

Warmwater shrimp social risk profile

Forced labor, human trafficking, and hazardous
child labor risks

India, Aquaculture and Processing

Published July 01, 2024
SEAFOOD SOCIAL RISK TOOL V2

Disclaimer

The Seafood Social Risk Tool has been prepared for information purposes only, and is not intended to constitute business, legal, market, financial or investment advice. The Seafood Social Risk Tool is designed to serve as an informational resource and does not override legislation or internal policies or procedures. It is recommended that all users of the Seafood Social Risk Tool seek independent legal advice. The Monterey Bay Aquarium Foundation shall not be responsible to any party related to its use or interpretation of the information contained in the Seafood Social Risk Tool.

Contents

About the Seafood Social Risk Tool3

Overview4

Base risks of forced labor, human trafficking, and hazardous child labor in the country in general 4

Adjusted risks of forced labor, human trafficking, and hazardous child labor in the country’s seafood supply chain..... 6

Summary of evidence of forced labor, human trafficking, and hazardous child labor in the seafood supply chain..... 8

Summary of factors that affect the likelihood of forced labor, human trafficking, and hazardous child labor in the seafood supply chain 10

Aquaculture 12

Processing and Trade 14

Due Diligence for Warmwater Shrimp in India..... 16

India: Country-level indicators..... 19

India: Seafood industry-level indicators..... 43

India: Aquaculture Indicators 51

India: Processing indicators 65

References 83

About the Seafood Social Risk Tool

The Seafood Social Risk Tool (SSRT) is a risk assessment tool that assesses the risks of forced labor, human trafficking, and hazardous child labor associated with a seafood product and producing country. The tool includes more than 80 risk indicators that assess evidence of forced labor, human trafficking, and hazardous child labor in seafood supply chains and the underlying drivers of risk associated with these abuses. This information is used to create risk profiles to help businesses and other interested stakeholders to better understand the risk of human rights abuses in seafood supply chains and to focus businesses' due diligence efforts to improve conditions for seafood workers.

To learn more about the SSRT and access the full list of available risk profiles, visit <https://www.seafoodwatch.org/our-projects/seafood-social-risk-tool>.

Disclaimer

The Seafood Social Risk Tool has been prepared for information purposes only, and is not intended to constitute business, legal, market, financial or investment advice. The Seafood Social Risk Tool is designed to serve as an informational resource and does not override legislation or internal policies or procedures. It is recommended that all users of the Seafood Social Risk Tool seek independent legal advice. The Monterey Bay Aquarium Foundation shall not be responsible to any party related to its use or interpretation of the information contained in the Seafood Social Risk Tool.

Citation

Please cite as: Monterey Bay Aquarium. 2024. "Warmwater Shrimp Social Risk Profile: India, Aquaculture and Processing," Monterey Bay Aquarium: Monterey, California, USA.

Overview

India is the world's third largest producer of farmed shrimp and prawns, accounting for 12.6% (0.9 million metric tons/M mt) of global production in 2022,ⁱ and is the world's second largest producer of whiteleg shrimp (*Litopenaeus vannamei*).ⁱⁱ Farmed shrimp represented more than 50% of India's total seafood exports by volume and almost 75% by value in 2020-2021.ⁱⁱⁱ Major export destinations for shrimp from India include the United States, which received more than 40% of India's total shrimp export volume in 2021, followed by China, the European Union, Japan and Vietnam.^{iv} Shrimp product from India is mainly sold in frozen Headless Shell-On (HLSO) form.^{v,vi} Whiteleg shrimp accounted for nearly 96% of India's total farmed shrimp and prawn production in 2022.^{vii} The main producing and exporting region for whiteleg shrimp is the south-eastern state Andhra Pradesh, where over 75% of whiteleg shrimp production in India takes place.^{viii}

Base risks of forced labor, human trafficking, and hazardous child labor in the country in general

The base risks of forced labor, human trafficking, and hazardous child labor in India are heightened by poverty and income inequality between states, high levels of informal employment, and social inequality and discrimination of marginalized groups including women, poor and lower castes, internal migrants, and religious minorities. Meanwhile, legislative gaps on human trafficking and child labor, poor enforcement of labor laws, restrictive legislation regarding trade unions, and anti-union practices hinder the protection of workers.

India's poverty rate is disproportionately divided over the states, with the lower income states being Odisha, Rajasthan, Uttar Pradesh, Bihar, Chhattisgarh, and Madhya Pradesh.^{ix} Inequalities between states drive high levels of intra-state migration to high income states in search of better economic opportunities^x. Internal migrants are vulnerable to exploitation as they tend to lack official identity documents, reducing their capacity to access basic social services, and are isolated through lack of a social network, cultural differences, and language barriers.^{xi,xii} A considerable number of migrant workers are employed through labor contractors, where they work in the informal sector or as informal workers in the formal sector.^{xiii} There is a high level of employment in the informal economy in India^{xiv}, in which withholding of wages, debt bondage, and physical and sexual abuse in the workplace are prevalent.^{xv} Due to the absence of records or contracts and casualization, workers in the informal sector are very susceptible to exploitative practices.^{xvi,xvii} Seasonal migrant workers, who tend to be from poorer regions and lower castes,^{xviii} have limited access to support and compensation in cases of abuse, and their children tend to face barriers to accessing education due to the isolation of work sites.^{xix,xx} Children work in many different sectors and activities, including hazardous work and are exploited in forced child labor in several sectors including agriculture, in brick kilns, and stone quarries, among other sectors.^{xxi} The 2021 Findings

on the Worst Forms of Child Labor report indicated that over 50% of working children aged 5 to 14 years work in agriculture, which also encompasses food processing, but updated figures are not provided in the 2022 report.^{xxii,xxiii}

Risks of exploitation for women, especially for those from poor and lower castes (*Dalit*), are increased through perpetuating perceptions rooted in Indian society on gender inequality and practices, such as dowry. *Sumangali* schemes where young girls and women are contracted out for work by their family to earn a dowry often result in debt bondage.^{xxiv,xxv,xxvi} While *Sumangali* schemes are banned by the government, people from poor and lower castes still experience discrimination and economic inequalities, especially in Indian rural societies, which were exacerbated during the Covid-19 pandemic.^{xxvii,xxviii,xxix,xxx} There is also evidence of persecution against religious groups by government authorities.^{xxxi} Inadequate access to benefits and health care, illiteracy, poverty and the prevalence of poor working and living conditions increases the risk of exploitation and trafficking among these marginalized communities.^{xxxii,xxxiii}

Labor trafficking is not explicitly addressed by law in India and anti-trafficking measures vary by state. This lack of a standardized approach to anti-trafficking and the absence of effective inter-state coordination impedes trafficking investigations.^{xxxiv} The practice of bonded labor is formally criminalized, but enforcement is varied with 21 out of India's 36 states not reporting any victims or filing any cases despite evidence to suggest that bonded labor occurs in many of those states.^{xxxv} India's legal framework does not adequately protect children from the worst forms of child labor.^{xxxvi} The minimum age for work is 14 years old, which is lower than the compulsory education age, and regulation governing hazardous work does not cover all sectors where children are known to engage in hazardous activities.^{xxxvii} Additionally, the Juvenile Justice Act, which imposes penalties for recruitment of child soldiers by non-state actors, does not apply to territories such as Jammu and Kashmir where reported incidents include children as young as 14-years being used in direct hostilities.^{xxxviii} Enforcement of labor laws is hindered by an insufficient number of labor inspectors, alleged corruption and official complicity by police and government officials in trafficking and child labor, as well as caste discrimination by police and other officials.^{xxxix,xl} Meanwhile, restrictive legislation and anti-union discrimination act as barriers to workers' rights to freedom of association and collective bargaining. In 2020, India introduced labor law reforms through the Industrial Relations (IR) Code, which have lessened workers' ability to form and join trade unions, to bargain collectively, and to strike.^{xli,xlii} There are reports of union leaders being prosecuted and workers being dismissed for participating in strikes, as well as incidents of union busting and violent attacks on protesting workers.^{xliii}

Adjusted risks of forced labor, human trafficking, and hazardous child labor in the country's seafood supply chain

India's shrimp industry has recently been connected to human rights abuses. While direct evidence of forced labor, human trafficking, and hazardous child labor in the wider seafood industry has been limited to date, a series of investigations emerged in early 2024 that all highlight forced labor issues in the shrimp supply chain, in addition to alleged cases of human trafficking and child labor in the shrimp processing industry by local news outlets. A more dated report also identifies hazardous child labor in shrimp farming although the source is not given. Risks in shrimp feed production are outside the scope of this SSRT profile.

Prior to the publication of the March 2024 investigations on India's shrimp supply chain, evidence of human rights abuses in India's seafood industry from within the past ten years mainly covered hazardous child labor in fishing and seafood processing, including the rescuing of girls from seafood processing plants in Kochi, Kerala^{xliv}, children being exploited as contract laborers and engaged in activities like diving in harbor waters for underwater cleaning of vessels in Visakhapatnam, Andhra Pradesh^{xliv}, and inclusion of children in the workforce in West Bengal's dry fish sector.^{xlvi} In addition, there are some articles mentioning bonded (internal) migrant labor on industrial fishing vessels in Maharashtra, where workers stay on board for at least one fishing season of nine months,^{xlvi} and children in Visakhapatnam, Andhra Pradesh being employed as bonded laborers as deck hands, kitchen help and errand boys.^{xlvi}

There is historic evidence linking human rights abuses to India's shrimp farming industry from its development in the 1980's onwards. Abuses identified include child labor in wild shrimp fry collection and shrimp peeling sheds and processing units, and incidents of hazardous child labor and forced labor, including debt bondage, restriction of freedom of movement, and sexual exploitation of women in shrimp pre-processing plants.^{xlvi} Other problems concerned widespread land seizures and conflicts, harassment, intimidation and violence, murder, and imprisonment of protestors by Indian police.^l Additionally, there were reports of the so-called 'prawn-mafia' lobby operating in certain regions, consisting of dominant landowners, shrimp exporters, politicians and bureaucrats, whose aim was to increase aquaculture production at the expense of others, of which there are still reports in the current day.^{li,lii}

A series of investigations by non-profit journalism organizations, Associated Press and The Outlaw Ocean Project, and human rights legal group, Corporate Accountability Lab, published in early 2024 reveal that some issues in farmed shrimp production and shrimp processing have persisted and further allege prevalent human right abuses at varying levels of the shrimp supply chain, including hatcheries, farms, peeling sheds, and processing plants. A study conducted by the Corporate Accountability Lab (CAL) over a three-year period from 2021-2024 among 150 workers

in Andhra Pradesh at different levels of the supply chain found indicators of forced labor such as debt bondage resulting from recruitment fees and loans, restriction of movement by limiting workers ability to leave company property, hazardous working conditions such as lack or insufficient Personal Protective Equipment (PPE), and abuse and sexual harassment towards women. The report highlights the vulnerabilities of shrimp supply chain workers who are mostly members of marginalized Dalit and Adivasi communities (Scheduled Castes and Scheduled Tribes), or from fishing communities, with many being internal migrants from other states. These migrant workers lack a common language and live onsite, putting them at greater risk of forced labor, especially women migrants. The report further alleges that most workers lack contracts and benefits, or work logs making it difficult to verify wages. At the hatchery and farm level, other labor issues identified included long working hours and limited time off, and poor living conditions onsite. At the peeling sheds and processing level, additional issues found were gender discrimination, intimidation, and threats, as well as fear of retaliation. Workers staying onsite are subjected to abusive living conditions and have their movement and access to their own phones restricted. Furthermore, child labor in the form of teenage girls working as processing workers is reported to be prevalent and there was evidence that workers have been paid on a piece-rate basis since Covid, below minimum wage and without overtime pay. Besides human rights abuses, the report further details the negative environmental impacts of shrimp farming and processing on the surrounding environment, and local community concerns stemming from the adverse impacts of shrimp farming on other livelihoods such as fishing and agriculture, sometimes leaving work in the shrimp industry as the only option.^{liii}

After receiving the advance findings from CAL, the Associated Press (AP) also investigated working conditions in Andhra Pradesh in February 2024. The AP article reports similar labor issues in the shrimp peeling and processing segment, such as long working hours, lack of contracts, payment below minimum wage and no overtime pay, occupational and health and safety concerns, recruitment fees, restriction of movement and abusive living conditions, and retaliation against workers speaking up about working conditions. The article also touches upon environmental concerns such as antibiotic use, contamination, and pollution of the surrounding environment by shrimp farms and processing plants, and abuse against local agriculture farmers protesting the development of processing and cold storage units.^{liv}

The Outlaw Ocean Project produced a separate series of articles, issued at the same time in 2024, following claims by a whistleblower about exports of known unsafe product and the presence of human right abuses in the processing plant where they had worked. The abuses align with some of the allegations by CAL and AP, such as restriction of movement, payments below minimum wage and delayed wage payments, excessive working hours, limited time off, and substandard living conditions. The articles state that many workers are hired through recruitment agents and comprise a mix of local and internal migrant labor, the latter being mostly illiterate women from the lowest castes.^{lv, lvi}

The findings of these investigations reflect issues that were identified in a 2023 human rights impact assessment conducted on a few shrimp farms and processing plants in Andhra Pradesh for three EU and US retailers, which identified indicators of forced labor including excessive overtime, potential debt bondage, physical violence and sexual harassment among other findings.^{lvii} The allegation of girls working in processing plants is also touched upon by several local news outlets, with one case concerning possible inter-State child trafficking.^{lviii,lix} A dated 2017 report references involvement of girls in the collection of wild shrimp fry, however, the evidence for this claim is not cited.^{lx} It is important to note that this likely involves the native giant tiger shrimp, for which broodstock is the main source of fry and production represents only 4% of India’s total shrimp production. Therefore, the practice of children collecting shrimp fry is likely to be very localized and to occur in less than 1% of India’s shrimp production.

These recent investigations, together with historic evidence, highlight the higher levels of risk of human rights abuses in India’s farmed shrimp supply chains. This risk is exacerbated by varying levels of product traceability and supply chain transparency.

Summary of evidence of forced labor, human trafficking, and hazardous child labor in the seafood supply chain

Country-level indicators
<ul style="list-style-type: none">There is evidence of human trafficking, forced labor, and child labor in a range of sectors in India with twenty-six commodities connected to child labor, including bricks, carpets, cottonseed, textiles and garment, rice, sandstone, stones, thread/yarn, and tea, among others.
Seafood industry-level Indicators
<ul style="list-style-type: none">Prior to the publication of several investigations on India’s shrimp supply chain in March 2024, there was limited direct evidence of forced labor in the country’s seafood industry.There are reports of (internal) bonded migrant labor and child labor in industrial fishing.Reports of hazardous child labor from studies and news articles include forced child labor in seafood processing plants, exploitation as contract labors engaged in diving in fishing harbors, and work in the dry fish sector.The 2022 Findings on the Worst Form of Child Labor for India identifies child labor in seafood processing.The 2024 Trafficking in Persons (TIP) Report for India is the first TIP Report to mention fish or seafood in relation to forced labor in India since 2018. The report identifies observer reports of indicators of forced labor in aquaculture, including

failure to pay a minimum wage, restricted freedom of movement, and dangerous working conditions. The report also identifies a risk of debt bondage in aquaculture because of these exploitative conditions, particularly among migrant workers and scheduled castes.

Aquaculture indicators

- No direct evidence was found of human trafficking in shrimp aquaculture, but there is evidence of forced labor, and to a lesser extent, hazardous child labor in parts of the shrimp aquaculture sector.
- Several indicators of forced labor in shrimp farming were reported by different sources in 2023 and 2024 including excessive working hours, the use of recruitment fees and potential for debt bondage, forced and unpaid overtime, physical violence and verbal abuse, sexual harassment, restriction of movement, and unsafe working and poor living conditions.
- The 2024 TIP Report identifies observer reports of indicators of forced labor in “some shrimp and aquaculture facilities” (assumed to include shrimp aquaculture), highlighting Andhra Pradesh. Indicators reported cover failure to pay a minimum wage, restricted freedom of movement, and dangerous working conditions. The report also identifies a risk of debt bondage in aquaculture facilities, particularly among migrant workers and scheduled castes.
- There is evidence, albeit limited, of hazardous child labor in parts of the shrimp farming sector; the Global March report (2017) describes girls collecting wild shrimp fry in contaminated waters, which is hazardous work.

Processing indicators

- Conditions for evidence of forced labor in the shrimp processing industry were found, as well as cases of potential human trafficking and child labor (not confirmed as hazardous) in the shrimp processing industry.
- Multiple indicators of forced labor in shrimp processing were reported by different sources in 2023 and 2024, including debt bondage through recruitment fees and loans, restriction of movement, hazardous working conditions, abuse and intimidation, sexual harassment towards women, substandard living conditions, and abuse of vulnerability.
- The 2024 TIP Report identifies observer reports of indicators of forced labor in “some shrimp and aquaculture facilities” (assumed to include shrimp processing), particularly in Andhra Pradesh. Indicators reported cover failure to pay a minimum wage, restricted freedom of movement, and dangerous working conditions.

Summary of factors that affect the likelihood of forced labor, human trafficking, and hazardous child labor in the seafood supply chain

Factors that increase the likelihood

Country-level indicators

- There are high rates of poverty and income inequality between states in India.
- India hosts a substantial number of migrants from neighboring countries, including refugees and asylum seekers from Tibet and Sri Lanka.
- There is a high number of intra-state economic migrants, who are vulnerable to exploitation as they tend to lack official identity documents and speak a different regional language.
- According to Gallup's Migrant Acceptance Index, the populations' acceptance of migrants decreased between 2016 and 2019.
- Ninety percent of India's workforce is engaged in the informal economy, where risks of exploitative practices are high due to the absence of formal contracts.
- There are restrictions on workers' rights to organize and repercussions for organizing workers.
- Perpetuating perceptions of gender inequality and practices such as dowry make women especially vulnerable to exploitation, trafficking, and debt bondage.
- Issues surrounding castes and forced labor remain entrenched in current society.
- Enforcement of the bonded labor act has been minimal and bonded labor is sometimes wrongly identified as labor law crimes or minimum wage violations.
- The number of labor inspectors is insufficient to adequately monitor and report on labor law violations.
- Caste discrimination among law enforcement officials hinders the identification and investigation of human trafficking cases.
- Alleged corruption and complicity among officials contribute to impunity in human trafficking and child labor cases.

Seafood industry-level indicators

- No information was found on the implementation and enforcement of the legal framework to protect workers in the seafood industry.
- No information was found on access to workplaces for third-party monitors such as trade union representatives in the seafood industry.
- Most fisheries and aquaculture work fall under the informal sector.
- There is a lack of adequate data on child labor in the fishery and aquaculture sectors.

Aquaculture indicators

- Shrimp farmers are often dependent upon (unregulated) intermediaries known as middlemen for finance and other inputs that can lead to indebtedness.
- Many shrimp farms are family-operated businesses, which could increase the risk of children engaging in farm work.
- A high proportion of shrimp farm workers are internal migrants.
- Shrimp farm workers include people from Other Backward Class and Scheduled Castes and Scheduled Tribes.
- The monthly income of shrimp farm workers is less than the average annual income of an Indian worker.
- Recruitment agents are used for hiring workers, with some charging recruitments fees.
- Working conditions can be abusive and hazardous, with long working hours, poor living conditions, and lack of proper PPE.
- There is a risk of debt bondage through recruitment fees or loans

Processing indicators

- There is a high level of young women involved in processing, who are more vulnerable to exploitation.
- Many shrimp processing workers are hired as contract or temporary workers and miss out on social security benefits.
- About half of the shrimp processing workers are inter- and intrastate migrants and of lower castes, who are more vulnerable to abuse.
- Workers have no formal contracts and work logs are not kept.
- Recent investigations indicate cases of actively hiding workers during audits.

Factors that decrease the likelihood

Country-level indicators

- According to the 2024 Trafficking in Persons Report, India's government is making significant efforts to eliminate human trafficking.
- India has ratified all key international conventions on child labor.

Seafood industry-level indicators

- According to Global March 2017, no instances of foreign women or child workers have been reported in the fishery sector.
- The growing importance of regular schooling and education has resulted in decreased employment of children in fishing communities.

- Voluntary third-party certification schemes for farmed seafood are present in India, with uptake of Best Aquaculture Practices and Aquaculture Stewardship Council certification.

Aquaculture indicators

- Increased government efforts to get shrimp farms registered, with different institutes managing registration.
- Shrimp farm workers appear to be Indian nationals.
- While young girls collect wild shrimp fry, it is likely to be the native giant tiger shrimp, which only represents 4% of India's total shrimp production and generally broodstock is used. Therefore, this practice is likely to be very localized and is estimated to affect less than 1% of India's total shrimp production.

Processing indicators

- Most processing workers are Indian nationals.
- Shrimp is predominantly produced for export, offering a point of leverage for buyers to drive improvement efforts.

Aquaculture

India's seafood industry accounts for 8% of global seafood production and contributes to approximately 1% of India's national GDP.^{lxi} The aquaculture sector is estimated to be responsible for the employment of 4.2 million people.^{lxii} In 2020, the government of India adopted the scheme, Pradhan Mantri Matsya Sampada Yojana (PMMSY), to support the country's blue revolution up to 2025. Among its aims is to double the production of aquaculture and export products.^{lxiii}

The main species produced by India is whiteleg shrimp (*Litopenaeus vannamei*), which comprised 94% of India's total farmed shrimp and prawn production in 2022.^{lxiv} Production of whiteleg shrimp in India increased because of rising demand in combination with a decline in global production due to disease outbreaks in major shrimp aquaculture producing countries such as Thailand, China, and Vietnam.^{lxv} In 2021-2022, Indian whiteleg shrimp production reached 976,213 metric tons (mt) and has been the only food sector with a tenfold production increase over the last fifteen years.^{lxvi, lxvii} The largest producing state of whiteleg shrimp in India is Andhra Pradesh, reporting a production volume of 782,772 mt in 2021-2022, which is more than 80% of the country's production.^{lxviii} The districts Krishna, West Godavari, and East Godavari were responsible for 75% of this production. West Godavari is the largest region in terms of production area and contributes nearly 30% of India's total shrimp production.^{lxix} The states Gujarat, Orissa, West Bengal, Tamil Nadu &

Pondicherry, Maharashtra and Karnataka, and Gao made up for the remaining volumes.^{lxx} Around 80% of whiteleg shrimp is produced in semi-intensive systems and 15% is produced in intensive systems.^{lxxi}

Giant tiger shrimp (*Penaeus monodon*) and giant river prawn (*Macrobrachium rosenbergii*) represent 4% and 2% of the annual shrimp production, respectively.^{lxxii} Giant tiger shrimp is mainly produced in the state West-Bengal, which accounts for 54% of the giant tiger shrimp production, reaching 22,185 mt in 2021-2022. Gujarat is responsible for approximately 25%, with the remaining volumes accounted for by the states Andhra Pradesh, Kerala, Orissa, Karnataka, and Goa.^{lxxiii}

According to the Marine Products Export Development Authority (MPEDA), shrimp production covers a total area of 186,140 hectares (ha). Giant tiger shrimp has the lowest productivity at 0.66 mt per ha per year and takes up 30% of the total registered cultivated area. Whiteleg shrimp takes up 61% of the production area with a productivity of 8.57 mt per ha per year.^{lxxiv} India is a low-density producer of whiteleg shrimp, India's Coastal Aquaculture Authority (CAA) regulations have limited stocking densities to 60 post larvae (PL) /m².^{lxxv} Stocking densities therefore range from 25 to 60 PL / m².

There are estimated to be over 100,000 shrimp producers operational in India.^{lxxvi} Around 90% of producers are small to medium scale with 1.2 to 2 ha sized farms, the majority being family run operations.^{lxxvii,lxxviii} While some shrimp farmers are also landowners, farm land is often leased from non-residents, companies, or government authorities.^{lxxix} There are a few large corporate vertically integrated players that control 10% of farms and production area^{lxxx}, with the largest farms reportedly covering approximately 80-120 hectares.^{lxxxi} Farmers use commercial pelleted feed, which amounts to an estimated 50-60% of farm expenses, and typically carry out feeding activities manually.^{lxxxii}

The level of farm registration is increasing, which gives farms a legal status and provides access to financial governmental support. Up to 2022, a total of 45,113 shrimp farms with a total farm area of about 69.5 thousand ha were registered under the CAA.^{lxxxiii} Registration by the CAA is reportedly inhibited by costs, difficulties for small scale farmers to comply with the CAA's standards and a lack of enforcement power.^{lxxxiv} Aquaculture farms producing for export are required to register with MPEDA to be able to obtain a Pre-Harvest Test certificate, which is mandatory for export to European Union (EU). Requirements for registering with MPEDA, including proof of ownership and a demonstration of the legality of the farm's location, should help ensure that farms do not violate the CAA regulations.^{lxxxv} According to MPEDA, the authority has a database of over 70,000 aquaculture farms.^{lxxxvi}

Currently, broodstock of whiteleg shrimp can only be imported from approved sources and are quarantined in government run facilities.^{lxxxvii} Based on data from the CAA, there are 314 shrimp hatcheries that are registered to import specific pathogen free (SPF) whiteleg shrimp broodstock, with a production capacity of 45 billion PLs per annum^{lxxxviii}, although it is alleged that there are many more unregistered hatcheries with the total number estimated to be 585 in 2021.^{lxxxix} There were 183 Nauplii Rearing Centers registered by the end of 2022 that produce PLs with an annual capacity of 8 billion *L. vannamei* seeds.^{xc} Hatcheries are predominantly located in the states, Andhra Pradesh and Tamil Nadu, with 40% of PLs being produced in Andhra Pradesh's district East Godavari.^{xc} Around 40% of the hatcheries are owned by small or mid-sized companies^{xcii}, operating one or two units and employing 15 to 30 workers per unit.^{xciii} A couple of larger companies own independent hatcheries or privately owned hatcheries with multiple units.^{xciv} The government is interested in developing fully contained and bio-secure broodstock multiplication centers that can complete the lifecycle of whiteleg shrimp and generate broodstock locally.^{xcv} The government also approved the import of SPF giant tiger shrimp broodstock.^{xcvi} Since then, local infrastructure to supply giant tiger shrimp broodstock has grown with importing companies partnering with local hatcheries to produce PL.^{xcvii}

Actors operating in the shrimp value chain up to the farming level include hatcheries, nurseries, middlemen / input and sub-dealers, feed manufacturers, and farms. Middlemen sometimes serve as financiers for farmers and are reported to control around 40% of production. The value chain is varied, with the existence of some fully vertically integrated companies.^{xcviii}

Processing and Trade

Post-harvest operations depend on the level of vertical integration in the shrimp supply chain. The shrimp product is either taken by middlemen or commission agents to be sold to processing units, directly sent to processing units, or sold at farm gate level. An estimated 40% of shrimp products from farms are directly sold to processing units, while commission agents/middlemen are responsible for buying up another 40%, and the remainder are sold at farm gate level.^{xcix} Middlemen play an informal role in the supply chain and are unregulated. They act as facilitators between farms and processing units by sourcing and selling raw materials and sort, preprocess, and transport the shrimp product for processors.^c

Processing units vary from non-integrated to fully integrated facilities, depending on whether they conduct pre-processing or processing activities. Pre-processing includes activities such as cleaning, peeling, washing, and icing, while processing consists of grading, packing, weighing, and freezing. Separated pre-processing activities tend to occur in small-scale units that are labor intensive, while processing requires large-scale, capital-intensive units.^{ci} Women are the predominant workforce in

both units.^{cii, ciii} There are 598 pre-processing centers registered with MPEDA across India.^{civ} Whether this number reflects all pre-processing units is unclear. Efforts have been made to integrate pre-processing activities in EU-approved processing facilities.^{cv} Pre-processing is reportedly outsourced when the processors lack space or sufficient workforce, and during peak production periods, or when sourcing shrimp from further away.^{cvi} Recent reports indicate usage of peeling sheds for product intended for export, although it is not clear whether these are to be considered as registered pre-processing facilities.^{cvii, cviii, cix} Peeling sheds are reported to be mostly operated by small businesses or individuals, having primitive constructions, and located in secluded coastal areas.^{cx}

Some processors use external exporter firms to export their product.^{cxii} There are 625 processors and 681 cold storage facilities registered with MPEDA, of which 500 have approved export licenses to the EU.^{cxii, cxiii, cxiv} Shrimp is exported from 23 Indian ports. The principal shrimp export port is Vizag Sea Port, located in northern Andhra Pradesh. Other important ports are Krishnapatnam Port Sea in central Andhra Pradesh and Kolkata Sea in the south of West Bengal.^{cxv}

Despite India's large seafood industry, the industry does not contribute significantly to the country's food security besides coastal regions.^{cxvi} Reports on domestic consumption of shrimp are varied, with some indicating an increase in the last couple of years to 20% of total production,^{cxvii} while other sources indicate the share is not bigger than 50,000 mt.^{cxviii} Domestically consumed shrimp are primarily sold fresh.

India's whiteleg shrimp production is predominately intended for export and India is globally the second largest exporter on the international shrimp market. Shrimp exports accounted for 53% of India's seafood export volume and 75% of the total seafood export value in 2021-2022.^{cxix} The main export markets are the United States, which accounts for 40% of total exports, followed by China, the EU, Japan, and Vietnam.^{cxx} Shrimp are mainly exported in frozen Headless Shell-On (HLSO) product form.^{cxxi} In 2020-2021, 728,123 mt of frozen shrimp was exported.^{cxxii} To a lesser extent shrimp is exported as cooked and breaded product. Reported investment into processing capacity for value-added products indicates that India's shrimp exports may diversify further in the coming years.^{cxxiii}

While there are instances of full vertical integration in the Indian supply chain with some large companies owning farms and processing facilities, there is an equal if not larger segment that is still fragmented. This fragmentation, in combination with the large number of small to medium scale farms, of which more than half lack formal registration, and the involvement of middlemen / agents, makes product traceability challenging.

Due Diligence for Warmwater Shrimp in India

Important Country-Specific Considerations

- India is a major producer and exporter of farmed shrimp to the United States and the European Union.
- The farmed shrimp industry has a varying level of vertical integration, with most producers being small-scale. Intermediaries known as middlemen provide inputs and finance and are responsible for handling almost half of the production.
- There is a high level of internal migration within India, with workers moving from lower income to higher income states. Migrant workers are more vulnerable to exploitation. This, in combination with recent reported cases of widespread use of recruitment agents, and with many charging recruitment fees, has fed into the allegations of the presence of forced labor.
- Gaps in relevant legal frameworks, limited inspection resources, and official corruption and complicity hamper the enforcement of relevant labor and trafficking regulations.

Suggested Due Diligence Priorities & Questions

Migrant Labor

There is a high level of internal migration within India and migrants can be vulnerable to labor exploitation. Internal migrant workers are commonly employed in the shrimp industry. There is limited information on the employment of foreign migrant workers in shrimp production.

1. What is the proportion of foreign and internal migrant workers employed?
2. Where do migrant workers originate from and what language do they speak?
3. Are contracts written in a language that migrant workers understand and were terms and conditions of the contract understood before workers migrated?
4. What is the main language spoken onsite and what provisions are in place for any migrant workers that may not speak the language? Is information on workers' rights, grievance mechanisms, and health and safety displayed in a way that all workers can understand?
5. Are migrant workers housed onsite and are the living conditions appropriate and safe?
6. Are workers that are housed onsite free to leave during off-hours?
7. Are workers able and allowed to communicate with their families or anyone outside the premises when accommodated onsite?

Recruitment and contracts

Shrimp farm and processing workers are generally hired via contractors, which allows companies to avoid complying with labor laws or providing workers with social security benefits by not issuing formal documentation. In addition, there have been reports of workers borrowing money to pay recruitment fees, which could result in debt bondage.

1. Are workers hired directly or through recruitment agents? What procedures are in place to manage the use of recruitment agents within their own operations and those of their raw material supplier?
2. Are there monitoring and accountability processes to verify ethical performance requirements of recruitment agents? Are recruitment agents registered with the appropriate authorities?
3. Do you know how recruitment agents comply with the 'Employer Pays Principle', including whether they have a procedure for verifying that workers are not charged fees and a mechanism for workers to report violations?
4. Are working hours, rest periods, and wages set in work agreements for all workers?

Working hours and compensation

Incidents of low wages, excessive working hours, and forced overtime have been reported in shrimp supply chains.

1. How are working hours, overtime, and rest periods monitored for all workers, including temporary, seasonal, and contract workers?
2. Do workers receive a pay slip and are they aware of wage-setting mechanisms? Is there a mechanism to enable workers to sign off on the hours they have worked or to dispute incorrect payments?
3. Is overtime voluntary and compensated?
4. Are workers paid at least the minimum wage according to state or sector requirements?
5. What payment structure is used to compensate workers (e.g., piece rate or fixed salary)?
6. Are all workers given social security benefits such as insurance, Employees' Provident Fund and Employees' State Insurance Corporation?

Company and Supplier Policies / Processing Activities

The level of vertical integration is limited and there is quite a high involvement of intermediaries in the shrimp supply chain, therefore, product ownership can change multiple times before arriving at the processing plants. Limited traceability in the shrimp supply chain means it may be difficult to identify where shrimp raw materials are sourced from and what routes they have taken in the supply chain.

1. Does the company know where processing companies/suppliers are sourcing their shrimp inputs?
 - a. Is there traceability back to the farm, and does the company know what working conditions and arrangements are like on the farm?
 - b. Do workers in your operation/supply chain have access to a complaint mechanism?
2. Do processing companies have established relations with certain intermediaries or agents that operate on behalf of the company?

India: Country-level indicators

Indicator	Description	Sources
Poverty levels in a country	<p>Human Development Index</p> <p>HDI Value (2022): 0.644</p> <p>HDI Rank (2022): 134</p> <p>India's HDI value for 2021 places it in the 'medium human development' category and positions it at 134 out of 193 countries and territories. India's HDI value for 2022 is above the average of 0.640 for countries in the medium human development group and above the average of 0.641 for countries in South Asia.</p> <p>Between 1990 and 2022, India's HDI value increased by 48.4%, showing progress with each of the HDI indicators for life expectancy, education, and Gross National Income (GNI), only decreasing in recent years after the COVID-19 pandemic. However, when India's HDI value is discounted for inequality, it falls to 0.444, a loss of 31.1% due to inequality in the distribution of the HDI dimension indices. The average loss due to inequality for medium HDI countries is 30.2% and for South Asia the average loss is also 30.9%.</p>	<p>UNDP Human Development Index (HDI)</p> <p>UNDP Global Human Development Indicators Country Ranks</p>
	<p>Poverty headcount ratio at national poverty line (% of population): 21.9% (2011), showing decline over 2 years from 29.8% (2009).</p> <p>The poverty headcount ratio is lower than neighboring countries, Afghanistan, Bangladesh, Myanmar, and Nepal, the same as neighboring country Pakistan, but higher than neighboring countries, Bhutan, China, and Sri Lanka:</p> <ul style="list-style-type: none"> • Afghanistan (2016) 54.5% • Bangladesh (2016) 24.3% • Bhutan (2017) 8.2% 	<p>World Bank</p>

Indicator	Description	Sources
	<ul style="list-style-type: none"> China (2020) 0% Myanmar (2017) 24.8% Nepal (2010) 25.2% Pakistan (2018) 21.9% Sri Lanka (2016) 4.1% 	
	<p>Global Hunger Index (2022):</p> <p>India ranks 107th out of 136 qualifying countries. With a score of 29.1 out of 100, India suffers from a level of hunger that is 'serious'.</p> <p>India scores better than neighboring country, Afghanistan (2022) 29.9, but worse than neighboring countries, Bangladesh (2022) 19.6, China (2022) <5, Myanmar (2022) 15.6, Nepal (2022) 19.1, Pakistan (2022) 26.1, Sri Lanka (2022) 13.6.0. There is no data for Bhutan.</p> <p>Note: GHI is scored on a 100-point GHI Severity Scale, where 0 is the best score (no hunger) and 100 is the worst (where ≥ 50 is 'extremely alarming').</p>	Global Hunger Index (GHI)
Country's position in the regional economic power system	<p>Comparing HDI ranking to other countries in the region</p> <p>India</p> <ul style="list-style-type: none"> HDI Value (2021): 0.633 HDI Rank (2021): 132 <p>Neighboring Countries:</p> <p>Afghanistan HDI Value (2021): 0.478 HDI Rank (2021): 180</p> <p>Bangladesh HDI Value (2021): 0.661 HDI Rank (2021): 129</p>	UNDP Human Development Index (HDI)

Indicator	Description	Sources
	<p>Bhutan HDI Value (2021): 0.666 HDI Rank (2021): 127</p> <p>China HDI Value (2021): 0.768 HDI Rank (2021): 79</p> <p>Myanmar HDI Value (2021): 0.585 HDI Rank (2021): 149</p> <p>Nepal HDI Value (2021): 0.602 HDI Rank (2021): 143</p> <p>Pakistan HDI Value (2021): 0.544 HDI Rank (2021): 161</p> <p>Sri Lanka HDI Value (2021): 0.782 HDI Rank (2021): 73</p>	
	<p>Comparing its recent economic growth to the general economic growth rates in the region</p> <p>India GDP Growth (annual %): 7 (2022)</p> <p>Neighboring countries:</p> <p>Afghanistan GDP Growth (annual %): -20.7 (2021)</p> <p>Bangladesh GDP Growth (annual %): 7.1 (2022)</p> <p>Bhutan GDP Growth (annual %): 4.1 (2021)</p>	<p>World Bank Databank figures on annual economic growth</p>

Indicator	Description	Sources
	<p>China GDP Growth (annual %): 3 (2022)</p> <p>Myanmar GDP Growth (annual %): 3 (2022)</p> <p>Nepal GDP Growth (annual %): 5.6 (2022)</p> <p>Pakistan GDP Growth (annual %): 6.2 (2022)</p> <p>Sri Lanka GDP Growth (annual %): -7.8 (2022)</p>	
	<p>Migration data</p> <p>Net migration rate (immigrants minus emigrants per 1,000 population) for India is -0.2 (2021).</p>	<p>IOM Migration Data Portal</p>
	<p>Regional migration trends and patterns</p> <p>Regionally, Central and South Asia is the top sender of migrants abroad, with an annual average of 1.5 million people emigrating away from this region. From 2000 to 2020, India, Bangladesh, Nepal, and Pakistan combined accounted for 84% of the region's total net migration to other countries. UN International Migration, 2019</p> <p>India has a nuanced and diverse migration history, with a diaspora spanning the globe. In 2019, India was the top country of origin of migrants by numbers, with 17.5 million people living internationally. UN International Migration, 2019 Yet, it has one of the lowest emigration rates by percentage of the population, just 1%, given its large population size. About half of the migrants from India now live in one of three main countries: the United Arab Emirates,</p>	<p>UN International Migration, 2019</p> <p>Pew Research Center, 2017</p> <p>United Nations High Commissioner for Refugees (UNHCR), 31 January 2020, Fact Sheet: India</p> <p>PRS Legislative Research, Migration in India and the impact of the lockdown on migrants, 2020</p>

Indicator	Description	Sources
	<p>Pakistan, and the United States. Pew Research Center, 2017</p> <p>In addition to being a major source of migrants, India hosts the 12th largest immigrant population in the world, with about 5.2 million people from other countries living there in 2015. Most immigrants originate from neighboring countries Bangladesh, Pakistan, Nepal, and Sri Lanka. Pew Research Center, 2017</p> <p>India hosts over 244,000 refugees and asylum seekers mostly from Tibet and Sri Lanka, according to UN data in 2020. UNHCR, 31 January 2020</p> <p>Migration within India is common. The Constitution of India offers basic freedom for internal migrants to move to any part of the country. There are inter and intra-state migrants, with intra-state migrants accounting for 88% according to a 2011 census. Internal migration is mainly driven by the states' economic inequities with most traveling from lower income states, such as Bihar, Jharkhand and West Bengal to higher income states such as Maharashtra, Andhra Pradesh, Kerala and Karnataka. Internally, migrant workers face challenges through lack of social security and health benefits and lack of portability of state-offered benefits such as food provisions. PRS Legislative Research, 2020 , Ashok, S & Thomas, N 2014</p> <p>In addition, internal migrants may also face difficulties through speaking different regional languages.</p>	<p>Ashok, S & Thomas, N 2014, 'A Study on issues of inter-state migrant labourers in India', International Journal of Scientific & Engineering Research, vol. 5, no.7, p. 92</p>
	<p>Known human trafficking routes</p> <p>The US Department of State's 2024 Trafficking in Persons (TIP) Report identifies exploitation of</p>	<p>US Department of State, 2024, 2024 Trafficking in</p>

Indicator	Description	Sources
	<p>domestic and foreign victims in India and Indian victims abroad over the past five years. Most bonded labor victims were identified in states Uttar Pradesh, Karnataka, and Tamil Nadu in 2022. However, the reporting of bonded labor victim identification varies by state, with 21 out of 36 states and union territories not reporting identifying victims despite ongoing reports of bonded labor in many of them. Women and girls migrate internally from poorer areas to wealthier cities and states, where they are subject to trafficking. In addition, traffickers recruit women and girls from Nepal and Bangladesh into sex trafficking, often under false pretense. Women and girls from countries in Central Asia, Europe, and Africa are also exploited in sex trafficking. Meanwhile, Indian migrants are subject to sex trafficking and forced labor overseas in Gulf countries and Southeast Asia. US Department of State, 2024</p> <p>The Freedom Collaborative Victim Journeys Map identifies multi-directional trafficking between India and Kenya, as well as trafficking within India, and from Nepal, Bangladesh, Myanmar and Uzbekistan to India. Half of victims that were reported are involved in the commercial sex industry, 30% in domestic work, and 10% in Agriculture/Forestry/Fishing and the remainder in an 'Other' category.</p>	<p>Persons (TIP) Report</p> <p>Freedom Collaborative, No date, Victim Journeys Map</p>
Governance practices and systems in a country (measured through indexes)	<p>WGI (2022) Percentile rank:</p> <ul style="list-style-type: none"> • Voice and Accountability: 49.28 • Political Stability and Absence of Violence: 24.53 • Government Effectiveness: 63.21 • Regulatory Quality: 50.94 • Rule of Law: 55.19 • Control of Corruption: 44.35 	<p>World Governance Indicators (WGI)</p>

Indicator	Description	Sources
	<p>India ranks in the lower percentiles for three indicators, 'Voice and Accountability', Political Stability and Absence of Violence', and 'Control of Corruption', and the other three in the higher percentiles. India ranks slightly to moderately above the regional average for South Asia, except for the indicator 'Political Stability and Absence of Violence', which ranks slightly below the regional average.</p> <p>Note: Percentile rank among all countries ranges from 0 (lowest) to 100 (highest) rank, where the higher the percentiles, the better the governance.</p>	
	<p>Corruption Perception Index (2023):</p> <p>Score: 39/100</p> <p>Rank: 90/180 countries</p> <p>More than two-thirds of countries score below 50 on this year's CPI, with an average score of just 43. India's score of 39 places it below the average and positions it 90th out of 180 countries and territories. India scores better than neighboring countries Afghanistan (20), Bangladesh (24), Myanmar (20), Nepal (35), Pakistan (29), and Sri Lanka (34), but worse than neighboring countries Bhutan (68) and China (42). India also scores worse than the regional average of 45.</p> <p>Note: Based on 0 = Highly Corrupt, 100 = Very Clean.</p>	Transparency International Corruption Perception Index (CPI)
	<p>Basel Anti-Money Laundering Index (2020):</p> <p>Rank: 70/141 countries</p> <p>Overall score: 5.15/10</p>	Basel Anti-Money Laundering (AML) Index

Indicator	Description	Sources
	<p>Average 2020 Basel AML Index is 5.22, with India's 5.15 score putting it just below the global average.</p> <p>The South Asia region has the highest overall risk score and exceeds the global average across all categories, indicating a higher risk for money laundering and terrorist financing. India is lowest risk in this region.</p> <p>Globally, neighboring country Afghanistan ranks first making it the highest risk of all 141 countries included, and Myanmar ranks third.</p> <p>Neighboring countries:</p> <ul style="list-style-type: none"> • Afghanistan: 8.16/10 • Bangladesh: 5.88/10 • Bhutan: No data • China: 6.76/10 • Myanmar: 7.86/10 • Nepal: No data • Pakistan: 6.3/10 • Sri Lanka: 6.52/10 <p>Note: India is not assessed in the 2023 edition of the Index. Ranking in the 2020 edition is out of 141 countries; top possible score is 0 (low risk), lowest score is 10 (high risk).</p>	
	<p>Global Rights Index (2024):</p> <p>Rating: 5 (No guarantee of rights)</p> <p>The ITUC Global Rights Index rates India worse than the regional average ranking of 4.13 for the Asia-Pacific region, which the index rates as the second worst region in the world for workers, behind the Middle East and North Africa.</p> <p>India is not ranked within the top ten worst countries for working people in 2024, but the previous year's</p>	<p>International Trade Union Conference (ITUC) Global Rights Index (GRI)</p>

Indicator	Description	Sources
	<p>2023 report does cite workers experiencing beatings by state forces, and restrictions on the right to form trade unions.</p> <p>Neighboring countries:</p> <ul style="list-style-type: none"> • Afghanistan: 5+ • Bangladesh: 5 • Bhutan: No data • China: 5 • Myanmar: 5+ • Nepal: 3 • Pakistan: 5 • Sri Lanka: 4 <p>Note: Countries are ranked from 1 to 5+, where five plus corresponds to “no guarantee of rights due to the breakdown of the law” and 1 corresponds to “sporadic violations of rights”.</p>	
Education and general literacy levels in a country	<p>Adult literacy rates, among the population aged 15 years and older (2018): 74%.</p> <p>Adult female literacy rate (2018): 66%</p> <p>Adult male literacy rate (2018): 82%</p> <p>Comparison to neighboring countries:</p> <ul style="list-style-type: none"> • Afghanistan (2021): 37% • Bangladesh (2020): 75% • Bhutan (2021): 71% • China (2020): 97% • Myanmar (2019): 89% • Nepal (2021): 71% • Pakistan (2019): 58% • Sri Lanka (2020): 92% 	World Bank Open Data
	Primary school completion rates, total (% of relevant age group) (2021): 97%	World Bank Open Data

Indicator	Description	Sources
	<p>Primary completion rates, female (% of relevant age group) (2021): 98%</p> <p>Primary completion rates, male (% of relevant age group) (2021): 96%</p> <p>Comparison to neighboring countries:</p> <ul style="list-style-type: none"> • Afghanistan (2019): 84% • Bangladesh (2021): 122% • Bhutan (2021): 90% • China (2009): 98% • Myanmar (2018): 95% • Nepal (2022): 106% • Pakistan (2019): 73% • Sri Lanka (2020): 98% <p>Note: “There are many reasons why the primary completion rate can exceed 100 percent. The numerator may include late entrants and overage children who have repeated one or more grades of primary education as well as children who entered school early, while the denominator is the number of children at the entrance age for the last grade of primary education.”</p>	
	<p>Lower secondary education completion rates, total (% of relevant age group) (2021): 85.8%</p> <p>Lower secondary completion rates, female (% of relevant age group) (2021): 87.8%</p> <p>Lower secondary completion rates, male (% of relevant age group) (2021): 84.0%</p> <p>Comparison to neighboring countries:</p> <ul style="list-style-type: none"> • Afghanistan (2019): 58.3% • Bangladesh (2018): 88% • Bhutan (2021): 85.2% • China (2011): 99.5% 	World Bank Open Data

Indicator	Description	Sources
	<ul style="list-style-type: none"> • Myanmar (2018): 64.8% • Nepal (2022): 102.8% • Pakistan (2019): 49% • Sri Lanka (2020): 100.5% <p>Note: “There are many reasons why the rate can exceed 100 percent. The numerator may include late entrants and overage children who have repeated one or more grades of lower secondary education as well as children who entered school early, while the denominator is the number of children at the entrance age for the last grade of lower secondary education.”</p>	
	<p>School enrolment, tertiary (2021): 31% gross</p> <p>School enrolment, tertiary, female (2020): 31%</p> <p>School enrolment, tertiary, male (2021): 30%</p> <p>Comparison to neighboring countries:</p> <ul style="list-style-type: none"> • Afghanistan (2020): 11% • Bangladesh (2021): 25% • Bhutan (2021): 23% • China (2021): 64% • Myanmar (2018): 19% • Nepal (2022): 17% • Pakistan (2019): 12% • Sri Lanka (2020): 22% <p>Note: “There are many reasons why the rate can exceed 100 percent. The numerator may include late entrants and overage children who have repeated one or more grades of lower secondary education as well as children who entered school early, while the denominator is the number of children at the entrance age for the last grade of lower secondary education.”</p>	World Bank Open Data

Indicator	Description	Sources
Attitudes towards migrant workers in a country's population	<p>Migrant Acceptance Index score: 4.01/9 (2019)</p> <p>Notably, the score for India declined from 4.90 in 2016 to 4.01 in 2019, reflecting a controversial change in 2019 to laws relating to pathways to citizenship for migrants.</p> <p>Comparison to neighboring countries:</p> <ul style="list-style-type: none"> • Afghanistan: 3.61/9 (2019) • Myanmar: 4.00/9 (2019) • Pakistan: 4.21/9 (2019) <p>Note: Based on 138 countries surveyed in 2016; U.S. surveyed in 2017; top possible score is 9.0, where the higher the score, the more accepting of migrants the population is. The Index was updated in 2019.</p>	Gallup Migrant Acceptance Index
Legislation and regulation to protect migrant workers	<p>Coverage of legal provisions under the labor laws</p> <p>India has not ratified the International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families.</p> <p>Given that much of the migrant work in India is internal, there are legal provisions in laws focusing on domestic workers. The Inter-state Migrant Workmen Act of 1979 provides some protections, but the Act is barely implemented and there are issues of compliance. This Act will likely be grouped into a larger Occupational Safety, Health and Working Conditions Code, which the Ministry of Labor and Employment introduced in 2019. This code combines 13 past labor laws, including the Dock Workers Act of 1986, and seeks to further regulate the health and safety of workers.</p> <p>Andhra Pradesh scores above average compared to other states in India for migrant integration policy according to the Interstate Migrant Policy Index</p>	<p>UN Treaty Body Database</p> <p>Committee on Migrant Workers</p> <p>Un News, India must follow Supreme Court orders to protect 100 million migrant workers: UN rights experts, June 4, 2020</p> <p>iPleaders, Rights of migrant workers in India, Ms Sankalpita Pal, August 27, 2020</p> <p>Negi, Chitranjali, Human Rights Violations of Migrants Workers</p>

Indicator	Description	Sources
	<p>(IMPEX), meaning this location has slightly better local policies to support internal migrant workers. IMPEX, 2019 It is worth noting that only 12% of internal migration is between differing states, rather the bulk is within the same district according to the World Bank's analysis of census data.</p> <p>During the 2020 COVID pandemic, the conditions for the internal migrant workers travelling back to their homes were abysmal. They received no protections until the Supreme Court stepped in to order the government to give access to free transport, food, and water. In addition to the poor travelling conditions, the migrant workers faced discrimination not only based on their status as migrant workers or minorities but also as “virus carriers” by the public. UN News, June 4, 2020</p> <p>After this mandate, several state governments moved forward with schemes to protect migrant workers during the pandemic. These measures included setting up temporary shelters using unused buildings, providing food and money, and setting up relief camps as well as finding stranded workers. iPleaders, Ms Sankalpita Pal, August 27, 2020</p> <p>While there is a national law to protect migrant workers in a time of crisis such as the Covid-19 pandemic known as the Inter-State migrant workmen (regulation of employment and conditions of service) Act of 1979, during the Covid-19 pandemic there were serious incidents of migrant rights violations. After imposing the initial lockdown in March 2020, migrant workers were struggling for transportation back to their home state, and obtaining food, water, and shelter during transport. In this period there are records of police brutality and deaths of migrant workers trying to get back home at the initial lockdown stage. Two months after the initial</p>	<p>in India During COVID-19 Pandemic (June 17, 2020)</p> <p>Hindustan Times, Explainer: Migrant workers to get social security in the new avatar of 1979 law that was not so effective, Chetan Chauhan, May 28, 2020</p>

Indicator	Description	Sources
	lockdown, the Supreme Court directed states to provide free food, shelter, and transport to stranded migrants. Hindustan Times, 2020 , Negi, C., 2020	
	<p>Access to social protection, health, and education</p> <p>Given the large volumes of internal migrants, there are limited social protections that address migrants' specific vulnerabilities. Access to public services is constrained by a lack of awareness among migrants as well as gaps in policies and the absence of a coherent social protection framework. Migrant workers have been unable to obtain subsidies for food and fuel, and interstate migrant workers are deprived of a wide range of health entitlements, as these are not transferable across state boundaries. Urban Health Centers for primary health care remain inaccessible as their timings would compel workers to give up a day's wages to access care. Additionally, health workers can only conduct visits to "recognized slums" that are part of their mandated areas, whilst migrant communities reside in open, unrecognized settlements or inside worksites outside the purview of such services. Given their temporary nature and general lack of domicile documents needed to obtain social housing, migrants struggle to find housing facilities. As result, they may resort to renting rooms in slums, where they are vulnerable to rent extortion, or choose informal settlements in open public places where they are at risk of eviction and lack of basic amenities.</p> <p>Migrant communities have been identified as one of the socially and economically disadvantaged groups in terms of access to education, due to a combination of factors, including: lack of appropriate documentation, lack of parental support in enrolment processes, lack of medium education schools that cater to migrant</p>	<p>ILO, Road map for developing a policy framework for the inclusion of internal migrant workers in India, 2020</p> <p>ILO, Social Protection - India</p>

Indicator	Description	Sources
	<p>children and a lack of schools in general in migration hotspots. ILO, 2020</p> <p>ILO constituents in India have agreed under the Decent Work Country Program 2023-027 Strategic priority 3, to “<i>Promote and strengthen institutions to enable all workers, especially those who are marginalized and vulnerable, to improve their employment outcomes and progressively achieve universal social protection</i>”, with one of the following goals: to have “<i>by 2027, fair, effective and inclusive policy frameworks, institutional mechanisms and services developed to reduce discrimination and inequalities and to protect the rights of migrant workers, women workers, especially those in the informal economy and workers in vulnerable situation</i>”. ILO, Social Protection - India</p>	
	<p>Bilateral MOUs or other agreements specifically designed to protect migrant workers</p> <p>India signed labor agreements with Qatar and Jordan in the 1980’s. More recently, India signed a MOU with the United Arab Emirates in 2006, Kuwait in 2007, Oman in 2008, Malaysia in 2009, and negotiations with Saudi Arabia and Yemen are ongoing. While each MOU is different, they all have the overarching goals of declaring mutual intent to enhance employment opportunities bilaterally and support the protection and welfare of workers. Ministry of External Affairs, India, 2016</p>	Ministry of External Affairs, India, 2016
Ratification of relevant international conventions and domestication of conventions into a national legal framework (Forced labor,	Convention No. 29 - In Force	Forced Labour Convention, 1930 (No. 29)

Indicator	Description	Sources
human trafficking, and hazardous child labor)		
	Convention No. 105 - In Force	Abolition of Forced Labour Convention, 1957 (No. 105)
	Convention No. 138 - In Force	Minimum Age Convention, 1973 (No. 138)
	Convention No. 182 - In Force	Worst Forms of Child Labour Convention, 1999 (No. 182)
	Protocol 29 - Not Ratified	Protocol of 2014 to the Forced Labour Convention, 1930 (P29)
	Palermo Protocol - Ratified	Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children, supplementing the United Nations Convention against Transnational Organized Crime (the 'Palermo Protocol')

Indicator	Description	Sources
	Convention No. 188 - Not Ratified	ILO Convention 188 on Work in Fishing;
	PSMA - Not Party to the PSMA	The FAO Port State Measures Agreement (PSMA)
	<p>Domestication into national legislation</p> <p>The law prohibits all forms of forced labor, but it remains widespread including bonded labor for both adults and children. US Department of State, 2022</p> <p>The minimum age for work is 14 years, and children aged 14-18 years are legally prevented from hazardous work.</p> <p>The Bonded Labor System (Abolition) Act of 1976 made bonded labor illegal, however the penalties prescribed by this law are not sufficiently stringent. Bonded labor was additionally criminalized under the Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act of 1989 which does prescribe sufficiently stringent penalties.</p> <p>Violations of the Child Labor Act include imprisonment for up to 2 years and fines up to US\$ 700. US Department of Labor, 2022</p>	<p>US Department of State, 2022 Country report on human rights practices: India</p> <p>US Department of Labor, Bureau of International Labor Affairs (ILAB), Findings on the Worst Forms of Child Labor – India, 2022</p>
Regulation of recruitment	<p>Country's government-sanctioned oversight mechanisms (regulations, accreditation schemes, inspection, etc.) of recruitment agents</p> <p>India has not ratified the ILO convention 'C181 - Private Employment Agencies Convention, 1997 (No. 181)', which provides for the regulation of recruitment through private employment agencies for all categories of workers except seafarers. ILO NORMLEX</p>	ILO NORMLEX

Indicator	Description	Sources
Enforcement of legislation for forced labor, human trafficking, hazardous child labor, migrant worker protections, recruitment and working conditions	<p data-bbox="435 163 592 199">TIP Report</p> <p data-bbox="435 233 1203 657">The US Department of State’s 2024 TIP Report assigns India a Tier 2 TIP Ranking, stating “The Government of India does not fully meet the minimum standards for the elimination of trafficking but is making significant efforts to do so. The government demonstrated overall increasing efforts compared with the previous reporting period; therefore India remained on Tier 2.” Efforts included increased prosecutions and convictions of traffickers, and increased investigations and convictions of bonded labor cases.</p> <p data-bbox="435 699 1177 989">India did not meet the standards of the higher tiers for several reasons, including: a low conviction rate for trafficking crimes, shortcomings in victim protections including inadequate auditing programs of government run- or funded- shelters, failure to criminalize all forms of trafficking, and officials complicit in trafficking cases not being prosecuted.</p> <p data-bbox="435 1031 1203 1686">Labor trafficking is not explicitly addressed in law and anti-trafficking measures vary by state. Effective inter-state coordination is absent, and states did not consistently use relevant legal provisions. In addition, legal service providers and law enforcement were not adequately trained on the human trafficking legal framework. Caste discrimination by police and other officials, as well as corruption and official complicity further hinder labor inspections and law enforcement, with few investigations, prosecutions or convictions of complicit officials taking place. Human trafficking prosecutions and convictions were impaired as a result; 21 out of India’s 36 states and union territories did not report identifying any victims or filing any cases in 2021 under the Bonded Labor System (Abolition) Act (BLSA), despite ongoing</p>	<p data-bbox="1235 163 1500 369">US Department of State, 2024, 2024 Trafficking in Persons (TIP) Report</p> <p data-bbox="1235 411 1520 569">US Department of Labor Findings on the Worst Forms of Child Labor, 2022</p>

Indicator	Description	Sources
	<p>reports of bonded labor in many of them. US Department of State, 2024</p> <p>The number of labor inspectors is unknown, but likely to be inadequate, and there is alleged corruption and official complicity by police and government officials in trafficking and child labor. US Department of Labor, 2022</p>	
	<p>Child labor laws</p> <p>Child labor is prevalent in several industries in India including Hand-Rolled Cigarettes, Brassware, Bricks, Carpets, Cotton, Cottonseed, Embellished Textiles, Fireworks, Footwear, Garments, Gems, Glass Bangles, Incense, Leather Goods/ Accessories, Locks, Matches, Mica, Rice, Sandstone, Silk Fabric, Silk Thread, Soccer Balls, Stones, Sugarcane and Thread/Yarn. Many of these industries also have been connected to forced labor and hazardous child labor.</p> <p>India's legal framework does not adequately protect children from the worst forms of child labor. While there are institutional mechanisms for the enforcement of laws and regulations on child labor, such as the Child Labor Act, the departments that enforce these regulations experience gaps in their operations that affect effective enforcement. Penalties and the levels of enforcement of the Child Labor Act are not sufficient to discourage employers from hiring child labor, as it rarely leads to imprisonment and maximum fines of US\$700 are hardly imposed.</p> <p>In 2018, the Trafficking of Persons (Prevent, Protection and Rehabilitation) Bill was passed in the lower house of Parliament but was not taken up by the upper chamber during the reporting period. A 2021 version of the bill has addressed the gaps of the</p>	<p>US Department of Labor Findings on the Worst Forms of Child Labor, 2022</p>

Indicator	Description	Sources
	<p>previous version and expands its scope to include care and rehabilitation to women and children, including Indian citizens outside of India and trans persons. The bill also aims to establish a National Anti-Trafficking Committee, which would be responsible for enforcing this legislation at the federal level and require reported human trafficking crimes to be fully investigated within 90 days. The bill was supposed to be put forward for a parliamentary vote in July-August 2021 but was delayed. While mentioned in the 2021 report, this is not further reported upon in the 2022 version of the Worst Forms of Child Labor report.</p> <p>According to the most recent Findings on the Worst Forms of Child Labor, there is a lack of public information on how prosecutions and convictions involve child victims. Convictions appear to be low and maximum permissible penalty amounts are not imposed. US Department of Labor, 2022</p>	
	<p>Global Slavery Index (2023):</p> <p>The 2023 Global Slavery Index (GSI) gives the Indian Government's response to Modern Slavery a 46 out of 100%, where a higher figure reflects more action taken by government.</p> <p>Est. no. of people living in modern slavery: 11,000,000</p> <p>Estimated prevalence of modern slavery (per 1,000 of population): 8.0</p> <p>Vulnerability to Modern Slavery: 56/100</p> <p>Government Response Score: 46/100</p> <p>The 2023 GSI methodology states the Government Response Rating is "based on data collected on 141 indicators that are relevant to understanding how</p>	<p>Global Slavery Index's overall ratings</p>

Indicator	Description	Sources
	<p>each government is tracking towards achieving 42 activities organized into five milestones. Each milestone represents an aspect of a strong government response to modern slavery; for example, supporting survivors to exit and remain out of modern slavery”.</p> <p>Note: The GSI government response rating is presented as a percentage. A higher percentage reflects more action being taken and is assumed to mean lower risk by the SSRT.</p>	
	<p>Documentation from national labor inspection and other law enforcement agencies</p> <p>Official information on labor law enforcement efforts and the number of labor inspectors is unknown. Research indicates that labor inspection training is inadequate, and that the number of inspections carried out is insufficient to cover India's workforce of over 523.8 million people. In addition, authorities have documented corrupt practices such as official misconduct and bribery at various levels of government, contributing to widespread impunity on alleged trafficking cases.</p>	<p>US Department of Labor, Findings on the Worst Forms of Child Labor – India, 2022</p>
	<p>ILO</p> <p>The Committee of Expert on the Application of Conventions and Recommendations sent multiple direct requests for the Government of India to respond to in 2021, in regards to Labour Inspection Convention, 1947 (No. 81), Rural Workers' Organisations Convention, 1975 (No. 141), Tripartite Consultation (International Labour Standards) Convention, 1976 (No. 144), and the Maritime Labour Convention, 2006 (MLC, 2006).</p> <p>The articles mentioned are as follows:</p>	<p>ILO Committee of Expert on the Application of Conventions and Recommendations</p> <p>Direct Request (CEACR) - adopted 2021, published 110th ILC session (2022), Labour Inspection Convention, 1947</p>

Indicator	Description	Sources
	<ul style="list-style-type: none"> • Status and conditions of labour inspectors <ul style="list-style-type: none"> ○ The Committee praised the increased number of inspectors and requested information on the exact qualifications, recruitment process and training that labor inspectors were required to have. • Coverage of workplaces by labour inspections. Self-inspection scheme. <ul style="list-style-type: none"> ○ The Committee requested that the Indian Government ensure that the self-certification of businesses did not interfere with labor inspections and that the Government provide information on the number of inspections, both routine and impromptu, and the number of inspections that were instigated due to a complaint. • Free access of labor inspectors to workplaces <ul style="list-style-type: none"> ○ The Committee requested the Indian Government to provide information on the number of inspections that labor inspectors requested aid from the police force to gain access to the building. <p>Labour Inspection Convention, 1947 (No. 81) - India (Ratification: 1949)</p> <ul style="list-style-type: none"> • Right of all categories of workers to establish and join organizations. Muster assistants (workers that provide water and medical facilities at rural worksites). <ul style="list-style-type: none"> ○ The Committee is resubmitting its request for information regarding the actual number of organizations of muster assistants available. <p>Rural Workers' Organisations Convention, 1975 (No. 141) - India (Ratification: 1977)</p> <ul style="list-style-type: none"> • Impact of the COVID-19 pandemic. <ul style="list-style-type: none"> ○ The Indian Government failed to implement certain provisions regarding 	<p>(No. 81) - India (Ratification: 1949)</p> <p>Direct Request (CEACR) - adopted 2021, published 110th ILC session (2022), Rural Workers' Organisations Convention, 1975 (No. 141) - India (Ratification: 1977)</p> <p>Direct Request (CEACR) - adopted 2021, published 110th ILC session (2022), Maritime Labour Convention, 2006 (MLC, 2006) - India (Ratification: 2015)</p>

Indicator	Description	Sources
	<p>seafarer's rights during the COVID-19 pandemic.</p> <p>Maritime Labour Convention, 2006 (MLC, 2006) - India (Ratification: 2015)</p>	
<p>Evidence of forced labor, human trafficking, and hazardous child labor in the country</p>	<p>General evidence from other sectors</p> <p>According to the US Department of Labor, prevalent industries that exploit child labor, forced labor, and forced child labor in India are bricks, hybrid cottonseed, embellished textiles, garments, rice, and stones. Other sectors linked to child labor and/or forced labor are bidis, brassware, carpets, cotton, fireworks, footwear, gems, glass bangles, incense, leather goods, locks, matches, mica, sandstone, silk fabric and thread, soccer balls, sugarcane, thread/yarn, and tea.</p> <p>India is a source and destination country for child trafficking, with in-country trafficking mostly for commercial sexual exploitation and forced labor in the domestic service or agriculture industry and states such as Bihar, Jharkhand, Chhattisgarh, and Odisha being major sourcing states.</p> <p>Children are also recruited by non-state armed groups to participate in armed conflict. US Department of Labor, 2022</p> <p>The US Department of State's 2024 Trafficking in Person Report highlights the widespread nature of bonded labor in India.</p> <p>Traffickers use debt-based coercion (bonded labor) to force people to work in agriculture, brick kilns, rice mills, embroidery and textile factories, and stone quarries. Numerous commodities are connected to the use of bonded labor, forced labor, or forced child labor including, among others, agricultural and food</p>	<p>US Department of Labor, Bureau of International Labor Affairs (ILAB), Findings on the Worst Forms of Child Labor – India, 2022</p> <p>US Department of State, 2024, 2024 Trafficking in Persons (TIP) Report</p>

Indicator	Description	Sources
	<p>products such as biscuits, bread, coconut, cotton, eucalyptus, ginger, and sugarcane.</p> <p>In addition, numerous states and regions are implicated, with the highest number of bonded labor victims identified in states Uttar Pradesh, Karnataka, and Tamil Nadu. Examples include indicators of forced labor identified in shrimp and aquaculture facilities in Andhra Pradesh, debt bondage connected to sugarcane harvesting and production in Maharashtra, forced labor connected to tea estates in northeast India, and <i>Sumangali</i> schemes in the Tamil Nadu spinning mill industry that may amount to bonded labor or result in women being subjected to sex trafficking.</p> <p>Traffickers exploit children as young as eight years in forced labor in industries including agriculture, bangle making, begging, construction, domestic service, garment and textiles, as well as food-processing factories, floriculture, cotton, ship breaking, stone carving, and manufacturing of wire and glass. Non-state armed groups recruit and use children in direct hostilities against the government and subject women and girls to sexual violence. US Department of State, 2024</p>	

Table 1: India - Country-level indicators

India: Seafood industry-level indicators

Indicator	Description	Sources
Direct evidence of forced labor, human trafficking, and hazardous child labor	<p>Most of the direct evidence of forced labor and hazardous child labor in the Indian seafood sector is slightly dated. Recent reports relating to the shrimp industry are discussed in the aquaculture and processing indicators.</p> <p>A 2016 article on bonded migrant labor on industrial fishing vessels in Maharashtra reports that workers are stuck on vessels for at least one fishing season of nine months. Mongabay, 2016</p> <p>A 2016 news article in The Hindu reported on girls being rescued from seafood processing plants in Kochi, Kerala. The Hindu 2016</p> <p>An unnamed government study, referenced in a 2017 Global March report, states that 40% of the fisher population are children and many work in the sector as child laborers. Activities include active fishing, sorting and grading, curing and drying, peeling, processing work fish meal work, fish trading and value addition. Young people are engaged in canoe-based purse-seine fishing in inshore waters of Kerala jumping into the sea to drive fish into the nets, as well as employed as cooks on multi-day fishing trips in Tamil Nadu, guarding vessels, or loading and unloading fish. In addition, girls above the age of seven are involved in cleaning, salting and drying fish in Ganjam District, Orrisa. The report does not state whether this work is designated as hazardous but does indicate that employment of children in marine fishing appears to be declining in India due to the growing importance attached to education amongst coastal fishing communities in Kerela and Tamil Nadu. Global March, 2017</p>	<p>Mongabay, Hard labor in India's fisheries: an interview with researcher Divya Karnad, 2016</p> <p>The Hindu, Child labour rampant in seafood units: police, 2016</p> <p>Global March Against Child Labor, CATCH OF THE DAY, A Situational Analysis of Trafficking and Forced Labour in the Global Supply Chains of the Garment and Seafood Sector in Bangladesh, India and Philippines, 2017</p> <p>Krishna, BM., Kumar, MJ., Raju, P.D., 2018, Child Labour in The Fishery Sector in Visakhapatnam: A Pilot Study, International Journal for Research</p>

Indicator	Description	Sources
	<p>A 2018 study on child labor in fishing in Visakhapatnam revealed that children were being exploited as contract labor and engaged in hazardous activities like diving in harbor waters for scraping the rust or bio fouling organisms on the bottom of vessels. Children were also reported to be employed as bonded laborers as deck hands, kitchen help and errand boys. Krishna et al., 2018</p> <p>The 2018 Trafficking in Person (TIP) Report identifies forced labor on fish farms in India but later TIP publications do not mention fish or seafood until the most recent 2024 report. US Department of State, 2018 , US Department of State, 2024</p> <p>The US Department of State’s 2022 Findings on the Worst Forms of Child Labor report that children are employed in the seafood processing industry. US Department of Labor, 2022</p>	<p>in Engineering Application & Management (IJREAM) Vol 4 (4)</p> <p>US Department of State, 2018, 2018 Trafficking in Persons (TIP) Report</p> <p>US Department of State, 2024, 2024 Trafficking in Persons (TIP) Report</p> <p>US Department of Labor, Findings on the Worst Forms of Child Labor – India., 2022</p>
<p>ILO indicators of forced labor and ILO R190 definition of hazardous child labor</p>	<p>The 2024 TIP Report links indicators of forced labor, including failure to pay a minimum wage, restricted freedom of movement, and dangerous working conditions, to aquaculture facilities, particularly in Andhra Pradesh, and highlights the resulting risk of debt bondage among migrant workers and scheduled castes. US Department of State, 2024</p> <p>A 2016 Reuters article reported on children working on fishing boats, carrying loads of catch, or cleaning fish and running errands as part of paying off their family’s debt bondage. Reuters, 2016</p> <p>A recently published scoping study on West Bengal’s dry fish sector mentions child workers engaging in</p>	<p>US Department of State, 2024, 2024 Trafficking in Persons (TIP) Report</p> <p>Reuters, Rescued from child labor, Indian fishermen's daughters ace school exams, 2016</p> <p>Ghosh, Raktima, Jenia Mukherjee, Amrita Sen, Souradip Pathak,</p>

Indicator	Description	Sources
	<p>dried fish processing activities such as spreading, sorting, and storing of fish. However, it is not clear whether the work is hazardous. Gosh et al., 2022</p> <p>A 2016 ITUC report referring to a 2015 study where 72% of seafood processing workers in Gujarat and Tamil Nadu were working an excess of 12 hours per day. The report also details occupational health and safety issues in seafood processing plants, and the studies conducted or referred to were in the provinces Gujarat, Tamil Nadu, and Kerala. The issues reported included work-related health issues like back and joint pain due to long periods of time in awkward positions, hand and leg numbness, skin issues like eczema, and respiratory issues and bronchitis, injuries, as well as reports on problems related to fertility. The health consequences in one of the districts were attributed to extended exposure to cold environments, chlorinated water, and fish protein related bioagents in the peeling sheds. The report further detailed cases of failure to provide workers with proper personal protective equipment, facilities not having provisions for emergency medical attention and lack of medical benefits for workers. International Trade Union Confederation (ITUC), 2016</p>	<p>Anuradha Choudry, and Shreyashi Bhattacharya. 2022. “Dried Fish in West Bengal, India: Scoping Report.” DFM Working Papers. The University of Manitoba & Indian Institute of Technology Kharagpur.</p> <p>International Trade Union Confederation (ITUC), Precarious Work in the Asian Seafood Global Value Chain, 2016</p>
Fishing, aquaculture and processing regulations and policies	<p>Labor-related fishing legislation</p> <p>The Ministry of Fisheries, Animal Husbandry & Dairying holds overarching responsibility for the fisheries and aquaculture sector, under which sits the Department of Fisheries, which is responsible for fisheries-related policies and schemes. The Department’s current vision for the fisheries sector includes the wellbeing of fishers and fish farmers, and the Department is responsible for the “Welfare of</p>	<p>Department of Fisheries, 2023, Annual Report 2022-2023</p> <p>ILO NATLEX Database</p> <p>Global Slavery Index (GSI) 2018 - Fishing</p>

Indicator	Description	Sources
	<p>Fishermen and other Fisher-folk and strengthening of their livelihoods.” in addition to environmental and markets-based issues. Department of Fisheries, 2023</p> <p>The ILO NATLEX database lists one law relating specifically to fishers: a scheme for employment in the fishing industry under the Maharashtra Mathadi, Hamal and Other Manual Workers (Regulation of Employment and Welfare) Act 1969.</p> <p>Additionally, the database shows two laws in force relating more generally to seafarers: the Seafarers’ Identity Documents Convention (2003) and the Maritime Labor Convention (2006). ILO NATLEX Database</p> <p>The 2018 Global Slavery Index (GSI) for fishing: India:</p> <ul style="list-style-type: none"> • National Fisheries Policy (catch outside EEZ, distant water fishing, and subsidies) <ul style="list-style-type: none"> ○ Medium Risk • Wealth and Institutional Capacity (GDP per capita, value landed per fisher, and unreported landings) <ul style="list-style-type: none"> ○ High Risk <p>Aquaculture regulations and policies mainly target requirements around production, environment, and export, with no apparent specific labor-related requirements. General national labor related regulations and policies cover aquaculture and processing workers.</p>	
Enforcement and implementation of industry-specific	Unknown. No specific information found on enforcement and implementation of industry specific regulation.	

Indicator	Description	Sources
regulations and policies		
Access to workplaces for third-party monitors (trade union representatives, on-board observers, etc.)	Unknown. No information was found on access to workplaces for third-party monitors in the seafood industry. However, India's recently implemented Industrial Relations Code in 2020, makes it more difficult for workers to unionize and imposes restrictions on their freedom to choose their own representatives and administer their own constitutions and rules. This could therefore impede access to trade unions.	Bhuta A. Imbalancing Act: India's Industrial Relations Code, 2020. Indian J Labour Econ. 2022;65(3):821-830. doi: 10.1007/s41027-022-00389-3. Epub 2022 Aug 25. PMID: 36042793; PMCID: PMC9409614C
Worker access to a functional grievance mechanism	<p>The Indian government's Whistle Blowers Protection Act 2014 (Whistle Blower Protection Act) provides a legal mechanism for reporting of illegal, unethical, and illegitimate practices by members of an organization. However, the scope of the Act is limited to the public sector and has not been passed by central government. The Companies Act 2013 (Companies Act) mandates companies to have a whistleblower policy, but only for listed companies. There are no laws on protection of whistleblowers of private, unlisted companies or unincorporated entities and their employees, and employers are free to adopt whistleblower policy if they wish. International Employment Lawyer, 2022</p> <p>According to a Human Rights Impact Assessment conducted by Elevate on the farmed shrimp industry in India, if an organization employs more than 100 workers, they are legally required to have active worker committees and internal complaint</p>	<p>International Employment Lawyer, Guide to Whistleblowing – India, 2022</p> <p>Elevate, Human Rights Impact Assessment Farmed Shrimp in India, 2023</p> <p>The Hindu, Explained What is the PoSH Act and why has the Supreme Court flagged lapses in its implementation? 2023</p>

Indicator	Description	Sources
	<p>committees (ICC). Worker committees include representatives elected by workers and aim to raise specific workplace challenges. Elevate, 2023</p> <p>In 2023, the Indian government introduced the Prevention of Sexual Harassment (POSH) Act, which requires employers with ten workers or more to set up an Internal Committee for the redressal of sexual harassment complaints and to regulate and administer complaints on sexual harassment. However, the Act does not comprehensively address accountability, does not specify who is responsible for adherence to the act, and who is responsible when there is non-compliance. In addition, the law is largely inaccessible to women in the informal sector, and harassment cases are underreported. The Hindu, 2023</p> <p>The Industrial Relations Code implemented in 2020 has applied a single industrial dispute tribunal in each State to address worker grievances and places a limit of three years for dispute resolution, which burdensome for workers. Frontline, 2020</p> <p>Specific to seafood, seafood workers officially have access to MPEDA which provides governmental grievance mechanisms. Elevate, 2023</p>	<p>Frontline, The new labour codes: Labour's loss, 2020</p> <p>Elevate, Human Rights Impact Assessment Farmed Shrimp in India, 2023</p>
Access to join a trade union	<p>The right to form a union is both in India's Constitution and the legal code, as well as laws against discrimination. However, there are restrictions against forming a union, for example, a minimum of 100 people or 10% of the workforce is required. As well as in the State of Sikkim, the public can oppose the formation of a union. The Industrial</p>	<p>ITUC</p> <p>Tax Guru, Corporate Law Articles – COLLECTIVE BARGAINING IN INDIA, 2023</p>

Indicator	Description	Sources
	<p>Relations Code forces the union to have their office bearers be employed in the business for the union.</p> <p>The union's right to strike is granted by law, however it is highly regulated. The regulations on strikes include a long prior notice period and "cooling off" period, an upheld court order that prevented a strike from being legal if it completely closed the business, as well as other restrictions related to strike busting.</p> <p>Regarding the threshold for collective bargaining negotiations, the recently implemented Industrial Relations Code requires 66% before a union can negotiate or perform its representative functions. In addition, the employer has no legal obligation to recognize a trade union or engage in collective bargaining. ITUC</p> <p>The rate of unionization in India is low. Many workers engaged in the informal sector lack legal protections and are not unionized. Additionally, there can be unbalanced bargaining power structures, where employers can resist workers' demands or simply not recognize trade unions and refuse to engage in collective bargaining. Tax Guru, 2023</p> <p>A study dated from 2015 among 120 seafood processing workers in Gujarat and Tamil Nadu reported that none were involved in worker associations or trade unions. Whilst there was an acknowledgment among 63% of the surveyed workers that there may be workers involved with unions, none knew specifically about the associations or unions in their area. A different study further reported that rights to associate and to strike had been exercised in Kerala, where both fishers and seafood processing workers objected to violations of</p>	<p>Referenced in ILO, Precarious Work in the Asian Seafood Global Value Chain, 2016</p>

Indicator	Description	Sources
	government-established minimum wages and objections of an increase in the number of vessels being able to operate within the Exclusive Economic Zone. Referenced in ILO, 2016	
Participation in voluntary schemes and implementation of comprehensive corporate policies and strategies to combat forced labor, human trafficking, and hazardous child labor	In relation to aquaculture production and processing, there are several voluntary schemes present in India such as Best Aquaculture Practices (BAP) and Aquaculture Stewardship Council (ASC) certification, which include indicators that address forced labor, human trafficking, and hazardous child labor within the organizations on both the production and processing level. According to ASC's Impacts Dashboard , India ranks second in number of ASC shrimp farms certified, but fifth in terms of certified volume's produced.	Best Aquaculture Practices Aquaculture Stewardship Council ASC's Impact's Dashboard

Table 2: India - Seafood industry-level indicators

India: Aquaculture Indicators

Indicator	Description	Sources
Direct evidence of forced labor, human trafficking, and hazardous child labor	<p>No direct evidence was found of human trafficking in shrimp aquaculture, but there is evidence of forced labor, and to a lesser extent, hazardous child labor in parts of the shrimp aquaculture sector.</p> <p>Several indicators of forced labor reported by different sources indicate the menace of penalty and involuntariness, which together may amount to forced labor.</p> <p>The Corporate Accountability Lab (CAL) interviewed more than 150 workers through the shrimp supply chain between 2021 and 2024. The investigation found that many shrimp supply chain workers, including hatchery and farm workers are internal migrants that are from lower castes. These migrants have little economic opportunities and are taken advantage of by employers in dangerous and abusive work. Working conditions on shrimp farms are alleged to be hazardous and abusive. Hazards include working with chemicals without adequate PPE. Shrimp hatchery and farm workers report working more than 12 hours a day, and experience threats and intimidated, as well as sexual harassment against women. Workers that live on or near the farm stay in rudimentary housing at isolated locations, with some living conditions reported to be with dirty bathrooms and no restroom facilities. The report does note that conditions found on shrimp farms vary and that this depends on ownership. A civil society activist stated that migrant and local workers are also sometimes provided with large loans by shrimp farm owners, forcing them to work until debt is</p>	<p>Corporate Accountability Lab, Hidden Harvest: Human Rights and Environmental Abuses in India's Shrimp Industry, March 2024</p> <p>Elevate, Human Rights Impact Assessment Farmed Shrimp in India, 2023</p> <p>The Hindu, Six Migrant Workers Killed in an Explosion, 2021</p> <p>Global March Against Child Labor, CATCH OF THE DAY, A Situational Analysis of Trafficking and Forced Labour in the Global Supply Chains of the Garment and Seafood Sector in Bangladesh, India and Philippines, 2017</p>

Indicator	Description	Sources
	<p>paid. These workers are then restrained through harassment and intimidation and are in some cases threatened and not allowed to leave until debt is paid. CAL, 2024</p> <p>These findings are supported by a 2023 Human Rights Impact Assessment on farmed shrimp in India, which found several indicators of forced labor in shrimp production and processing, but findings were not differentiated between the two stages. The assessment found cases where workers may have been unable to leave the site, excessive working hours and forced overtime without compensation, with indications of falsified records of workers' hours, and borrowing money from the site or labor agent to pay recruitment fees, which could result in debt bondage. In addition, there were reports of physical violence and sexual harassment at sites visited, with some workers reporting feeling unsafe, especially in the dormitories, and personal documentation being held by labor agents or by employers although they could get them back in almost all cases. Elevate, 2023</p> <p>Separately, a news article in The Hindu reported the death of several migrant workers from Odisha due to an explosion while they were working on a shrimp farm in Andhra Pradesh, indicating unsafe working conditions. The Hindu, 2021</p> <p>The 2023 Elevate HRIA report indicates that children consistently attend school, suggesting that child labor is unlikely. Elevate, 2023</p> <p>Evidence in relation to hazardous child labor is dated. The Global March 2017 report on the situational analysis of trafficking and forced labor</p>	

Indicator	Description	Sources
	<p>in the seafood sector supply chains states that many girls in India are involved in giant tiger shrimp fry collection, which is considered hazardous as local water bodies are highly contaminated due to discharges of polluted effluent from nearby aquaculture farms. However, the evidence for this claim is not cited. Nevertheless, the report goes on to highlight that the main problem is the lack of adequate data regarding child labor in the seafood sector, including aquaculture. Global March 2017</p> <p>As whiteleg shrimp is not native to India and farms are supplied with broodstock from hatcheries, it is assumed that wild fry collection relates to native species such as giant tiger shrimp. It is worth noting that production of giant tiger shrimp represents only 4% of India's total shrimp production and nowadays giant tiger shrimp broodstock is mainly used for securing fry. Therefore, the extent of this child labor practice in the shrimp farming industry is likely very localized and is estimated to occur in less than 1% of India's shrimp production.</p>	
<p>ILO indicators of forced labor and ILO R190 definition of hazardous child labor</p>	<p>The 2024 TIP Report identifies observer reports of indicators of forced labor, including failure to pay a minimum wage, restricted freedom of movement, and dangerous working conditions, in some shrimp and aquaculture facilities (assumed to include shrimp aquaculture), highlighting Andhra Pradesh, and the resulting risk of debt bondage among migrant workers and scheduled castes. US Department of State, 2024</p> <p>The CAL report states that there are indications of possible debt bondage among shrimp farm workers, with incidents reported by civil society</p>	<p>US Department of State, 2024, 2024 Trafficking in Persons (TIP) Report</p> <p>Corporate Accountability Lab, Hidden Harvest: Human Rights and Environmental Abuses in India's Shrimp Industry, March 2024</p> <p>Boston Consulting Group, A Strategic Approach to</p>

Indicator	Description	Sources
	<p>activist about large loans being offered to migrant and local workers requiring them to work without pay until the debt is cleared, but the report highlights more information is needed. CAL, 2024</p> <p>Indebtedness is also touched upon by the Boston Consulting Group, which reports shrimp farmers are sometimes indebted to middlemen who supply inputs, although it does not mention whether this results in debt bondage. Boston Consulting Group 2020</p> <p>A socio-economic baseline study conducted by Monterey Bay Aquarium (MBA) and the Department of Sociology and Social Work at the Acharya Nagarjuna University (ANU), forthcoming in 2024, found in terms of debt and debt bondage that while money lenders operate in an informal way, loan terms are often laid down in agreements and that the debt is transparent and does not influence harvest price or restrict buyer options. As such there is no debt bondage, but repeated crop failures could lead to debt cycles. Separately, 27% of the workers had to pay recruitment fees and 1% of the farm workers indicated payment through a recruiter, which also increases risks of debt bondage. Although no direct evidence of debt-bondage was found.</p> <p>The study also found a deficit in farm workers receiving sufficient PPE and 27% of the workers reporting having to buy equipment themselves.</p> <p>In terms of child labor, the study found that children in aquaculture communities generally have access to and are enrolled in education, but</p>	<p>Sustainable Shrimp Production in India THE CASE FOR IMPROVED ECONOMICS AND SUSTAINABILITY, 2020</p> <p>Monterey Bay Aquarium and Department of Sociology and Social Work at the Acharya Nagarjuna University, Socio-economic baseline study in shrimp farming areas in Andhra Pradesh, India, forthcoming 2024</p> <p>Arpita Sharma, Suchismita Prusty, Rajiv Rathod, R. Arthi, Andrew Watterson & Lissandra Cavalli (2023) Occupational hazards of Indian shrimp farm workers, All Life, 16:1, 2225762, DOI: 10.1080/26895293.2023.2225762</p>

Indicator	Description	Sources
	<p>that some children may assist in farm work to a level that impacts their attendance. Nevertheless, this was considered as the exception to the rule and child labor does not appear to be systemic and widespread. Key informants considered that shrimp farming had a positive contribution on children's education due to increased income resulting in more children being enrolled into schools. Education was found to be prioritized by shrimp farming families, and farmers appeared to be unwilling to resort to child labor.</p> <p><u>MBA and ANU, forthcoming 2024</u></p> <p>A study on occupational hazards of Indian shrimp farm workers found that of workers included in the study 93% reported physical hazards, 82% reported biological hazards, 77% reported chemical hazards, 71% reported ergonomic hazards and 71% reporting psycho-social hazards. Most common injuries reported were slips, falls and cuts (51%), electric shocks (44%), sunburn (41%), dehydration and headaches (40%) and fractures (27%). Around a third of workers also reported some form of chemical injuries, most commonly skin infections/breathing problems. Sharma et. al., 2023</p>	
Labor supply in the domestic market	A socio-economic baseline study conducted by Monterey Bay Aquarium and the Department of Sociology and Social Work at the Acharya Nagarjuna University (ANU), forthcoming 2024, found that among the 100 farm owners assessed, that most farms employed less than 5 staff with only two farms employing more. Small owner operated farms may get occasional help from family. Around two-thirds of the farm owners interviewed employed family or friends, with the	Monterey Bay Aquarium and Department of Sociology and Social Work at the Acharya Nagarjuna University, Socio-economic baseline study in shrimp farming areas in

Indicator	Description	Sources
	<p>remaining using informal recruitment agencies. Recruiting workers was frequently ranked as the fifth major challenge to farming operations, with labor cost being high and workers sometimes quitting in middle of the culture season leaving farms with difficult situations of having to hire and train new workers in the middle of the growing season. Of the 100 farm owners interviewed, most were Hindu (93%), and 55% and 44% belong to the Open Category (OC) and to 'Other Backward Class' (OBC) respectively and 1% belonging to Scheduled Castes or Scheduled Tribes. For the 100 farms workers interviewed, over 91% of the farm worker interviewees were Hindu, 8% Muslim and 1% Christian. Furthermore, 73% of the interviewed workers belong to OBC, 12% to Scheduled Castes, 10% to other castes and 5 % to Scheduled Tribes. There are, hence, more workers than farmers belonging to Scheduled Castes and Scheduled Tribes.</p> <p>The typical worker on a shrimp farm in Andhra Pradesh was found to be in his twenties, unwed and living on his own or if wed, likely living away from his family when working on shrimp farms. Young people listed limited employment options, fluctuating prices, and declining revenue from shrimp farming as reasons to leave the industry, casting doubt on the long-term labor availability, although it is generally considered a good occupation.</p> <p><u>MBA and ANU, forthcoming 2024</u></p> <p>A 2023 study on occupational hazards of Indian shrimp farm workers found of the 60 interviewees among shrimp farm workers in Andhra Pradesh, Maharashtra, Gujarat, and Tamil</p>	<p>Andhra Pradesh, India, <u>forthcoming 2024</u></p> <p>KUMARAN, M., et al. Prospective impact of Corona virus disease (COVID-19) related lockdown on shrimp aquaculture sector in India—a sectoral assessment. <i>Aquaculture</i>, 2021, 531: 735922.</p> <p>Arpita Sharma, Suchismita Prusty, Rajiv Rathod, R. Arthi, Andrew Watterson & Lissandra Cavalli (2023) Occupational hazards of Indian shrimp farm workers, <i>All Life</i>, 16:1, 2225762, DOI: 10.1080/26895293.2023.2225762</p>

Indicator	Description	Sources
	<p>Nadu, that 77% were Hindu, 10% Muslim, and 13% were Christian. Over 50% of the workers were from (OBC), 33% from Scheduled Caste/Scheduled tribe, and 13% belonged to the 'General' category. Sharma et. al., 2023</p> <p>Further reports of internal migrant workers being employed are in relation to the Covid-19 pandemic, which resulted in labor shortage issues due to travel restrictions. Kumaran, M., et. 2021</p>	
Aquaculture Characteristics	<p>Isolation of the site</p> <p>Shrimp farming is concentrated in the coastal regions for its dependency on salt/brackish water for both whiteleg shrimp and giant tiger shrimp production.</p> <p>The CAL report hints at the remoteness of shrimp farms, where workers need to stay onsite. CAL, 2024</p> <p>However, it is unlikely for the sites to be extremely isolated given the fact that larger operations would need a steady supply of feed and seed, as well as perishability of the product requiring a sophisticated infrastructure maintain product quality. FAO, 1999</p> <p>In terms of the level of registration, of the estimated 100,000 shrimp producers operational in India (Boston Consulting Group 2020), only 45,113 are reported to be registered by the CAA. Department of Fisheries Annual Report 2022-23</p> <p>Around 70,000 farms are registered by MPEDA, which is required if the product is intended for export. MPEDA</p>	<p>Corporate Accountability Lab, Hidden Harvest: Human Rights and Environmental Abuses in India's Shrimp Industry, March 2024</p> <p>FAO, Rural Aquaculture in India, 1999</p> <p>Boston Consulting Group, A Strategic Approach to Sustainable Shrimp Production in India THE CASE FOR IMPROVED ECONOMICS AND SUSTAINABILITY, 2020</p> <p>Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying, Government of India, Annual Report 2022-23.</p> <p>MPEDA, Enrollment of Farms</p>

Indicator	Description	Sources
	<p>The State Department of Fisheries Registration can also register aquaculture farms. Government of Andhra Pradesh</p> <p>It is unclear whether this registration entails any subsequent oversight in terms of labor inspections.</p>	<p>Government of Andhra Pradesh, Department of Fisheries, AQUA SERVICE DASHBOARD</p>
	<p>Child-adult ratio in aquaculture communities</p> <p>No exact information was found on the child-adult ratio in shrimp farming communities. However, since the majority of shrimp farms are family run operations, there is a possibility of children working alongside their family members.</p> <p>The Elevate HRIA, though limited in its scope and unclear on whether finding related to farming or processing, found that children consistently attended school. Elevate, 2023</p> <p>A socio-economic baseline study conducted by Monterey Bay Aquarium and the Department of Sociology and Social Work at the Acharya Nagarjuna University (ANU), forthcoming 2024, found that among their respondents of 100 farm owners, that of the married farmers, 97% are reside in nuclear families (up to four family members) and 14% of interviewed married and non-married farm owners live in joint families of five to 12 members. Children in aquaculture communities are reported to have access to and are enrolled in education, but some children may assist in farm work to a level that impacts their attendance. Nevertheless, this was considered as the exception to the rule. MBA and ANU, forthcoming 2024</p>	<p>Elevate, Human Rights Impact Assessment Farmed Shrimp in India, 2023</p> <p>Monterey Bay Aquarium and Department of Sociology and Social Work at the Acharya Nagarjuna University, Socio-economic baseline study in shrimp farming areas in Andhra Pradesh, India, forthcoming 2024</p> <p>Science, India defuses its population bomb: Fertility falls to two children per woman, 2021</p>

Indicator	Description	Sources
	The average fecundity in rural areas India is reported to have reduced to an average of 2.1 in 2019-2021. Science, 2021	
Workforce Characteristics	<p>The proportion of low-skilled migrant workers</p> <p>Many workers on shrimp farms are reported to be migrants from other regions of Andhra Pradesh or nearby states such as Odisha or West Bengal. CAL, 2024</p> <p>Research conducted by India's Central Institute of Brackishwater Aquaculture (CIBA) on the effects of COVID-19 on the shrimp industry, indicated that shrimp farms in the states Gujarat, Maharashtra and Andhra Pradesh were mostly manned by migrant laborers from eastern parts of India. Kumaran, M., et al. 2021</p> <p>According to a socio-economic baseline study conducted by Monterey Bay Aquarium and the Department of Sociology and Social Work at the Acharya Nagarjuna University (ANU) in Andhra Pradesh in 2023, forthcoming 2024, among the 100 shrimp farm workers interviewed, around a third were internal migrant workers, mostly from poorer states in Eastern India like Odisha. Migrant workers were typically employed for a growth cycle and would return home between contracts to engage in other work such as agriculture. Although this is not as lucrative as work on shrimp farms, work on shrimp farms alone would not allow for sufficient income to sustain migrant workers or their families.</p> <p>The study further found that of 100 farm owners and 100 farm workers interviewed, 37% and 31% respectively were illiterate, 16% were literate but without formal education, 7% and 22% had</p>	<p>Corporate Accountability Lab, Hidden Harvest: Human Rights and Environmental Abuses in India's Shrimp Industry, March 2024</p> <p>KUMARAN, M., et al. Prospective impact of Corona virus disease (COVID-19) related lockdown on shrimp aquaculture sector in India—a sectoral assessment. <i>Aquaculture</i>, 2021, 531: 735922.</p> <p>Monterey Bay Aquarium and Department of Sociology and Social Work at the Acharya Nagarjuna University, Socio-economic baseline study in shrimp farming areas in Andhra Pradesh, India, forthcoming 2024</p> <p>Arpita Sharma, Suchismita Prusty, Rajiv Rathod, R. Arthi, Andrew Watterson & Lissandra Cavalli (2023) Occupational hazards of Indian shrimp farm workers, <i>All Life</i>, 16:1,</p>

Indicator	Description	Sources
	<p>primary education, 27% and 13% studied above 10th standard, and 13% and 27% completed high school. Farmers were overall more illiterate than workers, which is hypothesized to be the result of workers being younger and having benefited more from government school systems. <u>MBA and ANU, forthcoming 2024</u></p> <p>A 2023 study on occupational hazards of Indian shrimp farm workers from the states of Andhra Pradesh, Maharashtra, Gujarat, and Tamil Nadu mentions that out of the 60 shrimp farm workers interviewed, 58% were migrant workers, 14% had no formal education, 28% had primary level and 54% secondary level schooling. Other studies cited show that shrimp farmers have a comparably higher level of education than the shrimp farm workers, with examples ranging from shrimp farmers who were non-literate to those who were post-graduates. <u>Sharma et. al., 2023</u></p> <p>This is supported by a study of shrimp farmers in Tamil Nadu, which found that most shrimp farmers had 1 to 5 years' experience and had a secondary school to graduate level education. <u>Angela and Sharma, 2023</u></p>	<p>2225762, DOI: 10.1080/26895293.2023.2225762</p> <p>Angela, S.A.D., and Sharma, A., 2023, Analysis of Socioeconomics and Occupational Dimensions of Shrimp Farmers of Tamil Nadu, Aquaculture Research</p>
	<p>Legal presence/regularity of migrant workers</p> <p>There is no information on the legal presence of foreign migrant workers in the shrimp farming industry.</p> <p>Internal migrant workers are more common. There are generally no restrictions on internal movement in India. Internal migration is covered by the Constitution and allows all Indian citizens the right to reside in any part of the territory of</p>	<p>PRS Legislative Research, Migration in India and the impact of the lockdown on migrants, 2020</p>

Indicator	Description	Sources
	India, with only a few exceptions. PRS Legislative Research, 2020	
Recruitment and Contracts	<p>Use of recruitment agents</p> <p>A Human Rights Impact Assessment conducted by Elevate on shrimp production in India, says that farmers may source contractors to provide seasonal labor through labor brokers or directly through an already-established relationship, which tends to occur on smaller sites and with workers from the neighboring communities. Elevate, 2023</p> <p>Informal recruitment pathways appear to be common. According to a socio-economic baseline study conducted by Monterey Bay Aquarium and the Department of Sociology and Social Work at the Acharya Nagarjuna University (ANU) in Andhra Pradesh in 2023, forthcoming 2024, 67% of the farmers employ family or friends while the rest recruited workers through informal intermediaries /agencies. Of the farm workers interviewed, 60% found their job themselves, while 40% used an intermediary to find employment. Among those using an intermediary, more than half were recruited by informal recruitment agents and 22% were recruited by family and friends. Of the workers surveyed, 27% reported paying fees of up to Rs 10,000 to get recruited, with more than half paying between Rs 5,000 and Rs 10,000 (US\$ 59.8 – 119) and the remainder less than Rs 5,000. However, it is unclear what exactly was being paid for. All farm workers indicated that they kept their original identity documents and almost all indicated that work and working conditions met expectations as</p>	<p>Elevate, Human Rights Impact Assessment Farmed Shrimp in India, 2023</p> <p>Monterey Bay Aquarium and Department of Sociology and Social Work at the Acharya Nagarjuna University, Socio-economic baseline study in shrimp farming areas in Andhra Pradesh, India, forthcoming 2024</p>

Indicator	Description	Sources
	promised at the time of recruitment. Very few workers receive formal training upon employment, with 97% reporting receiving no training at all but learning from working with experienced workers. <u>MBA and ANU, forthcoming 2024</u>	
	<p>Contract-and compensation- related regulations and practices</p> <p>India does not have a set national minimum wage, but minimum wages can be established by state government or industry sector. <u>Minimum Wage.org</u></p> <p>The living income estimate for rural Andhra Pradesh for a family of four was Rs 26,531 (US\$ 323) /month and gross living wage 16,999 (US\$ 207) /month in 2023. <u>Medinaceli, A et al (2023)</u></p> <p>According to the socio-economic baseline study conducted by Monterey Bay Aquarium (MBA) and the Department of Sociology and Social Work at the Acharya Nagarjuna University (ANU) in Andhra Pradesh in 2023, forthcoming 2024, the reported annual income for some shrimp farmers was substantially lower than the estimated living wage reported by Medinaceli <i>et al</i>/(2023), indicating they are likely not able to live off shrimp farming alone.</p> <p>Key informants for the study indicated that the average salary for farm workers is approximately Rs 12,000/month, which is below the estimated living wage as reported by Medinaceli <i>et al</i>/(2023). Most farm workers regarded their income as somewhat sufficient (63%), with more than a quarter finding it fully sufficient (27%) and 10%</p>	<p><u>Minimum Wage.org, International Minimum Wages, India Minimum Wage</u></p> <p><u>Medinaceli, A et al (2023): Living Wage Update Report: Rural Andhra Pradesh, India, 2023, Anker Research Institute, Global Living Wage Coalition and SDSN Bolivia</u></p> <p><u>Monterey Bay Aquarium and Department of Sociology and Social Work at the Acharya Nagarjuna University, Socio-economic baseline study in shrimp farming areas in Andhra Pradesh, India, forthcoming 2024</u></p> <p><u>Fairfood International, Caught in a Trap, 2015</u></p> <p><u>Arpita Sharma, Suchismita Prusty, Rajiv Rathod, R. Arthi, Andrew Watterson & Lissandra Cavalli (2023) Occupational hazards of Indian shrimp farm</u></p>

Indicator	Description	Sources
	<p>considering it insufficient. Payment was generally in cash and was reported to be stable and on time. Some workers reported payment through online systems and 1% reporting being paid through their recruiter. In terms of payment frequency, most workers reported to have received upfront advances before the start of the culture cycle (53%), but this varied with 28% receiving daily payments, 27% monthly payments, and 10% at end-of-cycle payments. Since the COVID-19 pandemic, there is a move towards the use of electronic payment systems more.</p> <p>Among the interviewed farm workers, 1% were full-time staff, 69% were contract workers and 30% were day laborers. Contracting was found to be highly informal. Among the 100 farm workers interviewed, 86% only have a verbal contract and 14% have no contract.</p> <p>Most workers worked dayshifts (73%) and a small proportion (2%) worked nightshifts, while some worked both (25%). Almost all workers reported to work all days of the week. Most workers can take sick leave (85%), with fewer workers able to take leave during festivals (45%) or to attend to family issues (24%). The study additionally found there be significant gaps in provision of sufficient PPE to farm workers.</p> <p><u>MBA and ANU, forthcoming 2024</u></p> <p>Fairfood International report, based on research done by other NGOs, that workers' wages in the shrimp industry are not high enough to support a decent standard of living. <u>Fairfood International, 2015</u>. Whether this applies to both farming and processing is unclear in the report.</p>	<p>workers, All Life, 16:1, 2225762, DOI: 10.1080/26895293.2023.2225762</p> <p>Angela, S.A.D., and Sharma, A., 2023, Analysis of Socioeconomics and Occupational Dimensions of Shrimp Farmers of Tamil Nadu, Aquaculture Research</p>

Indicator	Description	Sources
	<p>The Occupational Health and Safety study (2023) on 60 shrimp farm workers from Andhra Pradesh, Maharashtra, Gujarat, and Tamil Nadu found that the workers resided on site, and they worked 8 to 12 hours per day, with one rest day per week, and were usually allowed one month of paid leave per year. The monthly income of shrimp farm workers ranged from US\$ 101 to 106, averaging at US\$ 103 per month, which is less than the average annual income of an Indian worker estimated at US\$ 113 per month for the year 2020–2021 according to the Ministry of Statistics & Programme Implementation Annual Report 2020-21. Shrimp farm workers in Tamil Nadu earn the highest average monthly income. In addition, some farms hire temporary daily waged workers for shrimp seed stocking activities. Sharma et. al., 2023</p> <p>A study of shrimp farmers in Tamil Nadu found that shrimp farmers had a mean annual income 1.13 million rupees, equivalent to around US\$ 13,770, which is higher than the national and state-level per capita income, and higher than figures reported for shrimp farmers in other states. Angela and Sharma, 2023</p> <p>In the case where shrimp farms are family-operated businesses, the level of income would depend on the success of the crop cycle and global demand for shrimp products offset against prices for input products such a seed and feed.</p>	

Table 3: India - Aquaculture Indicators

India: Processing indicators

Indicator	Description	Sources
Direct evidence of forced labor, human trafficking, and hazardous child labor	<p>A combination of different reported abuses indicates that there are conditions for forced labor in the shrimp processing industry. Several recent news reports furthermore highlight alleged cases of human trafficking and child labor (not confirmed as hazardous) in shrimp processing.</p> <p>Corporate Accountability Lab, which interviewed 150 workers throughout India's shrimp supply chain, alleges that the highest risk of forced labor is found in the shrimp processing sector, which includes peeling sheds and processing plants. The investigation found several indicators of forced labor that indicate menace of penalty and involuntariness, which together may amount to forced labor.</p> <p>The investigation found cases of abuse of vulnerability, as most of the workers were internal migrants and Dalits or Adivasis, with little options for other employment. This, in combination with the informal nature of employment and lack of written contracts and pay slips, resulted in increased vulnerability for workers.</p> <p>It further alleges incidents of debt bondage. Recruiters were reported to target vulnerable populations for recruitment and provide loans to recruited workers. Reported loans were up to up to 100,000 INR (US\$ 1,240) and required workers to stay in their employment until they paid back their loans plus interest. Women tend to take on these loans as there are limited financial options available to them.</p>	<p>Corporate Accountability Lab, Hidden Harvest: Human Rights and Environmental Abuses in India's Shrimp Industry, March 2024</p> <p>Associated Press, AP finds grueling conditions in Indian shrimp industry that report calls 'dangerous and abusive', 20 March 2024</p> <p>The Outlaw Ocean, India Shrimp Rife with Bondage, Hazards, and Stolen Wages, 2024</p> <p>Elevate, Human Rights Impact Assessment Farmed Shrimp in India, 2023</p> <p>The Hindu, 25 September 2023, 'Poverty-stricken minors from other States found labouring in aqua processing units in Andhra Pradesh'</p> <p>The Hindu, 23 September 2023, 'Child welfare officials inspect aqua unit in A.P. where minor</p>

	<p>Migrant workers were housed in company owned hostels that were found to be unhygienic and overcrowded. Married couples were not allowed to stay together. Additionally, workers staying in these accommodations were restricted in their movement, being allowed to leave once or twice a month with guards and wardens controlling access in and out of the facilities. In some cases, there were alleged incidents of monitoring workers on- and offsite.</p> <p>Working conditions in the factories were allegedly abusive and dangerous with high risk of injury, with the cold environment worsening conditions such as asthma, frostbite, rashes, and sores. Other conditions mentioned were dehydration and malnourishment, ammonia leaks as well as verbal abuse when not meeting production targets. Multiple workers reported working excessive overtime hours, such as working 30 weeks in a row and workers, especially migrant women, not being paid for overtime.</p> <p>Lastly, workers were allegedly found to be threatened and intimidated by recruiters and company employees, with a risk of losing their jobs if workers spoke with investigators. Separately a union leader of the sector alleged that sexual harassment of women in processing plants is rampant, as they fear to lose their job if they complain. CAL, 2024</p> <p>A 2024 Associated Press article, which followed in lieu of initial findings from Corporate Accountability Lab, also alleges to have found workers facing dangerous and abusive labor conditions. The article reports cases of women working in peeling sheds without appropriate PPE resulting in frostbite and infections and overall</p>	<p>girl was found dead on Sept.20'</p> <p>The Hindu, 25 September 2023, 'Over 20 'minor' girl workers found in aqua company in Krishna district'</p> <p>Reuters, 21 September 2020, 'India's Nobel laureate fears upsurge in child labour as pandemic shrivels economy'</p> <p>The Times of India, 13 September 2020</p>
--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>unsanitary and dangerous working conditions. Workers worked 10-hour shifts, with women having been reported to miscarry due to the heavy work. In addition, it is reported some workers receive less than US\$ 4 per day (which is below minimum wage), are not paid overtime and must pay recruiters 25 cents out of their salaries as well as other provisions such as transport and lunch. Many of the workers have no formal contracts and no recourse. The accommodation provided for workers was reported to be unhygienic and over-crowded and some workers reported to be locked in guarded hostels when not working or restricted in their movements. Associated Press, 2024</p> <p>Based on the claims of whistleblower on cases of export of known unsafe product and presence of human right abuses in a shrimp processing plant, the Ocean Outlaw also produced a separate series of articles at the start of 2024. One of these articles covered the allegations that workers at a processing plant were underpaid, not allowed to leave without permission, and often living in run-down conditions. There was evidence of excessive working hours, with a labor contractor's papers indicating they had worked 360 days in a year and staff being paid less than minimum wage, although the processing company in question denied these interpretations. The whistleblower also indicated overdue payment of wages and migrant workers not being able to go home for a long period of time. In terms of living arrangements and conditions, the provision of bedding was insufficient for the number of workers onsite, and the company had</p>	
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

	<p>discontinued providing sanitary napkins because of alleged misuse. The Ocean Outlaw, 2024</p> <p>The above findings are supported by a Human Rights Impact Assessment report on farmed shrimp in India found several indicators of forced labor in shrimp farming and processing, but findings were not differentiated between the two stages. The assessment found cases where workers may have been unable to leave the sites, excessive working hours and forced overtime without compensation with indications of falsified records of workers' hours, borrowing money from the site or labor agent to pay recruitment fees which could result in debt bondage, reports of physical violence and sexual harassment at sites visited with some workers reported feeling unsafe, especially in the dormitories, and personal documentation held by labor agents or by employers although they could get them back in almost all cases. Elevate, 2023</p> <p>In relation to alleged cases of human trafficking and child labor, the CAL 2024 also reported widespread use of teenage girls in shrimp processing plants. CAL, 2024</p> <p>A September 2023 news article reported on the rescue of children from a fish processing and packing plant in Pamaru, Krishna district in Andhra Pradesh, describing it as a "major inter-State child trafficking case". According to the article, a raid was conducted at the fish processing plant by the officials of the State Commission for Protection of Child Rights (SCPCR) and the Child Welfare Committee (CWC). Around 30 workers suspected to be minors were found at the unit. The children had migrated for work from several</p>	
--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

	<p>areas including the Andhra-Odisha Border, Odisha, and West Bengal. Two girls stated they were working to support their families. One girl described being hired by an intermediary, with wages being transferred to her parents. Some of the workers at the company were engaged in grading shrimp, while others worked in the processing and packing unit. The company reportedly buys farmed shrimp from several districts in Andhra Pradesh for processing and export. The Hindu, 25 September 2023</p> <p>The suspicious death of 13-year-old, Monalisa Khatun from West Bengal was reported at the same processing unit in Pamarru earlier in September. While the death was not connected to work at the processing unit, upon investigating, officials said that workers were living in “pathetic conditions” near the work site. The Hindu, 23 September 2023</p> <p>According to a community social worker, Monalisa had been staying with her mother, and the company claimed she was not a worker. The Hindu, 25 September 2023</p> <p>A news article from 2020 highlights a potential case of child labor in shrimp processing, stating “[Kailash] Satyarthi's organisation backed by police rescued dozens of girls during a raid on a shrimp processing unit in western India.” Reuters, 21 September 2020</p> <p>Another news report provides further information on the 2020 incident, stating that Gujarat and Jharkhand police rescued 20 girls from a shrimp processing unit in Makhinga, Surat district in Gujarat. The girls were reportedly</p>	
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

	<p>trafficked from Jharkhand to Gujarat. The processing unit had checked the age of the girls and found five of them to be minors, which resulted in the company refusing to employ those girls and buying them return tickets. The father of one of the girls filed a complaint against the labor contractor who had taken the girl to Surat. The police examined the documents of other workers and found that 14 workers were girls using forced Aadhaar identity cards. The Times of India, 13 September 2020</p>	
<p>ILO indicators of forced labor and ILO R190 definition of hazardous child labor</p>	<p>The 2024 TIP Report identifies observer reports of indicators of forced labor, including failure to pay a minimum wage, restricted freedom of movement, and dangerous working conditions, in some shrimp facilities (assumed to include shrimp processing), particularly in Andhra Pradesh. US Department of State, 2024</p> <p>An outdated report indicates the presence of children working in poor conditions in shrimp pre-processing plants. WWF & Accenture, 2013 This is also touched upon by a briefing from Envisage (2022) that indicates labor violations relating to child labor are particularly present in ‘tier 2’ processing operations, which include peeling sheds, though the information appears to be more related to fisheries. Envisage, 2022</p> <p>A news article from 2021 reports the governor from Andhra Pradesh intervening to aid / “free” migrant workers from their contractor who were working in a shrimp processing unit, which could be evidence of forced labor. The Hindu, 2021</p> <p>There are some recent news articles that describe incidents of unsafe working conditions in shrimp processing plants, with people reportedly</p>	<p>US Department of State, 2024, 2024 Trafficking in Persons (TIP) Report</p> <p>WWF & Accenture, FUTURE PROOFING SHRIMP PRODUCTION, Transition to Controlled Intensification, 2013</p> <p>Envisage, SHRIMP PROCESSING AND RELATED SECTORS IN INDIA. 2022</p> <p>The Hindu, A.P. Governor steps in to aid migrant workers, 2021</p> <p>Times of India, Seven held for gas leak in prawn processing plant in Odisha, 2019</p> <p>Times of India, Odisha: 28 people fall ill after ammonia gas leak in</p>

	becoming ill due to toxic fumes. Times of India, 2019 , Times of India, 2022	prawn processing plant in Balasore, 2022
Processing Characteristics	<p>Processing stage</p> <p>Processing units vary from non-integrated to fully integrated facilities, depending on whether they conduct full processing or only pre-processing activities. Pre-processing includes activities such as cleaning, peeling, washing, and icing, while processing consists of grading, packing, weighing, and freezing. Separate pre-processing activities tend to occur in small scale units that are labor intensive, while processing requires large-scale, capital-intensive units. International Trade Union Confederation (ITUC), 2016</p> <p>Exporting companies are reported to outsource the lower-value, labor-intensive processing tasks to peeling sheds. A few companies own peeling sheds, but the majority are operated by small enterprises. Some peeling sheds operate based on resource availability. Processed shrimp is exported as Individually Quick Freezing (IQF), to retailers and wholesalers, or is shipped overseas for value-addition. Peeled shrimp is a common final product for export. CAL, 2024</p> <p>Processors in Andhra Pradesh and Odisha are focused on secondary processing, which includes peeling and de-heading, for US and EU markets, with a greater focus on volume rather than quality. ILO, 2023</p>	<p>International Trade Union Confederation (ITUC), Precarious Work in the Asian Seafood Global Value Chain, 2016</p> <p>Corporate Accountability Lab, Hidden Harvest: Human Rights and Environmental Abuses in India's Shrimp Industry, March 2024</p> <p>ILO, Value chain analysis of the food processing sector in Andhra Pradesh and Odisha, 2023</p>
	<p>Consolidation and vertical integration</p> <p>The level of consolidation in India's aquaculture shrimp supply chain varies from fully vertically integrated to non-integrated and fragmented. The processing industry is fragmented, with</p>	Boston Consulting Group, A Strategic Approach to Sustainable Shrimp Production in India THE CASE FOR IMPROVED

	<p>limited examples of companies being vertically integrated. The two largest vertically integrated companies, Avanti Feeds and CP India, own farms, or contract directly with individual farmers, own feed mills, hatcheries, and processing facilities, and manage their exports. Boston Consulting Group 2020</p>	ECONOMICS AND SUSTAINABILITY, 2020
	<p>Domestic versus export</p> <p>Whiteleg shrimp and giant tiger shrimp are predominantly produced for exports, with approximately 90% of the processed shrimp being exported. Boston Consulting Group, 2020</p> <p>Reports on the level of domestic consumption differ, with some saying that consumption of primarily of fresh shrimp has been increasing to around 20% of total production (Boston Consulting Group 2020), whilst other stating domestic consumption remains low at 50 thousand metric tons per year. Global Seafood Alliance, 2020</p> <p>Interviewees for an ILO analysis study on the shrimp value chain mentioned that the majority of shrimp produced in Andhra Pradesh and Odisha is for export and estimates that only 1% is sold domestically. ILO, 2023</p>	<p>Boston Consulting Group, A Strategic Approach to Sustainable Shrimp Production in India THE CASE FOR IMPROVED ECONOMICS AND SUSTAINABILITY, 2020</p> <p>Global Seafood Alliance, How India became the world's top shrimp producer, 2020</p> <p>ILO, Value chain analysis of the food processing sector in Andhra Pradesh and Odisha, 2023</p>
Workforce Characteristics	<p>Skilled versus low-skilled</p> <p>According to Fairfood International, work in the shrimp processing industry in India is low-skilled work. This slightly contradicts with a study on the impact of the Coronavirus (COVID-19) lockdown, that states that most of the skilled workers employed in processing plants are migrant workers who went back home during the lockdown resulting in manpower issues. However,</p>	<p>Fairfood International, Caught in a Trap, 2015</p> <p>KUMARAN, M., et al. Prospective impact of Corona virus disease (COVID-19) related lockdown on shrimp aquaculture sector in India—a sectoral</p>

	<p>neither study provides a definition or justification of their chosen terminology. Fairfood International, 2015 , Kumaran, et al. 2021</p> <p>A 2016 ITUC report describes how women working in pre-processing centers are “disproportionately from economically backward classes” and are predominantly confined to floor level work with very few operating at a supervisory or technical role. It further states that because of a lack of regulation at pre-processing level, they are particularly vulnerable to abuses at work. International Trade Union Confederation (ITUC), 2016</p>	<p>assessment. Aquaculture, 2021, 531: 735922.</p> <p>International Trade Union Confederation (ITUC), Precarious Work in the Asian Seafood Global Value Chain, 2016</p>
	<p>The proportion of women in the workforce</p> <p>The 2024 Hidden Harvest Report by CAL states that processing companies mainly hire women to de-head, peel, and sort shrimp. CAL, 2024</p> <p>The AP and Outlaw Ocean articles both discuss women working in processing plants, but do not give a clear proportion. Associated Press, 2024, The Outlaw Ocean, 2024</p> <p>A targeted study done by Elevate indicates that of the two processing sites that were visited with approximately 500 to 1,000 full-time employees each in Andhra Pradesh, 65% of the workers were women. Elevate, 2023</p> <p>This seems to match a recent ILO study on the shrimp processing sector in Andhra Pradesh and Odisha that estimates that 70–80% of the workforce are women. The report further mentions that roles tend to be gendered, with women usually responsible for peeling and de-heading the raw shrimp. ILO, 2023</p>	<p>Corporate Accountability Lab, Hidden Harvest: Human Rights and Environmental Abuses in India’s Shrimp Industry, March 2024</p> <p>Associated Press, AP finds grueling conditions in Indian shrimp industry that report calls ‘dangerous and abusive’, 20 March 2024</p> <p>The Outlaw Ocean, India Shrimp Rife with Bondage, Hazards, and Stolen Wages, 2024</p> <p>Elevate, Human Rights Impact Assessment Farmed Shrimp in India, 2023</p>

	<p>More dated studies also report that women comprise the dominant work force in pre-processing and processing facilities, although some studies were not conducted in the dominant aquaculture production states.</p> <p>The Fairfood International (2015) report details that due to the competitiveness in exporting sectors in the developing world, including seafood processing, costs are being pushed down to workers at the bottom of the supply chain, and that women make for a low-paid, compliant, elastic, and replaceable work force. This increases the vulnerability of women to abuses and job insecurity, as they are not recognized as important to the booming shrimp industry. Fairfood International, 2015</p>	<p>Fairfood International, Caught in a Trap, 2015</p> <p>ILO, Value chain analysis of the food processing sector in Andhra Pradesh and Odisha, 2023</p>
	<p>The proportion of migrant versus local workers</p> <p>The 2024 Hidden Harvest Report by CAL states that many shrimp workers are internal migrants from regions where there are few employment options, either from other regions of Andhra Pradesh or nearby states such as Odisha or West Bengal, although the report does not offer a proportion in terms of migrant versus local workers, nor does it distinguish between farm and processing workers. Internal migrants are reported to face barriers in terms of language, social isolation, discrimination, and harassment, CAL 2024</p> <p>The Outlaw Ocean Project article describes up to 650 migrant workers being housed at the processing plant, but it is unclear how large a share this is. The Outlaw Ocean, 2024</p>	<p>Corporate Accountability Lab, Hidden Harvest: Human Rights and Environmental Abuses in India's Shrimp Industry, March 2024</p> <p>The Outlaw Ocean, India Shrimp Rife with Bondage, Hazards, and Stolen Wages, 2024</p> <p>ILO, Value chain analysis of the food processing sector in Andhra Pradesh and Odisha, 2023</p> <p>Fairfood International, Caught in a Trap, 2015</p>

	<p>The proportion of local labor in shrimp processing is currently estimated to be 50:50 migrant to local workers. ILO, 2023</p> <p>Research conducted at shrimp processing plants in Gujarat found that 46% of the respondents were migrant workers, with 66% of the migrant women workers originating from Kerala and 32% from Tamil Nadu. Fairfood International, 2015</p> <p>A more dated study from 2001 found that most of the women workers in shrimp processing plants in Andhra Pradesh, Orissa, and Tamil Nadu were internal migrants from Kerala. Kerala women workers were preferred over local workers due to their skills in handling raw material, willingness to work at odd hours and festivals, and maintaining hygienic conditions. Nishchith, 2001</p>	<p>NISHCHITH, V. D. Role and status of women employed in seafood processing units in India. In: International Symposium on Women in Asian Fisheries, ICLARM Contribution. 2001.</p>
	<p>The proportion of minority or indigenous workers</p> <p>The 2024 Hidden Harvest Report indicates that most workers across the Indian shrimp supply chain are from marginalized lower caste groups such as Dalit, Adivasi, or fisher communities. These minorities are particularly vulnerable to abuse resulting from (historical) practices such as exclusion from well-paying jobs, social exclusion, restrictions in accessing education and healthcare, and caste-based physical violence. CAL 2024</p>	<p>Corporate Accountability Lab, Hidden Harvest: Human Rights and Environmental Abuses in India's Shrimp Industry, March 2024</p>
	<p>The proportion of temporary and contract versus permanent workers</p> <p>According to a 2023 ILO report, many workers join shrimp processing factories on a contractual basis, with labor required to be present at any given time depending on processing unit demand. ILO, 2023</p>	<p>ILO, Value chain analysis of the food processing sector in Andhra Pradesh and Odisha, 2023</p> <p>ITUC, Precarious Work in the Asian Seafood Global Value Chain, 2016</p>

	<p>The 2016 ITUC reports defers to 2015 and 2013 studies, where the former found that only 15% of 120 workers in Gujarat and Tamil Nadu held permanent positions, and that most workers were hired daily wage workers. The 2013 study found that most shrimp processing workers in this area were women employed as daily wage workers.</p> <p>The ITUC report further indicates that women are hired as casual, unskilled labor and do not receive job security and social security benefits and that the practice, in case of pre-processing, allows for raw material availability to determine working conditions such as hours and number of workers needed. International Trade Union Confederation (ITUC), 2016</p>	
	<p>Workers' origins</p> <p>The 2024 Hidden Harvest Report by CAL states that many shrimp workers are internal migrants from regions with few employment options either from other regions of Andhra Pradesh or nearby states such as Odisha or West Bengal, although the report does not offer a distinction between farm and processing workers. CAL, 2024</p> <p>Intra-state migrant workers in Andhra Pradesh, the largest shrimp producing state, mostly come from Srikakulam district to work in Visakhapatnam. Interstate migrants are reported to come from Odisha, Assam and Kerela. Workers often come from nearby villages or districts in search of work, and it has been mentioned through interviews with labor union representatives that the workers predominantly come from lower-income households. ILO, 2023</p>	<p>Corporate Accountability Lab, Hidden Harvest: Human Rights and Environmental Abuses in India's Shrimp Industry, March 2024</p> <p>ILO, Value chain analysis of the food processing sector in Andhra Pradesh and Odisha, 2023</p>
	<p>Migrant worker language (vs. dominant language in the industry)</p>	<p>Ministry of Education, no date.</p>

	<p>There are 22 official regional languages in India. Ministry of Education</p> <p>The main languages spoken in shrimp aquaculture production and processing states are Telugu (Andhra Pradesh, Pondicherry), Bengali (West Bengal) Gujarati (Gujarat), Tamil (Tamil Nadu, Pondicherry), Odia/Oriya (Orissa), Marathi (Maharashtra), Malayam (Kerela, Pondicherry), Kannada (Karnataka). New World Encyclopedia, 2022</p> <p>Inter-state migrants face issues such as language barriers depending on their state of origin and destination.</p> <p>Based on interviews from the 2024 Hidden Harvest report, migrant workers and local workers from Andhra Pradesh often do not have a common language. Local workers primarily speak Telugu, and migrant workers mainly speaking languages from their regions. CAL, 2024</p>	<p>New World Encyclopedia, Languages of India, 2022</p> <p>Corporate Accountability Lab, Hidden Harvest: Human Rights and Environmental Abuses in India's Shrimp Industry, March 2024</p>
	<p>GDP per capita of processing country and main worker source country</p> <p>Workers are internally migrant within India, so India's GDP per capita applies. The net state domestic product per capita in 2021-2022 for Andhra Pradesh was ₹ 192,587 (US\$ 2,330), while for Odisha, Assam and Kerela this was ₹ 128,873, ₹ 102,965, ₹ 124,798 (US\$ 1,560, 1,245, 1,510) respectively. Ministry of Statistics & Programme Implementation, 2023</p>	<p>Ministry of Statistics & Programme Implementation, 2023</p>
	<p>Legal presence/regularity of migrant workers</p> <p>There is no information or indication of foreign migrants working in the shrimp processing sector. Internal migrants are common.</p>	<p>PRS Legislative Research, Migration in India and the impact of the lockdown on migrants, 2020</p>

	<p>There are in general no restrictions on internal movement within India. Internal migration is covered by the Constitution and allows all Indian citizens the right to reside in any part of the territory of India, with only a few exceptions. According to a 2011 census, 38% of the Indian population was migrant, of which 99% was internally migrant and only 1% comprised migrants from other countries. Of the internal migrants, a distinction is made between inter (between) and intra (within)-state migrants, with intra-state migrants accounting for 88%. Internal migrant workers face challenges through lack of social security and health benefits and lack of portability of state-offered benefits such as food provisions. PRS Legislative Research, 2020</p> <p>In addition, internal migrants may also face difficulties through speaking different local languages.</p> <p>The proportion of local labor in shrimp processing is currently estimated to be 50:50 migrant to local workers. ILO, 2023</p>	<p>ILO, Value chain analysis of the food processing sector in Andhra Pradesh and Odisha, 2023</p>
	<p>The ability of migrant workers to change jobs</p> <p>Although internal migrant workers are not restricted to a work visa, and the Indian Constitution affords all Indian citizens the right to reside in any part of the territory of India, it is unlikely that workers are bound to a specific employer as part of their work permit.</p> <p>However, the 2024 Hidden Harvest CAL report and AP article both indicate that migrant workers in the shrimp processing industry have little options for other types of employment, making the ability to switch jobs difficult from a socio-economic and cultural perspective despite</p>	<p>Corporate Accountability Lab, Hidden Harvest: Human Rights and Environmental Abuses in India's Shrimp Industry, March 2024</p> <p>Associated Press, AP finds grueling conditions in Indian shrimp industry that report calls 'dangerous and abusive', 20 March 2024</p>

	oppressive conditions and desire to leave. CAL, 2024, Associated Press, 2024	
Recruitment and Contracts	<p>Use of contractors and recruitment agents</p> <p>According to the 2024 Hidden Harvest report, shrimp processing workers are rarely given contracts, timesheets, pay slips or access to working hour records and many remain “daily wage laborers” without any access to health insurance, social security, or vacation days. Most workers are hired through recruitment agents, who are long-term industry workers and recruit workers from their hometowns. Recruitment fees are common and are paid upfront or for each day of work and some workers reported paying a month’s worth of salary as a recruitment fee. Processing companies in turn pay a commission for each worker, ranging from INR 5 (US\$ 0.06) to INR 10 (US\$ 0.12) per worker. CAL, 2024</p> <p>The 2024 Associated Press Article also alleges that most workers have no contract and that workers must pay recruiters 25 cents / day to work in peeling sheds. Associated Press, 2024</p> <p>According to a recent ILO study, most workers are hired via contractors. Interviewees for the study mentioned that companies preferred this system as they are not required to manage labor law compliance of worker benefits such as insurance, Employees’ Provident Fund and Employees’ State Insurance Corporation contributions. The lack of formal documentation and the absence of labor cards prevents workers from qualifying for social security benefits from the labor department. The report further states that interviewees mentioned that many owners have connections with local politicians, which</p>	<p>Corporate Accountability Lab, Hidden Harvest: Human Rights and Environmental Abuses in India’s Shrimp Industry, March 2024</p> <p>Associated Press, AP finds grueling conditions in Indian shrimp industry that report calls ‘dangerous and abusive’, 20 March 2024</p> <p>ILO, Value chain analysis of the food processing sector in Andhra Pradesh and Odisha, 2023</p> <p>International Trade Union Confederation (ITUC), Precarious Work in the Asian Seafood Global Value Chain, 2016</p> <p>Fairfood International, Caught in a Trap, 2015</p>

	<p>results in fewer and less stringent labor inspections being applied. ILO, 2023</p> <p>This aligns with earlier, more dated reports that indicate most workers in processing plants, especially daily/temporary workers, are hired through contractors or employment agencies. International Trade Union Confederation (ITUC), 2016, Fairfood International, 2015</p> <p>Temporary workers typically do not have access to social security and company benefits. Fairfood International, 2015</p>	
	<p>Compensation method</p> <p>The 2024 Hidden Harvest Report indicates that workers are paid in cash or directly into bank accounts at the end of the month. A lack of recordkeeping for working hours and pay slips leaves workers unaware of any discrepancies and unable to dispute them. Most workers are paid below the minimum wage and only a few reported having Provident Fund (PF) and Employees' State Insurance (ESI) card, which is compulsory under Indian law for facilities with a certain number of workers and where workers are paid less than a certain amount. Most workers earn between INR 8,000 (US\$ 96.38) and INR 12,000 (US\$ 144.57) per month, which should entitle them to receive PF and ESI, although workers reported to receive neither.</p> <p>Hiring informal workers saves processing companies from having to pay benefits. According to some of the interviewees, ""Workers who have ESI/PF get INR 450-500 (US\$ 5.41-6.02) per day. And workers who don't have ESI/PF, the daily wagers get only INR 300-350 (US\$ 3.61-4.21)."</p>	<p>Corporate Accountability Lab, Hidden Harvest: Human Rights and Environmental Abuses in India's Shrimp Industry, March 2024</p> <p>Associated Press, AP finds grueling conditions in Indian shrimp industry that report calls 'dangerous and abusive', 20 March 2024</p> <p>The Outlaw Ocean, India Shrimp Rife with Bondage, Hazards, and Stolen Wages, 2024</p> <p>ILO, Value chain analysis of the food processing sector in Andhra Pradesh and Odisha, 2023</p> <p>The Hindu, 25 September 2023, 'Poverty-stricken</p>

	<p>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.” CAL, 2024</p> <p>The 2024 Associated Press Article also alleges that interviewed workers reportedly received between US\$ 3 to US\$ 4 per day, which is less than the minimum wage. Associated Press, 2024</p> <p>The Outlaw Ocean article describes situations of late payment of wages. The Outlaw Ocean, 2024</p> <p>According to a 2023 ILO report, payment is based on piece rate systems where workers typically earn 60–100 rupees (US\$0.77–1.15) per kilogram of shrimp processed, with an average processing capacity of a worker of 30 kg per hour. This results in wages of between 10,000–16,000 rupees (US\$128 and US\$205) per month. Night shift work is paid at an additional rate of 150 rupees (US\$1.92) per day. ILO, 2023. A 2023 news article confirms this with a woman migrant worker describing being paid 12,000 rupees per month for work in a processing and packing unit in Andhra Pradesh. The Hindu, 25 September 2023</p> <p>A more dated ITUC report, also identified the compensation method at pre-processing facilities during a 2014 study, as a piece rate system with more than half of the workers earning wages ranging from 100- Rs. 200 per day (US\$1,22 - 2,44), and one fourth earning 200-300 RS per day (US\$2,44 - 3,66). It further details women peelers from Kerela going on strike in 2015 to protest</p>	<p>minors from other States found labouring in aqua processing units in Andhra Pradesh’</p> <p>International Trade Union Confederation (ITUC), Precarious Work in the Asian Seafood Global Value Chain, 2016</p> <p>Fairfood International, Caught in a Trap, 2015</p>
--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>receiving less than 20 RS (US\$ 0,24) per kg instead of the government mandated piece-rate wage of 26 RS (US\$ 0,32) per kg. A large share of workers did not receive legally mandated social security benefits like Provident Fund (PF) accounts and Employees' State Insurance (ESI) cards. International Trade Union Confederation (ITUC), 2016</p> <p>The Fairfood International report states that current wages in India were only about 70% of a living wage and Indian workers reported wages right at the minimum wage levels. Excessive overtime work was used as evidence that wage rates were too low, and the report suggests that overtime was required to earn enough. However, the ITUC report states that in their 2015 study, regular wages were received regardless of hours worked. Fairfood International, 2015</p>	
--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

Table 4: India - Processing indicators

References

- ⁱ Certification and Ratings Collaboration, 2023, Sustainable Seafood Data Tool. Available at <https://certificationandratings.org/data-tool-2022/> [Accessed on 18 April 2023].
- ⁱⁱ Certification and Ratings Collaboration, 2023, Sustainable Seafood Data Tool. Available at <https://certificationandratings.org/data-tool-2022/> [Accessed on 18 April 2023].
- ⁱⁱⁱ MPEDA, Marine Products Exports. Available at https://mpeda.gov.in/?page_id=438 [Accessed on 7 January 2023].
- ^{iv} UN Comtrade Database. Available at <https://comtradeplus.un.org/TradeFlow?Frequency=A&Flows=X&CommodityCodes=0306&Partners=842&Reporters=699&period=all&AggregateBy=none&BreakdownMode=plus> [Accessed on 7 January 2023].
- ^v MPEDA, Marine Products Exports. Available at https://mpeda.gov.in/?page_id=438 [Accessed on 7 January 2023].
- ^{vi} Expert Business, 2017, [Shrimp Exports from India – Top 2017 Shrimp Exporters in India \(exportgenius.in\)](#) [Accessed on 7 January 2023].
- ^{vii} Certification and Ratings Collaboration, 2023, Sustainable Seafood Data Tool. Available at <https://certificationandratings.org/data-tool-2022/> [Accessed on 18 April 2023].
- ^{viii} MPEDA, 2022, State-wise Aquaculture Production. Available at https://mpeda.gov.in/?page_id=651 [Accessed on 7 April 2023].
- ^{ix} The World Bank 2016, India States Briefs, World Bank. Available at: <http://www.worldbank.org/en/news/feature/2016/05/26/india-states-briefs> [Accessed on 29 January 2023].
- ^x Ashok, S & Thomas, N 2014, 'A Study on issues of inter-state migrant labourers in India', International Journal of Scientific & Engineering Research, vol. 5, no.7, p. 92. Available at: <https://www.ijser.org/researchpaper/A-study-on-issues-of-inter-state-migrant-labourers-in-India.pdf> [Accessed on 19 May 2024].
- ^{xi} The Freedom Fund 2016, Northern India Hotspot 2016 Annual Report, The Freedom Fund, p. 12. Available at: [N-India-2016-Annual-Report.pdf \(d1r4g0yjc7lx.cloudfront.net\)](http://www.indianet.nl/pdf/FabricOfSlavery.pdf) [Accessed on 19 May 2024].
- ^{xii} India Committee of the Netherlands (ICN) 2016, Fabric of Slavery, ICN, p.2. Available at: <http://www.indianet.nl/pdf/FabricOfSlavery.pdf> [Accessed on 13 May 2024].
- ^{xiii} Deepak K. Mishra, Migrant Labour During the Pandemic: A Political Economy Perspective, The Indian Economic Journal, 69(3) 410-421 (2021) at 413. Available at <https://journals.sagepub.com/doi/pdf/10.1177/00194662211021209> [Accessed on 19 May 2024].
- ^{xiv} Deepak K. Mishra, Migrant Labour During the Pandemic: A Political Economy Perspective, The Indian Economic Journal, 69(3) 410-421 (2021) at 413. Available at <https://journals.sagepub.com/doi/pdf/10.1177/00194662211021209> [Accessed on 19 May 2024].
- ^{xv} Kalyani, M 2016, 'Indian Informal Sector: An Analysis', International Journal of Managerial Studies and Research, vol. 4, no. 1, p. 82. Available at: <https://www.arcjournals.org/pdfs/ijmsr/v4-i1/9.pdf> [Accessed on 19 May 2024].
- ^{xvi} Anti-Slavery International 2017, 'Slavery in India's Brick Kilns and the Payment Systems', Anti-Slavery International, p.5. Available at: <http://www.antislavery.org/wp-content/uploads/2017/09/Slavery-In-Indias-Brick-Kilns-The-Payment-System.pdf> [Accessed on 19 May 2024].
- ^{xvii} Special Rapporteur on contemporary forms of slavery, including its causes and consequences (Tomoya Obokata), Nexus Between Displacement and Contemporary Forms of Slavery, Report to Human Rights Council, Forty-eighth Session, United Nations, A/HRC/48/52 (July 26, 2021) at 9, cited in: Southern Shrimp Alliance, 14 January 2022, Comments on ILAB Reports 2022. Available at

<https://www.dol.gov/sites/dolgov/files/ILAB/submissions/SSA-Comments-to-ILAB-on-List-of-Goods-Report-Jan-14-2022-India.pdf> [Accessed on 26 January 2024].

^{xxviii} Deepak K. Mishra, Migrant Labour During the Pandemic: A Political Economy Perspective, *The Indian Economic Journal*, 69(3) 410-421 (2021) at 413. Available at <https://journals.sagepub.com/doi/pdf/10.1177/00194662211021209> [Accessed on 19 May 2024].

^{xxix} Kulkarni, R 2015, 'Seasonal Migration- A developmental challenge?', *Indian Journal of Occupational & Environmental Medicine*, vol. 19, no. 1, p.1. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4446931/> [Accessed on 19 May 2024].

^{xxx} Human Rights Watch 2014, 'They Say We're Dirty' – Denying an Education to India's marginalized, Human Rights Watch, p. 58, Available at: http://www.right-to-education.org/sites/right-to-education.org/files/resource-attachments/HRW_Denying_Education_to_India_Marginalised_2014.pdf [Accessed on 19 May 2024]

^{xxxi} US Department of Labor, 2023, 2022 Findings on the Worst Forms of Child Labor: India. Available at <https://www.dol.gov/agencies/ilab/resources/reports/child-labor/india> [Accessed on 29 January 2024].

^{xxxii} US Department of Labour, 2021, Findings on the Worst Forms of Child Labor - India. Available at https://www.dol.gov/sites/dolgov/files/ILAB/child_labor_reports/tda2021/India.pdf [Accessed on 26 January 2024].

^{xxxiii} US Department of Labour, 2022, Findings on the Worst Forms of Child Labor - India. Available at: https://www.dol.gov/sites/dolgov/files/ILAB/child_labor_reports/tda2022/India.pdf [Accessed on 26 January 2024].

^{xxxiv} Feminism in India (FII), 2022, Sumangali Scheme: Marginalised Young Girls Made To Earn Dowry Through A Caste-Class Patriarchal Nexus. Available at <https://feminisminindia.com/2022/06/08/sumangali-scheme-marginalised-young-girls-made-to-earn-dowry-through-a-caste-class-patriarchal-nexus/> [Accessed on 29 January 2022].

^{xxxv} Laudes Foundation, 2020, Fighting the Sumangali scheme. Available at <https://www.laudesfoundation.org/learning/lesson-notes/sumangali-scheme-textile-industry-india> [Accessed on 29 January 2022].

^{xxxvi} India Committee of the Netherlands, 2017, Fabric of Slavery Large-scale forced (child) labour in South India's spinning mills. Available at <http://www.indianet.nl/pdf/FabricOfSlavery.pdf> [Accessed on 19 May 2024].

^{xxxvii} Feminism in India (FII), 2022, Sumangali Scheme: Marginalised Young Girls Made To Earn Dowry Through A Caste-Class Patriarchal Nexus. Available at <https://feminisminindia.com/2022/06/08/sumangali-scheme-marginalised-young-girls-made-to-earn-dowry-through-a-caste-class-patriarchal-nexus/> [Accessed on 29 January 2022].

^{xxxviii} Sengupta, S., & Guchhait, S. K. (2021). Inequality in Contemporary India: Does Caste Still Matter? *Journal of Developing Societies*, 37(1), 57–82. <https://doi.org/10.1177/0169796X21998387> [Accessed on 19 May 2024].

^{xxxix} Pew Research, 2021, RELIGION IN INDIA: TOLERANCE AND SEGREGATION - 4. Attitudes about caste. Available at <https://www.pewresearch.org/religion/2021/06/29/attitudes-about-caste/> [Accessed on 14 August 2021].

^{xxxx} CNN, 2020, Under India's caste system, Dalits are considered untouchable. The coronavirus is intensifying that slur. Available at: <https://edition.cnn.com/2020/04/15/asia/india-coronavirus-lower-castes-hnk-intl/index.html> [Accessed on 14 August 2023].

^{xxxi} Human Rights Watch, 2022, India: Surge in Summary Punishments of Muslims. Available at <https://www.hrw.org/news/2022/10/07/india-surge-summary-punishments-muslims> [Accessed on 15 December 2023].

^{xxxii} Global Slavery Index, GLOBAL SLAVERY INDEX / 2018 / COUNTRY STUDIES, INDIA. Available at <https://www.globalslaveryindex.org/2018/findings/country-studies/india/#footnote:60> [Accessed on 29 January 2023].

^{xxxiii} Southern Shrimp Alliance, 14 January 2022, Comments on ILAB Reports 2022. Available at <https://www.dol.gov/sites/dolgov/files/ILAB/submissions/SSA-Comments-to-ILAB-on-List-of-Goods-Report-Jan-14-2022-India.pdf> [Accessed on 26 January 2024].

-
- ^{xxxiv} US Department of State, 2024, 2024 Trafficking in Persons Report. Available at <https://www.state.gov/reports/2024-trafficking-in-persons-report/india/> [Accessed on 25 June 2024].
- ^{xxxv} US Department of State, 2024, 2024 Trafficking in Persons Report. Available at <https://www.state.gov/reports/2024-trafficking-in-persons-report/india/> [Accessed on 25 June 2024].
- ^{xxxvi} US Department of Labor, 2022, Bureau of International Labor Affair (ILAB) > Resources > International Child Labor & Forced Labor Reports > Findings on the Worst Forms of Child Labor - India. Available at: https://www.dol.gov/sites/dolgov/files/ILAB/child_labor_reports/tda2022/India.pdf [Accessed on 10 December 2023].
- ^{xxxvii} US Department of Labor, 2022, Bureau of International Labor Affair (ILAB) > Resources > International Child Labor & Forced Labor Reports > Findings on the Worst Forms of Child Labor - India. Available at: https://www.dol.gov/sites/dolgov/files/ILAB/child_labor_reports/tda2022/India.pdf [Accessed on 10 December 2023].
- ^{xxxviii} US Department of Labor, 2022, Bureau of International Labor Affair (ILAB) > Resources > International Child Labor & Forced Labor Reports > Findings on the Worst Forms of Child Labor - India. Available at: https://www.dol.gov/sites/dolgov/files/ILAB/child_labor_reports/tda2022/India.pdf [Accessed on 10 December 2023].
- ^{xxxix} US Department of Labor, 2022, Bureau of International Labor Affair (ILAB) > Resources > International Child Labor & Forced Labor Reports > Findings on the Worst Forms of Child Labor - India. Available at: https://www.dol.gov/sites/dolgov/files/ILAB/child_labor_reports/tda2022/India.pdf [Accessed on 10 December 2023].
- ^{xl} US Department of State, 2024, 2024 Trafficking in Persons Report. Available at <https://www.state.gov/reports/2024-trafficking-in-persons-report/india/> [Accessed on 25 June 2024].
- ^{xli} Frontline, 2020, The new labour codes: Labour's loss. Available at <https://frontline.thehindu.com/the-nation/labours-loss/article32749705.ece> [Accessed on 9 July 2023].
- ^{xlii} Bhuta A. Imbalancing Act: India's Industrial Relations Code, 2020. Indian J Labour Econ. 2022;65(3):821-830. doi: 10.1007/s41027-022-00389-3. Epub 2022 Aug 25. PMID: 36042793; PMCID: PMC9409614. Available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9409614/> [Accessed on 19 May 2024].
- ^{xliii} ITUC, 2022, Global Rights Index India 2022. Available at [ITUC GRI - India \(globalrightsindex.org\)](https://globalrightsindex.org/) [Accessed on 22 January 2023].
- ^{xliiv} The Hindu, 2016, Child labour rampant in seafood units: police. Available at <https://www.thehindu.com/news/cities/Kochi/Child-labour-rampant-in-seafood-units-police/article14616051.ece> [Accessed on 31 March 2023].
- ^{xli v} Krishna et al. 2018, Child Labour in The Fishery Sector in Visakhapatnam: A Pilot Study, International Journal for Research in Engineering Application & Management (IJREAM). Available at <http://ijream.org/papers/IJREAMV04I0439164.pdf> [Accessed on 19 May 2024].
- ^{xli vi} Dried Fish Matters, year unknown, Dried Fish in West Bengal, India: Scoping report. Available at <https://driedfishmatters.org/pub/dried-fish-in-west-bengal-india-scoping-report.html#Acknowledgements> [Accessed on 19 May 2024].
- ^{xli vii} Mongabay, 2016, Hard labor in India's fisheries: an interview with researcher Divya Karnad. Available at <https://news.mongabay.com/2016/05/migrant-labor-works-appalling-conditions-indias-fisheries-industry-interview-fisheries-researcher-divya-karnad/> [Accessed on 31 March 2023].
- ^{xli viii} Krishna et al. 2018, Child Labour in The Fishery Sector in Visakhapatnam: A Pilot Study, International Journal for Research in Engineering Application & Management (IJREAM). Available at <http://ijream.org/papers/IJREAMV04I0439164.pdf> [Accessed on 19 May 2024].
- ^{xli ix} Environmental Justice Foundation (EJF), 2003. Smash & Grab: Conflict, Corruption and Human Rights Abuses in the Shrimp Farming Industry. Environmental Justice Foundation, London, UK. Available at https://ejfoundation.org/resources/downloads/smash_and_grab.pdf [Accessed on 19 May 2024].

-
- ⁱ Environmental Justice Foundation (EJF), 2003. Smash & Grab: Conflict, Corruption and Human Rights Abuses in the Shrimp Farming Industry. Environmental Justice Foundation, London, UK. Available at https://ejfoundation.org/resources/downloads/smash_and_grab.pdf [Accessed on 19 May 2024].
- ⁱⁱ Environmental Justice Foundation (EJF), 2003. Smash & Grab: Conflict, Corruption and Human Rights Abuses in the Shrimp Farming Industry. Environmental Justice Foundation, London, UK. Available at https://ejfoundation.org/resources/downloads/smash_and_grab.pdf [Accessed on 19 May 2024].
- ⁱⁱⁱ The Fish Site, 2021, How a shrimp farming "mafia" is displacing Indian fishing communities. Available at <https://thefishsite.com/articles/how-a-shrimp-farming-mafia-is-displacing-indian-fishing-communities> [Accessed on 7 April 2023].
- ⁱⁱⁱⁱⁱ Hidden Harvest: Human Rights and Environmental Abuses in India's Shrimp Industry, Corporate Accountability Lab (March 2024), Available at: <https://corpaccountabilitylab.org/hidden-harvest> [Accessed on 19 May 2024].
- ^{liii} Associated Press, 20 March 2024, AP finds grueling conditions in Indian shrimp industry that report calls 'dangerous and abusive'. Available at <https://apnews.com/article/india-shrimp-seafood-industry-labor-abuses-us-imports-e5b51878eafbb6e28977710b191eb7de> [Accessed on 1 April 2024].
- ^{lv} The Ocean Outlaw, Indian Shrimp: A Growing Goliath – The true price of a cheap appetizer. Available at <https://www.theoutlawocean.com/investigations/india-shrimp-a-growing-goliath/> [Accessed on 7 April 2024].
- ^{lvi} The Ocean Outlaw, India Shrimp Rife with Bondage, Hazards, and Stolen Wages. Available at <https://www.theoutlawocean.com/investigations/india-shrimp-a-growing-goliath/indian-shrimp-rife-with-bondage-hazards-and-stolen-wages/> [Accessed on 7 April 2024].
- ^{lvii} Elevate, 2023, Human Rights Impact Assessment Farmed Shrimp in India. Available at https://www.thekrogerco.com/wp-content/uploads/2023/06/EVT_Kroger_Lidl_HRIA-Shrimp-India_May-2023-Final-Report.pdf [Accessed on 19 May 2024].
- ^{lviii} The Hindu, 25 September 2023, 'Poverty-stricken minors from other States found labouring in aqua processing units in Andhra Pradesh'. Available at: [Poverty-stricken minors from other States found labouring in aqua processing units in Andhra Pradesh – The Hindu](https://www.thehindu.com/news/national/andhra-pradesh/over-20-minor-girl-workers-found-in-aqua-company-in-krishna-district/article67341930.ece) [Accessed on 5 May 2024].
- ^{lix} The Hindu, 25 September 2023, 'Over 20 'minor' girl workers found in aqua company in Krishna district'. Available at: <https://www.thehindu.com/news/national/andhra-pradesh/over-20-minor-girl-workers-found-in-aqua-company-in-krishna-district/article67341930.ece>. [Accessed on 5 May 2024].
- ^{lx} Global March Against Child Labor, 2017, CATCH OF THE DAY, A Situational Analysis of Trafficking and Forced Labour in the Global Supply Chains of the Garment and Seafood Sector in Bangladesh, India and Philippines. Available at <https://www.humandignity.foundation/wp-content/uploads/2018/11/Catch-of-the-Day.pdf>
- ^{lxi} Press Information Bureau, 2019. Government of India Ministry of Agriculture & Farmers Welfare. Available at <https://pib.gov.in/newsite/PrintRelease.aspx?relid=187305#:~:text=The%20fisheries%20and%20aquaculture%20production,5%25%20to%20the%20agricultural%20GDP> [Accessed on 13 August 2023].
- ^{lxii} ILO, Technical meeting on the future of work in aquaculture in the context of the rural economy, Sectoral Policies Department, 2021. Available at https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---sector/documents/meetingdocument/wcms_841121.pdf [Accessed on 19 May 2024].
- ^{lxiii} Ministerie van Landbouw, Natuur en Voedselkwaliteit, 2020, Covid-19 and India's aquaculture sector: after rain comes sunshine? Available at <https://www.agroberichtenbuitenland.nl/actueel/nieuws/2020/09/02/covid-19-and-india%E2%80%99s-aquaculture-sector-after-rain-comes-sunshine> [Accessed on 7 April 2023].

-
- lxiv The Marine Products Export Development Authority, Annual Report 2021-2022. Available at <https://mpeda.gov.in/wp-content/uploads/2023/01/Annual%20Report%20PDF-21-22.pdf> [Accessed on 10 December 2023].
- lxv International Trade Union Confederation (ITUC), 2016, Precarious Work in the Asian Seafood Global Value Chain. Available at https://www.ituc-csi.org/IMG/pdf/precarious_work_in_the_asian_seafood_global_value_chain.pdf [Accessed on 19 May 2024].
- lxvi Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying, Government of India, Annual Report 2021-22. Available at https://dof.gov.in/sites/default/files/2022-04/Annual_Report_2021_22_English.pdf
- lxvii The Marine Products Export Development Authority, Annual Report 2021-2022. Available at <https://mpeda.gov.in/wp-content/uploads/2023/01/Annual%20Report%20PDF-21-22.pdf> [Accessed on 10 December 2023].
- lxviii The Marine Products Export Development Authority, Annual Report 2021-2022. Available at <https://mpeda.gov.in/wp-content/uploads/2023/01/Annual%20Report%20PDF-21-22.pdf> [Accessed on 10 December 2023].
- lxix Aqua Culture Asia Pacific, Review of India's 2021 shrimp crop. Available at https://issuu.com/aquacultureasiapacific/docs/aq22179_aap_sepoct_22_fa_lr/s/16897245#:~:text=Hatchery%20segment,280%2C000%20were%20imported%20in%202021. [Accessed on 7 April 2023].
- lxx The Marine Products Export Development Authority, Annual Report 2021-2022. Available at <https://mpeda.gov.in/wp-content/uploads/2023/01/Annual%20Report%20PDF-21-22.pdf> [Accessed on 10 December 2023].
- lxxi Boston Consulting Group, 2020, A Strategic Approach to Sustainable Shrimp Production in India THE CASE FOR IMPROVED ECONOMICS AND SUSTAINABILITY. Available at <https://media-publications.bcg.com/BCG-A-Strategic-Approach-to-Sustainable-Shrimp-Production-in-India-Jan-2020.pdf> [Accessed on 7 April 2023].
- lxxii The Marine Products Export Development Authority, Annual Report 2021-2022. Available at <https://mpeda.gov.in/wp-content/uploads/2023/01/Annual%20Report%20PDF-21-22.pdf> [Accessed on 10 December 2023].
- lxxiii The Marine Products Export Development Authority, Annual Report 2021-2022. Available at <https://mpeda.gov.in/wp-content/uploads/2023/01/Annual%20Report%20PDF-21-22.pdf> [Accessed on 10 December 2023].
- lxxiv The Marine Products Export Development Authority, Annual Report 2021-2022. Available at <https://mpeda.gov.in/wp-content/uploads/2023/01/Annual%20Report%20PDF-21-22.pdf> [Accessed on 10 December 2023].
- lxxv Coastal Aquaculture Authority, II. GUIDELINES FOR ACCORDING APPROVAL TO THE FARMS FOR SPF LITOPENAEUS VANNAMEI CULTURE. Available at https://www.caa.gov.in/pdf/accordingapproval_spf_lvannamai.pdf [Accessed on 13 August 2023].
- lxxvi Boston Consulting Group, 2020, A Strategic Approach to Sustainable Shrimp Production in India THE CASE FOR IMPROVED ECONOMICS AND SUSTAINABILITY. Available at <https://media-publications.bcg.com/BCG-A-Strategic-Approach-to-Sustainable-Shrimp-Production-in-India-Jan-2020.pdf> [Accessed on 7 April 2023].
- lxxvii The Fish Site, 2022, Connecting Indian aquaculture Scaling up the adoption of technology in Indian aquaculture. Available at <https://thefishsite.com/articles/scaling-up-the-adoption-of-technology-in-indian-aquaculture-aquaconnect> [Accessed on 7 April 2023].
- lxxviii Boston Consulting Group, 2020, A Strategic Approach to Sustainable Shrimp Production in India THE CASE FOR IMPROVED ECONOMICS AND SUSTAINABILITY. Available at <https://media-publications.bcg.com/BCG-A-Strategic-Approach-to-Sustainable-Shrimp-Production-in-India-Jan-2020.pdf> [Accessed on 7 April 2023]
- lxxix Shrimp Insights, 2024, Guide to the Indian Shrimp Industry, SHRIMP INSIGHTS Report Series. Available at <https://www.shrimpsights.com/report-series/guide-indian-shrimp-industry> [Accessed on 31 May 2024].

- ^{boxx} Boston Consulting Group, 2020, A Strategic Approach to Sustainable Shrimp Production in India THE CASE FOR IMPROVED ECONOMICS AND SUSTAINABILITY. Available at <https://media-publications.bcg.com/BCG-A-Strategic-Approach-to-Sustainable-Shrimp-Production-in-India-Jan-2020.pdf> [Accessed on 7 April 2023]
- ^{boxxi} ILO, 2023, Value chain analysis of the food processing sector in Andhra Pradesh and Odisha. Available at: https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new_delhi/documents/publication/wcms_877320.pdf [Accessed on 19 May 2024].
- ^{boxxii} Shrimp Insights, 2024, Guide to the Indian Shrimp Industry, SHRIMP INSIGHTS Report Series. Available at <https://www.shrimpsights.com/report-series/guide-indian-shrimp-industry> [Accessed on 31 May 2024].
- ^{boxxiii} Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying, Government of India, Annual Report 2022-23. Available at https://dof.gov.in/sites/default/files/2023-04/Final_Annual_Report_2022-23_English.pdf [Accessed on 19 May 2024].
- ^{boxxiv} Shrimp Insights, 2024, Guide to the Indian Shrimp Industry, SHRIMP INSIGHTS Report Series. Available at <https://www.shrimpsights.com/report-series/guide-indian-shrimp-industry> [Accessed on 31 May 2024].
- ^{boxxv} Shrimp Insights, 2024, Guide to the Indian Shrimp Industry, SHRIMP INSIGHTS Report Series. Available at <https://www.shrimpsights.com/report-series/guide-indian-shrimp-industry> [Accessed on 31 May 2024].
- ^{boxxvi} MPEDA, ENROLMENT OF FARMS, Available at https://mpeda.gov.in/?page_id=989 [Accessed on 9 July 2023].
- ^{boxxvii} Aqua Culture Asia Pacific, Review of India's 2021 shrimp crop. Available at https://issuu.com/aquacultureasiapacific/docs/aq22179_aap_sepoct_22_fa_lr/s/16897245#:~:text=Hatchery%20segment,280%2C000%20were%20imported%20in%202021. [Accessed on 7 April 2023].
- ^{boxxviii} Coastal Aquaculture Authority, Ministry of Fisheries, Animal Husbandry and Dairying, Government of India. Available at https://caa.gov.in/hatcheries_approved.html [Accessed on 7 April 2023].
- ^{boxxix} Review of India's 2021 Shrimp Crop, Aqua Culture Asia Pacific (Sept./Oct. 2022), Available at: [https://issuu.com/aquacultureasiapacific/docs/aq22179_aap_sepoct_22_fa_lr/s/16897245#:~:text=President%20\(Events\).- ,Highest%20production%20in%202021,to%20the%20increase%20in%20production.](https://issuu.com/aquacultureasiapacific/docs/aq22179_aap_sepoct_22_fa_lr/s/16897245#:~:text=President%20(Events).- ,Highest%20production%20in%202021,to%20the%20increase%20in%20production.) [Accessed on 7 April 2024].
- ^{xc} Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying, Government of India, Annual Report 2022-23. Available at https://dof.gov.in/sites/default/files/2023-04/Final_Annual_Report_2022-23_English.pdf
- ^{xcii} Aqua Culture Asia Pacific, Review of India's 2021 shrimp crop. Available at https://issuu.com/aquacultureasiapacific/docs/aq22179_aap_sepoct_22_fa_lr/s/16897245#:~:text=Hatchery%20segment,280%2C000%20were%20imported%20in%202021. [Accessed on 7 April 2023].
- ^{xciii} Boston Consulting Group, 2020, A Strategic Approach to Sustainable Shrimp Production in India THE CASE FOR IMPROVED ECONOMICS AND SUSTAINABILITY. Available at <https://media-publications.bcg.com/BCG-A-Strategic-Approach-to-Sustainable-Shrimp-Production-in-India-Jan-2020.pdf> [Accessed on 7 April 2023].
- ^{xciv} Hidden Harvest: Human Rights and Environmental Abuses in India's Shrimp Industry, Corporate Accountability Lab (March 2024), Available at: <https://corpaccountabilitylab.org/hidden-harvest> [Accessed on 19 May 2024].
- ^{xcv} Boston Consulting Group, 2020, A Strategic Approach to Sustainable Shrimp Production in India THE CASE FOR IMPROVED ECONOMICS AND SUSTAINABILITY. Available at <https://media-publications.bcg.com/BCG-A-Strategic-Approach-to-Sustainable-Shrimp-Production-in-India-Jan-2020.pdf> [Accessed on 7 April 2023].

- ^{xcv} Aqua Culture Asia Pacific, Review of India's 2021 shrimp crop. Available at https://issuu.com/aquacultureasiapacific/docs/aq22179_aap_sepoct_22_fa_lr/s/16897245#:~:text=Hatchery%20segment,280%2C000%20were%20imported%20in%202021. [Accessed on 7 April 2023].
- ^{xcvi} Global Seafood Alliance, 2020, How India became the world's top shrimp producer. Available at <https://www.globalseafood.org/advocate/how-india-became-the-worlds-top-shrimp-producer/> [Accessed on 7 April 2023].
- ^{xcvii} Shrimp Insights, 2024, Guide to the Indian Shrimp Industry, SHRIMP INSIGHTS Report Series. Available at <https://www.shrimpsights.com/report-series/guide-indian-shrimp-industry> [Accessed on 31 May 2024].
- ^{xcviii} Boston Consulting Group, 2020, A Strategic Approach to Sustainable Shrimp Production in India THE CASE FOR IMPROVED ECONOMICS AND SUSTAINABILITY. Available at <https://media-publications.bcg.com/BCG-A-Strategic-Approach-to-Sustainable-Shrimp-Production-in-India-Jan-2020.pdf> [Accessed on 7 April 2023].
- ^{xcix} Boston Consulting Group, 2020, A Strategic Approach to Sustainable Shrimp Production in India THE CASE FOR IMPROVED ECONOMICS AND SUSTAINABILITY. Available at <https://media-publications.bcg.com/BCG-A-Strategic-Approach-to-Sustainable-Shrimp-Production-in-India-Jan-2020.pdf> [Accessed on 7 April 2023].
- ^c Boston Consulting Group, 2020, A Strategic Approach to Sustainable Shrimp Production in India THE CASE FOR IMPROVED ECONOMICS AND SUSTAINABILITY. Available at <https://media-publications.bcg.com/BCG-A-Strategic-Approach-to-Sustainable-Shrimp-Production-in-India-Jan-2020.pdf> [Accessed on 7 April 2023].
- ^{ci} International Trade Union Confederation (ITUC), 2016, Precarious Work in the Asian Seafood Global Value Chain. Available at https://www.ituc-csi.org/IMG/pdf/precarious_work_in_the_asian_seafood_global_value_chain.pdf [Accessed on 19 May 2024].
- ^{cii} Boston Consulting Group, 2020, A Strategic Approach to Sustainable Shrimp Production in India THE CASE FOR IMPROVED ECONOMICS AND SUSTAINABILITY. Available at <https://media-publications.bcg.com/BCG-A-Strategic-Approach-to-Sustainable-Shrimp-Production-in-India-Jan-2020.pdf> [Accessed on 7 April 2023].
- ^{ciiii} WILLIAMS, Meryl J.; SYDDALL, Victoria. Women, fisheries technology and development: toward new research approaches. *Gender, Technology and Development*, 2022, 1-28. Available at <https://www.tandfonline.com/doi/abs/10.1080/09718524.2022.2125456> [Accessed on 19 May 2024].
- ^{civ} The Marine Products Export Development Authority (Ministry of Commerce & Industry, Govt. of India), Region-wise Pre Processing Plants With Capacity. Available at https://e-mpeda.nic.in/registration/Rpt_Region_wise_Peelingshed_With_Capacity.aspx [Accessed on 10 December 2023].
- ^{cv} International Trade Union Confederation (ITUC), 2016, Precarious Work in the Asian Seafood Global Value Chain. Available at https://www.ituc-csi.org/IMG/pdf/precarious_work_in_the_asian_seafood_global_value_chain.pdf [Accessed on 19 May 2024].
- ^{cvi} Shrimp Insights, 2024, Guide to the Indian Shrimp Industry, SHRIMP INSIGHTS Report Series. Available at <https://www.shrimpsights.com/report-series/guide-indian-shrimp-industry> [Accessed on 31 May 2024].
- ^{cvi} Hidden Harvest: Human Rights and Environmental Abuses in India's Shrimp Industry, Corporate Accountability Lab (March 2024), Available at: <https://corpaccountabilitylab.org/hidden-harvest> [Accessed on 19 May 2024].
- ^{cviii} Associated Press, 20 March 2024, AP finds grueling conditions in Indian shrimp industry that report calls 'dangerous and abusive'. Available at <https://apnews.com/article/india-shrimp-seafood-industry-labor-abuses-us-imports-e5b51878eafbb6e28977710b191eb7de> [Accessed on 1 April 2024].
- ^{cix} The Ocean Outlaw, India Shrimp Rife with Bondage, Hazards, and Stolen Wages. Available at <https://www.theoutlawocean.com/investigations/india-shrimp-a-growing-goliath/indian-shrimp-rife-with-bondage-hazards-and-stolen-wages/> [Accessed on 7 April 2024].

-
- ^{cx} Hidden Harvest: Human Rights and Environmental Abuses in India's Shrimp Industry, Corporate Accountability Lab (March 2024), Available at: <https://corpaccountabilitylab.org/hidden-harvest> [Accessed on 19 May 2024].
- ^{cxii} Boston Consulting Group, 2020, A Strategic Approach to Sustainable Shrimp Production in India THE CASE FOR IMPROVED ECONOMICS AND SUSTAINABILITY. Available at <https://media-publications.bcg.com/BCG-A-Strategic-Approach-to-Sustainable-Shrimp-Production-in-India-Jan-2020.pdf> [Accessed on 7 April 2023].
- ^{cxiii} The Marine Products Export Development Authority (Ministry of Commerce & Industry, Govt. of India), Region-wise Processing Plants. Available at https://e-mpeda.nic.in/registration/Rpt_Region_wise_Plants_With_Capacity.aspx [Accessed on 10 December 2023].
- ^{cxiii} The Marine Products Export Development Authority (Ministry of Commerce & Industry, Govt. of India), Region-Wise Storage Premises. Available at https://e-mpeda.nic.in/registration/Rpt_Region_Wise_Storages_With_Capacity.aspx [Accessed on 10 December 2023].
- ^{cxiv} European Commission Information Management System for Official Controls. https://webgate.ec.europa.eu/tracesnt/directory/publication/establishment/index#!/search?classificationSectionId=FISHERY_PRODUCTS&classificationSectionChapter=food&countryCode=IN&sort=country.translation Available at [Accessed on 10 December 2023].
- ^{cxv} Export Genius, 2017, Shrimp Exports from India – Top 2017 Shrimp Exporters in India. Available at <https://www.exportgenius.in/blog/shrimp-exports-from-india-top-2017-shrimp-exporters-in-india-132.php> [Accessed on 7 April 2023].
- ^{cxvi} International Trade Union Confederation (ITUC), 2016, Precarious Work in the Asian Seafood Global Value Chain. Available at https://www.ituc-csi.org/IMG/pdf/precarious_work_in_the_asian_seafood_global_value_chain.pdf [Accessed on 19 May 2024].
- ^{cxvii} Boston Consulting Group, 2020, A Strategic Approach to Sustainable Shrimp Production in India THE CASE FOR IMPROVED ECONOMICS AND SUSTAINABILITY. Available at <https://media-publications.bcg.com/BCG-A-Strategic-Approach-to-Sustainable-Shrimp-Production-in-India-Jan-2020.pdf> [Accessed on 7 April 2023].
- ^{cxviii} Global Seafood Alliance, 2020, How India became the world's top shrimp producer. Available at <https://www.globalseafood.org/advocate/how-india-became-the-worlds-top-shrimp-producer/> [Accessed on 7 April 2023].
- ^{cxix} The Marine Products Export Development Authority, 2023, Annual Report 2021-2022. Available at <https://mpeda.gov.in/wp-content/uploads/2023/01/Annual%20Report%20PDF-21-22.pdf> [Accessed on 10 December 2023].
- ^{cxx} United Nations, 2023, UN Comtrade Database. Available at <https://comtradeplus.un.org/> [Accessed on 7 April 2023].
- ^{cxxi} Boston Consulting Group, 2020, A Strategic Approach to Sustainable Shrimp Production in India THE CASE FOR IMPROVED ECONOMICS AND SUSTAINABILITY. Available at <https://media-publications.bcg.com/BCG-A-Strategic-Approach-to-Sustainable-Shrimp-Production-in-India-Jan-2020.pdf> [Accessed on 7 April 2023].
- ^{cxxii} The Marine Products Export Development Authority, 2023, Annual Report 2021-2022. Available at <https://mpeda.gov.in/wp-content/uploads/2023/01/Annual%20Report%20PDF-21-22.pdf> [Accessed on 10 December 2023].
- ^{cxxiii} Shrimp Insights, 2024, Guide to the Indian Shrimp Industry, SHRIMP INSIGHTS Report Series. Available at <https://www.shrimpsights.com/report-series/guide-indian-shrimp-industry> [Accessed on 31 May 2024].