. If the worker tries to leave before the season has finished, in some cases the worker has been threatened and not allowed to leave.



*The entrance to a shrimp processing facility (Andhra Pradesh, 2024)*

Kabir, a 24-year-old from Odisha, and his wife find themselves living in separate hostels as migrant workers in the Indian shrimp industry. They arrived in Andhra Pradesh to work for Devi Fisheries Limited just after the first COVID-19 lockdown. Kabir works in the ice-crushing unit earning around INR 12,500 (USD 150.39) each month. Like other migrant workers, he lacks a contract and is not paid PF or ESI benefits. According to Kabir, he is only compensated for his work a couple of times a year when he returns home.

Kabir and Alpana live separately in a guarded company hostel that segregates men and women regardless of their marital status. The rooms in these camps are overcrowded, with six workers living in rooms meant for only four people. The couple does not see each other very often, crossing paths occasionally at work and having infrequent conversations on holidays and days off.

## Forced Labor in the Shrimp Processing Sector<sup>220</sup>

CAL's investigations revealed that the highest risk of forced labor in the Indian farmed shrimp supply chain is in the processing sector, in both peeling sheds and processing plants. Migrant workers, particularly migrant women who live in employer-provided housing are especially vulnerable to forced labor. Local workers and those who do not live on company facilities are less likely to be subjected to forced labor, although they also experience abuses in the workplace. CAL's field investigators identified the following ILO indicators in the processing sector: abuse of vulnerability, debt bondage, abusive living and working conditions, excessive working hours, restriction of movement, isolation, and intimidation and threats.

**Abuse of vulnerability:** Workers in processing plants and units are often vulnerable to forced labor due to the fact that many are migrants from other regions in India, Dalits or Adivasis, and have few, if any, other options for employment. Moreover, the informal nature of workers' employment – including companies' failures to provide workers with written contracts or pay slips – increases their vulnerability. Processing facilities take advantage of a large group of vulnerable workers who have traveled far from home for work and ensnare them in exploitative working conditions and, in some cases, debt bondage.

**Debt bondage:** Recruiters for the shrimp processing sector act as intermediaries between workers and companies, often providing loans to workers who must continue working to pay them off, resulting in debt bondage. Recruiters work on behalf and behest of companies that charge recruiters with finding workers. Recruiters often target impoverished rural areas with few employment options, luring workers to Andhra Pradesh for processing work. Loans for migrant workers can be as much as 100,000 INR (USD 1,240), a large sum for someone earning INR 250-340 (USD 3.01-4.11) to pay back. Such loans prevent workers from being able to leave their jobs until they have paid off their loans with interest.

**Abusive living conditions:** Many migrant workers live in company-owned hostels located near processing facilities and units. Living conditions in these hostels are generally unhygienic and overcrowded. Workers live in cramped rooms. There are often not enough restrooms for the occupants, and the restrooms that are provided are often dirty and unsanitary, impeding access to safe and adequate sanitation.

**Restriction of movement and isolation:** Migrant workers who live in company-owned hostels have their freedom of movement severely restricted. Workers reported that they are only allowed to leave the hostels once or twice a month – men generally can more often than women – and that guards or wardens control access into and out of the hostels. In many cases, men and women, even if married, live in separate buildings and are rarely allowed to see each other. Some workers also mentioned that there are video cameras in the hallways of the women's dormitories. CAL's investigations revealed that companies also try to keep tabs on workers after they leave the facilities. In one case, workers complained that autorickshaw drivers who took them to town were constantly monitoring them. Even if a worker is sick or injured and must go to the hospital, the company often has the worker's recruiter accompany them off-site.

**Abusive working conditions:** Working conditions in processing facilities are often abusive and dangerous, posing high risks of injury. Workers complained about working in cold processing plants where low temperatures exacerbate breathing conditions such as asthma. Workers directly handle raw frozen shrimp to de-head, peel, devein, and sort it, which often leads to frostbite as well as rashes and sores. There are also reports of women fainting, likely due to malnourishment or dehydration while on the job. Additionally, there have been reports of ammonia leaks, which can cause a variety of injuries to workers. Workers also report being verbally abused by supervisors – if they slow down, use the bathroom for too long, talk to one another, or otherwise assert their autonomy.

**Excessive working hours and withholding of wages:** Multiple workers reported working weeks on end with no days off, as many as 30 days in a row. Workers, especially migrant women workers, also reported that they are not always paid for overtime work.

**Intimidation and threats:** CAL's field investigators found that workers were visibly scared to speak to outsiders, especially near company facilities when guards could see them. Even when far from company premises, workers were often apprehensive about speaking to CAL's field investigators. Workers are often told not to speak to anyone outside the company about their jobs, even when they are in their hometowns. After CAL's field investigators visited one village where numerous workers are originally from, the recruiter was informed and warned the workers not to tell the company about the interviews. The recruiter threatened the workers, saying that if they mentioned speaking to the investigators, they would lose their jobs.



## B. Threats and Intimidation: “It looks like they were intimidated by the company.”

Workers in the processing sector report being constantly berated, intimidated, and threatened – both explicitly and implicitly. Verbal abuse during working hours is common and often related to 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. As one worker explained, “They abuse workers verbally. Even for small delays, they raise [their] voice. They are very strict.”

The recruiters – often from the same village or region as workers – also exert substantial control over workers. One worker explained that her recruiter warned her not to ask questions and instead just to do what she is told. Speaking to outsiders is strongly frowned upon. After CAL’s field investigators visited a village and spoke with workers, their common recruiter found out and intimidated the workers into hiding the interviews from the company, threatening their jobs.

Workers also reported feeling threatened by company employees, especially by guards posted near company premises. The guards’ presence made workers fear speaking with investigators and labor advocates. A union organizer explained, “Recently, I went to the entrance of a shrimp factory. A migrant worker approached me. He looked distressed. He started to talk about his woes inside the shelter. He wanted to go home. But before he could complete the story, the company watchman approached us and verbally abused the worker...The worker turned back and walked away.” The union leader explained further, “In 2020, a few migrant workers turned up here in our office seeking help to return to their home states. We were ready to assist them. But they didn’t come back to us again. It looks like they were intimidated by the company.” This was in line with many of CAL’s field investigators’ experiences trying to speak with workers; workers were often hesitant, scared, and sometimes flatly refused to speak, even when far from company facilities.



*Workers in a peeling shed (Andhra Pradesh, 2023)*

## Forced Labor on Shrimp Farms

CAL's investigations indicate that workers are at risk of forced labor on shrimp farms in India. Referring to shrimp farms, a local activist explained that "Forced labor is rampant among workers in the shrimp industry in East and West Godavari." Shrimp farms are not homogenous. Many farms are owned by individual smallholders, and the conditions workers on shrimp farms face vary depending on ownership. Despite this variability, there are reports that the following ILO indicators are found on shrimp farms: abuse of vulnerability, abusive working and living conditions, excessive overtime, and debt bondage.

As is true across the farmed shrimp supply chain, many workers on shrimp farms are migrant workers from the lower castes who have few other options for work. Many workers previously worked as agricultural farmers. As agricultural farming has become increasingly difficult, such farms have been converted into shrimp farms. Some employers take advantage of workers' precarious situations and their lack of other economic opportunities to engage them in dangerous and abusive work. Additionally, working conditions on shrimp farms can be hazardous and abusive.<sup>221</sup> Workers often do not receive the proper protective equipment, even when their jobs require handling chemicals. They also work excessively long hours, often upwards of twelve hours, preparing the farms, stocking them, and harvesting shrimp. There are also indications that some workers on shrimp farms are threatened and intimidated and that some may be in debt bondage, although more information is needed.

Workers often live on the farms, sometimes in huts near farm entrances or, on larger farms, in dormitories. Housing is often rudimentary and poorly kept, with workers living in basic structures with a simple kitchen and sparse accommodations. While it varies by farm, there are reports of living facilities either having dirty bathrooms or no restroom facilities. The combination of dangerous and abusive working conditions, excessively long hours, and poor living conditions is indicative of an abusive and exploitative workplace, which may amount to forced labor.

### **C. Abusive Living Conditions: "There is no proper shelter for these workers guarding the ponds."**

Across the shrimp supply chain, workers live in unsanitary and overcrowded accommodations. Companies house hatchery workers in dormitory-like rooms shared by four or five workers. The rooms are often unsanitary and poorly maintained.

Workers on shrimp farms often live on location in huts with a simple kitchen and sparse sleeping arrangements. Companies often locate these rudimentary accommodations near the farm's entry and close to a storage shed, or sometimes in the shed that holds equipment, feed, and other inputs. A farm supervisor said that migrant families who come to work on shrimp farms do not receive proper accommodation or toilets. Confirming this, an activist said, "There is no proper shelter for these workers guarding the ponds. There won't be any washrooms or restrooms. The migrants may be coming along with their families."



*Workers' accommodation at a hatchery (Andhra Pradesh, 2022)*

Although CAL's field investigators could not access worker dormitories on large shrimp farms, a recent audit by ELEVATE indicates that living conditions are substandard. ELEVATE's audit report described the "poor conditions" of worker dormitories on large farms owned by more prominent companies.<sup>222</sup> However, due to the remoteness of shrimp farms and around-the-clock demands of the work, there are few other options.<sup>223</sup> Regardless of whether workers live in huts or dormitories, such living accommodations mean workers are constantly on site and may be tied to their work through their housing.

Living conditions in the processing sector, especially for migrant workers, are also often substandard. Migrant workers who work in the shrimp processing sector often live in "hostels," dormitories owned by the company. Workers repeatedly reported that the rooms in the hostels are overcrowded. Workers described hostels that reportedly have four bunk beds for eight women per room, or even 30 women crammed into a room meant for 20-25 people. Workers who live in company hostels also report not having adequate access to water or sanitation. One hostel supposedly has room for about 500 women, who work on three shifts, yet there are only eight bathrooms.



*Shacks on shrimp farms where workers live (Andhra Pradesh, 2024)*



## **D. Controlling Workers' Movements: “Living inside a company accommodation is like deciding to reside in an open jail.”**

Employers in the shrimp sector often control workers' movements, especially for migrant workers who live on-site. According to a member of civil society closely monitoring conditions in the industry: “Migrant workers' conditions are like captured slaves in this sector. Their accommodations are restrictive, and they enjoy little freedom.”

Across the supply chain, employers determine if and when workers can leave company property. Migrant workers who live in hatcheries may be confined to the company premises. Workers told CAL's field investigators that they are not allowed to leave company property even during rest hours, requiring permission from supervisors for basic activities like going to neighboring stores.



*A shrimp hatchery (Andhra Pradesh, 2024)*



## Forced Labor in Hatcheries

Workers are at risk of forced labor in shrimp hatcheries. CAL's field investigations revealed the following ILO indicators across shrimp hatcheries: abuse of vulnerability, restriction of movement, isolation, abusive living and working conditions, and excessive overtime.

Workers in hatcheries are often from lower castes; many are migrant workers from other states in India, often impoverished districts of Andhra Pradesh and poorer regions of neighboring states, who have few other options for work. Hatcheries often take advantage of these vulnerabilities. Living conditions consistently appear to be poor, as workers in hatcheries often live on-site in dirty and overcrowded rooms. The living accommodations that CAL's field investigators saw had flimsy and dirty mattresses on cots or concrete floors and multiple men living in one small room.

Working conditions are also abusive, as workers in hatcheries work extremely long hours, and there is often no distinction between work and non-work hours; workers are expected to always be on the clock. Workers must constantly monitor hatchery ponds and are expected to perform work-related tasks as needed, regardless of the time and how many hours they have already worked, often leading to excessive overtime. Finally, workers are often confined to the hatchery premises not only during work hours but also during rest hours. To leave the premises – even to go to a neighboring store – workers must often receive consent from their supervisors. This significant restriction of movement that hatcheries exert over their workforce, coupled with abusive living and working conditions, excessive overtime, and abuse of vulnerability, is indicative of forced labor.

The control exerted by companies over migrant workers extends to the processing sector, with some companies only allowing workers to leave company premises once a month. As one worker who previously lived in a hostel said, “Living inside a company accommodation is like deciding to reside in an open jail. Especially in Nekkanti's factory, the freedom of movement of workers is restricted without compromise.” Even within the hostels, workers' actions are constrained. Men and women are not allowed to see each other, even if the buildings are next door and within a single facility – and even if married.

## Indian Law Protects Workers' Freedom of Movement and of Association

Widespread practices in the Indian shrimp industry restricting workers' ability to move freely infringe on workers' freedoms of movement and of association enshrined in Indian law, including in the Indian Constitution.<sup>224</sup> Such obstruction is a facial violation of Article 19 of the Indian Constitution, which provides that “All citizens shall have the right ... to move freely throughout the territory of India.”<sup>225</sup> It is also likely a violation of Section 339 of the Indian Penal Code, which states that “Whoever voluntarily obstructs any person so as to prevent that person from proceeding in any direction in which that person has a right to proceed, is said wrongfully to restrain that person.”<sup>226</sup> By guarding entrances, intimidating workers, and obstructing workers in the processing sector from leaving company premises, companies may be violating this criminal provision.

Additionally, by restricting workers' movement, companies also obstruct the right of workers to form a union or association, a violation of Article 19 of the Indian Constitution, which grants all citizens the rights “[t]o form associations or unions.”<sup>227</sup> Such restrictions are also a facial violation of the Industrial Disputes Act, which prohibits companies from “interfer[ing] with, restrain[ing], or coerc[ing], workmen in the exercise of their right to organise, form, join or assist a trade union or to engage in concerted activities for the purposes of collective bargaining, other mutual aid or protection...”<sup>228</sup>



*A large shrimp processing facility (Andhra Pradesh, 2024)*

Security guards wield significant control over workers. A woman who works as a guard in a women's hostel explained that hostels restrict workers' access to their own phones, only allowing their use at certain times. One worker highlighted the strict surveillance, stating, "There are cameras everywhere in the company. Even [in] the girls' hostel corridor, there are cameras." A migrant worker at Devi Fisheries explained that he had been brought to the area of Andhra Pradesh by train and was initially accommodated in a guarded camp. Workers at one hostel seemed anxious on the rare occasions that they left the company's property. A conversation with CAL's field investigators a few hundred meters from the entrance to a hostel – where guards are located – abruptly ended when the worker noticed that the security guard had spotted them speaking. When the field investigators greeted that same worker later, the worker pretended not to know them.

The security guards both keep workers within facilities and stop outsiders from entering. When CAL's field investigators tried to enter the facilities, they were turned away. In one case, field investigators encountered three security checkpoints surrounding a single company's facilities. Every checkpoint had cameras, guards with weapons and radios, an office room, and vehicles with beacon lights. The guards decide who can enter, allowing only those they know. This security apparatus may ostensibly ensure workers' safety, but it also establishes the company's absolute control of access in and out of facilities, intimidating those inside and outside.

Before the COVID-19 pandemic, workers said they were allowed to go into town once a week or once every other week. However, there has been a noticeable shift, with such freedoms now restricted to once per month. Another worker explained that migrant workers were not allowed to leave the camps; a warden decides who can enter and leave. This is common; workers repeatedly said they can only leave on specific days and for only a few hours at a time. This control over workers' freedom of movement

makes it all but impossible for workers to speak with outsiders, including union representatives. A union district secretary explained that “Neither they are allowed to meet outsiders, including unionists like me, nor do they allow us inside to know what [] the living conditions [are].”

Ravi, a 22-year-old Dalit from Odisha works for Nekkanti Sea Foods packing and loading shrimp to earn around INR 10,000 (USD 120.40) per month. He complained that he does not know how much the company really pays him because the company pays his salary to a contractor who pays Ravi. The first year he worked at the company, Ravi realized that he had accepted the company housing on false pretenses: “While the contractor will say that [once a week] we will get a gate pass to go out, the reality is that we get a gate pass only on the day we get the salary.” Ravi found company housing to be far too restrictive, like living in a jail, especially because his movements during his leisure time and on days off were even restricted.

After living in the compound for a year, Ravi was determined to escape the surveillance and control of the company hostel. He found modest accommodation with his friend Manu, a 21-year-old from the same village who also works for Nekkanti Sea Foods in the packing section. Manu came to work in the shrimp processing sector because his family’s farm had been losing money, a result of climate change. The two men have no cots but instead sleep on the floor. They own a small electric stove, a few cooking utensils, and there is a toilet outside. Because they have no cupboard, they hang their clothes on a rope tied across the room. Despite how sparse their home is, they prefer living here over the company hostels. Ravi explained: “We need freedom of movement. We don’t want to take gate passes always to go out. And they don’t give [them]. So, we took this small room for ourselves. Here we can come late, go early, and sleep peacefully...”

Even when workers are injured or sick, the company – through the recruiter – will often keep tabs on the worker. A group of workers explained that 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. At no time is the worker allowed to travel on her own. Similarly, in some cases, it seems that the recruiter keeps tabs on workers when they leave the hostel to buy goods by controlling the autorickshaw driver they use, again ensuring that they are not out alone with no one watching them.

Like so many workers in the shrimp processing sector, Sujit, along with his wife and two young sons, came to Andhra Pradesh because there were no jobs in his hometown in West Bengal. Both Sujit and his wife work for a major shrimp company, together earning about INR 20,000 (USD 240.62) per month. Their family lives on company premises. “We have a small gas stove in the room. So, we cook our food. Once in a month, we take [a] pass and come to this market, buy food stuff.” Sujit’s sons do not currently attend school. Instead, they remain in the family’s room on the company’s premises all day while their parents are at work. When asked about his sons not attending school, Sujit responded: “[F]irst let us earn something to eat, then [we] will think about education.” Sujit complained that he cannot come and go from the company premises as he wishes, saying that the “security system is high” and that he is only allowed to leave the company premises twice a month. He also complained that it is expensive – about INR 800 (USD 9.62), or almost three times a woman’s daily wage – to travel to town to buy food, which he buys all at once for a few weeks. He, therefore, splits the trip with others.

# VI. Environmental Harms

## A. Pollution and Contamination: “Since the aqua farms came, water has been getting polluted from the ground and land.”

Over the past fifteen years, the shrimp industry has reshaped the landscape in Andhra Pradesh. Where previously rice paddies and coconut farms flourished, shrimp farms now dominate the landscape. Hatcheries and processing facilities line the coast, having replaced mangroves and taken over the coastline. This rapid buildup of infrastructure for the shrimp industry has led to the pollution of groundwater, canals, and other waterways and resulted in health issues in communities near hatcheries and shrimp farms.

Shrimp hatcheries, which require intake and output of water to keep the broodstock and juvenile shrimp alive, often release unclean effluents into the ocean, polluting the local environment.<sup>229</sup> A 2018 report by the Comptroller and Auditor General of India found that a group of hatcheries in Andhra Pradesh had “continued to discharge untreated effluents directly into the sea,” despite regulations prohibiting such actions.<sup>230</sup> Although the Indian Government has acknowledged the problem, the lack of oversight and enforcement – and the weakening of regulations<sup>231</sup> – has allowed numerous hatcheries to violate local environmental laws.



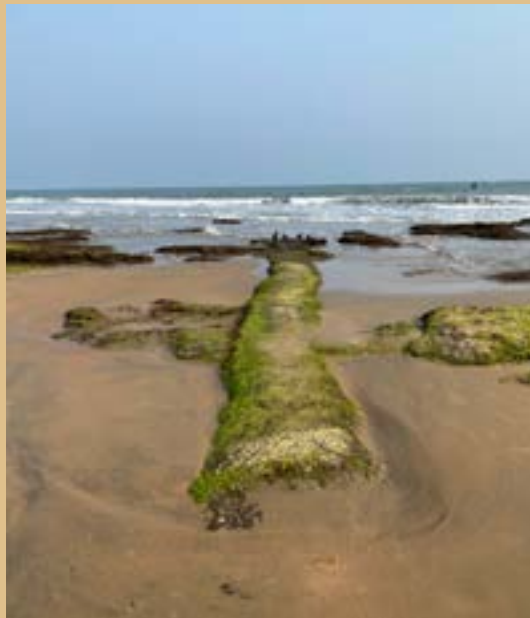
*Gates of a hatchery overlooking the nearby shoreline (Andhra Pradesh, 2024)*





*A shrimp hatchery (Andhra Pradesh, 2024)*

Communities located near hatcheries, often local fisher communities on the coast, reported that their groundwater is no longer potable. In multiple villages, community members explained that in the past decade – beginning when hatcheries were built nearby – the groundwater has increased in salinity, becoming non-potable. One man from a village located next to a large hatchery explained that the pH of the groundwater in his village has decreased to 2.5, far below the 6.5 pH that is acceptable for drinking water. This same man mentioned that a village one kilometer away from the hatchery still has clean drinking water.



*A pipe from a hatchery leading into the ocean near Srikakulam (Andhra Pradesh, 2024)*

The contamination of groundwater harms local communities in numerous ways. The inability to drink groundwater increases the cost of living. In one village, community members reported that they spend INR 100 (USD 1.21) per day on water, a significant proportion of their income. The need to buy drinking water leaves less money for families to pay for other necessities, such as children's school or healthcare.

Community members also complained that the contaminated water has caused an increase in health issues. In one village of small-scale fishers, the community explained that people had rashes from the groundwater,<sup>232</sup> as well as liver and kidney problems. One community also reported increased rates of cancer and irregular periods. While more information is needed about the impact on communities' health, complaints are consistent across villages dotting the coast.



*Effluents from a hatchery emptying onto beaches (Andhra Pradesh, 2022)*





*Effluents from a hatchery emptying onto beaches (Andhra Pradesh, 2022)*

Shrimp farms also require large quantities of water to function – water that often contains contaminants and is supposed to be cleaned before being released into the environment. Cleaning effluents from shrimp farms is costly, and farmers often skimp on those costs by dumping shrimp waste, feed, dead shrimp skin, and other pollutants directly into canals and other nearby waterways.<sup>233</sup> Shrimp feed is especially concerning as a pollutant; primarily composed of fishmeal, wheat flour, and soybean meal, it can contain large amounts of nitrogen and phosphorus.<sup>234</sup> Shrimp are nibblers, leaving uneaten feed to settle on the bottom of shrimp ponds – breaking down and releasing dissolved nitrogen and phosphorus into the water.<sup>235</sup>

***“All the aqua farms are near the canals that we use for drinking, cattle, domestic, and agriculture. Aqua farms and their related activities worsen our living conditions. We are already at the edge of danger, without hope for the future, and we are not willing to keep our children under these conditions.”***

-Rama, a local activist in Andhra Pradesh



*A shrimp farm near Kakinada (Andhra Pradesh, 2024)*

Shrimp farms are a major polluter of groundwater in nearby villages, often causing groundwater to become too saline for drinking. Multiple communities explained that they can no longer drink the groundwater in their villages due to pollution from nearby shrimp farms. One family, whose house is located just steps away from a shrimp farm, reported that they have not been able to drink the groundwater since the shrimp farm was built ten years ago. There is a large well in front of their house that sits unused; instead, they must buy drinking water, which can be expensive. This same family explained that cases of malaria had increased since shrimp farms were built nearby. A farmer explained that in the past,

“We used [to use] drinking water from wells and nearby ponds without using any filters. The land was called the rice bowl of India and was rich in coconut and other commercial and non-commercial crops. Since the aqua farms came, water has been getting polluted from the ground and land.”

Other villages near shrimp farms reported that the farms have used all the groundwater, leaving none for villages that rely on it. Because shrimp farms require so much water, farms have pumped in water and decreased the water table in some coastal areas.<sup>236</sup>





*A well that can no longer be used, with a shrimp farm in the background (Andhra Pradesh, 2024)*

The contamination of waterways, including the seepage of salt from shrimp ponds into groundwater, also pollutes irrigation sources for agricultural crops, including rice paddies and coconut plantations.<sup>237</sup> Such seepage can cause a domino effect; contamination from shrimp ponds can make it all but impossible to continue to grow agricultural products nearby, leaving farmers near shrimp farms with few options other than to sell their land or convert it into shrimp farming.<sup>238</sup>

The destruction of agricultural land causes additional social harm, making it even more difficult for families to find work nearby and earn enough to support their children. A woman from a village near shrimp farms explained, “Our agricultural lands are polluted by waste released from aqua farms. We now lack agricultural work, and our men are forced to migrate to cities for manual jobs. With little money, we are struggling to spend on children’s education, hospitals, and even drinking water.” Women who used to do agricultural work must look for work elsewhere. Some women travel 40 kilometers to earn INR 300 (USD 3.61) each day, but they spend half of their income on travel costs.<sup>239</sup>

## The Coastal Aquaculture Amendment Act (CAA) (2023)

In 2005, the Indian Government passed the Coastal Aquaculture Authority Act (2005), which prohibited “coastal aquaculture” – hatcheries and shrimp farms – from operating within 200 meters of the high tide line along the coast.<sup>240</sup> Enforcement, however, was lacking. In practice, much of the shrimp sector operated illegally, as a case study on hatcheries in Tamil Nadu exemplified; almost all surveyed hatcheries operated illegally.<sup>241</sup> In 2021, there were renewed attempts at enforcement when a judicial order directed the Coastal Aquaculture Authority to remove all aquaculture hatcheries within 200 meters of the high tide line, initiate criminal prosecution against violators, and require violators to provide compensation to small-scale fisher communities for past violations.<sup>242</sup> Little came of this.

The Andhra Pradesh Aquaculture Authority, Fisheries Department, and District Collector are responsible for ensuring that appropriate actions are taken against unauthorized aquaculture farms in the Coastal Zones. However, an investigative committee formed in 2020 by the Indian National Green Tribunal (NGT), a statutory body established to decide cases related to environmental protection and natural resources, found “very few” of the coastal aquafarms located in East Godavari district were operating with proper registration.<sup>243</sup> The committee also found widespread failure to enforce effluent treatment systems for wastewater generated by these farms.<sup>244</sup> In a 2022 judgment pronounced on the basis of the committee’s findings, the NGT directed relevant authorities to take action against unauthorized farms, including through removal of the farms and prosecution of those responsible.<sup>245</sup>

A 2022 Performance Audit on Conservation of Coastal Ecosystems, conducted by the Indian Ministry of Environment, Forest & Climate Change found over 860 hectares of land registered under aquaculture within the Andhra Pradesh Coringa Wildlife Sanctuary, which contains the second largest mangrove forest along the country’s eastern coast.<sup>246</sup> Despite findings that eleven shrimp farms were discharging untreated effluents into the Coringa waters, the audit notes that the Andhra Pradesh Pollution Control Board cited but did not pursue penalty or legal proceedings against five farms, and took no action against the other six.<sup>247</sup>

In August 2023, the controversial Coastal Aquaculture Amendment Act passed, watering down the 2005 Act even further and exempting hatcheries and shrimp farms from the law altogether.<sup>248</sup> As a result, hatcheries and shrimp farms, including those within 200 meters of the high tide line, can function without fear of criminal prosecution or regulatory actions.<sup>249</sup> This amendment is a clear win for the shrimp industry but a step in the wrong direction for environmental protection and local communities, especially for fisher communities.



*Dead coconut trees near shrimp farms (Andhra Pradesh, 2024)*





*A rice paddy (Andhra Pradesh, 2024)*



*The eutrophication is visible in the plants growing on the river (Andhra Pradesh, 2024)*

Pollutants from shrimp farms released into waterways also cause algae blooms, resulting in plants and wild fish dying and the creation of toxic chemicals that kill aquatic animals.<sup>250</sup> The blooms cloud the water, preventing light from reaching organisms that ordinarily produce dissolved oxygen, causing them to die.<sup>251</sup> Eutrophication can even raise toxic phytoplankton populations to dangerous levels, poisoning and killing more marine life.<sup>252</sup> These processes lead to anoxic and toxic conditions in surrounding waterways when waste products are discharged from pools.<sup>253</sup>

The Indian Government has thus far shown little interest in the pollution of coastal waters, the decimation of wild fish populations, the depletion of groundwater, and the large-scale impact of the industry on patterns of land use. The lack of oversight in the Indian shrimp sector exacerbates the risk of environmental harm. Reports suggest that a large number of shrimp farms operate in direct violation of environmental regulations.<sup>254</sup>

## Mangrove Loss and Destruction

Throughout India, especially on India's eastern coast, shrimp production facilities continue to replace mangroves, adding to a global trend in which shrimp farming accelerates mangrove destruction.<sup>255</sup> Hatcheries are often built near the coastline, sometimes replacing or harming mangroves, wetlands, mudflats, and agricultural areas.<sup>256</sup> Mangroves have also been cleared to make way for shrimp farms, some of which are quickly abandoned due to disease and pollution.<sup>257</sup> The increase in mangrove deforestation due to shrimp farming is directly connected with the fact that shrimp has become one of the most widely consumed seafoods in the world over the last four decades.<sup>258</sup> Globally, half of all mangroves have been destroyed since 1940 – and farmed shrimp production has caused between 30 and 50 percent of that destruction.<sup>259</sup>

This loss can be devastating for coastal communities. Mangroves are a vital part of the ecosystem on the eastern coast of India, where much of the shrimp production process takes place.<sup>260</sup> Both within India and globally, mangroves are crucial for the survival of entire ecosystems. Mangroves serve as nursery grounds for a variety of fish and other animals and provide shelter for those animals at early stages of development.<sup>261</sup> The destruction of mangroves, therefore, reduces animal diversity in the area. Additionally, despite occupying only 0.7 percent of the world's forests, mangroves play a crucial role in carbon sequestration,<sup>262</sup> sequestering carbon up to four times the rate of terrestrial forests.<sup>263</sup> Mangroves can also serve as a buffer from major weather events, stabilizing coastlines and protecting communities from storm surges.<sup>264</sup> Their destruction can, therefore, leave communities more vulnerable to storms and flooding.

Many coastal regions in Andhra Pradesh, Odisha, and especially in West Bengal – three large shrimp-producing states – are home to vast mangrove forests, agricultural lands, and local ecosystems such as mudflats and scrublands.<sup>265</sup> The Godavari-Krishna delta in Andhra Pradesh, a center of the farmed shrimp industry, is one of the major mangrove forests on India's eastern shoreline,<sup>266</sup> and West Bengal is home to part of the Sundarbans, the largest mangrove in the world.<sup>267</sup> Such areas have been changed drastically by the shrimp industry, in part from the introduction of seawater irrigation and shrimp farmers' taking over public land, including areas that fishers traditionally used.<sup>268</sup> Government intervention to protect the remaining mangroves is essential for local fisher communities, to protect communities from storms, and for carbon sequestration.

## **B. The Impact on Fisher Communities: “Shrimp culture killed fishes, so fishermen have to suffer.”**

The expansion of hatcheries and shrimp farms has also hurt local fisher communities, many of whom live along the coast and fish using traditional small boats and nets. Shrimp farmers have illegally taken over communal areas near the coast to construct embankments, walls, and other infrastructure for shrimp farming.<sup>269</sup> As a result, fishers lose access to this space, which they had traditionally used to park their boats, dry fish, or repair their nets – activities necessary for their livelihoods. The growth of shrimp farming and resulting mangrove loss directly threatens the economic stability of these communities.<sup>270</sup>

The destruction of mangroves for farmed shrimp production has also contributed to the reduction in fish stock by destroying fish spawning territory.<sup>271</sup> Pollution from shrimp farms and hatcheries contributes as well, releasing effluents directly into the ocean. Fishers explained that chemicals from hatcheries and shrimp farms destroy fish eggs in canals and that red crabs, which used to be prevalent and were



a common catch, are now rare. One fisher said that it used to be common to catch 20 kilograms of fish per day, but that catch yields have fallen to between two and four kilograms. Another fisher mentioned that during the first COVID-19 wave, fish yields increased when shrimp farming paused. However, as shrimp farms became active again and pollution resumed at higher levels, the fish yields returned to their previous low levels. The price fishers earn for their catch has also decreased with the rise of aquaculture. Fishers complained that farmed shrimp have reduced the price they can earn for wild shrimp.



*Small-scale fishing boats (Andhra Pradesh, 2024)*

The decreased fish yields have led to numerous communal impacts, including men migrating to other parts of India for work. As one fisherman explained, “Only one or two members go to work in aqua farms; the rest are forced to travel 50-60 kilometers to find daily labor, and we can’t bear the cost of travel. Therefore, we are looking into seasonal migration to other states where construction and other works, like carpentry, are possible.”<sup>272</sup> In some cases, men from these communities travel as far as Gujarat, where they work as fishermen on larger boats. In one inland fisher village, CAL field investigators were told that at least one member of each of the over 1200 households has migrated for work. These men earn about INR 15,000 per month on these boats – many of which likely catch “trash fish” used for shrimp feed.

Women who remain in the village must also look for alternative sources of income. Instead of drying and selling the fish as they traditionally have done, some women turn to the shrimp sector, working as domestic workers in hatcheries or in the processing sector to earn around INR 300 (USD 3.61) per day. As a result, the shrimp industry destroys fisher communities’ livelihoods, pollutes their groundwater, and then exploits these same individuals as workers.



*A fisher woman selling fish at the Visakhapatnam fish market (Andhra Pradesh, 2024)*

***“Shrimp culture killed fishes, so fishermen have to suffer. There are no fish in the canals and rivers, and consequently, there is a scarcity of fish in the sea. The greed of upper-caste landlords is forcing us to leave our own land and search for daily labor work, for which we are not skilled.”***

***-Krishna, a fisher in Andhra Pradesh***

Shrimp farming is a massive industry – and the resulting environmental harms are therefore correspondingly large. The lack of regulation in the shrimp sector has allowed companies and shrimp farmers to slough off the costs of production to local communities who live with contaminated water, the loss of mangroves, and decreased fish stocks. These environmental harms force traditional fishers and agricultural workers to become laborers, often for the farmed shrimp industry.

*Small-scale fishing boats (Andhra Pradesh, 2024)*





# VII. Certification Schemes: A Failed Attempt At Gap-Filling

As consumers increasingly understand the prevalence of human rights and environmental risks in international supply chains, they are demanding that the products available to them are produced ethically, with no forced or child labor and with minimal environmental impact. Companies have responded to and capitalized on this new market for ethical food products, slapping third-party certifications on goods from bananas to coffee. However, with misaligned incentives and deep structural flaws, social auditing and certification schemes fail to protect workers and the environment.<sup>273</sup> While some standards are strong, weak enforcement and check-box auditing means that these standards do not fill the governance gap they were theoretically created to respond to. Instead, they can paper over the issues and act, in effect, as cover for companies. This is visible in the Indian shrimp industry, in which two certification schemes, Best Aquaculture Practices (BAP) and the Aquaculture Stewardship Council (ASC), certify much of the shrimp that enters the United States.

Certification schemes have proliferated across the global seafood industry, with overlapping certifications focused on an array of species and different parts of the supply chain.<sup>274</sup> Some schemes focus specifically on environmental harms, while others cover a broader spectrum and encompass social, labor, and environmental issues.<sup>275</sup> BAP and ASC both cover social, labor, and environmental issues in their standards.

## Supplier Codes of Conduct

Companies, including most large supermarkets, have codes of conduct for their suppliers.<sup>276</sup> These codes include labor and environmental policies that suppliers must comply with to sell their products to that retailer. Across the board, these codes of conduct prohibit forced labor, debt bondage, health and safety violations, child labor, and environmental abuses.

Some codes of conduct explicitly refer to key international human and labor rights conventions, including the United Nations' Declaration of Human Rights, ILO conventions, or the United Nations' Guiding Principles on Business and Human Rights.<sup>277</sup> Other codes of conduct, such as those for Publix and Meijer, have only cursory paragraphs on social conduct by employers.<sup>278</sup> Regardless of how detailed the codes of conduct are, this report has repeatedly demonstrated that in many cases suppliers are not complying with these most basic human rights. Including strong language prohibiting labor and environmental abuses is a first step, but it is only the beginning; companies must also pay fair prices to their suppliers so that their suppliers are no longer squeezed and can pay their workers – and sub-suppliers – fair prices as well.

Certification schemes such as BAP and ASC provide businesses in specific industries with recognized labels, offering consumers assurance about the product's compliance with certain standards. Producers in the shrimp sector, including hatcheries, shrimp farms, and processing facilities, pay to have private auditors monitor and review their compliance with standards that the certifying body has developed.

While many of the standards in these certifications are laudable, they are often not enforced.<sup>279</sup> In most certification schemes, the factories, farms, or hatcheries being audited pay for the audit, creating a conflict of interest for auditors who would like to be rehired in the future.

Additional inherent structural flaws mean that auditors often miss egregious human rights abuses, including forced labor.<sup>280</sup> This is due to the significant obstacles in place: worker fear and intimidation, threat of retaliation against workers, undocumented sub-contracting, and pervasive false and inadequate records. Social audits and certification schemes have been shown to be ineffective tools for eliminating or even decreasing the prevalence of labor abuses in supply chains.<sup>281</sup>



*The entrance to the Vaisakhi Bio-Marine Pvt. Ltd hatchery (Andhra Pradesh, 2024)*



## The Best Aquaculture Practices

The Best Aquaculture Practices (BAP) certification standards are set by the Global Seafood Alliance to encourage the use of responsible aquaculture practices.<sup>282</sup> BAP certification standards claim to ensure that food products sold with BAP certification were produced through “environmentally and socially responsible means.”<sup>283</sup> The BAP program has four pillars: food safety, social accountability, environmental responsibility, and animal health and welfare.<sup>284</sup> It also has an overarching set of Traceability Requirements.<sup>285</sup> Yet BAP was founded by and continues to be dominated by industry – it is essentially an industry body attempting to regulate itself.<sup>286</sup>

BAP certifies the entire shrimp production process, from feed mills to hatcheries to shrimp farms to processing plants.<sup>287</sup> Its labor standards include clear prohibitions on forced labor: “All work, including overtime, shall be voluntary, and shall not be under threat of any penalty or sanctions.”<sup>288</sup> The standards explicitly state that processing plants, farms, and hatcheries, “shall not engage in any form of forced or indentured labor including prison labor.”<sup>289</sup> Furthermore, BAP’s standards prohibit recruitment fees, bonded labor, and require that workers “have the right to leave the premises after their work shift.”<sup>290</sup>

Despite strong standards on paper, implementation is often weak. First, although BAP technically certifies the entire supply chain, auditors are unlikely to audit peeling sheds which may be processing shrimp for export. Second, Nekkanti Sea Foods, for example, is certified by BAP and, according to BAP’s website, has had unannounced audits performed on many of its processing plants, including at the Nekkanti Mega Food Park Private Limited and at the company’s Visakhapatnam plant.<sup>291</sup> Yet we found that Nekkanti Sea Foods – as well as many other companies – regularly violates labor laws, from paying workers informally, to intimidating workers, to even restricting workers’ freedom of movement in hostels – all clear indicators of forced labor.

The Vaisakhi Bio-Marine Pvt. Ltd is certified by BAP,<sup>292</sup> yet CAL’s field investigators found numerous violations of BAP’s standards for hatcheries.<sup>293</sup> Workers at the hatchery reported that they earned INR 300 (USD 3.61), under the minimum wage, and that they do not receive PF and ESI. According to BAP’s standards, workers must be paid the minimum wage and all benefits to which they are legally entitled.<sup>294</sup>

Villagers from the fisher community next to the Vaisakhi Bio-Marine Pvt. Ltd hatchery have numerous complaints about its environmental impact. Community members reported that they can no longer drink the groundwater due to pollution from the hatchery and that they are having health issues from the contamination, including skin rashes. The hatchery standards state that the “hatchery shall demonstrate efforts to mitigate any negative impacts on local communities and the surrounding environment including but not limited to: waste disposal, sensory impacts (visual, noise, and odor), and livelihoods of local residents.”<sup>295</sup> Additionally, “Operation of the hatchery shall not lead to erosion, beach deterioration, or cause other ecosystem damage.”<sup>296</sup> Yet these community members are adamant that the hatchery has damaged the ecosystem and negatively impacted the community ever since it was built.



*Inside the Vaisakhi Bio-Marine Pvt. Ltd hatchery (Andhra Pradesh, 2024)*

### The Aquaculture Stewardship Council

The Aquaculture Stewardship Council (ASC) is a nonprofit organization that establishes labeling protocols for farmed seafood, with the stated aim to ensure sustainable aquaculture, environmental sustainability, and social responsibility.<sup>297</sup> The ASC Standards were developed in line with the United Nations Food and Agriculture Organization (FAO) Guidelines and the International Social & Environmental Accreditation & Labelling (ISEAL) Standard Setting Code of Good Practice. ASC provides the final audit report on its website,<sup>298</sup> allowing buyers, consumers, and the public to read the reports.

While such transparency is commendable, the fact that ASC announces its audits in advance indicates that its findings may be flawed. In the best circumstances, announcing audits in advance gives employers time to rectify issues they are aware of. The reality, however, is that announced audits often allow employers to hide illegalities and to train workers to provide “correct” answers to auditors. Moreover, ASC only certifies shrimp farms, ignoring other key parts of the supply chain – a nuance that consumers may be unaware of.<sup>299</sup>

Auditing is especially unreliable in industries and countries with a high likelihood of labor abuses, such as the Indian shrimp industry, and it is especially prone to failure in the informal economy. A 2021 report from the KIT Royal Tropical Institute found that non-compliance with BAP standards was exceptionally high in the seafood processing sector in India.<sup>300</sup> **As an auditor who worked for fifteen years in social auditing in India explained, “Ultimately everybody wants money in the industry; nobody is working for the sake of betterment of workers – that is all bulls\*\*t. Everybody is here to make money.”<sup>301</sup> Despite the open secret that social auditors often complete box ticking exercises rather than legitimate monitoring, companies – including shrimp companies – continue to rely on them.**

## Violations of BAP's Seafood Processing Standard at a Nekkanti Sea Foods' Processing Facility

BAP Processing Standard <sup>302</sup>	Nekkanti's Facility #3 (J. Thimmapuram Village, Peddapuram Mandal, Andhra Pradesh, India) <sup>303</sup>
5.2.1 The facility shall ensure that workers are paid at least the legal minimum wage, or the wage rate established by an employment contract or collective bargaining agreement, whichever is higher. Regular wages and compensation shall cover the workers' basic expenses and allow for some discretionary funds for use by workers and their families. <sup>304</sup>	Women workers reported being paid INR 300 (USD 3.61) per day, below the minimum wage in Andhra Pradesh. This is far below the living wage in Andhra Pradesh, INR 16,999 (USD 207). <sup>305</sup>
5.2.2 The facility shall provide benefits that, at minimum, are required by local or national law (such as paid holidays, maternity leave, health insurance, paid sick time, etc., as applicable). <sup>306</sup>	Most workers said they were not paid benefits, including ESI and PF, nor do they have any paid days off.
5.2.3 The facility shall compensate workers for overtime hours worked beyond the nationally mandated a work week, at a premium rate, as required by local law. <sup>307</sup>	Workers said they are not paid a premium for overtime work but instead are paid the same rate. Some women workers reported not being paid for overtime at all.
5.2.6 ...A record of wage payment (such as a pay slip) shall be provided to the worker and include itemized detail of all benefits provided and the deductions that were made. <sup>308</sup>	Workers said they do not receive pay slips or have any documentation of their pay.
5.2.8 The facility shall not use contractors, subcontractors, temporary workers, homeworkers, apprentices or other non-full-time employment schemes to avoid the payment of benefits, social security, etc. required by local or national law under a regular employment relationship. <sup>309</sup>	Most workers reported being recruited by another worker at the processing facility. Workers are generally not paid benefits they are legally entitled to, including PF or ESI.
5.4.2 The facility shall not engage in any form of forced or indentured labor including prison labor. This includes human trafficking, ... and other means of coercion intended to force anyone to work. <sup>310</sup>	Migrant workers living in company hostels are at a high risk of forced labor.
5.4.3 Bonded labor shall be prohibited. The facility shall not require the payment of deposits, bonds or other financial or collateral guarantees that may result in debt bondage. This includes recruitment fees, fines, and deductions from wages, and withholding of pay that are not part of a written contractual agreement with the employee. <sup>311</sup>	Workers reported that some workers at this facility have loans and must work to repay them. In some cases, workers may receive loans from supervisors that are then repaid, with interest, from salaries. Recruiters also receive a cut for each worker they have recruited who comes to work each day. Some workers reported they paid a month's salary to recruiters.
5.4.4 Workers shall have the right to leave the premises after their work shift. ... Facility shall not otherwise unreasonably restrict workers' freedom of movement including but not limited to surveillance during rest or non-work hours, during transportation or in dormitories provided by the facility. <sup>312</sup>	Workers who live in hostels on company premises are not allowed to leave, except once a month.



<p>5.6.2 The facility shall provide to all workers, prior to hire (jobseekers) and during employment, with written and understandable information regarding the terms and conditions of employment, worker’s rights, benefits, compensation, expected working hours, details of wages for each pay period each time they are paid, and facility policies regarding disciplinary actions, grievance procedures, any authorized deductions from pay, physical work, environment and housing, and similar. ...<sup>313</sup></p>	<p>Workers are not provided with contracts or written information about their employment terms.</p>
<p>5.6.3 Where contracted/subcontracted or temporary workers are hired through a labor recruiting agency or employment service, the facility shall ensure that these services provide all the information cited at clause 5.6.2 prior to and during hire, in appropriate languages, to ensure workers are aware of their rights and conditions of employment as described above.<sup>314</sup></p>	<p>Workers are not provided with contacts or written information about their employment terms.</p>
<p>5.6.4 All labor recruiting agencies or employment services used by the facility must be licensed to operate by the local or national government as a labor provider. Jobseekers and workers shall not have been subject to recruitment practices that employ threats, penalties, coercions, physical force, or fraud.<sup>315</sup></p>	<p>Recruitment is informal, carried out by an individual at the company who is also a worker.</p>
<p>5.7.3 The facility shall treat jobseekers and workers with dignity and respect and not engage in or permit physical, verbal or sexual abuse, bullying or harassment.<sup>316</sup></p>	<p>Workers report being yelled at by supervisors regularly.</p>
<p>5.7.5 The facility shall not terminate employees for pregnancy, force the use of contraception, or reduce wages after maternity leave. ....<sup>317</sup></p>	<p>Workers repeatedly reported that any woman who is pregnant is immediately fired.</p>
<p>6.1.1 The facility shall provide safe, healthy and clean conditions in all designated work, rest, dining, and, where applicable, housing areas, and shall establish and follow a clear set of procedures that ensures occupational health and safety. ....<sup>318</sup></p>	<p>Workers complained that they live in overcrowded living facilities.</p>
<p>6.1.2 If provided or mandated by the facility or employment agency/labor broker, employee housing shall meet local and/or national standards including but not limited to safe, watertight structures, adequate space as per occupational load for the facility, heating/ventilation/cooling, pest control, sink, shower and toilet facilities.<sup>319</sup></p>	<p>Workers complained that they live in overcrowded living facilities. A guard in a women’s hostel confirmed this, saying that 500 women live in the hostel in rooms with eight people.</p>
<p>6.3.1 Safe, appropriate and hygienic protective gear shall be provided, free of charge, to workers commensurate with work activity.<sup>320</sup></p>	<p>Workers are provided protective equipment and clothing. However, the gloves they are given do not adequately protect them from frostbite.</p>
<p>6.4.1 The facility shall provide adequate medical care for employees, including access to or communication with medical authorities in case of emergencies or accidents.<sup>321</sup></p>	<p>Workers reported that they receive immediate healthcare when they are injured. However, if they fall or faint, women said that they are told to rest for a few minutes but then must return to work.</p>

Companies see audits and certification schemes as essential – often as cover and protection for themselves – and as marketing. As consumers have become more aware of the labor and environmental harms stemming from the food they buy, especially in seafood, companies have invested in certification schemes as a sign to consumers that they are taking steps to ensure their supply chains are clean. However, these actions often fail to help those who are most vulnerable, namely the workers and local communities. A more effective approach than certification schemes would involve a worker-driven model,<sup>322</sup> where there is real worker engagement, based on freedom of association, ensuring that workers are part of decision-making, earn a living income, and can advocate for their rights without fear of retaliation.



*A processing facility near Kakinda (Andhra Pradesh, 2024)*

# VIII. Next Steps

The Indian shrimp industry is at a crossroads. As demand for shrimp continues to increase, so must the pressure on stakeholders at every level to identify and remedy abusive working conditions, forced labor, and environmental harm that characterize the sector. Workers in the sector are victims in the race to cut costs and profit more on America's favorite seafood. Industry certification schemes, such as BAP and ASC, help mask the atrocities when they fail to enforce their standards while falsely reassuring U.S. purchasers and consumers that all is well.

This report challenges the current narrative and issues an urgent call to action. As demand for shrimp continues to grow, so must the pressure on stakeholders at every level to identify and remedy the sector's pervasive forced labor, abusive conditions, and environmental harms.

Companies producing and exporting farmed shrimp from India must abide by international and Indian labor and environmental laws, and the Indian Government must ensure this legal compliance. Prominent shrimp companies operating in India, such as Apex Frozen Foods, Avanti Feeds Limited, Devi Fisheries Limited, Nekkanti Sea Foods, and Sandhya Aqua, must engage in meaningful reforms, respecting labor and environmental laws, empowering workers to organize, and prioritizing fair wages and humane working conditions. These companies must abide by the United Nations Guiding Principles on Business and Human Rights to ensure that harmed workers receive access to real remedies.<sup>323</sup>

U.S. retailers and wholesalers possess the power – and thus, the responsibility – to transform the sector by investing in workers and the environment through paying higher prices, establishing grievance mechanisms, and implementing binding agreements with independent worker organizations to ensure workers' rights are protected. U.S. retailers and wholesalers wield significant power and bear a profound responsibility to help transform the Indian shrimp sector by requiring investments in fair compensation, ethical recruitment, and sustainable practices across the shrimp supply chain. Significant buyers like Walmart, Target, and Costco must change their procurement practices, including paying a fair price for shrimp.

Finally, the U.S. Government also has a critical role to play. It must eradicate shrimp produced with forced labor from its own procurement process and utilize existing agency mechanisms – including under Section 307 of the Tariff Act of 1930, Section 301 of the Trade Act of 1974, and SIMP – to hold itself and importing companies accountable. The U.S. Government must also take steps to ensure that U.S. companies, including importers and sellers of shrimp, do not take advantage of the large cracks in the global legal system to profit off the backs of workers, the environment, and local communities.

The current system of farmed shrimp production is not sustainable: not for workers, the environment, or – ultimately – the purchasers. The Indian shrimp sector is rife with harassment, discrimination, debt bondage, dangerous workplace conditions, threats, and toxic sewage. These abuses have been hidden during the sector's impressive rise over the past fifteen years but are now exposed and must not be further ignored.



# Endnotes

- 1 Throughout the report, all names have been changed to protect workers' identities.
- 2 The living wage per month in Andhra Pradesh is INR 16,999 (USD 207), while the cost of decent standard of living for a family is INR 26,531 (USD 323). *Living Wage Update Report: Rural Andhra Pradesh, India 2023*, Anker Research Institute, Global Living Wage Coalition, SDSN Bolivia, Living Wage Update Report No. 23-04-05 (2023), [https://www.globallivingwage.org/wp-content/uploads/2023/08/Update-report\\_India\\_Rural-Andhra-Pradesh\\_2023\\_JUNE.pdf](https://www.globallivingwage.org/wp-content/uploads/2023/08/Update-report_India_Rural-Andhra-Pradesh_2023_JUNE.pdf) [hereinafter *Living Wage Update Report: Rural Andhra Pradesh, India*].
- 3 Snigdendu Bhattacharya, *Artisanal Fishers Wary of Coastal Aquaculture Regulation Amendments that Legalise Past Violations*, Mongabay, Sept. 15, 2023, <https://india.mongabay.com/2023/09/artisanal-fishers-wary-of-coastal-aquaculture-regulation-amendments-that-legalise-past-violations> [hereinafter Bhattacharya, *Artisanal Fishers Wary of Coastal Aquaculture Regulation Amendments*]; Priyanka Shankar, *Artisanal Fishers of Rameswaram Resist the Polluting Shrimp Farms on the Island*, Mongabay, March 30, 2023, <https://india.mongabay.com/2023/03/artisanal-fishers-of-rameswaram-resist-polluting-shrimp-farms-on-the-island/>.
- 4 United States International Trade Commission (U.S. ITC), *Dataweb*, <https://dataweb.usitc.gov/> [hereinafter U.S. ITC, *Dataweb*].
- 5 *Id.* In 2012, the United States imported \$575,040,815 of shrimp from India, or 66,011,225 kilograms. That same year, the United States imported \$1,201,957,120 of shrimp from Thailand (135,935,872 kilograms). By 2013, just one year later, imports from India had risen to \$1,006,751,975 (90,983,559 kilograms) while imports from Thailand had decreased to \$904,872,922 (84,047,730 kilograms). *Id.*
- 6 *Frozen Warmwater Shrimp from China, India, Thailand, and Vietnam*, Investigation Nos. 731-TA-1064 and 1066-1068 (Third Review), United States International Trade Commission (2023), p. 71, [https://www.usitc.gov/publications/701\\_731/pub5432.pdf](https://www.usitc.gov/publications/701_731/pub5432.pdf) [hereinafter *Frozen Warmwater Shrimp* (2023)].
- 7 *See, e.g., id.* (“While the outbreak of a disease called Early Mortality Syndrome (“EMS”) that began in China in 2009, spread to Southeast Asia between 2010 and 2012 and curtailed production in some of the subject countries for only a few years, Thai Producers claim to continue to be impacted by this issue during the POR. Further, the subject industry in Thailand is also combating reports of forced labor practices in its seafood supply chain.”); *see also* Martha Mendoza, *Nestle Confirms Labor Abuse Among its Thai Seafood Suppliers*, Associated Press, Nov. 23, 2015, <https://www.ap.org/explore/seafood-from-slaves/nestle-confirms-labor-abuse-among-its-thai-seafood-suppliers.html>; Martha Mendoza, *AP Report on Slave-Peeled Shrimp Spurs Calls for Boycott*, Associated Press, Dec. 14, 2015, <https://www.ap.org/explore/seafood-from-slaves/ap-report-on-slave-peeled-shrimp-spurs-calls-for-boycott.html>; Margie Mason, et al., *Global Supermarkets Selling Shrimp Peeled By Slaves*, Associated Press, Dec. 14, 2015, <https://www.ap.org/explore/seafood-from-slaves/global-supermarkets-selling-shrimp-peeled-by-slaves.html> [hereinafter Mason et al., *Global Supermarkets Selling Shrimp Peeled By Slaves*]; Holger Rubel, et. al., *A Strategic Approach to Sustainable Shrimp Production in India: The Case For Improved Economics And Sustainability* Boston Consulting Group (Jan. 2020), p. 6, <https://media-publications.bcg.com/BCG-A-Strategic-Approach-to-Sustainable-Shrimp-Production-in-India-Jan-2020.pdf> [hereinafter Rubel, et. al., *A Strategic Approach to Sustainable Shrimp Production in India*] (“In the early years of this century, China, Thailand, and Vietnam were leaders in the shrimp farming sector—and India was only the sixth-largest shrimp producer. But the competitive landscape has shifted. Outbreaks of disease and rising labor costs have threatened this once-thriving industry, and India, which has dramatically increased its share in the global shrimp market by producing large volumes at low prices, has become the second-largest shrimp producer worldwide, after China.”).
- 8 U.S. ITC, *Dataweb*, *supra* note 4. By 2017, India accounted for 47.0 percent of all peeled shrimp imports into the United States and by 2019, it accounted for 60.3 percent of peeled shrimp imports. *Id.*
- 9 *Impact of Corona Virus Disease (COVID-19) Related Lockdown on Shrimp Aquaculture Sector in India: Issues and Way Forward*, ICAR-CIBA (Feb. 5, 2020), p. 3 <http://www.ciba.res.in/wp-content/uploads/2020/05/ICAR-CIBA%20Report%20on%20Impact%20of%20COVID19.pdf> [hereinafter *Impact of Corona Virus Disease (COVID-19) Related Lockdown*] (“About 12 lakh families are dependent on this sector directly and indirectly for their employment and income to sustain their livelihoods.”).
- 10 International Labour Organization, *Forced Labour Convention 1930* (No. 29), art. 2, [https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:55:0::NO::P55\\_TYPE,P55\\_LANG,P55\\_DOCUMENT,P55\\_NODE:CON,en,C029,/Document](https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:55:0::NO::P55_TYPE,P55_LANG,P55_DOCUMENT,P55_NODE:CON,en,C029,/Document).
- 11 According to import data and publicly-available information these retailers buy farmed shrimp from India – many from Apex Frozen Foods, Avanti Feeds Limited, Devi Fisheries Limited, Nekkanti Sea Foods, and Sandhya Aqua. Panjiva, <https://panjiva.com/>; *Farmed Whiteleg Shrimp in India*, Monterey Bay Seafood Watch, accessed March 5, 2024, <https://www.seafoodwatch.org/our-projects/farmed-shrimp-in-india> [hereinafter *Farmed Whiteleg Shrimp in India*]; *Customers*, Nekkanti Sea Foods, accessed March 5, 2024, <http://nekkantiseafoods.com/customers/> [hereinafter *Customers*, Nekkanti Sea Foods Limited]; *Sourcing Our Seafood*, Red Lobster, accessed March 5, 2024, <https://www.redlobster.com/our-story/seafood-with-standards/sourcing-our-seafood/#shrimp> [hereinafter *Sourcing Our Seafood*, Red Lobster].
- 12 The early days of the COVID-19 pandemic scrambled the Indian shrimp industry. Workers in India were sent home, consumers around the world stopped going to restaurants, and, as a result, the Indian shrimp industry suffered enormously. But within a few

months, shrimp consumption bounced back; instead of buying shrimp at restaurants, U.S. consumers began to cook it at home. While production decreased in 2020, it rebounded in 2021. Unlike the first wave, when the second COVID-19 wave hit India, workers remained in their jobs. The field visits underlying this report were carried out during and after the second wave, when workers were back in their jobs and the industry was again exporting large quantities of shrimp. “Apparent U.S. consumption was 1.55 billion pounds in 2019, 1.65 billion pounds in 2020, and 1.94 billion pounds in 2021.” *Frozen Warmwater Shrimp* (2023), *supra* note 6, p. 67; “According to GTA data, exports of frozen warmwater shrimp from India declined from 1.39 billion pounds in 2019 to 1.16 billion pounds in 2020, then increased to 1.49 billion pounds in 2021.” *Id.*, p. 34.

- 13 Hatcheries are primarily located in Andhra Pradesh and Tamil Nadu. See *List of Registered Hatcheries for Import of Spf L. Vannamei Broodstock For Seed Production*, Coastal Aquaculture Authority Ministry of Agriculture and Farmers’ Welfare Government of India, [https://www.caa.gov.in/uploaded/doc/LIST\\_OF\\_REGISTERED\\_HATCHERIES\\_03-01-2017.pdf](https://www.caa.gov.in/uploaded/doc/LIST_OF_REGISTERED_HATCHERIES_03-01-2017.pdf) [hereinafter *List of Registered Hatcheries*]; *Review of India’s 2021 Shrimp Crop*, Aqua Culture Asia Pacific (Sept./Oct. 2022), [https://issuu.com/aquacultureasiapacific/docs/aq22179\\_aap\\_sepoct\\_22\\_fa\\_lr/s/16897245#:~:text=Hatchery%20segment,Andhra%20Pradesh%20and%20Tamil%20Nadu](https://issuu.com/aquacultureasiapacific/docs/aq22179_aap_sepoct_22_fa_lr/s/16897245#:~:text=Hatchery%20segment,Andhra%20Pradesh%20and%20Tamil%20Nadu) [hereinafter *Review of India’s 2021 Shrimp Crop*]. As of 2020-21, out of a total of 166,722.5 hectares of shrimp farms, 74,512 hectares – almost 45 percent – are also in Andhra Pradesh. Andhra Pradesh especially dominates production of *l. vannamei*. In 2020-21, Andhra Pradesh had 71,921 hectares of *l. vannamei* under culture, out of a total of 108,526.27 hectares under culture in India, or over 66 percent. Similarly, Andhra Pradesh produced 634,672 tons of *l. vannamei*, out of a total of 815,745 tons produced in 2020-21, or almost 78 percent of *l. vannamei* shrimp. See *State-wise Aquaculture Production*, Marine Products Export Development Authority of India (2021), [https://mpeda.gov.in/?page\\_id=651](https://mpeda.gov.in/?page_id=651) [hereinafter *State-wise Aquaculture Production*]. Moreover, Andhra Pradesh is a major center for the processing sector, where large companies have set up processing facilities. See, e.g., *Strategically Located Processing Plant*, Apex Frozen Foods, accessed March 5, 2024, <https://apexfrozenfoods.in/strategically-located-processing-plant/> (“Our operational facilities are strategically located along the coastal belt of Andhra Pradesh.”); *Infrastructure*, Nekkanti Sea Foods, <http://nekkantiseafoods.com/infrastructure/>; *Operations*, Devi Fisheries, <https://devifisheries.com/>.
- 14 This report does not look at the shrimp feed production process. While we chose to focus investigations on the production of the shrimp rather than on feed, there are a couple of companies that dominate the shrimp feed sector and are part of the broader shrimp supply chain. As of 2020, it was reported that “[t]wo players, Avanti Feeds and CP India, together control approximately 70% of the shrimp feed market. Several midsize companies control 20%, and the rest of the market is highly fragmented.” Rubel, et al., *A Strategic Approach to Sustainable Shrimp Production in India*, *supra* note 7, p. 11.
- 15 All information about individual workers and community members is from CAL’s field work. Quotes from workers and community members were collected during this work. While some conversations were held in English, many were in Telugu, Bengali, Hindi, and other languages. We have carefully translated all quotes into English.
- 16 This report provides an overview of the shrimp industry in India in the 1990s. Devaki Panini, *Legal Rights of Workers in Fish Processing Industries*, Center for Education and Communication (March 1999).
- 17 *About ELEVATE*, ELEVATE, accessed March 5, 2024, <https://www.elevatelimited.com/about-elevate/>.
- 18 *Human Rights Impact Assessment: Farmed Shrimp in India* (May 2023), [https://www.thekrogerco.com/wp-content/uploads/2023/06/EVT\\_Kroger\\_Lidl\\_HRIA-Shrimp-India\\_May-2023-Final-Report.pdf](https://www.thekrogerco.com/wp-content/uploads/2023/06/EVT_Kroger_Lidl_HRIA-Shrimp-India_May-2023-Final-Report.pdf) [hereinafter *Human Rights Impact Assessment*]. In its audit report, ELEVATE included recommendations for the shrimp industry, retailers, vendors, and farms and processors. *Id.*, pp. 24-26. It also states that this “HRIA included a pilot program to remediate any potential findings identified in the farmed shrimp sector in Andhra Pradesh, India.” *Id.*, p. 27. The report further explains that “To facilitate the remediation of these risks, ELEVATE will expand an existing grievance mechanism helpline in India to the sites involved in the HRIA.” *Id.* According to the report, the “remediation pilot will run until November 2023.” *Id.*, p. 28.
- 19 *Id.*, pp. 16-17, 19-22.
- 20 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](https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new_delhi/documents/publication/wcms_877320.pdf) [hereinafter ILO, *Value Chain Analysis*].
- 21 Rubel, et al., *A Strategic Approach to Sustainable Shrimp Production in India*, *supra* note 7.
- 22 *Id.*, pp. 9-11.
- 23 See, e.g., Kumaran Mariappan, et al., *Prospective Impact of Corona Virus Disease (COVID-19) Related Lockdown on Shrimp Aquaculture Sector in India - A Sectoral Assessment*, *Aquaculture* 531(1) (Jan. 2021), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7484627/pdf/main.pdf>; David C. Love, *Emerging COVID-19 Impacts, Responses, And Lessons For Building Resilience in the Seafood System*, *Global Food Security*, Vol. 28 (March 2021), <https://tinyurl.com/2kz3s5s6>; Debajyoti Pradhan & Gadadhar Dash, *Effect of COVID-19 Pandemic on Shrimp Aquaculture in West Bengal, India*, *South Asian Journal of Experimental Biology*, Vol. 12: No. 2 (2022), <https://tinyurl.com/28uru4s5>. See also *Impact of Corona Virus Disease (COVID-19) Related Lockdown*, *supra* note 9.
- 24 See, e.g., Vandana Shiva, *After Fifty Years, is the World Bank Socially and Environmentally Responsible?*, *Bulletin of Concerned Asian Scholars*, Vol. 26:4 (1994), pp. 78-80, <https://www.tandfonline.com/doi/epdf/10.1080/14672715.1994.10416175?needAccess=true>.
- 25 See, e.g., Kaitlyn McGarvey, et al, *Environmental Impacts of Shrimp Aquaculture and Integrated Multi-trophic Aquaculture*

- (IMTA) as a Solution, Debating Science, University of Massachusetts, Amherst, April 19, 2017, <https://blogs.umass.edu/nats-ci397a-cross/environmental-impacts-of-shrimp-aquaculture-and-integrated-multi-trophic-aquaculture-imta-as-a-solution/> [hereinafter McGarvey, et al, *Environmental Impacts of Shrimp Aquaculture*]; F. Páez-Osuna, *The Environmental Impact of Shrimp Aquaculture: Causes, Effects, and Mitigating Alternatives*, <https://pubmed.ncbi.nlm.nih.gov/11436996/> [hereinafter Páez-Osuna, *The Environmental Impact of Shrimp Aquaculture*]; See M. Jayanthi, et al., *Impact of Shrimp Aquaculture Development on Important Ecosystems in India*, 52 *Global Environmental Change* (2018), pp. 10-21, available at <https://www.sciencedirect.com/science/article/abs/pii/S0959378018302954> [hereinafter Jayanthi, et al., *Impact of Shrimp Aquaculture Development*].
- 26 *Report of the Comptroller and Auditor General of India on Conservation of Coastal Ecosystems*, Union Government, Ministry of Environment, Forest & Climate Change, Report No. 4 (2022), pp. 36-37, 50, available at <https://cag.gov.in/en/audit-report/details/116707> [hereinafter *Report of the Comptroller and Auditor General of India*].
- 27 The U.S. ITC recently issued a report finding that Indian shrimp is sold across the country: “both U.S. producers and importers from each subject country other than China reported selling frozen warmwater shrimp to all regions in the contiguous United States.” *Frozen Warmwater Shrimp* (2023), *supra* note 6, II-5, Table II-3, pp. 54, 5; *Sourcing Our Seafood*, Red Lobster, *supra* note 11; *Large Tail Off Peeled & Deveined Raw Shrimp - Frozen - 41-50ct - Good & Gather*, Target, <https://tinyurl.com/bdu3d5ay>.
- 28 *Frozen Warmwater Shrimp* (2023), *supra* note 6, Appendix C, Summary Data. C-3, Table C-1, Warmwater shrimp: Summary data concerning the U.S. market, by item and period. In 2021, imports accounted for 93.7 percent of U.S. consumption quantity and 93.5 percent of U.S. consumption value. This represents the highest share ever held by imports, up from 91.9 percent in 2020 and 91.1 percent in 2019 (for U.S. consumption quantity). *Id.* In 2015, imports accounted for 90.3 percent of U.S. consumption quantity, 90.8 percent in 2014, and 89.0 percent in 2013. *Frozen Warmwater Shrimp*, *supra* note 6, C-3, Table C-1 (Second Reviews) Warmwater shrimp: Summary data concerning the U.S. market, 2013-15, January to September 2015, and January to September 2016. Between 2005 and 2009, import quantities varied between a low of 87.3 percent in 2006 and a high of 90.8 percent in 2008. U.S. ITC, *Frozen Warmwater Shrimp*, *supra* note 6, C-3, Table C-1 (First Reviews) Frozen WW shrimp: Summary data concerning the U.S. market, 2005-09, January-September 2009, and January-September 2010.
- 29 U.S. ITC, *Dataweb*, *supra* note 4. India accounted for 36 percent of the volume of total imports of shrimp in 2022, down from 38 percent in 2021, and has been back up to 38 percent in 2023 (Jan. to Oct.). *Id.*
- 30 The U.S. ITC’s report following the countervailing duty investigation of Indian shrimp ten years ago indicates that the U.S. Department of Commerce found that significant subsidies were being given by the Indian government to the Indian shrimp industry during this period, valued at 10.84 percent of the export sales value of Indian shrimp to the United States. U.S. International Trade Commission, *Frozen Warmwater Shrimp from China, Ecuador, India, Malaysia, and Vietnam*, Inv. Nos. 701-TA-491-493, 495, and 497 (Final), USITC Pub. 4429 (2013), I-6, Table I-1, [https://www.usitc.gov/publications/701\\_731/pub4429.pdf](https://www.usitc.gov/publications/701_731/pub4429.pdf). See also *Certain Frozen Warmwater Shrimp from India: Final Affirmative Countervailing Duty Determination*, 78 Fed. Reg. 50385 (Aug. 19, 2013), <https://www.federalregister.gov/documents/2013/08/19/2013-20167/certain-frozen-warmwater-shrimp-from-india-final-affirmative-countervailing-duty-determination>.
- 31 In 2009, India accounted for just 3.6 percent of the total volume of shrimp imports, while Thailand was the largest supplier to the United States with a 34.9 percent share. Even in 2010, India remained a small exporter of shrimp, accounting for only 5.4 percent of imports. U.S. ITC, *Dataweb*, *supra* note 4.
- 32 In 2009, the seven largest producers of shrimp were: Thailand (192,766,001 kilograms); Indonesia (69,328,523 kilograms); Ecuador (61,595,332 kilograms); China (44,077,186 kilograms); Vietnam (42,181,342 kilograms); Mexico (41,121,787 kilograms); India (19,918,949 kilograms). U.S. ITC, *Dataweb*, *supra* note 4. In 2009, India accounted for just 4.7 percent of the total volume of peeled shrimp imports, while Thailand was the largest supplier to the United States with a 34.7 percent share. By 2013, India had nearly quintupled its share to 22.9 percent, while Thailand – wracked with controversy over forced labor in peeling sheds – had dropped to 14.3 percent, down from 26.7 percent the year before. By 2017, India accounted for 47.0 percent of all peeled shrimp imports into the United States and in 2019, it was an incredible 60.3 percent of peeled shrimp imports. U.S. ITC, *Dataweb*, *supra* note 4
- 33 Arathy Ashok et al., *Impact of Pacific White Shrimp (Litopenaeus vannamei) on Shrimp Production and Seafood Processing in Andhra Pradesh*, *Fishery Technology* 52 (2015), p. 53, <https://krishi.icar.gov.in/jspui/bitstream/123456789/1059/1/07.%20Impact%20of%20Pacific%20White%20Shrimp%20%202015.pdf>; Ying Fan, Keith R. Schneider & Paul J. Sarnoski, *Determining Spoilage of Whiteleg Shrimp (Litopenaeus Vannamei) During Refrigerated Storage Using Colorimetric Strips*, *Food Science and Human Nutrition Department, University of Florida, Gainesville, June 30, 3022*, <https://www.sciencedirect.com/science/article/pii/S259015752200061X>. Whiteleg shrimp is indigenous to the eastern Pacific coast from Mexico in the north to Peru in the south. It is now farmed all over the world. Food and Agriculture Organization, *Penaeus vannamei (Boone, 1931)*, *Cultured Aquatic Fact Sheets* (2009), [https://www.fao.org/fishery/docs/DOCUMENT/aquaculture/CulturedSpecies/file/en/en\\_whitelegshrimp.htm](https://www.fao.org/fishery/docs/DOCUMENT/aquaculture/CulturedSpecies/file/en/en_whitelegshrimp.htm).
- 34 *Farmed Whiteleg Shrimp in India*, *supra* note 11 (“India is the world’s second-largest producer of [*litopenaeus vannamei*] world-wide, yielding close to 1 million metric tons each year.”).
- 35 See Frank Asche et al., *China’s Seafood Imports - Not For Domestic Consumption?*, *National Oceanic and Atmospheric Administration* (2022), [https://repository.library.noaa.gov/view/noaa/47248/noaa\\_47248\\_DS1.pdf](https://repository.library.noaa.gov/view/noaa/47248/noaa_47248_DS1.pdf); Rubicon Resources, *How China Impacts the Global Shrimp Market*, *Medium*, Nov. 30, 2017, <https://medium.com/sustainable-seafood/how-china-impacts-the-global-shrimp-market-5474a214efb2>.
- 36 In 2012, the United States imported \$575,040,815 of shrimp from India, or 66,011,225 kilograms. That same year, the United



States imported \$1,201,957,120 of shrimp from Thailand (135,935,872 kilograms). By 2013, just one year later, imports from India had risen to \$1,006,751,975 (90,983,559 kilograms) while imports from Thailand had decreased to \$904,872,922 (84,047,730 kilograms). U.S. ITC, *Dataweb*, *supra* note 4.

37 *Frozen Warmwater Shrimp* (2023), *supra* note 6, p. 34.

38 *Farmed Whiteleg Shrimp in India*, *supra* note 11.

39 India's Marine Products Exports Development Authority (MPEDA) publishes annual reports which contain data on the cultivation and export of marine products. *See, e.g., Annual Reports*, MPEDA, [https://mpeda.gov.in/?page\\_id=2365](https://mpeda.gov.in/?page_id=2365). The 2005-2006 report describes the production of tiger shrimp (*p. monodon*) seeds and broodstock and does not mention *I. vannamei*, other than noting the department's tracking of wholesale shrimp prices for both black tiger and white shrimp. *Annual Report 2005-2006*, MDEPA, pp. 3-4, 43 available at [https://mpeda.gov.in/?page\\_id=2365](https://mpeda.gov.in/?page_id=2365). Annual Reports from 2006-2008 highlight projects for increasing production, improving the health of tiger shrimp stock, and pursuing sustainability certification for tiger shrimp fisheries, and the 2006-2007 report notes consultation about the risks and benefits of introducing *I. vannamei* shrimp in India. *Annual Report 2006-2007*, MDEPA, pp. 5-6, 12, 20 available at [https://mpeda.gov.in/?page\\_id=2365](https://mpeda.gov.in/?page_id=2365); *Annual Report 2007-2008*, MDEPA pp. 17, 42-43, available at [https://mpeda.gov.in/?page\\_id=2365](https://mpeda.gov.in/?page_id=2365). The 2009-2010 report discusses the introduction of *I. vannamei* after the new "exotic" variety was approved by the India Government and the wave of hatcheries seeking approval for *I. vannamei* cultivation. *Annual Report 2009-2010*, MDEPA pp. 18, 21-22, 25, 45, available at [https://mpeda.gov.in/?page\\_id=2365](https://mpeda.gov.in/?page_id=2365).

40 Indian Council of Agricultural Research - Central Institution of Brackishwater Aquaculture, *Frequently Asked Questions (FAQs) Pertaining to Penaeus Vannamei Shrimp Farming* (2016), p. 5, <https://krishi.icar.gov.in/jspui/bitstream/123456789/11187/1/FAQ%20English%20book.pdf>.

41 Mariappan Kumara, et al., *Training Needs of Extension Personnel in Pacific White Shrimp (Litopenaeus Vannamei) Farming*, 75 *Fishery Technology* (2015), p. 265; Jeffrey Immanuel, *Coastal Shrimp Aquaculture in India: Should the Farmers be Blamed?*, p. 96, in Siddharth Chakravarty & Savita Vijayakumar, *Occupation of the Coast: II: The Puzzle of Shrimp Production on the East Coast of India*, The Research Collective (Dec. 2020), available at <https://updatecollective.wordpress.com/2021/01/15/occupation-of-the-coast-the-puzzle-of-shrimp-production-on-the-east-coast-of-india/> [hereinafter Chakravarty & Vijayakumar *Occupation of the Coast: II*].

42 *Id.*; *Shrimp Trade, Marketing, and Economics*, Food and Agriculture Organization, accessed Jan. 3, 2024, <https://www.fao.org/3/ad505e/ad505e07.htm#:~:text=USA%20consumers%20appear%20to%20prefer,UF%2FIFAS%2C%202003>.

43 *Year in Review: Looking Back at the Shrimp Market in 2022*, SeafoodNews.com, Dec. 27, 2022, <https://www.seafoodnews.com/Story/1242492/Year-in-Review-Looking-Back-at-the-Shrimp-Market-in-2022>.

44 *The Future Is in High Demand*, Global Shrimp Forum Foundation (Nov. 2023), pp. 17-18 ("In India, food represents 41% of total household spending, a much larger share of total spending than in western societies. ...In general, lower spending power means a higher share of household spending goes on food, and that a higher share of food spending goes on items that are deemed 'necessary' instead of on those deemed to be "luxury" items. This makes shrimp less affordable for the average household in China and India. In other words: the share of households that can afford to buy shrimp is lower in these markets."). *UN DESA Policy Brief No. 153: India Overtakes China as the World's Most Populous Country*, United Nations' Department of Economic and Social Affairs Economic Analysis, April 24, 2023, <https://www.un.org/development/desa/dpad/publication/un-desa-policy-brief-no-153-india-overtakes-china-as-the-worlds-most-populous-country/>.

45 Mason, et al., *Global Supermarkets Selling Shrimp Peeled by Slaves*, *supra* note 7.

46 *Thai Union Acquiring 40% of Avanti Frozen Foods*, Thai Union, March 29, 2016, <https://www.thaiunion.com/en/newsroom/press-release/121/thai-union-acquiring-40-of-avanti-frozen-foods> [hereinafter *Thai Union Acquiring 40% of Avanti Frozen Foods*]; *Avanti Feeds Limited*, Thai Union, accessed March 5, 2024, <https://www.thaiunion.com/en/about/company/subsidiary/945/avanti-feeds-limited>.

47 Rachel Sapin, *Thai Union-backed Red Lobster Names New CEO as Restaurant Starts to See Turnaround*, IntraFish, Sept. 22, 2023, <https://www.intrafish.com/people/thai-union-backed-red-lobster-names-new-ceo-as-restaurant-starts-to-see-turn-around/2-1-1523292>.

48 *Id.*

49 Stacey Leasca, *Endless Shrimp Is Financially Ruining Red Lobster: Not Every Deal is a Good Deal*, Food & Wine, Nov. 29, 2023, <https://www.foodandwine.com/red-lobster-endless-shrimp-deal-losses-8407893>.

50 U.S. ITC, *Dataweb*, *supra* note 4.

51 ILO, *Value Chain Analysis*, *supra* note 20, p. 57.

52 Avanti Feeds Limited, which Thai Union has invested in, is a prime example of this model. With six feed facilities, one hatchery, and processing facilities, it still outsources the riskiest part of the supply chain to individual farmers. Avanti Feeds Limited, *Growing Footprints Across the World*, 30th Annual Report (2022-23), p. 60, <https://avantifeeds.com/v2/wp-content/uploads/2023/07/30th-Annual-Report-2022-23.pdf>.

53 *About Us*, BMR Groups, accessed March 5, 2024, <https://www.bmrgroups.com/about-us/> ("BMR group of Industries is a vertically integrated group of companies that provides end to end solution to Shrimp farmers with highest degree of transparency and honesty.").

- 54 Coastal Aquaculture Authority, Department of Fisheries, *Empanelment of Overseas Suppliers of SPF Shrimp Broodstock*, <https://caa.gov.in/uploaded/doc/EMPANELMENT%20OF%20OVERSEAS%20SUPPLIERS%20OF%20SPF%20SHRIMP%20BROOD-STOCK-01.12.2023.pdf>.
- 55 U.S. Fish and Wildlife Service, “broodstock,” National Broodstock Egg Distribution Service, accessed March 5, 2024, <https://www.fws.gov/glossary/broodstock>.
- 56 *The Shrimp Supply Chain*, Shrimp Welfare Project, accessed March 5, 2024, <https://www.shrimpwelfareproject.org/the-shrimp-supply-chain> [hereinafter *The Shrimp Supply Chain*].
- 57 *List of Registered Hatcheries*, *supra* note 13.
- 58 Some sources put the total number of hatcheries closer to 585 – meaning that many are unregistered. *Review of India’s 2021 Shrimp Crop*, *supra* note 13. See also *Details of Unapproved Shrimp Hatcheries Inspected and Action Taken by CAA*, Coastal Aquaculture Authority, [https://caa.gov.in/uploaded/doc/Hatcheries\\_Closure\\_Order\\_31-11-2016.pdf](https://caa.gov.in/uploaded/doc/Hatcheries_Closure_Order_31-11-2016.pdf).
- 59 East Godavari reportedly produces 40 percent of “India’s post larvae production.” *Review of India’s 2021 Shrimp Crop*, *supra* note 13.
- 60 Rubel, et al., *A Strategic Approach to Sustainable Shrimp Production in India*, *supra* note 7, p. 11.
- 61 *Id.*
- 62 *Id.*
- 63 *Id.*, p. 21. See S. Murali, *Shrimp Farmers in Andhra Pradesh Mull Crop Holiday as Prices Fall*, *The Hindu*, Nov. 26, 2022, <https://www.thehindu.com/news/national/andhra-pradesh/shrimp-farmers-in-andhra-pradesh-mull-crop-holiday-as-prices-fall/article66183698.ec> [hereinafter Murali, *Shrimp Farmers in Andhra Pradesh Mull Crop Holiday*]; Shreehari Paliath, *In Andhra Pradesh, Women are Taking a Lead Role in the Transition to Natural, Sustainable Farming*, *Scroll.In*, Oct. 9, 2022, <https://scroll.in/article/1034434/in-andhra-pradesh-women-are-taking-a-lead-role-in-the-transition-to-natural-sustainable-farming>. Middleman control a large portion of shrimp production in India and are often a deterrent to small shrimp farmers’ ability to secure good prices for their crop. As early as 2017, government officials were advocating reducing the role of the middleman in shrimp farming. See *Reduce Role of Middlemen in Aquaculture, Capture Fisheries:VP*, *India Today*, Nov. 21, 2017, <https://www.indiatoday.in/pti-feed/story/reduce-role-of-middlemen-in-aquaculture-capture-fisheriesvp-1091402-2017-11-21> [hereinafter *Reduce Role of Middlemen*].
- 64 Middlemen are sometimes referred to as “commission agents,” “distributors,” or “aggregators.”
- 65 *Human Rights Impact Assessment*, *supra* note 18, p. 15 (Once the shrimp has grown to the requisite size, “there may be an aggregator that works in between the farm and the processor. The aggregator can be a large farm that works with many smallholders to harvest and sell the shrimp through contracts with a processing facility. Alternatively, the aggregator may be a dealer that brings the shrimp to a depot where it is sized before processing. These dealers may have the first right of refusal to a harvest through pre-financing production. Refusal may occur from the farm if a dealer will not pay the harvest’s market value or from the dealer if the harvest quality is not up to expectation. In either scenario, the farmer will pay the pre-financing back per the agreement.”).
- 66 ILO, *Value Chain Analysis*, *supra* note 20, p. 53-55.
- 67 *Shrimp Cropping Pattern*, Marine Products Export Development Authority (MPEDA), [https://mpeda.gov.in/?page\\_id=645](https://mpeda.gov.in/?page_id=645) (“Whereas for Vannamei culture, the general trend is to go for year round culture with no distinct crop season...”).
- 68 ILO, *Value Chain Analysis*, *supra* note 20, p. 53.
- 69 Arpita Sharma, et al., *Occupational Hazards of Indian Shrimp Farm Workers*, *All Life* (2023), p. 5, <https://www.tandfonline.com/doi/epdf/10.1080/26895293.2023.2225762?needAccess=true> [hereinafter Sharma et al., *Occupational Hazards of Indian Shrimp Farm Workers*]; *The Shrimp Supply Chain*, *supra* note 56.
- 70 See *Shrimps Culture*, Tamil Nadu Agricultural University Agritech Portal, [https://agritech.tnau.ac.in/fishery/fish\\_shrimps.html#6](https://agritech.tnau.ac.in/fishery/fish_shrimps.html#6) [hereinafter *Shrimps Culture*].
- 71 Sharma, et al., *Occupational Hazards of Indian Shrimp Farm Workers*, *supra* note 69, p. 5.
- 72 See Arup Kar, Sushil Bera & Subhajt Santra, *Intensification of Medicine on Shrimp Culture*, *International Journal of Fisheries & Aquatic Studies* 10(3) (2022), p. 106, <https://www.fisheriesjournal.com/archives/2022/vol10issue3/PartB/10-3-10-880.pdf> (“With the expansion of shrimp culture in India, there has been an increasing trend in using medicine and chemicals in shrimp health treatment.”).
- 73 Sharma, et al., *Occupational Hazards of Indian Shrimp Farm Workers*, *supra* note 69, p. 5.
- 74 See *Shrimps Culture*, *supra* note 70.
- 75 Rubel, et. al., *A Strategic Approach To Sustainable Shrimp Production in India*, *supra* note 7, p. 42 (“With more than 100,000 shrimp farms in operation, more than 90% of them family owned and only 1% registered with the Coastal Aquaculture Authority, India will find it difficult to implement change quickly.”).
- 76 ILO, *Value Chain Analysis*, *supra* note 20, p. 53 (“Farm sizes vary based on several factors, but a typical farm is a small- or medium-scale unit and has around three acres of land for shrimp farming. In Bhimavaram, a major aquaculture hub in AP, 60 per cent of the farmers are small scale with between 2–5 acres of land; 20 per cent are medium scale with 10–20 acres of land; and 10 per

cent are large scale with farm sizes in the range of 20–60 acres. The final 10 per cent consists of corporate farmers with farms as large as 200–300 acres.”) Two acres is equal to about 0.4 hectares, while five acres is a little over two hectares.

- 77 Official registration data may not tell the whole story. CAL’s field investigators saw farms that were larger than three hectares, at least some of which did not seem to be registered. Although more information is needed, it is likely that – as is true in so much of the supply chain – government data is not an accurate reflection of data on the ground.
- 78 Rubel, et. al., *A Strategic Approach To Sustainable Shrimp Production in India*, *supra* note 7, p. 13 (“With more than 100,000 shrimp farms in operation, more than 90% of them family owned and only 1% registered with the Coastal Aquaculture Authority, India will find it difficult to implement change quickly.”).
- 79 ILO, *Value Chain Analysis*, *supra* note 20, p. 53.
- 80 See Rubel, et. al., *A Strategic Approach To Sustainable Shrimp Production in India*, *supra* note 7, p. 17 (explaining that according to one estimate, a good crop can provide shrimp farmers with a 22-25 percent profit margin, although the average profit margin is closer to 20 percent.)
- 81 *Over 1,600 Farmers Died by Suicide in Andhra Pradesh Since YSRCP Came to Power: CPI*, The Wire, Dec. 20, 2022, [https://thewire.in/politics/over-1600-farmers-died-by-suicide-in-andhra-pradesh-since-ysrcp-came-to-power-cpi#:~:text=According%20to%20the%20latest%20NCRB,%20and%20Maharashtra%20\(4%2C064\)](https://thewire.in/politics/over-1600-farmers-died-by-suicide-in-andhra-pradesh-since-ysrcp-came-to-power-cpi#:~:text=According%20to%20the%20latest%20NCRB,%20and%20Maharashtra%20(4%2C064);); Gopi Dara, *Farmer Suicides Have Come Down in Andhra Pradesh, Union Minister Tells Lok Sabha*, Times of India, Feb. 8, 2023, <https://timesofindia.indiatimes.com/city/vijay-awada/farmer-suicides-have-come-down-in-ap-union-min-tells-lok-sabha/articleshow/97713405.cms>; Nanda Kishore Kannuri & Sushrut Jadhav, *Cultivating Distress: Cotton, Caste and Farmer Suicides in India*, 28 *Anthropology & Medicine*, pp. 558-60 (2021), <https://www.tandfonline.com/doi/epdf/10.1080/13648470.2021.1993630?needAccess=true>; *About APCNF*, Andhra Pradesh Community Managed Natural Farming, accessed March 5, 2024, <https://apcnf.in/about-apcnf/>.
- 82 See, e.g., Siddharth Chakravarty, *West Bengal: Who Wins When Shrimp Booms?*, in Chakravarty & Vijayakumar, *Occupation of the Coast: II*, *supra* note 41.
- 83 See S. Murali, *Andhra Pradesh: Shrimp Farmers in Prakasan at their Wits’ End in View of Hostile Market Condition*, The Hindu, Oct. 23, 2022, <https://www.thehindu.com/news/national/andhra-pradesh/andhra-pradesh-shrimp-farmers-in-prakasam-at-their-wits-end-in-view-of-hostile-market-condition/article66040398.ece>.
- 84 ICAR-Central Institute of Brackishwater Aquaculture, *Annual Report 2020*, p. 29, [http://www.ciba.res.in/wp-content/uploads/2021/12/Annual-Report-2021-1\\_compressed.pdf](http://www.ciba.res.in/wp-content/uploads/2021/12/Annual-Report-2021-1_compressed.pdf) (“During the past five years disease surveillance was carried out almost all the shrimp farming states. In the year 2020-2021, 98 shrimp farms have been investigated and Enterocytozoon hepatopenaei (EHP) had the highest prevalence (41%) followed by Infectious myonecrosis viral disease (IMNV) prevalence of 30%. The prevalence of White spot syndrome viral disease (WSSV) was found to be 18% and Infectious hypodermal hematopoietic necrosis disease at 1%. The disease investigation revealed that IMNV is an emerging pathogen and a great concern for the shrimp farmers.”).
- 85 Prasanna Kumar Patil, et. al., *Economic Loss Due to Diseases in Indian Shrimp Farming with Special Reference to Enterocytozoon hepatopenaei (EHP) and White Spot Syndrome Virus (WSSV)*, *Aquaculture*, Vol. 533, Feb. 25, 2021, p. 8, <https://www.sciencedirect.com/science/article/abs/pii/S0044848620339375#:~:text=The%20total%20employment%20loss%20due,shrimp%20worth%20US%24%201.02%20B.>
- 86 According to shrimp farmers and workers on farms with whom CAL’s field investigators spoke, aquaculture only requires a single worker per hectare of shrimp farm. This has been found to be the case in other countries as well: “The shrimp farming industry is not labour-intensive and loss of employment in the agricultural sector (as a result of the inundation of land) has led to the displacement of hundreds of thousands of people from lands used traditionally, and sustainably, for generations. Employment on shrimp farms and processing plants is frequently linked to very poor working conditions and exploitation of workers.” Shanahan, et al., *Smash & Grab: Conflict, Corruption & Human Rights Abuses in the Shrimp Farming Industry*, Environmental Justice Foundation (2023), p. 2, [https://ejfoundation.org/resources/downloads/smash\\_and\\_grab.pdf](https://ejfoundation.org/resources/downloads/smash_and_grab.pdf) [hereinafter Shanahan, et al., *Smash & Grab*].
- 87 *Whiteleg Shrimp, Giant Tiger Prawn: Litopenaeus Vannamei, Penaeus Monodon*, Monterey Bay Aquarium Seafood Watch, pp. 47-51, [https://www.seafoodwatch.org/globalassets/sfw-data-blocks/reports/s/mba\\_seafoodwatch\\_farmedshrimp\\_india\\_report.pdf](https://www.seafoodwatch.org/globalassets/sfw-data-blocks/reports/s/mba_seafoodwatch_farmedshrimp_india_report.pdf).
- 88 *Id.*, pp. 8-9.
- 89 Commission Implementing Decision (EU) 2016/1774 of 4 October 2016 amending Decision 2010/381/EU on emergency measures applicable to consignments of aquaculture products imported from India and intended for human consumption, 2016 O.J. (L 271) 7, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016D1774&rid=1>. In 2016, the EU increased its inspection levels of India aquaculture products, including shrimp, from the usual 10 percent to 50 percent. An audit of the aquaculture industry published in May 2018 indicated continued noncompliance. European Commission, *Health and Food Audits and Analysis: Final Report of an Audit Carried Out in India* (July 2018), <https://ec.europa.eu/food/audits-analysis/audit-report/details/3965>. India has sought to return inspection levels to the 10 percent inspection rate, but the 50 percent port of entry inspection rate remains in effect. *India Seeks EU Nod for Export of Farmed Shrimps by Newly Listed Firms*, Business Standard, July 28, 2023, [https://www.business-standard.com/india-news/india-seeks-eu-nod-for-export-of-farmed-shrimps-by-newly-listed-firms-123072800439\\_1.html](https://www.business-standard.com/india-news/india-seeks-eu-nod-for-export-of-farmed-shrimps-by-newly-listed-firms-123072800439_1.html) (“India has demanded the European Union to provide permission to newly-listed fishery companies for the export of farmed shrimps and reduce the sampling frequency at the EU border inspection post from the current level of 50 per cent.”).
- 90 See generally U.S. Government Accountability Office (GAO), GAO-21-231, *Imported Seafood Safety: FDA Should Improve Monitoring of Its Warning Letter Process and Better Assess Its Effectiveness*, (2021), <https://www.gao.gov/assets/gao-21-231>.



[pdf#page=34](#). This has been an ongoing problem for years: “[I]n fiscal year 2015 FDA tested 0.1 percent of about 1 million seafood entry lines for drugs of concern to FDA in an effort to detect unsafe residues.” GAO, GAO-17-443, *Imported Seafood Safety: FDA and USDA Could Strengthen Efforts to Prevent Unsafe Drug Residues* 19(2017), <https://www.gao.gov/assets/gao-17-443.pdf> (“In its 2010 assessment of India, FDA noted that drug residue testing required by the Indian government for seafood exports to the EU and the United States differed. Specifically, a greater level of testing was required for seafood exports to the EU. According to FDA’s assessment, the Indian government said the type of testing done on seafood intended for the EU would also be done on seafood intended for the U.S. market if FDA required that seafood exports be accompanied by a health certificate, as is required by the EU, Japan, and South Korea. However, FDA does not require health certificates and took no action to require them after completing this assessment, according to FDA officials.”).

- 91 ILO, *Value Chain Analysis*, *supra* note 20, p. 55-56; *Human Rights Impact Assessment*, *supra* note 18, p. 15.
- 92 Middlemen control a large portion of shrimp production in India and are often a deterrent to small shrimp farmers’ ability to secure good prices for their crop. Rubel, et al., *A Strategic Approach to Sustainable Shrimp Production in India*, *supra* note 7, p. 43; ILO, *Value Chain Analysis*, *supra* note 20, pp. 55-56. As early as 2017, government officials were advocating reducing the role of the middleman in shrimp farming. *See Reduce Role of Middlemen in Aquaculture*, *supra* note 63.
- 93 Rubel, et al., *A Strategic Approach to Sustainable Shrimp Production in India*, *supra* note 7, p. 21.
- 94 ILO, *Value Chain Analysis*, *supra* note 20, p. 55.
- 95 *Id.*
- 96 *Human Rights Impact Assessment*, *supra* note 18, p. 15.
- 97 *Id.*
- 98 *Id.* *See, e.g.,* Murali, *Shrimp Farmers in Andhra Pradesh Mull Crop Holiday*, *supra* note 63.
- 99 Apex Frozen Foods, accessed March 5, 2024, <https://apexfrozenfoods.in/>; Apex states on its website: “We have long-standing relationships with numerous global customers. Our entire produce is being exported to countries such as USA, UK and various European countries. Some of our major customers are Chicken of the Sea Frozen Foods (USA), Ocean World Ventures LLC (USA) and Pacific Sea Food Group (USA).” *Established Customer Relationships*, Apex Frozen Foods, accessed March 5, 2024, [https://apexfrozenfoods.in/established-customer-relationships/#:~:text=We%20have%20long%2Dstanding%20relationships,Sea%20Food%20Group%20\(USA\).](https://apexfrozenfoods.in/established-customer-relationships/#:~:text=We%20have%20long%2Dstanding%20relationships,Sea%20Food%20Group%20(USA).)
- 100 Avanti Feeds Limited, <https://avantifeeds.com/#>. Thai Union, which owns the Chicken of the Sea brand, also owns shares in Avanti Feeds Limited: “15.43% (held by Thai Union Group Public Company Limited) and 9.21% (held by Thai Union Asia Investment Holding Limited)”. *Avanti Feeds Limited*, Thai Union, accessed March 5, 2024, <https://www.thaiunion.com/en/about/company/subsidiary/945/avanti-feeds-limited>; *Our Brands*, Thai Union, accessed March 5, 2024, <https://www.thaiunion.com/en/products-and-brands/our-brands>.
- 101 *Devi Fisheries*, accessed March 5, 2024, <https://devifisheries.com/> (listing Devi Fisheries Inc., a company in Houston, Texas).
- 102 *Customers*, Nekkanti Sea Foods, *supra* note 11.
- 103 Sandhya Aqua, <http://sandhyaaqua.com/>.
- 104 Rubel, et al., *A Strategic Approach to Sustainable Shrimp Production in India*, *supra* note 7, p. 56.
- 105 U.S. ITC, *Dataweb*, *supra* note 4. By 2017, India accounted for 47.0 percent of all peeled shrimp imports into the United States and by 2019, it accounted for 60.3 percent of peeled shrimp imports. *Id.*
- 106 Rubel, et al., *A Strategic Approach to Sustainable Shrimp Production in India*, *supra* note 7, p. 12.
- 107 *Id.*
- 108 ILO, *Value Chain Analysis*, *supra* note 20, p. 34 (“This was confirmed by several processors who reported that countries like China and Vietnam are better at tertiary value added products, and they re-export Indian processed shrimp after tertiary processing on their soil.”)
- 109 ILO, *Value Chain Analysis*, *supra* note 20, p. 57 (Figure 19. Pricing in the shrimp value chain) (2023).
- 110 This information is primarily based on import data provided by Panjiva. Panjiva, <https://panjiva.com/>. *See also* Aquastar, *Store Locator*, <https://www.aquastar.com/store-locator/>; *Customers*, Nekkanti Sea Foods, *supra* note 11.
- 111 This information comes from import data provided by Panjiva. Panjiva, <https://panjiva.com/>.
- 112 This information is based on a variety of sources, including on import data from Panjiva. Panjiva, <https://panjiva.com/>; Additional information comes from; Apex Frozen Foods, <https://apexfrozenfoods.in/>; Avanti Feeds Limited, <https://avantifeeds.com/>; Devi Fisheries, <https://devifisheries.com/>; *Customers*, Nekkanti Sea Foods, *supra* note 11; Sandhya Aqua, <http://sandhyaaqua.com/>; *Distribution*, Pacific Seafood, <https://www.pacificseafood.com/capabilities/distribution/>; *Where to Buy*, Pacific Seafood, <https://www.pacificseafood.com/our-products/where-to-buy/>; *Where to Buy*, Chicken Of The Sea Frozen Foods, <https://chickenofthesea.com/where-to-buy/>; *Store Locator*, Aqua Star (USA) Corp., <https://www.aquastar.com/store-locator/?zip-code=90019>; *Where to Buy*, Seapak, <https://seapak.com/where-to-buy/>; *Where to Buy*, High Liner Foods USA Inc., <https://www.highliner.com/where-to-buy/>; Toppits Foods Ltd., <https://www.toppits.com/retail>; *Avanti Frozen Foods Expands Recall of Frozen Cooked Shrimp Because of Possible Health Risk*, U.S. Food & Drug Administration, Aug. 13, 2021, <https://www.fda.gov/safety/recalls-market-withdraw->

[als-safety-alerts/avanti-frozen-foods-expands-recall-frozen-cooked-shrimp-because-possible-health-risk](#) [hereinafter *Avanti Frozen Foods Expands Recall*].

- 113 National Oceanic And Atmospheric Administration, *Seafood Import Monitoring Program*, accessed March 5, 2024, <https://www.fisheries.noaa.gov/international/international-affairs/seafood-import-monitoring-program>.
- 114 *Id.*
- 115 National Oceanic And Atmospheric Administration, *Compliance Guide: U.S. Seafood Import Monitoring Program* (revised Oct. 2022), p. 3, [https://media.fisheries.noaa.gov/2022-11/SIMPComplianceGuide\\_PDF.pdf](https://media.fisheries.noaa.gov/2022-11/SIMPComplianceGuide_PDF.pdf) [hereinafter NOAA, *Compliance Guide*]; National Oceanic And Atmospheric Administration, *Model Aggregated Catch Certificate – Justification for Data Elements and Format for Electronic Reporting* (updated Dec. 2020), [https://media.fisheries.noaa.gov/2022-03/SIMPModelAggregatedCatch-Form\\_12.2020\\_0.pdf](https://media.fisheries.noaa.gov/2022-03/SIMPModelAggregatedCatch-Form_12.2020_0.pdf) [hereinafter NOAA, *Model Aggregated Catch Certificate*]. Facility license and authorization are only conditionally required. *Id.*
- 116 NOAA, *Compliance Guide*, *supra* note 115. “SIMP exempts an importer from the requirement to individually identify small-scale vessels—or small-scale aquaculture facilities—if the importer provides other required data elements based on an aggregated harvest report. Aggregated harvest report is defined as a record that covers: . . . (3) deliveries made to a single collection point (processing facility, broker, or transport) on a single calendar day by aquaculture facilities that each deliver 1,000 kg or less in that day.” *Id.*
- 117 *The Shrimp Supply Chain*, *supra* note 56. Semi-intensive farms harvest between nine and twelve metric tons of shrimps per hectare per year, while intensive shrimp farms harvest between six and fifteen metric tons of shrimps per hectare per year. Since most smallholder farmers own only a couple of hectares, they are unlikely to harvest more than 1,000 kilograms on any given day. *Id.*
- 118 NOAA, *Model Aggregated Catch Certificate*, *supra* note 115.
- 119 *Id.*
- 120 Jaclyn Peiser, *Stores are Pushing Vendors to Cut Prices, But Your Bill Will Stay the Same*, Washington Post, Feb. 5, 2023, <https://www.washingtonpost.com/business/2023/02/05/retail-grocery-costs-consumer-spending/>.
- 121 *Id.*
- 122 The U.S. ITC recently issued a report finding that Indian shrimp was sold in every region of the United States. *Frozen Warmwater Shrimp* (2023), *supra* note 6, II-5, Table II-3.
- 123 *Customers*, Nekkanti Sea Foods, *supra* note 11.
- 124 *Avanti Frozen Foods Expands Recall*, *supra* note 112; Russel Redman, *Albertsons Relaunches Waterfront Bistro Responsibly Sourced Seafood Brand*, Supermarket News, Oct. 4, 2022, <https://www.supermarketnews.com/seafood/albertsons-relaunches-waterfront-bistro-seafood-brand>.
- 125 Christine Blank, *Thai Union Subsidiary Becomes Top US Importer of Fair Trade-certified Shrimp*, Seafood Source, Dec. 1, 2022, <https://www.seafoodsource.com/news/foodservice-retail/thai-union-subsidiary-is-now-largest-importer-of-fair-trade-certified-shrimp>; *Thai Union Acquiring 40% of Avanti Frozen Foods*, *supra* note 46; *Avanti Feeds Limited*, Thai Union, accessed March 5, 2024, <https://www.thaiunion.com/en/about/company/subsidiary/945/avanti-feeds-limited>.
- 126 Panjiva, <https://panjiva.com/>.
- 127 ILO, *Value Chain Analysis*, *supra* note 20, p. 58 (“Shrimp pricing is dictated by international buyers and trickles down to farmers.”); Kieran Guilbert, *UK Supermarket Squeeze on Suppliers Fuels Poverty and Abuse, Campaigners Say*, Reuters, June 20, 2018, <https://www.reuters.com/article/us-britain-retail-workers-abuse-idUSKBN1JH00J/>.
- 128 Robin Willoughby & Tim Gore, *Ripe for Change: Ending Human Suffering in Supermarket Supply Chains*, Oxfam (June 2018), p. 101, [https://oi-files-d8-prod.s3.eu-west-2.amazonaws.com/s3fs-public/file\\_attachments/cr-ripe-for-change-supermarket-supply-chains-210618-en.pdf](https://oi-files-d8-prod.s3.eu-west-2.amazonaws.com/s3fs-public/file_attachments/cr-ripe-for-change-supermarket-supply-chains-210618-en.pdf) [hereinafter Willoughby & Gore, *Ripe for Change*].
- 129 *Id.*
- 130 *Id.*, p. 102.
- 131 *Id.*
- 132 *Id.*, p. 101.
- 133 *Frozen Warmwater Shrimp* (2023), *supra* note 6, Appendix C, Summary Data. C-3, Table C-1, Warmwater shrimp: Summary data concerning the U.S. market, by item and period. In 2021, imports accounted for 93.7 percent of U.S. consumption quantity and 93.5 percent of U.S. consumption value. This represents the highest share ever held by imports, up from 91.9 percent in 2020 and 91.1 percent in 2019 (for U.S. consumption quantity). *Id.* In 2015, imports accounted for 90.3 percent of U.S. consumption quantity, 90.8 percent in 2014, and 89.0 percent in 2013. International Trade Commission, *Frozen Warmwater Shrimp from China, India, Thailand, and Vietnam*, Publication 5432 (June 2023), C-3, Table C-1 (Second Reviews) Warmwater shrimp: Summary data concerning the U.S. market, 2013-15, January to September 2015, and January to September 2016. Between 2005 and 2009, import quantities varied between a low of 87.3 percent in 2006 and a high of 90.8 percent in 2008. U.S. International Trade Commission, *Frozen Warmwater Shrimp from China, India, Thailand, and Vietnam*, Publication 5432 (June 2023), C-3, Table C-1 (First Reviews) Frozen WW shrimp: Summary data concerning the U.S. market, 2005-09, January-September 2009, and January-Septem-

ber 2010.

- 134 Willoughby & Gore, *Ripe for Change*, *supra* note 128, p. 40.
- 135 Anouk Franck & Art Prapha, *Not In This Together: How Supermarkets Became Pandemic Winners While Women Workers are Losing Out*, Oxfam (June 2021), p. 18, <https://oxfamlibrary.openrepository.com/bitstream/handle/10546/621194/bp-not-in-this-together-220621-en.pdf?sequence=22>.
- 136 “The term Dalit means ‘oppressed’, ‘broken’ or ‘crushed’ to the extent of losing original identity. ...[The term] has come to symbolize for them a movement for change and for the eradication of the centuries-old oppression under the caste system. In legal and constitutional terms, Dalits are known in India as scheduled castes. There are currently some 166.6 million Dalits in India.” *Dalit*, Minority Rights Group, <https://minorityrights.org/minorities/dalits/>. Adivasis are indigenous peoples, legally referred to as Scheduled Tribes. “Adivasis continue to face prejudice and often violence from mainstream Indian society.” Displacement from customary lands is a major issue, resulting in economic and social challenges for communities. There are currently over 104 million Adivasis in India. Adivasis in India, Minority Rights Group, <https://minorityrights.org/communities/adivasis-2/>.
- 137 International Labour Organization, *A Global Alliance Against Forced Labor: Global Report under the Follow-up to the ILO Declaration on Fundamental Principles and Rights at Work 2005*, International Labour Conference 93rd Session 2005, Report I (B), <https://www.ilo.org/public/english/standards/relm/ilc/ilc93/pdf/rep-i-b.pdf> [hereinafter ILO, *A Global Alliance Against Forced Labor*]. Forced labor in India – as well as other forms of labor exploitation – often draws on the caste system. The report addressed the high prevalence of forced labor resulting from caste, particularly for Scheduled Caste (SC) and Scheduled Tribe (ST) communities. *Id.* In 2009, the Former UN Rapporteur on Contemporary Forms of Slavery highlighted that “ILO research shows a clear link in Asian countries between forced labour and long-standing patterns of discrimination. In India, the overwhelming majority of bonded labour victims in agriculture, brick making, mining and other sectors are from Scheduled Castes and Scheduled Tribes.” *Caste-based Slavery*, International Dalit Solidarity Network, <https://idsn.org/key-issues/caste-based-slavery/>.
- 138 ILO, *A Global Alliance Against Forced Labor*, *supra* note 137.
- 139 Gautham Subramanyam, *In India, Dalits Still Feel Bottom of the Caste Ladder*, NBC News, Sept. 13, 2020, <https://www.nbcnews.com/news/world/india-dalits-still-feel-bottom-caste-ladder-n1239846>; Sindhuja Sankaran, et al., *The Role of Indian Caste Identity and Caste Inconsistent Norms on Status Representation*, *Frontiers in Psychology* 8:487 (2017), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5374864/pdf/fpsyg-08-00487.pdf>. *But see* Pew Research Center, “4. Attitudes about caste,” <https://www.pewresearch.org/religion/2021/06/29/attitudes-about-caste/>.
- 140 Hamsa Vijayaraghavan, *Gaps in India’s Treatment of Refugees and Vulnerable Internal Migrants Are Exposed by the Pandemic*, Migration Policy Institute, Sept. 10, 2020, <https://www.migrationpolicy.org/article/gaps-india-refugees-vulnerable-internal-migrants-pandemic>.
- 141 Government of India, Ministry of Home Affairs, Department of Official Language, *Languages Included in the Eighth Schedule of the Indian Constitution*, <https://rajbhasha.gov.in/en/languages-included-eighth-schedule-indian-constitution>.
- 142 The Andhra Pradesh Official Language Act, 1989, Act 9 of 1966, [https://prsindia.org/files/bills\\_acts/acts\\_states/andhra-pradesh/1966/1966AP9.pdf](https://prsindia.org/files/bills_acts/acts_states/andhra-pradesh/1966/1966AP9.pdf).
- 143 Climate change has impacted weather patterns in agricultural areas, which in turn impacts yields. *See, e.g.*, Vivek Gupta, *A Year of Extreme Weather Events Has Weighed Heavy on India’s Agricultural Sector*, Mongabay, Nov. 7, 2022, <https://india.mongabay.com/2022/11/in-india-climate-impact-on-agriculture-is-already-a-reality-now/>; Pritha Datta, Bhagirath Behera & Dil Bahadur Rahut, *Climate Change and Indian Agriculture: A Systematic Review of Farmers’ Perception, Adaptation, and Transformation*, *Environmental Challenges* 8 (2022), <https://tinyurl.com/35a9f4ry>.
- 144 International Labour Organization, *International Labour Conference Adds Safety and Health to Fundamental Principles and Rights at Work*, June 10, 2022, [https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS\\_848132/lang--en/index.htm](https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_848132/lang--en/index.htm).
- 145 International Labour Organization, *ILO Declaration on Fundamental Principles and Rights at Work*, art. 2(b), [https://www.ilo.org/wcmsp5/groups/public/---ed\\_norm/---declaration/documents/normativeinstrument/wcms\\_716594.pdf](https://www.ilo.org/wcmsp5/groups/public/---ed_norm/---declaration/documents/normativeinstrument/wcms_716594.pdf).
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- 147 *Id.*
- 148 International Labour Organization, *Informal Economy and Atypical Forms of Employment*, [https://www.ilo.org/actrav/areas/WCMS\\_DOC\\_ATR\\_ARE\\_INF\\_EN/lang--en/index.htm](https://www.ilo.org/actrav/areas/WCMS_DOC_ATR_ARE_INF_EN/lang--en/index.htm).
- 149 *Id.*
- 150 *A Glance at the Informal Sector in India*, Oxfam, March 1, 2022, <https://www.oxfamindia.org/knowledgehub/factsheets/glance-informal-sector-india>; *see, e.g.*, Santosh Mehrotra, *Informal Employment Trends in the Indian Economy: Persistent Informality, But Growing Positive Development*, International Labour Organization, Working Paper No. 254, [https://www.ilo.org/wcmsp5/groups/public/---ed\\_emp/---ifp\\_skills/documents/publication/wcms\\_734503.pdf](https://www.ilo.org/wcmsp5/groups/public/---ed_emp/---ifp_skills/documents/publication/wcms_734503.pdf); S. V. Ramana Murthy, *Measuring Informal Economy in India*, Indian Experience, Session II: Traditional Estimation Practices: Determining the Level and Growth of the Informal Economy.
- 151 International Labour Organization, *Informal Economy in Southeast Asia*, <https://www.ilo.org/newdelhi/areasofwork/informal-economy/lang--en/index.htm>. According to the ILO, “Women [in India] are somewhat more likely to be engaged in the



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- culture” as “culturing, under controlled conditions in ponds, pens, enclosures or otherwise, in coastal areas, of shrimp, prawn, fish or any other aquatic life in saline or brackish water; but does not include fresh water aquaculture...” The establishment of the CAA followed a landmark 1996 Indian Supreme Court decision regarding the ecological and social implications of commercial shrimp farming in India. In *S. Jagannath Vs. Union of India and Others*, the Supreme Court directed the Central Government to constitute an authority with all powers necessary to protect ecologically fragile coastal areas, requiring: the demolition of shrimp culture industries operating within coastal regulation zones; the prevention of agricultural lands, salt pan lands, mangroves, wet lands, and forest lands from being converted to shrimp farms; and compensation to individuals and families who had suffered because of pollution from shrimp cultivation, among other measures. Following the order, the Central Government established the Aquaculture Authority under the Environmental Protection Act. However, when the Coastal Aquaculture Act was passed by Parliament in 2005, it retrospectively amended the CRZ Notification, 1991 to exclude coastal aquaculture from the list of prohibited activities. It also constituted the Coastal Aquaculture Authority. Supreme Court advocate Sanjay Parikh argues that this legislation effectively stayed the Supreme Court’s directions, such that “The result is no compensation has been paid to the farmers and the people who have lost their livelihood and groundwater. Nor has the damage done to the environment been remedied.” Coastal Aqua Authority (Amendment) Act, 2023, [https://prsindia.org/files/bills\\_acts/acts\\_parliament/2023/The%20Coastal%20Aquaculture%20Authority%20\(Amendment\)%20Act,%202023.pdf](https://prsindia.org/files/bills_acts/acts_parliament/2023/The%20Coastal%20Aquaculture%20Authority%20(Amendment)%20Act,%202023.pdf); *Sri. S. Jagannath Vs. Union of India & others* (1997) 2 SCC 87; Vipin Mathew Benjamin (ed.), *Has the Judiciary Abandoned the Environment? Human Rights Law Network* (2010), p. 50, [https://www.slic.org.in/uploads/2018/08/has-the-judiciary-abandoned-the-environment\\_final.pdf](https://www.slic.org.in/uploads/2018/08/has-the-judiciary-abandoned-the-environment_final.pdf).
- 241 *Below the Radar: A Case Study of Coastal Aquaculture Hatcheries in Chengalpattu and Villupuram Districts, Tamilnadu*, The Coastal Resource Centre (Dec. 2020), p. 9, available at <https://coastalresourcecentre.wordpress.com/2020/12/19/report-coastal-aquaculture-hatcheries-escape-regulatory-eye-found-in-violation-of-key-norms/> (finding that “62 of the 65 hatcheries were operational within 200m of the HTL in violation of the provisions in the Coastal Aquaculture Authority Act 2005”; “None of the 65 hatcheries has a valid Consent to Establish or Operate under Water & Air Acts”; and “None of the 65 hatcheries was appraised or granted clearance under the CRZ Notification 2011. The hatcheries have been constructed and are operating in violation of the CRZ Notification 2011.”)
- 242 See SV Krishna Chaitaya, *Remove Aqua Hatcheries Operating in Prohibited Zones, NGT Tells Tamil Nadu*, The New Indian Express, Oct. 1, 2022, <https://www.newindianexpress.com/states/tamil-nadu/2022/oct/01/remove-aqua-hatcheries-operating-in-prohibited-zones-ngt-tells-tamil-nadu-2503749.html>.
- 243 Joint Committee Report before the Honourable National Green Tribunal in the matter of Venkatapathi Raja Yenumula Vs. Union of India and Others (OA No.91 of 2020 (SZ)), Section VI(12).
- 244 *Id.*, Section VI(7).
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- 248 Ministry of Law and Justice (Legislative Department), CG-DL-E-14082023-248093, Aug. 14, 2023, [https://prsindia.org/files/bills\\_acts/bills\\_parliament/2023/The%20Coastal%20Aquaculture%20Authority%20\(Amendment\)%20Act,%202023.pdf](https://prsindia.org/files/bills_acts/bills_parliament/2023/The%20Coastal%20Aquaculture%20Authority%20(Amendment)%20Act,%202023.pdf).
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- 266 *See id.*
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- 271 Blum & Herr, *Mangroves*, *supra* note 261; Shanahan, et al., *Smash & Grab*, *supra* note 86, pp. 2, 6 (“[S]hrimp farming contributes directly to a reduction in marine and coastal resources. The industry not only results in a net loss of protein (as fish is caught to feed shrimp); but is also associated with declines in the availability of marine and coastal species traditionally harvested by local communities (as habitats are lost).” *Id.*, p. 6.
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