

# Social conditions in the natural stone sector in China

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*The Steering Committee of the TruStone Initiative recognises and agrees that this study was performed by an independent organisation.*

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# 1 Management Summary

China is the world's second-biggest exporter of stone products exporting 9.96 million tons of stone in 2019, at an export value of over 100 million USD. This report is a desktop study commissioned by the International Covenant for Responsible Business Conduct in the natural stone sector, Trustone Initiative, based in the Netherlands. It aims to assess social risks in the supply chain of natural stone in China, and particularly in the provinces of Fujian and Shandong, which are prominent centres of natural stone mining and processing. Companies sourcing from China can use this report as the basis for their own due diligence. Government entities looking for buying responsible natural stone, can also use this report in their conversations with their suppliers. In this way it offers a joint assessment of the situation, as far as it can be perceived by a desk top study.

## Methodology

In order to explore the social compliance risks in the natural stone sector in China, extensive desktop research was carried out at several levels. Desktop research started with a deep dive into the domestic and international trade of stone and followed with a literature review of various stone industry related social risks in the present and future of the sector. Our research compared global standards to local regulations and enforcement and risks of non-compliance on the ground. Both English and Chinese language resources were used, and resources spanned government publications to independent research findings. The findings in this paper are limited to publicly available data, existing reports and published analysis. Therefore, it should be noted that there may be risks in the natural stone supply chain that are poorly documented in the public domain and for this reason, authors were not able to fully capture and describe these risks. Two local experts were interviewed, in these cases. They could provide on the ground insights where literature was lacking. These experts are professionals with many years of experience in reviewing incidents of human rights non-compliance in worker communities in the regions in question. In addition, very little literature has been released describing the effects of the 2019 / 2020 COVID-19 pandemic, and as a result, this topic is only lightly covered.

Due to the situation in China, it proved difficult to find the right stakeholders in those provinces to verify and explore the findings in this report more deeply, with a stakeholder engagement phase as was originally planned.

## China is a net importer of natural stone

Stone products exported to the Netherlands and Belgium with the highest value include: monumental stone and carved stone of granite; setts, curbstones and flagstones of natural stone; other worked articles of marble, travertine and alabaster, cement, concrete and artificial stone; and worked slate. with an overall trade value exceeding 205 million USD (China Custom, n.d.). However, China is a net importer of natural stone, with its main import of unprocessed or crudely processed stone blocks and main export of processed stone slabs or monumental stones. This makes the origin of stone less transparent. The imported stone material supplements the domestic stone material both in terms of quantity and variety. In 2016, about 319 million m<sup>2</sup> standard slab equivalent of marble and granite were mined domestically, while a total of 134 million m<sup>2</sup> of standard slab equivalent<sup>1</sup> of marble and granite were imported. Based on these data alone, about 70% of natural stone was mined domestically and 30% imported.

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<sup>1</sup> The trade data from UN Comtrade was quoted in tonnes (11.78 million tonnes). It was converted to square meter of equivalent slabs using the conversion ratio used by Hou & Zhou, 2017.

## Overview of the natural stone industry in China

China is rich in natural stone resources. Natural stone mining and processing sites are numerous and are characterised as generally small and widely distributed businesses across the country. However, due to the difficulty of transporting heavy stone, there are national and regional clusters, where processors come together around mines and transport hubs. China can be divided into 5 main regions, East Coastal region, Central provinces, Bohai Economic Rim, Northwest region and Southwest region in regard to the natural stone industry based on their different levels of development and geography. The East Coastal region has the highest production and trade volume and is the most developed industry cluster.

Stone industry enterprises in China may exceed 30,000 with nearly 5 million employees (Gao , Liao , Zhang , & Sun , 2014), including stone mining, stone processing, stone maintenance and trade etc.. Stone industry enterprises are majority privately owned and only 0.3% of enterprises reported were large and medium-sized enterprises, while 99.7% of them were small and micro-enterprises (Gao , Liao , Zhang , & Sun , 2014). The current number of stone companies might be smaller than that in 2016, as many small-hold companies who failed to comply with environmental regulations were shut down in recent years.

The stone supply chain starts with mining and quarrying of the stone followed by processing and then onto domestic or international retail. Transport of stone is needed between all stages of the supply chain. Due to the weight, stone processors, and even retailers tend to cluster around mines in order to reduce the need to transport product too far. Sub-contracting at each stage of the process is very common, meaning that a stone product will pass through many independent hands before it reaches the final consumer.

### Natural stone worker profile

Limited research could be found focusing on the demographics of workers in the stone industry. However, we can still infer the following from various sources:

- **Skills level** – Due to the manual, labour-intensive characteristic of the roles, level of skill needed ranges from little to no skills for quarrying and transporting to the need for mid to high-level skills needed for processing. Most workers do not have specialised education and usually learn the relevant skills through on-the-job training under the coaching of more experienced workers.
- **Employment** – The form of employment contract offered to workers in the industry depends on the role of the worker. Auxiliary workers are often provided with a fixed daily rate. However, many workers appear to be sub-contracted or paid on a piece-rate basis. Written contracts do not seem to be the norm.
- **Origin** - A substantial proportion of the workers in the stone industry are domestic migrant workers who come from rural areas.
- **Age group and gender** – Less young people are entering the industry and most workers are likely to be transient, casual workers. In addition, most of the workers are male, especially in stone mining and processing.

### Summary of supply chain social risks

In order to conduct complete and balanced research, our exploration of the social risks in the sector was carried out along the following supply chain risk categories, namely Business ethics and

management systems, Labour, Health and safety and Environment. Within these categories, the following risks were more deeply investigated, and this report deals with each of these risks in turn:

Our findings are summarised below and detailed in the following report sections. Our findings are influenced by the socio-economic context of China, China's regulatory landscape, the demographics of the workers as well as the inherent characteristics of the supply chain.

### ***Business ethics and management systems***

- **Documentation and traceability** –With thousands of small to micro-enterprises, there is a lack of documentation to trace movement of stone products back through their supply chain. Also, the common use of sub-contracting in all stages of the supply chain makes it difficult to identify and monitor social risks. A third factor that contributes to the lack of traceability is the substantial proportion of the natural stone processed in China with a foreign origin, from countries such as India, Turkey and Egypt. These countries are known to have many social risks. The lack of traceability on the origin of exported stone itself creates challenges in accurately assessing the true extent of supply chain risks.

### ***Labour***

- **Worker contracts** - Our research appears to show that many workers in the stone industry are considered "self-employed" and paid on a "piece rate". This exposes these individuals to the risk of poor working conditions, such as long hours and low pay when compared to the number of hours worked to produce the "pieces". The weakness of the worker union system in China may leave workers unsupported in these labour challenges and without a way of voicing their grievances. The type of contract workers in the stone industry have is easy to check for buyers.
- **Migrant workers** – As a large majority of workers in the natural stone sector appear to be domestic migrant workers. China's household registration system (or "hukou system") limits people's access to social welfare services in their own jurisdiction but not others. Therefore, migrant workers tend to be associated with lower pay, very low social insurance contributions and poorer living conditions. Although restrictions on migrant workers' access to social services have been relaxed more recently, this historical disadvantage can still be felt though the general income and education levels of migrant workers versus residents.
- **Wages and benefits and working hours** - Due to the lack of formal contracts and tendency to pay certain workers on a piece-rate basis, it is challenging to accurately understand if wages paid are fair. However, we did find reports that workers in the processing of natural stone earn a living wage, as they tend to be skilled workers and high in demand. In addition, there is an extremely low participation rate of social insurance by employers in the stone industry and the lack of monitoring of participation by enforcement agencies poses a key social risk. The lack of transparency, monitoring and regulation of this benefit leaves workers vulnerable to exploitation and misinformation.
- **Child labour** - Our research has suggested that child labour appears to be a lesser risk in today's China than it may have been in decades past. The growth of the Chinese economy increases family income and improves the quality and access to education, which helps to mitigate the root causes of child labour. In addition, the nature of the work under review tends to require both strength and skill, meaning that child labour would add very little value. Although there was no evidence found that juvenile labour is being used, there is a risk here and due to the dangerous working conditions, this may be considered illegal.

- **Forced labour** – Forced labour can be a concern in China, especially due to the recent Withhold Release Orders from the US, and upcoming similar regulation from Europe and Australia. However, our investigations found that prison labour as well as Uighur labour tends to be found in large and/or state-owned businesses, whereas the stone processing industry in China is made up of thousands of small to micro privately-owned (almost one-man band) businesses, which could mean exposure to this risk is lower. Recruitment fees are another indication of forced labour risk. Our research seems to show that a small proportion of workers may use recruitment agencies, because the ease of communication and travel in the country seems to allow workers to find their work directly with employers. Currently in many places, demand for workers actually outstrips supply, which leads to better benefits and working conditions in order to stay competitive. However, as in any manual labour industry in any market, buyers must remain vigilant to the potential for these human rights violations to occur.
- **Freedom of Association** - Trade unions are allowed in China, however, their activities are significantly restricted. They are considered ineffective, as workers cannot join a trade union of their choosing, and there is just one state-union allowed. Although there is also no right to strike in China, thousands of peaceful strikes by workers occur each year.
- **Discrimination** – Discrimination on the basis of gender, physical abilities and sexual orientation does seem to be of concern in the country and young, healthy males are very likely actively selected for in the recruitment process.

#### ***Health and safety***

- **Occupational health and safety** - Our findings show that workers are exposed to a range of health and safety hazards during stone mining and processing, which may lead to workplace injuries or occupational diseases. Silicosis, a chronic severe lung disease caused the inhalation of silicon dust, is identified as the primary Occupational Health and Safety (OHS) risk in the stone industry.
- **Road and transport safety.** Stone is a heavy product and so transporting it comes with health and safety risks. These risks include risk of injury when loading and unloading, as well as road safety risks to drivers and assistants when in transit.

#### ***Social risks related to the Environment.***

Our findings show that there are numerous environmental impacts in the natural stone industry and these impacts spark environmental disputes at the community level. Environmental issues include dust pollution, noise pollution, damage to landscape and vegetation, solid waste pollution and water pollution. These disputes can lead to bad relations between communities and companies and cause disruption to operations, which may have financial and reputational consequences further up the supply chain. In addition, as environmental regulations tighten within China, many mines have been closed due to environmental non-compliance, adding to operational disruptions throughout the supply chain.

## Recommendations

- Work together to increase transparency. Buyers must be aware of the potential risks in their supply chains and move to mitigate them. If buyers want to be fully comfortable that the risk of social non-compliances in their supply chain is low, an extensive tracking and tracing exercise throughout the supply chain, including sub-contractors, may be needed. This may involve self-assessment questionnaires, internal or third-parties audits. This exercise should focus efforts on the risk areas summarised in this report. It may also involve engagement with business associations, civil society and international organisations.
- Involve Chinese suppliers in this exercise. They need to have this information as well. There is a growing urgency for Chinese companies to show that they are conducting due diligence as well. The China Chamber of Commerce of Metals Minerals and Chemicals Importers & Exporters (CCCME) Guidelines for Social Responsibility in Outbound Mining Investment for example call for companies to 'observe the UN Guiding Principles on Business and Human Rights during the entire life-cycle of the mining project'
- Work together with stakeholders in China to create learning forums on human rights, tailored to Chinese business needs.
- Consider phasing out of business with Chinese companies who are not willing to cooperate and who are not transparent.
- Questions to Chinese suppliers may be:
  - Where is the processing of the stone taking place?
  - Where has the stone been mined? Does it come from China or abroad? Suppliers should know the origin of the stone.
  - What have you done to identify the risks in your supply chain?
  - Do workers in processing, mining, transport have a contract and does that make them eligible to social benefits?
  - Are you aware whether the wages constitute a living wage?
  - What do you do and what do your suppliers do to protect the health and safety of the workers?
  - Do you or your suppliers work with migrants and do you know if they have access to social benefits?
  - Do you have an independent and accessible grievance mechanism that workers can use to file complaints on social issues?



## 2 Introduction: the objective of the report

China is one of the most significant exporters of natural stone products to the Netherlands and Belgium.

This report investigates the potential social supply chain risks in China of the natural stone market in the Netherlands and Belgium. We seek to understand the root causes of the key social risks in the supply chain to better inform foreign companies how they may be able to use their influence to manage and mitigate those risks. The research takes a country-wide view, with two provinces, Fujian and Shandong, highlighted to capture more nuanced local context.

## 3 Socio-economic overview of China

### 3.1 GDP

China is the world's most populous nation, with a total population of 1.40 billion in 2019 (National Bureau of Statistics of China, 2020). Since China began to open up and reform its economy in 1978, GDP growth has averaged almost 10% a year and has had significant implications for the country's population. As a result of the sustained economic growth, more than 850 million people have been lifted out of poverty and targeted programs implemented by the Chinese government have significantly improved living standards (World Bank Group, 2020). Today, China is an upper-middle-income country and the world's second-largest economy. But China's per capita income is still only about a quarter of that of high-income countries, at USD 10,259 per capita in 2019 (National Bureau of Statistics of China, 2020). About 373 million Chinese are living below the upper-middle-income poverty line of US\$5.50 (2011 PPP) a day. Income inequality has improved over the last decade but remains relatively high (World Bank Group, 2020).

The overall labour force participation rate (% of population ages 15 or more) was at 70.9% in 2019, 60.5% for females and 75% for males. About 25.4% of Chinese workers had been employed in agriculture, 28.2% in secondary industries and 46.4% in tertiary industries (World Bank Group, n.d.). The unemployment rate was at 3.6% in 2019, lower than the world average of 5.4% and the average of upper middle-income countries for 5.9% (World Bank Group, n.d.).

### 3.2 Trade

China is the world's largest exporter, with exports amounting to RMB 17.2 trillion (USD2.49 trillion) in 2019 and contributing to 17.4% of GDP (National Bureau of Statistics of China, 2020). China also has one of the largest consumer markets in the world and is the world's second-biggest importer of goods, amounting to RMB 14.3 trillion (USD 2.07 trillion) of import in 2019 (National Bureau of Statistics of China, 2020). The top export markets of China include European Union (17.2% of total export), USA (16.7% of total export), ASEAN (14.4% of total export), Hong Kong (11.2% of total export), Japan (5.7% of total export) and South Korea (4.4% of total export) (National Bureau of Statistics of China, 2020). The top categories of export include information communication technology products (e.g. smartphones, computers, integrated circuits and their parts) (National Bureau of Statistics of China, 2020).

### 3.3 National governance

China issues 5-year development plans highlighting government priorities in terms of economic and social development, the most recent of which is the 13th Five Year Plan from 2016 - 2020. This plan highlights the development of services and measures to achieve the following major objectives (Central Compilation and Translation Press). Within the 13<sup>th</sup> Five Year Development Plan, the natural stone sector is most significantly affected by the policies around environmental regulation, mining rights and coordinated development among regions, which will be elaborated in later sections of the report.

### 3.4 Anti-corruption

President Xi launched an aggressive nation-wide anti-corruption campaign targeting party, government, military and state-owned company officials. The campaign has led to the investigation and prosecution of thousands of officials across the country (BBC, 2018).

However, the country's position in the Corruption Perceptions Index, the annual survey of the world's most and least corrupt countries carried out by Transparency International, has remained fluctuating around 40 (out of 100) for the last few years, ranking 80 out of 180 countries. Comparing different countries in the region, China is perceived to be considerably more corrupt than Singapore (score 85), Japan (score 73) and South Korea (score 59) (Transparency International, n.d.).

### 3.5 National health insurance

In 2018, 95% of China's population was covered by the national healthcare insurance (National Healthcare Security Administration, 2019). For some such medical benefits are restricted geographically to only their place of birth due to the hukou system. Therefore, it is important for domestic migrant workers to obtain medical insurance through their employment, so they are entitled to subsidised healthcare in the city of their work.

The participation rate for employer-sponsored medical insurance is not 100% despite being a legal requirement. In 2014, the participation rate for rural migrant workers was merely 17.6% (National Bureau of Statistics, 2015).

The quality and access of that healthcare are different depending on the province, with urban provinces seeing considerably better quality than remote ones (China Power, n.d.).

#### 3.5.1 National Social Regulation

China has ratified 4 out of 8 of the fundamental conventions by the International Labour Organisation (ILO), including one on equal remuneration, on anti-discrimination and two related to child labour. However, those fundamental conventions related to the abolition of forced labour and freedom of association and collective bargaining have not been ratified (International Labour Organisation, n.d.). However, when economic slowdown occurred in the 2010s, senior government officials were keen to roll back labour rights in a bid to create a more pro-business legal environment (China Labour Bulletin, 2020), which might explain why many current labour laws are not strictly enforced.

#### 3.5.2 National Environmental Regulation

In 2018, two ministries were given the main environmental responsibilities: the Ministry of Ecological Environment (MEE), and the Ministry of Natural Resources (MNR). MEE serves as the country's top regulator of pollution, from all sources, while MNR is a natural resource owner and manager. At the local level, a similar reform has been carried out.

In 2017, MNR published a set of Industry Standards for Construction of Green Mines for nine types of minerals (including non-metals, chemicals, gold, coal, sandstone, onshore oil and gas, cement, limestone, metallurgy, non-ferrous metals, etc.), which provided the regulatory foundation for China's mining industry (Ministry of Natural Resources of China, 2018). A similar set of industry standards for natural stone is currently underway to be developed. Once the Standards is published, natural stone mines will be rated based on a number of areas, including, mine environment, resource development methods, comprehensive utilisation of resources, energy-saving & emission-reduction, scientific & technological innovation, as well as enterprise management and image (Hou , Chinese stone green mine construction enters the fast lane - The industry standard of "Code for Construction of Green Mines in Stone Industry" passed the review in Beijing, 2020). Mines that pass the assessment will be credited with the title of "Green Mines" and will be eligible for various government incentive and support schemes.

These tightening of environmental laws and regulations in China will put more scrutiny on stone companies' environmental performance. Multiple companies that have failed to comply, particularly the smaller mines and processing workshops, have been shut down or subjected to significant fines, causing disruption to operations and further instability in the sector, which has knock-on social impacts. Moreover, environmental pollution is a major source of dispute with the local community.

## 4 The natural stone sector in China

### 4.1 Size and state of the sector

Since 2016 both the domestic market for natural stone, as well as the international trade, is declining. Also, the production capacity decreased as many mines closed down due to environmental regulations. India has taken over China as the biggest exporter of natural stone.

Revenue stone industry (2017):	42.58 billion RMB
Profit stone sector:	31.8 billion RMB
Production of granite:	476 million m <sup>2</sup>
Production of marble:	269m <sup>2</sup>
Contribution to national GDP:	0,5%

There are more than 200 stone markets in the country, which contribute to 50% of stone trade and house more than 70% of stone companies. In general, there are three main uses of natural stone (Hou, Factors and characteristics affecting the development of stone machinery in China, 2019):

- as construction materials for buildings and gardens;
- in interior and exterior decoration
- as monumental or ornamental stones, such as stone carving and tombstones

Among these, construction consumes the largest quantity of natural stone (Hou, Factors and characteristics affecting the development of stone machinery in China, 2019).

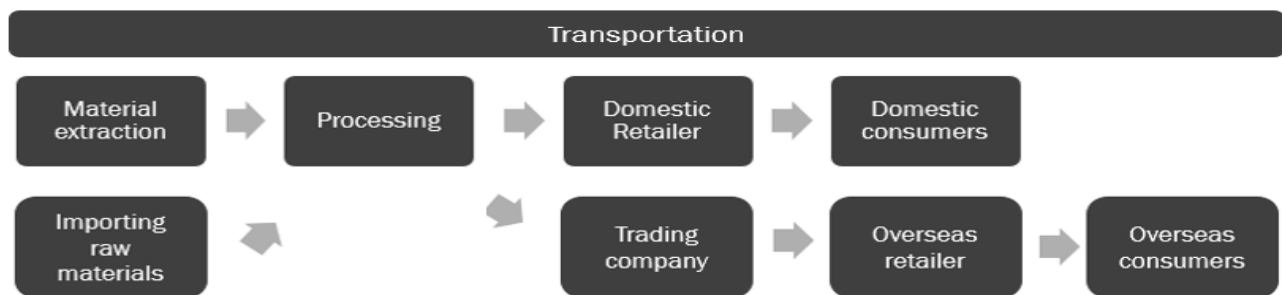


Figure 1 Value chain of the natural stone sector (Xu J. , 2009).

The chart above illustrates a typical value chain structure of the natural stone industry (Xu J. , 2009), from material extraction, to processing, to retail either domestically or for export and involves multiple modes of transport during the process. The following sections will give a concise illustration of the processes for each of the stages.

## 4.1.1 Mining

### Number and type of mines

The most common types of natural stone mines in China are granite, marble and slate. Each category can be divided into multiple rock types and sub-categories based on hardness, colour and pattern (Qiu, Li, Fan, & Zhang, 2020).

As of the end of 2018, there were about 2,150 stone mines in China for over 12 types of stone (Qiu, Li, Fan, & Zhang, 2020). Among these mines, marble and granite mines were the most numerous, amounting to 1,002 and 481 sites respectively. In addition, there were 107 slate mines, 121 diabase mines, 23 basalt mines, 244 limestone mines and 46 serpentinite mines. Size-wise, there were 55 large-scale mines, 90 medium-sized mines and 2,008 small mines, accounting for 2.6%, 4.2%, 93.2% of total mines respectively. (Qiu, Li, Fan, & Zhang, 2020). It should be noted that there can be multiple companies holding mining concession in one mining site, each taking a smaller area (KK News, 2018).

In recent years, many provinces, particularly in the Eastern Coastal area, have closed down stone mines that do not meet the environmental standards. Among them, granite production is more severely affected as it involves more small-hold workshops (Wang, Rong, & Liu, 2020). For example, multiple granite mines in Changtai and Fuding (Fujian), Shangrao and Cenxi (Jiangxi), Xingyang and Suizhou (Henan), Longsheng (Inner Mongolia) were suspended for remediation or even permanently shut down in 2019 (Wang, Rong, & Liu, 2020). As a result, stone quarries moved landward, to the Western and Central provinces. Meanwhile, some investors also turn overseas and import raw materials overseas (Hou, Factors and characteristics affecting the development of stone machinery in China, 2019)

### Mining methods:

For stone quarrying, there are 5 main methods used in China (Jiang, Zhang, Wang, Guo, & Song, 2014):

- **Manual methods**, including manual wedge splitting and flame cutting, were generally phased out due to low efficiency, high cost and uneven cutting surface. Manual methods were only used sporadically in small family-owned mines or for very specific tasks in a limited capacity.
- **Drilling and blasting**, during which small holes are drilled and explosives are used to cut off blocks of stone material. There is a wide range of available techniques under this category, each undergoing constant improvement for more controlled blasting impact and less damage to the structural integrity of the stone material itself. The most commonly used technique in China is smooth blasting. Since explosives are used under this method, which is a controlled substance in China, the process is closely monitored and regulated by the State Administration of Work Safety.
- **Static cracking**, which cracks the stones using the principle of static expansion of cracking agent mixing water, is a safe, low-noise and low-dust and no-splitter method. However, the downside of this method is that it is slow, costly and sensitive to surrounding temperatures.
- **Mechanical sawing**. Diamond beaded wire cutting and disc sawing are the two most commonly used techniques. Mechanical sawing is considered to one of the more advanced techniques and is currently widely used in China.

## 4.1.2 Processing

### Number and type of processing companies

Similar to the stone mines, most stone processing companies, especially granite, are also small-sized (Hou, Factors and characteristics affecting the development of stone machinery in China, 2019). Large clusters of stone processing companies usually form around quarry areas. The numerous small players

not only have higher inherent social risks and have limited capacity in managing these risks, but also make it harder to track, manage and monitor the associated risks in the supply chain.

### **Processing methods**

Some of the most common procedures involved during the processing of stone include sizing, shaping, planing (removing irregularities from the stone surface), carving, finishing (through sandblasting, burning or bush hammering), polishing (enhancing the look of the final product) and repairing (repairing any cracks).

In recent years, the development and manufacturing of stone processing equipment grew rapidly, which expedited the mechanisation of the stone processing industry. Chinese stone processors developed a series of mechanical equipment such as stone sawing, automatic polishing, disc sawing and block loading machines (Stone World, 2015). There has also been rapid development in terms of digitalisation of equipment and computer-controlled system, particularly in areas such as Fujian, Shandong and Guangdong, where companies are able to produce state-of-the-art stone processing machinery (Hou, Factors and characteristics affecting the development of stone machinery in China, 2019). Under support of the government well established stone processing centers such as Fujian, Shandong and Guangdong have built a number of industrial parks. These set out specific requirements on clean productions and consolidated waste management. This demonstrates the beginning of an industry transformation towards a more standardised and higher value adding model (China Stone chamber, 2016)

There has also been a change in customer preference for higher-quality products as the real estate market shifts to higher-end renovation and interior design. Customers demand for more artistic, higher-quality, more diverse stone products with more stringent requirements on shape, precision and size of processing. Companies are accelerating the technological transformation of their production line, investing in smart, automatic production systems.

Overall, processing methods vary widely depending on the size of the business. Most stone processing has moved away from purely manual processes. The greater emphasis on quality incentivises product innovations and improvement (Hong , 2019).

### **Subcontracting**

Many stone processing companies subcontract part of their production to other companies or subcontract specific parts of the production process (Xu J. , 2009). In Western Shandong province, for example, some companies subcontract the cutting of raw blocks into slabs to small family enterprises. Some large producers also buy additional finished products from others for export. Therefore, large companies can have a turnover of millions of euros, yet rarely employ over a thousand workers directly (SwedWatch, SOMO and IHLO, 2008), other than a few managerial positions, who are usually also family members. In these situations, most of the production process is outsourced to contractors (Xu J. , 2009).

Some larger companies are partially vertically integrated. They have invested in quarries, process the blocks into finished products in their own factories, and subsequently export them directly. However, even vertically integrated companies usually also buy from independent quarries, especially if they offer products in a large variety of different types of stone. Inversely, some quarries are licensed and used by three or four different producers. Most producers stock different blocks, including imported stone types (if they offer them), to shorten the lead time (SwedWatch, SOMO and IHLO, 2008).

Most companies focus on natural stone processing, while only a few bigger companies invest in the upstream or downstream supply chain. For those investing upstream, some companies own stone quarries domestically; while others directly imported unprocessed stone blocks overseas, this is most notably seen in Fujian NanAn. This effectively reduces the risks of disruption in the supply of raw material and reduces material cost.

### 4.1.3 Retail

The processed stone products are then packaged and transported to the domestic or international market. Domestically, stone products are usually traded in regional stone markets where hundreds of retailers congregate in one venue to offer customers a one-stop shopping platform for natural stone products (China Stone Chamber, 2016). For international trade, a large majority of exports to Europe are handled by trading companies and agents that buy from many different producers (SwedWatch, SOMO and IHLO, 2008).

### 4.1.4 Transport

Stone products are often transported through maritime shipping, by rail, by road, or a combination of these methods. Stone is almost never transported via air (Feng, 2017), due to its weight. Transportation over the sea or rail is usually cheaper but slower, which is preferred for long-distance and high-volume transportation. Transportation by road is convenient, flexible and fast, but more expensive (Rong , He, & Li, 2018). Domestically, stone is mainly transported by road or rail, and supplemented by shipping over sea or rivers. Internationally, stone is transported mainly through maritime shipping, unless it is to a neighbouring country, in which case it may be transported through rail or road (Rong , He, & Li, 2018). Most international maritime shipping is through container shipping, except importing unprocessed granite blocks from India and Brazil, where usually dry bulk shipping<sup>2</sup> is used instead.

Along the supply chain, raw material and finished products are transported between different players. In the market, there are a few main forms of arrangement for road transportation:

- Sub-contracted to a transportation company or an organised truck fleet
- Sub-contracted to individual drivers who are also owners of the trucks.
- For bigger companies, they might have their own trucks and hire drivers as employees or contractors

According to estimation, logistics costs account for more than 50% of the total cost of stone. Because of these cost implications, eastern coast regions such as Fujian, Shandong and Guangzhou have a significant comparative advantage as they are more well-connected by mass transportation and are much more accessible through maritime shipping, which can translate into significant cost saving in transportation.

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<sup>2</sup> Dry bulk shipping is usually cheaper than container shipping, however, there is higher risks of physical damage to the cargo as it is not protected by a container. Therefore, dry bulk shipping is only used in the transportation of granite, which is hardier and less prone to cracks than marble.



## 4.2 Workers' profile in the stone industry

### Demographics

The most up to date source of the number of employees in the stone industry could be found, in a 2016 article stating that the total number of stone industry enterprises in China exceeded 30,000 with nearly 5 million employees (Gao , Liao , Zhang , & Sun , 2014), including stone mining, stone processing, stone maintenance and trade etc.. This number is generally corroborated by the report that the stone sector supports about 0.5% of the national GDP (China Stone Chamber, 2016). Only 0.3% of enterprises reported were large and medium-sized enterprises, while 99.7% of them were small and micro-enterprises (Gao , Liao , Zhang , & Sun , 2014). The current number of stone companies might be smaller than that in 2016, as many small-hold companies who failed to comply with environmental regulations were shut down in recent years.

Limited research could be found focusing on the demographics of workers working in the stone industry. However, we can still infer the following from various sources:

- **Skills level** – Workers are employed in various tasks such as quarrying, cutting, drilling, mechanical and hand processing, packing, guarding, transporting and driving. Almost all tasks are manual and labour-intensive. Level of skill needed ranges from little to no skills for quarrying and transporting to the need for mid to high-level skills needed for processing.
- **Contracting** – The form of employment contract offered to workers in the industry depends on the role of the worker. Auxiliary workers are often provided with a fixed daily rate. However, many workers appear to be sub-contracted or paid on a piece-rate basis. Written contracts do not seem to be the norm. A substantial proportion of the workers in the stone industry are migrant workers (Xu J. , 2009; Wu , Yang, Wang, Zhou, & Wang, 2018; Gao , Liao , Zhang , & Sun , 2014; Love Save Pneumoconiosis, 2020), although the exact percentage does not appear to be reported..
- **Age group** - Increasingly, it is harder for companies to attract, recruit and retain younger workers in this industry. As the Chinese economy develops and more working opportunities emerges, fewer and fewer young people are willing to work in the stone industry, whose nature of work is physically demanding and the working environment often unpleasant. (Yan, Talking about the talent drain and countermeasures of stone enterprises, 2010). This indicates that most workers are likely to be transient, casual workers, rather than individuals seeking a career in the industry.
- **Gender** - Most of the workers are male, especially in stone mining and processing. This is because the work is considered labour-intensive, physically strenuous and requires long working hours. Employers often prefer to hire male workers who are usually perceived to be better at handling these harsh conditions (Yan, Talking about the talent drain and countermeasures of stone enterprises, 2010).

## 4.3 International trade

### Export

In 2019, China exported 9.96 million tons of stone<sup>3</sup>; granite slabs and products accounted for 79.2% of the export share. South Korea, Germany and the United States are the top three destinations for China's stone exports; The trade war with the US (drop of 38.8% of China's stone exports to the US), shifted the focus of the natural stone market to new markets such as the Middle East and Southeast Asia (Wang , Rong, & Liu, 2020). Netherlands and Belgium accounted for 2.8% and 1.7% of China's stone export in terms of volume (China Stone Net, 2020). Below is a table showing the top 10 exporting destinations of natural stone from China (China Stone Net, 2020). In 2019, the stone products exported to the Netherlands and Belgium with the highest value included<sup>4</sup> monumental stones and carved stone of granite; setts, curbstones and flagstones of natural stone; other worked articles of marble, travertine and alabaster, cement, concrete and artificial stone; and worked slate (China Stone Net, 2020).

*Table 1 Top exporting destinations of natural stones from China*

Top exporting destinations	Export in 2019*		
	Quantity (mil tonne)	% total quantity	% change from 2018
South Korea	2,63	26%	-10%
Germany	0,66	6,6%	-11%
USA	0,63	6,4%	-39%
Japan	0,56	5,6%	-3%
Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu	0,44	4,4%	1%
Vietnam	0,42	4,2%	1%
Hong Kong	0,31	3,2%	-28%
Netherlands	0,28	2,8%	9%
UK	0,22	2,2%	-11%
Australia	0,20	2,1%	-6%
Belgium (ranked 13th)	0,17	2,0%	-27%
<b>Global overall</b>	<b>9,96</b>	<b>100%</b>	<b>-10%</b>

The main ports of export, which has export value above USD 100 million included (in the descending order) Xiamen, Shenzhen, Qingdao, Guangzhou, Tianjin, Fuzhou, Shanghai and Wuhan in 2017. Together, they accounted for 91.8% of total export (China Stone Chamber, 2018).

### Import

<sup>3</sup> Excluding travertine and granite in granules, chippings and powder, including various types monumental stones; slabs of marble, granite, slate and limestone; travertine and granite in granules, chippings and powder; setts, curbstones and flagstones; artificial stones.

<sup>4</sup> The descriptions quoted here are from the HS (Harmonised System) which uses a commodity code internationally for recording international trade. The Harmonized System is an international nomenclature for the classification of products, which allows countries to classify traded goods on a common basis for customs purposes. At the international level, the Harmonized System (HS) for classifying goods is a six-digit code system. The six digits can be broken down into three parts. The first two digits (HS-2) identify the chapter the goods are classified in, e.g. 68 = Articles of stone, plaster, cement, asbestos and mica. The next two digits (HS-4) identify groupings within that chapter, e.g. 6802 = worked monumental or building stone (except slate) and articles. The next two digits (HS-6) are even more specific, e.g. 680293 = monumental stones and carved stone of granite.

Most imported products are crudely processed stone blocks which will be further processed in China for domestic consumption or export again (Hou, Factors and characteristics affecting the development of stone machinery in China, 2019).

*Table 2 Top 10 importing origins of natural stones into China*

Top 10 importing origins	Import in 2019			Main products
	Quantity (mil tonne)	% total quantity	% change from 2018	
India	4.31	31%	-3%	Granite crude or roughly trimmed
Turkey	3.37	24%	-14%	Marble and travertine crude or roughly trimmed, or sawed into blocks and slabs
Portugal	0.81	5.8%	54%	Sandstone; marble and travertine crude or roughly trimmed
Egypt	0.79	5.6%	-12%	Marble and travertine sawed into blocks or slabs
Brazil	0.21	5.1%	-16%	Granite crude or roughly trimmed, or sawed into blocks and slabs
Italy	0.63	4.5%	0%	Marble and travertine crude or roughly trimmed, or sawed into blocks and slabs; worked article of marble , travertines and alabaster
Iran	0.61	4.4%	-21%	Marble and travertine crude or roughly trimmed, or sawed into blocks and slabs; Cement, concrete and artificial stone
Vietnam	0.46	3.2%	73%	Marble and travertine sawed into blocks or slabs
Greece	0.28	2.0%	-37%	Marble and travertine crude or roughly trimmed, or sawed into blocks and slabs
Pakistan	0.23	1.6%	15%	Marble and travertine sawed into blocks or slabs
<b>Global overall</b>	<b>14.09</b>	<b>100%</b>	<b>-4%</b>	

The main ports of import include (in the descending order) Xiamen, Guangzhou, Tianjin, Shanghai and Shenzhen in 2017. Together, they accounted for 97.8% of total import (China Stone Chamber, 2018).

Based on the above, overall, China is a net importer of natural stone, with its main import as unprocessed or crudely processed stone blocks and main export as processed stone slabs or monumental stones.

In 2016, about 319 million m<sup>2</sup> standard slab equivalent of marble and granite were mined domestically (Hou & Zhou, Data and analysis of China's stone import and export in 2016, 2017), while a total of 134 million m<sup>2</sup> of standard slab equivalent<sup>5</sup> of marble and granite were imported (United Nation Trade Statistics Branch, n.d.). Based on these data alone, about 70% of natural stone was mined domestically and 30% imported. The high proportion of imported natural stone, a large quantity of which was countries with known high social compliance risks, warrants a closer examination of the provenance of imported natural stone into the Netherlands and Belgium.

<sup>5</sup> The trade data from UN Comtrade was quoted in tonnes (11.78 million tonnes). It was converted to square meter of equivalent slabs using the conversion ratio used by Hou & Zhou, 2017.

## 4.4 Geographical distribution

China is rich in natural stone resources. The mining and processing sites are numerous, generally small and widely distributed across the country (China Stone Chamber, 2016). China can be divided into 5 regions regarding the natural stone industry based on their different levels of development and geography (Figure 3).

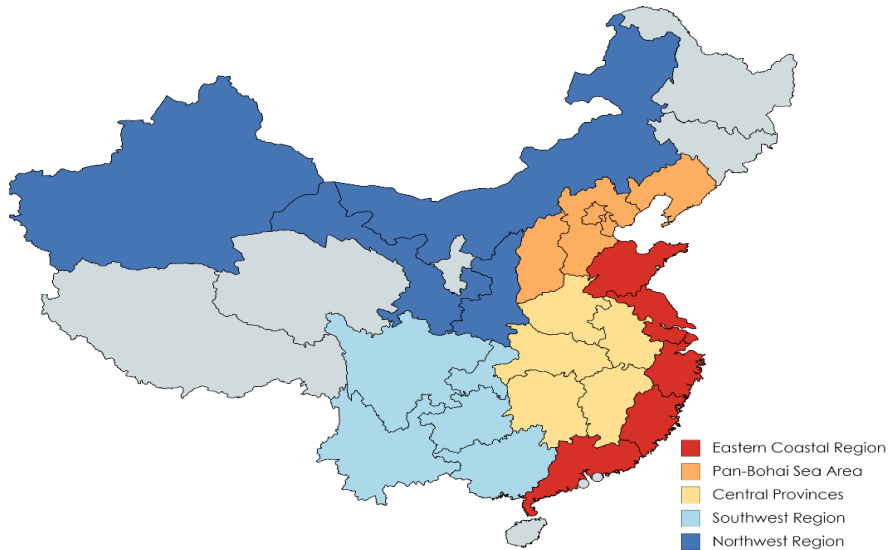


Figure 2 Natural stone industry clusters and regions

### A. East Coastal region: Shandong, Jiangsu, Zhejiang, Fujian, Shanghai, Guangdong

The East Coastal region has the highest production and trade volume and is the most developed industry cluster. It is rich in mining resources, especially granite and marble (China Stone Chamber, 2016) (Liu, Li, Liu, & Yang, 2003) (Zhe, 2010). It is also the leading region in terms of management structure, mining practices, as well as the centre of trade, logistics and R&D for the stone industry, playing a key role in promoting industrial transformation and upgrading (China Stone Chamber, 2016) (Su, 2016). Shuitou NanAn and Xiamen (in Fujian), Yunfu (in Guangdong), Laizhou (in Shandong), Shanghai are identified as the key international trade centres to be further developed in the "13th Five-Year Plan" (2016-2020), with a focus on trade, international convention, technological R&D, process industrialisation and innovative value-add (China Stone Chamber, 2016). Fujian, Shandong and Guangdong are notably the key natural stone centres in terms of mining, processing, trading and innovation. In 2015, this region contributed to 65.6% of national granite output and 32.3% national marble output (Tian, 2016).

### B. Central provinces: Henan, Hubei, Hunan, Jiangxi, Anhui

The central provinces are a highly populous area with many cities which fuel a strong domestic demand (China Stone Chamber, 2016). Per "13th Five-Year Plan", Macheng (in Hubei) is and will continue to function as a regional centre, tapping on the convenience of river transport system supported by the Yangtze River. The key focus of this region between 2016 and 2020 is conducting mining in an environmentally responsible manner as well as to refining processing for a higher-end market (China Stone Chamber, 2016).

### **C. Bohai Economic Rim: Liaoning, Shanxi, Hebei, Tianjin, Beijing**

The natural stone sector in the Bohai Economic Rim is primarily driven by a strong domestic market. Beijing and Tianjin are established stone centres, tapping on the growth opportunities brought by the integration of "Beijing-Tianjin-Hebei Economic Region" and the revival of industrialisation in the northeast provinces. This natural stone trade in this region is facilitated by a good system of river and sea transport (China Stone Chamber, 2016). In 2015, Bohai Economic Rim and central provinces together contributed to 21.1% of national granite output and 31.6% national marble output (Tian, 2016).

### **D. Northwest region: Xinjiang, Inner Mongolia, Shaanxi, Gansu**

The natural stone sector is picking up in the northwest region. With its vast area and rich stone reserves, many promising natural stone resources are still under exploration (China Stone Chamber, 2016) (Zhe, 2010) (Tian, 2016). Tapping on opportunities brought by initiatives such as "Western Development" , "Poverty Alleviation for Ethnic Minorities" and "Belt and Road", Xinjiang and Inner Mongolia are identified as emerging stone processing and trading centres to cater to the increasing domestic and international market in the "13th Five-Year Plan" (China Stone Chamber, 2016).

### **E. Southwest region: Guizhou, Guangxi, Yunnan, Chongqing, Sichuan**

The natural stone sector is picking up in the southwest region. The mountainous southwest is rich in mining resources (especially granite), many of which are still in the process to be explored (China Stone Chamber, 2016) (Tian, 2016). Tapping on the comparative advantage in geographical locations and growing economy in the southwest, a few regional stone centres such as Sichuan YaAn, Guizhou Anshun and Guangxi Hezhou have been established (China Stone Chamber, 2016). Per the "13th Five-Year Plan", Anshun, Hezhou and Chongqing are to be developed into regional stone centres for processing, conventions, trade and innovation in the Southwestern region (China Stone Chamber, 2016) (Su, 2016). In 2015, the western region (northwest and southwest) together contributed to 13.3% of national granite output and 36.1% national marble output (Tian, 2016).

### **Focus on two provinces: Fujian and Shandong**

This report will focus on two provinces, namely Fujian and Shandong for a more in-depth analysis. These two provinces were selected because they are considered the biggest centres of natural stone mining, processing and trading. The following factors were taken into consideration:

- In 2019, Fujian and Shandong were the two provinces with the highest export value of stone products to the Netherlands and Belgium. Fujian exported 117 million USD worth of natural stone while Shandong exported 19 million USD (China Custom , n.d.).
- Both provinces had established stone industry clusters, notably the Xiamen- Quanzhou- Shuitou NanAn cluster in Fujian, and Laizhou and Pingyi clusters in Shandong
- Xiamen Port, Fuzhou Port (in Fujian) and Qingdao Port (in Shandong) were among the biggest ports of international trade for stone products. In 2017, these three ports accounted for more than 73% of total Chinese stone export in terms of quantity and 58% in terms of value (China Stone Chamber, 2018)
- Both provinces host prominent international stone fairs annually, such as Xiamen China Stone Fair and China Shuitou International Stone Fair in Fujian, as well as Laizhou International Stone Expo, Pingyi International Stone Fair and Qingdao International Stone Expo in Shandong

More details of the two provinces selected are illustrated in the sections below.

## 4.5 The stone sector in Fujian

In 2019, per trade data disclosed by China Custom, the value of exported stone commodity from Fujian to the Netherlands and Belgium amounted to more than 117 million USD, accounting for 57% of China's total export to these two countries (China Custom , n.d.). The most traded commodities include monumental stone and other carved stone of granite; setts, curbstones and flagstones of natural stone; as well as artificial stones (China Custom , n.d.).

The largest natural stone base in China is the Xiamen- Quanzhou- Shuitou NanAn area in Fujian province. There are 15,000 stone processing plants, of which 5,000 are import and export trading companies. Most of the top Chinese stone companies have set up their operations here (Stone World, 2015).

The stone mines are concentrated in the north, southwest and southeast areas. Fujian has 62 types of natural stone resources, with a stone reserve totalling 2 billion m<sup>3</sup>. Many different types of granite are quarried in Fujian. The private stone sector thrives in Fujian with all sorts of sizes.

Shuitou NanAn is the biggest stone producing and processing base in China. During the year, Shuitou has a stock of more than 400, 000 wholesale shelves for marble slabs, and more than 24 million m<sup>2</sup> of stored marble slabs. Due to its strategic geographical location, Shuitou has assembled almost all varieties of natural stones in the world, and attracted many experienced and skilled workers. A Stone Vocational School has also been established for training specialised talents (Su, 2016).

Xiamen and Fuzhou are the main ports of stone export and import. In 2017, these two ports accounted for 50% of export and 70% of import in value (China Stone Chamber, 2018), as illustrated by the table below. The stone processing industry in Fujian is highly dependent on the imported unprocessed stone raw material.

Table 3 Main ports of international trade

Port	Province	Export from China*				Import to China			
		Quantity* (mil tonne)	Value* (bil USD)	% quantity*	% value*	Quantity (mil tonne)	Value (bil USD)	% quantity	% value
Xiamen	Fujian	4.91	3.10	42%	46%	10.63	1.94	73%	70%
Fuzhou	Fujian	0.53	0.24	5%	4%				
Shenzhen	Guangdong	0.41	1.16	4%	17%	0.15	0.05	1%	2%
Guangzhou	Guangdong	0.57	0.47	5%	7%	2.28	0.43	16%	15%
Qingdao	Shandong	3.02	0.57	26%	8%				
Tianjin	Tianjin	0.61	0.27	5%	4%	0.58	0.15	4%	5%
Shanghai	Shanghai	0.16	0.18	1%	3%	0.61	0.13	4%	5%
Wuhan	Hebei	0.43	0.13	4%	2%				

\*Excluding 251749 travertine and granite in granules, chippings and powder

Two of the biggest stone conventions in the country, namely, Xiamen China Stone Fair and China Shuitou International Stone Fair take place in Fujian. Per the "13th Five-Year Plan", Shuitou NanAn and Xiamen are identified as the key international trade centres to be further developed in the Eastern Coastal region (China Stone Net, 2020).

## 4.6 The stone sector in Shandong

In 2019, per trade data disclosed by China Custom, the value of exported stone commodity from Shandong to the Netherlands and Belgium amounted to close to 19 million USD, accounting for 9% of China's total export to these two countries and ranked the 2nd after Fujian province. The most traded

commodities include monumental stone and other carved stone of granite, other worked articles of calcareous stone, as well as setts, curbstone and flagstones of natural stone (China Custom , n.d.).

As compared to the stone sector in Fujian, Shandong is relatively more resource-centric. The province is rich in stone resources with a great variety, there is a known reserve of 3 billion m<sup>3</sup> of marble, 28 billion m<sup>3</sup> of granite, 1 billion m<sup>3</sup> of slate. 11 types of natural stones are identified as “Nationally Excellent Variety” (Zhe, 2010).

More than 60% of the stone output is consumed domestically while the other 30% is exported (Zhe, 2010). There are more than 10 special docks and express custom clearance lanes for stone material export across different ports in the province, such as Qingdao Port, Laizhou Port and Weihai Port etc. (Zhe, 2010). There are 4 major stone centres in the province:

1. Laizhou is the centre of stone processing and export in northern China, regarded as "Chinese Capital of Stone" (Zhe, 2010). Its dominant product is artificial granite, made from granite chippings. Laizhou been identified as a key international trade centre to be further developed in the "13th Five-Year Plan" in the Eastern Coastal region (China Stone Chamber, 2016).
2. Pingyi is the "Hometown of Granite". It can process 50 million m<sup>2</sup> of stone annually, with an annual output value of more than 10 billion RMB (about 1.4 bil USD). There are more than 1,000 stone companies, and nearly 100,000 people employed in the stone sector. Pingyi is a well-known raw stone processing trade and distribution base (China Stone Net, 2019).
3. Wulian-Rongcheng-Zhaoyuan area is rich in stone resources. It is also a well-recognised processing base (Zhe, 2010).
4. Jiaxiang has more than 1000 years of history in stone carving. It is a specialised processing and trade centre for carved stones (Zhe, 2010).

The exportation of stone is one of the main industries in the Eastern Shandong province. In the area between Qingdao and Yantai, there are several grey granite quarries suitable to produce paving and kerbstones. The stone industry around Yantai is characterised by seasonal work, since the region is also a farming area. This means that most stone suppliers are active for around 200 days a year, especially the manual hammering workers. During the rest of the year, the stone workers are engaged in farming, such as growing apples, sweetcorn and peanuts. That said, machine operators may work all the year round (SwedWatch, SOMO and IHLO, 2008).

## 5 Supply chain risks

There are a number of potential social risks in the Chinese supply chains of natural stone companies based in the Netherlands and Belgium.

It should be noted that the body of literature available on each category of risk varies significantly. For example, the literature on occupational health & safety far outweighs that on sub-contracting and labour rights. Findings related to each risk is limited to the availability of this literature. In these cases, the literature review is supplemented by interviews with local experts with extensive knowledge of the Chinese context and on-the-ground experience through factory audits or worker engagement. Moreover, some understanding of social risks is inferred from the broader social conditions in China and may not be industry-specific. That means that it can be a risk because it is very common in China and therefore also likely for the natural stone industry.

It is worth noting that the economy in China continues to grow rapidly and the governance of social risks continues to improve. Social violations that may have been under the international spotlight in the past have been dealt with and may no longer be of the highest risk in the country. Moreover, while this report strives to reference the most up-to-date research, in some circumstances, the best available sources are from more than a decade ago. The situation may have evolved for the better since that time and, therefore, findings from these sources may be considered a conservative representation of the current state.

### 5.1 Business ethics and management systems risks

#### 5.1.1 Documentation and traceability

The lack of traceability makes it hard to understand who has been involved, both in mining as in processing.

Traceability is a challenge for the following reasons:

- The high percentage of imported stone into China. A substantial proportion of natural stone in China is imported from worldwide sources of natural stone for processing within China and then exported once again. Therefore, stone bought from within China may not have originated there and suppliers may not be able to provide evidence of the origin of the stone to the buyer. The main countries from which unprocessed stone blocks are imported are India, Turkey and Egypt, which may have high social risks. The lack of traceability on the origin of exported stone creates challenges in accurately assessing the true extent of supply chain risks. While this report only discusses the supply chain risks within China, it is important for buyers to understand the provenance of the stone products purchased and further assess the supply chain risks of the country of origin.
- The prevalence of sub-contracting in the industry. Sub-contracting is very common in all stages of the supply chain, where the sub-contracted party can either be a firm or even an individual. For example, many smaller stone processing companies often do not have special arrangements with quarries and buy semi-processed slabs as input. These are sourced from wholesale markets such as Quanzhou in Fujian province. Furthermore, due to the fact that a large majority of business in the stone industry in China appear to be small and micro businesses, sub-contracting seems to be fairly informal and there appears to be a lack of documentation that can be used to trace movement of stone products back through their supply chain. This risk reduces the visibility of social risks in the supply chain, making it more challenging to monitor and manage human rights violations.



Fortunately many companies work with fixed subcontractors only, since quality is so important. In this case assessment and monitoring of social risks might be easier.

## 5.1.2 Worker contracts

### **Related legislation in China**

In 2008 a Labour Contract Law was implemented. The law specifies that workers are entitled to a detailed written employment contract when they are hired, and severance pay (based on length of employment) if they are laid off.

### **Enforcement of contract legislation in China**

Prior to the passage of the Labour Contract Law, domestic and international business communities waged an intense lobbying campaign to water down the bill. After the law was implemented, employers exploited every loophole possible to avoid compliance. The Labour Contract Law was amended in 2013 in an attempt to fix the loopholes by limiting the percentage of dispatch labour to 10%, but employers continue to evade their legal responsibilities and lobby the government to relax certain provisions of the law that, they claim, restrict the hiring and firing of employees (China Labour Bulletin, 2020). The failure of employers to abide by the law is further illustrated by the National Bureau of Statistics survey of migrant workers in 2009 which showed that only 42.8% of migrant workers had signed a contract with their employer. By 2016, that proportion had dropped to just 35.1%.

### **Exposure to contracts risks in the stone industry**

There are two areas of risk when it comes to worker contracts, the first is that any type of formal contracts in the stone sector do not appear to be the norm. A lack of formal employment contract is often associated with a lower pay, poor and unsafe working conditions and discrimination.

The second area of risk is that despite the government's response of tightening loopholes in the law, some employers continue to employ staff as contract workers (China Labour Bulletin, 2019). Whereas outsourcing to recruitment agencies can lower the cost of manpower through savings from recruitment, training, worker's benefit and human resource management (Xu J. , 2009) it can also mean that employees on these kinds of contracts are not entitled to the same conditions as direct employees, such as severance pay and paid leave.

Although our research was not able to determine the percentage of workers in the stone industry in China that are employed on a contractual basis and / or through an agency, resources seem to indicate that employment contracts are not the norm. In addition, many workers appear to be paid on a "piece" rate basis. Additional investigation is required to understand the full extent of the lack of formal employment contracts in the industry.

## 5.2 Labour risks

### 5.2.1 Migrant workers

#### **Global Standards**

ILO standards on migration provide tools for both countries of origin and of destination to manage migration flows and ensure adequate protection for this vulnerable category of workers. ILO has two main conventions for migrant workers - Migration for Employment Convention (Revised), 1949 (No. 97) and Migrant Workers (Supplementary Provisions) Convention, 1975 (No. 143).

**Related legislation in China**

The situation in China, however, is fairly unique. Migrant workers in China are largely workers that are working outside of their town or city but are Chinese nationals. Foreign migrants form a relatively small group in China (approximately 1 million in 2017) (International Organisation for Migration (IOM) , n.d.). They seem to consist of a large extent of higher educated ex-pats, who have much lower risks of social stigmatisation and exploitation.

The definition and conditions of domestic migrant workers in China is intertwined with the Chinese household registration system or *hukou* in Chinese. Each town and city issue its own domestic passport or *hukou*, which gives residents access to social welfare services in that jurisdiction. This means that migrant workers are not guaranteed this access. Individuals are broadly categorised as "rural" or "urban" based on their place of residence. Rural migrant workers are not necessarily from rural areas. The *hukou* is hereditary so children whose parents hold a rural *hukou* also have a rural *hukou* no matter where they are actually born (China Labour Bulletin , 2020).

Per the government definition, rural migrant workers refer to those who work in urban areas, or in the non-agriculture sectors in local or other areas with their household registrations being in rural areas (National Bureau of Statistics of China, 2020). Among the migrant workers, they are divided into two groups, local migrant workers and outside migrant workers. The former refers to those who work within the same county, while the later refers to those who work in areas further afield.

**The current situation in China and the stone industry**

A substantial percentage (around 36%) of the Chinese workforce is formed by rural domestic migrant workers, totalling 290.8 million in 2019 (National Bureau of Statistics of China, 2020). Most domestic migrant workers work in labour-intensive industries, including stone mining and processing.

Most migrant workers are not protected by a formal employment contract, as indicated in the table below (National Bureau of Statistics, 2017), meaning that they remain unprotected and may be more exposed to labour rights risks than local workers.

*Table 4 Percentage of migrant workers with employee contract in 2016 (National Bureau of Statistics, 2017)*

	<b>Non-fixed term labour contract</b>	<b>&lt; 1-year labour contract</b>	<b>&gt; 1-year labour contract</b>	<b>No labour contract</b>
Percentage of migrant workers	12.9%	3.4%	19.9%	63.8%

The proportion of migrant workers with a pension or any form of social insurance is still at a very low level. The Ministry of Human Resources and Social Security reported that in 2017 only about 22 percent of migrant workers had a basic pension or medical insurance, 27 percent had work-related injury insurance, and just 17 percent had unemployment insurance, an increase over the five years since 2012 of 36.5 percent, 24.6 percent, 9.3 percent and 81 percent, respectively. It was estimated that around 40 million construction workers (74 percent) had work-related injury insurance.

**Migrant worker risks**

The hukou system remains the most pervasive form of employment-related discrimination, denying migrant workers access to the full range of social benefits, including health care, pensions, and disability programs, on an equal basis with local residents (Bureau of Democracy, Human Rights, and Labour, n.d.).

Migrant workers are particularly vulnerable to workplace exploitation, such as lack of social insurance and protection against safety hazards at work, difficulties in obtaining compensation for workplace injuries, late or deferred payment of wages, access to joining trade unions, or excessive overtime without overtime payment. For a migrant worker who gets sick or injured at work it is often extremely difficult to receive compensation and subsidised hospital care. In 2018, only 28% of the migrants (80 million migrant workers ) were covered under work injury insurance (The Government of China, 2019). Receiving compensation for occupational diseases is even more difficult, as they have to prove the work relation and need permission from their employers to get diagnosed (SwedWatch, SOMO and IHLO, 2008).

### **A note on foreign migrant workers**

Where lower educated foreign migrant workers may be part of the natural stone industry, is unknown so far. While this report acknowledges that there still are foreign workers from the lower-income and lower-skill bracket in China, from poorer neighbouring countries such as Mongolia and Vietnam, their numbers are relatively very small (Lin, 2011) as compared to the population of domestic migrant workers and very little literature exists on them in the stone industry.

## **5.2.2 Wages**

### **Global standards**

The right to a just remuneration is one of the fundamental human rights that ensures an existence worthy of human dignity (International Labour Organisation (ILO)).

Many countries have a legal minimum wage, however, often this does not constitute a living wage and a just remuneration. A living wage describes the concept that workers should have the right to earn a wage that covers their basic needs. According to WageIndicator, in 2019, the gross living wage for a worker in a typical family in China (two parents, 1.6 children and 1.7 adults working) was 3650 to 5730 yuan per month (WageIndicator, 2019)<sup>6</sup>. WageIndicator Living Wages are estimated for 3 family types: a 1-person household, a standard family and a typical family.

### **Wages legislation in China**

The 1995 Labour Law established the fundamental rights of workers to be paid in full and on time and receive overtime payments and paid leave. These basic rights were added to in the 2000s with the introduction of a wide-ranging and comprehensive body of legislation covering work safety, work-related injury insurance, employment contracts, workplace discrimination, labour dispute arbitration and mediation, and the role of enterprise trade unions (China Labour Bulletin, 2020). As for a minimum wage, each province, municipality, or region sets its own minimum wage in accordance with its own local conditions. In Shandong, the minimum wage is RMB 1550-1910 per month, or RMB 15.5-19.1 per hour, depending on the area (Xinhua Net, 2018). In Fujian, the minimum wage is RMB 1420-1800, or RMB 15-18.5 per hour, depending on the area (Xinhua Net, 2019). The average monthly income of migrant workers was RMB 3,962 (USD 573 per month) in 2019, up by 6.5% over the previous year.

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<sup>6</sup> WageIndicator presents its Living Wages as a range with a lower- and upper-bound. The lower bound of Living Wage is measured, using prices taken at the 25th percentile. The 25th percentile is the value for which 75% of respondents report higher values. This is a conservative scenario, which assumes a cost-optimizing household seeking cheaper-than-average housing, food and some other indispensable goods or services. The upper bound of a Living Wage is measured, using prices taken at the 50th percentile. The 50th percentile (median) represents the value in the middle of the distribution.

Local workers' wages do not vary greatly from migrant workers in China, according to anecdotal evidence from local expert. Industries with the highest average income were transportation & logistics and construction.

### Enforcement of wages legislation in China

Enforcement of labour law in China generally has been lax. Local government labour bureaus and labour inspectorates are primarily responsible for enforcing labour laws and ensuring that workers' rights are protected. The vast majority of disputes accepted by Labour Dispute Arbitration Committee (LDAC) are related to remuneration, social insurance payments, and contract termination, with a smaller proportion of work-related injury cases (China Labour Bulletin, 2020).

### The current situation in China and the stone industry

There are no data specifically for wages in the stone industry. However, there are some available of the mining industry. The table below illustrates the average wages in 2018 of residents in cities or towns and private-owned companies in the mining industry (National Bureau of Statistics, 2020) compared against average wages across industries as well as average disposable income and spending. For reference, the US\$5.50 per day (2011 PPP) poverty line by the World Bank is equivalent to RMB19.38 per day, or RMB 7,074 per year. The data show that there are great income disparities between different regions and for the mining industry, with the provinces located in the eastern coastal region (e.g. Jiangsu, Zhejiang, Shanghai, Fujian) wealthier than provinces in the west (e.g. Sichuan) or southwest (e.g. Guangxi, Guizhou).

*Table 5 Average GDP, wage, disposal income and spending per capita by province (2018 data) (National Bureau of Statistics, 2020).*

Region	GDP per capita (RMB/year)	Average wage of workers in cities/towns <sup>7</sup> (RMB/year)	Average wage of workers in privately-owned companies in the mining industry in cities/towns (RMB/year)	Average disposable income per resident in cities/towns (RMB/year)	Average spending per resident in cities/towns (RMB/year)
Beijing	153,095	145,766	57,635	67,989	42,926
Shanghai	148,744	140,400	71,879 <sup>8</sup>	68,034	46,015
Guangdong	88,781	88,636	42,556	44,340	30,924
Fujian	98,542	74,316	48,945	42,121	28,145
Shandong	66,472	73,593	54,314	39,549	24,798
Jiangsu	115,930	84,688	49,054	47,200	29,262
Hubei	71,109	73,777	41,112	34,455	23,996
Henan	52,114	63,174	36,853	31,874	20,889
Zhejiang	101,813	88,883	56,095	55,574	34,598
Anhui	54,078	74,378	50,818	34,493	21,523
Sichuan	51,556	77,686	43,975	33,216	23,484
Guangxi	40,012	70,606	43,167	32,436	20,159
Guizhou	42,767	78,316	50,341	31,592	20,788

<sup>7</sup> The average wage refers to the amount of monetary wages earned by the employees in an entity during a certain period. The calculation formula is: average wage = total wages actually paid for all employees during the reporting period / average number of all employees during the reporting period.

<sup>8</sup> Shanghai did not disclose the salary of workers in privately-owned companies separately. The number quoted covered workers from both state-owned companies and privately-owned companies.

Inner Mongolia	63,772	73,835	46,272	28,305	24,437
Xinjiang	51,950	75,457	54,074	32,764	24,192

### **Exposure to wages risk in the stone industry**

It is generally observed that the stone sector offers competitive pay for workers, although a comprehensive breakdown of wages each type of worker in the industry was not found, therefore, it this may not be true for all workers in the industry.

Per an internet source, Stone139 Net (139 Stone Net, 2018), an average worker in the stone processing industry who engages in cutting may earn about RMB 4,000 to 6,000 per month. Workers employed for polishing, contouring and carving and works involving high dust concentration could earn a higher income, ranging from RMB 8,000 – 10,000 per month; workers doing repairing, waterproofing and applying glue can earn about RMB 5,000 per month. Apprentices are usually paid lower. In general, the total income is higher when work is paid on a piece-rate, as workers tend to work harder based on that arrangement.

These data indicate that the average income of workers in the stone processing industry is significantly higher than the minimum wage, the average wage for migrant workers in China and the estimated living wage in China. This observation concurs with the observations by the report Save Love Pneumoconiosis, which found that more than 55.2% of the surveyed migrant workers with pneumoconiosis said that they chose to work in operations with high dust concentration, such as mining and stone processing because the job paid better (Love Save Pneumoconiosis, 2020).

Having said this, it was noted that production workers are often paid on a piece-rate basis, whereas auxiliary workers, such as guards and packers, usually earned a fixed daily wage. Payment on a piece-rate basis raises questions around if the payment is fair compensation for the number of hours worked as this is challenging to accurately determine without further on-the-ground data and information. In addition, a reduced domestic demand and global trade due to impacts of COVID-19 pose serious financial challenges for stone companies and will in turn, impact workers. The diminished market demand can have a significant financial impact on the workers in the stone industry, who are mostly paid on a piece-rate basis.

## **5.2.3 Benefits**

### **Global standards**

Social security is a basic human right under the United Nations Human Right International Covenant on Economic, Social and Cultural Rights (ICESCR) (part of the Bill of Human Rights), one of the human rights treaties, ratified by China.

### **Benefits legislation in China**

In 2011, the Social Insurance Law was implemented, which codified and clarified existing regulations on employer-employee obligations related to pensions, unemployment insurance, health insurance, work-related injury insurance, and maternity insurance. Five insurances and one fund are legally required in China. While pension, medical insurance, unemployment insurance and the housing provident fund are co-contributed by employers and employees, work injury insurance and maternity insurance are to be paid solely by the employers.

## Enforcement of benefits legislation in China

As with the Labour Contract Law, employers routinely flout the Social Insurance Law by ignoring or underpaying pension and other insurance contributions. Also the lack of an employment contract, denies workers access and protection under this law.

## The current situation in China and the stone industry

Social insurance is a key benefit that will impact the wellbeing of workers and deserves some investigation in this context. Despite social insurance being mandatory, the participation rate is not 100%, as would be expected. The contribution rate for social insurance in China varies slightly from city to city but generally is noted to be low. For example, the participation rate of migrant workers in social insurance is very low, as shown in Table 7. This low participation is not thought to be unique to migrant workers only, but across the spectrum of worker profiles.

Table 6 Overview of social insurances in China

	Description	Contribution rate by employers (Xu X. , 2018)	Contribution rate by individuals	Migrant workers participation rate (National Bureau of Statistics, 2015)
<b>Pension</b>	Pension after retirement	16%	8%	16.7%
<b>Medical insurance</b>	Basic medical benefits, including outpatient and hospitalisation benefits	7%	2%	17.6%
<b>Unemployment insurance</b>	Unemployment benefit	0.7%	0.3%	10.5%
<b>Work injury insurance</b>	Medical benefits and compensations related to work-related injuries and occupational disease	1%	Nil	26.2%
<b>Maternity insurance</b>	Covers medical expenses related to pregnancy and salary during maternity leave	1%	Nil	7.8%
<b>Housing provident fund</b>	To be used in purchasing houses and favourable interest rate for home mortgage	5%-12%, flexible	Usually matching employer contribution rate	5.5%
<b>Overall</b>		31-37%	16-23%	-

## Exposure to benefits risk in the stone industry

Low participation in social insurance is common practice across the country and other benefits in lieu are often offered to workers when companies do not contribute to workers' social insurance. There are two main reasons that low participation is the norm:

- The mandated contribution rate of companies on social insurance is relatively high and would add substantial cost to companies. Despite enacting a local regulation on social insurance, the Chinese government is not stringent on enforcement and allows flexible interpretation by the local government to relieve the financial burdens on companies. In some cases, companies are allowed to pay social insurance using the minimum wage rather than the actual wage as a basis.
- The understanding of social insurance by workers is low. Many of them are reluctant to contribute to social insurances and would prefer to negotiate a higher disposable income with their employers. For migrant workers, there is also a general concern about the transferability of pension and medical insurance, the two largest contribution in social insurances, when they move to another city or return to their hometown due to the constraints imposed by the Hukou system. Although in recent years, the Chinese government has lifted such a constraint, it can still be administratively cumbersome to make a transfer.

Having said that, although low participation may be a common practice across all business sectors, the lack of transparency, monitoring and regulation of this benefit and if it is truly offset by other benefits such as a higher wage, does leave workers, including those in the stone sector, vulnerable to exploitation and misinformation. Therefore, social insurance participation could be considered a social risk for stone sector workers.

## 5.2.4 Working hours

### **Global standards**

The importance of limiting working hours was recognized by the very first ILO convention in 1919, the Hours of Work Convention. The organisation determined that working excessive hours posed a danger to workers' health and to their families. Today, ILO standards on working hours provide the framework for regulated hours of work, daily and weekly rest periods, and annual holidays. ILO Convention on Hours of Work (Industry) recommends a principle of 8-hours day or 48-hours week (ILO, 1919). China has not ratified this convention.

### **Working hours legislation in China**

In mainland China, laws concerning work hours are mainly included in the Labour Law and supplementary regulations. There are three types of regulations: the default standard system; the comprehensive system of calculating work hours on a weekly, monthly, quarterly or annual basis; and the flexible system.

According to Chinese Labour law, workers should work no more than 8 hours day, 40 hours a week, unless special approval is obtained from the local government. At least one rest day must be provided to employees per working week and on public holidays. In the case overtime is required (Ministry of Human Resources and Social Security of China , 2010):

- Overtime should be fewer than 3 hours a day, 36 hours a month;
- Workers should be compensated at higher rate for overtime:
  - If the workers are scheduled to work beyond 8 hours on a working day, employer shall pay the workers' wages at 150% of their hourly rate for the additional hours;

- If the workers are scheduled to work on a rest day and cannot get another day off in lieu, employer shall pay the workers' wages at 200%;
- If the workers are scheduled to work on a public holiday, employer shall pay the workers' wages at 300%
- The above standards do not apply to work of special nature, for example, senior management, salesperson, security guards etc. and special sectors which are, such as postal service, transportation, tourism etc.

### **Enforcement of working hours legislation in China**

As with many labour laws in China, this law is poorly enforced, and enforcement may vary from province to province. For example, in 2016, per National Bureau of Statistics, migrant workers on average worked 10 months a year, 24.9 days a month, 8.5 hours a day. 64.4% migrant workers worked more than 8 hours a day and 78.4% of them worked more than 44 hours a week (National Bureau of Statistics, 2017). However, many workers in the stone industry are paid on a “piece” rate arrangement, not according to hours worked, in which case, hours of work are not tracked or recorded.

### **The current situation in China and the stone industry**

In general, March to October is the peak season for the natural stone sector while the other months have lower production volume (Rong & Wang, 2019). The seasonality of the stone sector generally matches that of the construction industry, as it is too cold to operate in the winter months of the northern provinces. Quarries suspended operations during the rainy season. For workers who were on a “piece” rate arrangement, their compensation is not dependent on the hours worked but pieces of work delivered. There is a usually greater incentive for workers to work longer hours under this payment arrangement.

The report by Save Love Pneumoconiosis had similar observations (Love Save Pneumoconiosis, February 2020). As a representation of all workers, more than 84% of migrant workers who were diagnosed with pneumoconiosis worked more than 8 hours a day. Among them, 43% of them worked 8-10 hours a day and 41% of them worked on average 10 hours or more a day.

### **Exposure to working hours risk in the stone industry**

In the stone industry, long hours of work may increase the risks of OHS due to longer exposure and higher propensity to human error due to exhaustion and leads to questions around if payment, particularly over-time pay, adequately compensates for these additional hours. A lack of publicly available information on over-time worked in the sector and over-time payments, as well as the piece-rate arrangement, compounds the lack of clarity. This topic warrants further investigation in the next phase of the project.

## **5.2.5 Child labour**

### **Global standards**

The UN Convention on the Rights of the Child forbids children under the age of eighteen to conduct “work that is likely to be hazardous or to interfere with the child’s education, or to be harmful to the child’s health or physical, mental, spiritual, moral or social development”. China ratified this convention and the ILO Convention 182 - Worst Forms of Child Labour Convention (1999) and C138 - Minimum Age Convention (1973). The minimum age to work is fifteen, as long as it is not hazardous.



## **Child labour legislation in China**

The minimum age of work is 16 in China. Workers below 16 years old are considered child labour and are strictly prohibited (Ministry of Human Resources and Social Security of China, 1994), Workers aged between 16 and 18 are juvenile workers, who are entitled to extra protection against harm at work. For example, juvenile workers should not carry out labour-intensive work (e.g. mining activities) or work under hazardous conditions (e.g. dusty environment). Moreover, employers must provide regular health check-up to juvenile workers at the commencement of work and every half year (Ministry of Human Resources and Social Security of China, 1994). Due to the nature of work in the stone industry, stone mining and processing are considered unsuitable for juvenile workers.

### **Enforcement of child labour legislation in China**

There is limited research available on child labour in the natural stone sector specifically, but it is possible to infer the situation from the overall Chinese context. Just over a decade ago, child labour was a widespread, systematic and a serious problem in China. In 2010, there were still 7.74% of children between the age of 10 and 15 working (Tang, Zhao, & Zhao, 2018).

### **The current situation in China and the stone industry**

In the last 10 years, the situation on child labour in China has improved significantly as a result of more stringent scrutiny, stricter regulatory enforcement, higher average income and better accessibility to education offered free of charge by the state. Today, the forces creating both the supply of and demand for child labour have diminished considerably, and although there are still occasional reports of child labour in the Chinese media, the situation has improved (China Labour Bulletin, 2019).

Economic development and restructuring, particularly the move away from low-cost, labour-intensive manufacturing, has significantly reduced the market for cheap child labour. However, juvenile workers above the legal working age of 16-years-old, such as student interns, are still used by factories as a source of flexible labour during periods of high demand or as a cheaper alternative (China Labour Bulletin, 2019). A survey conducted in 2018 in the manufacturing sectors (e.g. electronics, toy, textile and garments etc.) showed that around 12% of 1<sup>st</sup> tier suppliers employ juvenile workers, which accounts for approximately 0.2% of the total workforce (Center for Child Rights & Corporate Social Responsibility and the CSR Centre at the Embassy of Sweden in Beijing, 2018).

Although there was no evidence that juvenile workers are used in this industry, there is a possibility that they are employed, in which case, their exposure to the dangerous working conditions at quarries and processing sites may be illegal.

### **Exposure to child labour risk in the stone industry**

Due to the rapidly changing socio-economic situation in the country and the fact that workers in the stone industry need strength and / or skill, something that child workers do not possess, the exploitation of child workers would not be that likely in this sector. Use of juvenile workers without the proper protection, however, is worth more attention.

## **5.2.6 Forced labour**

### **Global standards**

Two ILO Conventions define the definition of what forced labour is. The C105 Abolition of Forced Labour Convention and the C9 Forced Labour Convention. These conventions forbid making use of

any form of forced or compulsory labour for any of the following (International Labour Organisation, 1957):

- as a means of political coercion or education or as a punishment for holding or expressing political views or views ideologically opposed to the established political, social or economic system;
- as a method of mobilising and using labour for purposes of economic development;
- as a means of labour discipline;
- as a punishment for having participated in strikes;
- as a means of racial, social, national or religious discrimination.

It is defined as “any work or service which is exacted from any person under the menace of any penalty and for which the said person has not offered himself voluntarily.” China has not ratified the two ILO conventions concerning forced labour. China has not ratified these two conventions.

### **Forced labour legislation in China**

China has national laws and regulations against forced labour. The Penal Law prohibits “forcing another person to work by violence, threat or restriction of personal freedom” (Article 244, 2011 amendment). In addition, the Labour Contract Law also entails multiple provisions against forced labour and stipulates that “Administrative and criminal penalties are in place for forcing a person to work by resorting to violence, intimidation or illegal restriction of personal freedom” (Ethical Trading Initiatives, 2019).

The use of agencies and intermediaries is also regulated. The Law on Promotion of Employment (2008) regulates employment services, including labour agents and intermediaries. Under this law, a job intermediary must be registered and meet certain conditions, and may not provide false employment information, take away a worker’s resident identity card, or take a deposit from the worker (Ethical Trading Initiatives, 2019).

### **Enforcement of forced labour legislation in China**

Despite the laws in place, official policies and practice appear to be in conflict with the forced labour laws and regulations in the country. The issue of forced prisoner workers in China has long received international attention. The country has held a Re-education through Labour (RTL) System, in which inmates were routinely subjected to forced labour for up to four years, which could be considered to be in contention with global standards.

Moreover, there are growing concerns around forced labour among the Uighur minorities (Business & Human Rights Resource Centre, 2020). Since 2017, more than a million Uighurs and members of other Turkic Muslim minorities have been put into a vast network of ‘re-education camps’ in the far west region of Xinjiang. There is evidence that many Uighurs are being forced to work in factories within Xinjiang. Chinese factories outside Xinjiang are also sourcing Uyghur workers under a revived, exploitative government-led labour transfer scheme. In response, the US government has issued new legislation that forbids the importation of goods mined, produced or manufactured, wholly or in part, in any foreign country by forced or indentured labour, with a specific focus on the Xinjiang province of China. Other governments in Europe and Australia appear to be following suit.

## The current situation in China and the stone industry

In November 2013, the Chinese government officially announced that it would abolish the RTL, however, a 2017 report by the US-China Economic and Security Review Commission alleges that China still maintains a network of state detention facilities that use forced labour (Minderoo Foundation, n.d.).

A report published by the Australian Strategic Policy Institute estimated that between 2017 and 2019, 80,000 of Uighurs have been transferred out of Xinjiang to work in factories through a labour transfer programs under a central government policy known as 'Xinjiang Aid' (Xu, Cave, Leibold, Munro, & Ruser, 2020). It is extremely difficult for Uighurs to refuse or escape these work assignments, both inside and outside of Xinjiang. In addition to constant surveillance, there is a threat of detention for those who refuse their government-sponsored work assignments (Xu, Cave, Leibold, Munro, & Ruser, 2020). Under these conditions that strongly suggest forced labour, the report found that Uighurs were working in factories that are in the supply chains of at least 82 well-known global brands in the technology, clothing and automotive sectors.

While the topic of RTL and forced labour of Uighur minorities in Xinjiang province remains an active concern for the international community, our research has not come across published reports of Uighur-related forced labour in the stone industry, including in Xinjiang. In ILAB's latest report published in 2020, there were no reported cases of forced labour for granite and limestone in China (The Bureau of International Labor Affairs, 2018). In July 2020, the US government started to sanction a number of Chinese companies on the bases of human rights abuses against Uighurs, either through restricted purchase of American technology and products or outright prohibition of all transactions (Swanson, 2020; U.S. Department of the Treasury, 2020). So far, no Chinese stone companies have been implicated by these sanctions.

Other high-risk situations for forced labour can be created when using recruitment agencies<sup>9</sup> to recruit migrant workers. Especially when they require workers to pay recruitment fees (including travel), heavily indebting workers and pressurising them into accepting unfair labour practices to repay the debt. At the base of this unfair dynamics is lack of information and mobility of workers in poor areas or countries where there are little economic opportunities.

In current China's labour market, workers are in high demand, especially for industries like stone mining and processing, which are deemed more physically demanding and less pleasant. The change in market dynamics may be giving workers more leverage, and possibly making them less susceptible to exploitative labour relationship as there are generally plenty of working opportunities elsewhere. This observation concurred with the findings by the Ethical Trading Initiative (ETI), which reported that a high demand of workers make them less likely to be charged recruitment fees (Ethical Trading Initiatives, 2019).

A potential indicator of forced labour is the deferred payment of wages. As a proxy, Chinese Bureau of Statistics reports that in 2016, just 0.83 % of migrant workers were subjected to late or deferred payment of wages, with an average owed amount of RMB 11,433 (USD 1,655). The highest occurrence of such payment deferment was found in the construction sector (1.8%) (National Bureau of Statistics, 2017). While the 2016 overall rate of deferred payment has seen a 15% improvement from 2015 and

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<sup>9</sup> The recruitment agency here refers to an organisation which matches job opportunities between employers to employees and provide relevant administrative services to facilitate such a process. It is different from a labour dispatch agency in the following way: a recruitment agency only provides recruiting services, while a labour dispatch agency is the direct employers of workers who will be dispatched to the recipient company.

the rate of deferred payment has stayed below 1% since 2013, this still leaves more than 2 million workers affected.

### **Exposure to forced labour risk in the stone industry**

Given that the stone industry is dominated by small privately-owned enterprises, the risk that Uighur labour is transferred to these companies, is low. However, the risks of Uighur-related forced labour in the stone industry within Xinjiang province needs to be further assessed, as several reports have shown that it can happen in any supply chain.

Low risk does not mean no risk. The ETI survey found that 12% of workers reported that they had paid money to obtain a job at some point, whether to a labour agency, an intermediary, or to the employer directly. Also, 29% of workers (mostly in the footwear and electronics industries) reported paying for their health examination (Ethical Trading Initiatives, 2019). There is limited information on the situation in the stone sector, which needs to be enquired in the next phase of the project.

## **5.2.7 Freedom of Association**

### **Global standards**

Freedom of Association is considered a human right and is included in The Declaration on Fundamental Principles and Rights at Work by the International Labour Organization, the Universal Declaration of Human Rights and article 22 of International Covenant on Civil and Political Rights, as well as the fundamental ILO conventions 87 and 98. The right is also guaranteed by all modern and democratic legal systems around the globe. The ILO Conventions have not been ratified by China.

### **Freedom of association legislation in China**

The 1992 Trade Union Law was one of the first pieces of social legislation in China and established workers' rights to be represented by a trade union. However, the right to strike was removed from the Constitution of the People's Republic of China in 1982,

### **Enforcement of freedom of association legislation in China**

Although there is a relatively high level of union registration, the right to form or join a trade union is severely restricted as all enterprise unions must be affiliated with the one legally-mandated body, the All-China Federation of Trade Unions (ACFTU). All union activity must be approved by and organized under the ACFTU, a CCP organ chaired by a member of the Politburo. The law gives the ACFTU financial and administrative control over constituent unions empowered to represent employees in negotiating and signing collective contracts with enterprises and public institutions. Independent trade unions are few because they are often viewed by the Chinese Communist Party as a political threat and dealt accordingly.

### **The current situation in China and the stone industry**

The International Trade Union Confederation (ITUC) gave China a score of "5 – no guarantee of rights" for its Global Rights Index, which documents violations of internationally recognised collective labour rights by governments and employers. China's score was worse than the average of 4.09 in the Asia-Pacific Region (ITUC, 2020). In the same band, there were countries like Turkey, Egypt, India, Brazil, etc.

The grassroots enterprise unions, which form the foundation of the ACFTU hierarchy, are generally established by local trade union officials in consultation with management, rather than the employees (China Labour Bulletin, 2020). Union committee activities are usually restricted to handing out gifts on holidays and organizing social functions. Only very occasionally will enterprise trade union leaders

support workers in a dispute against management. For these reasons, workers generally did not view the ACFTU as an advocate, especially migrant workers who hardly come into contact with union officials.

Despite there being no right to strike in China, strikes do happen. In fact, the China Labour Bulletin maintains a strike map and they recorded 1,385 strikes across the country in 2019 (Bulletin, 2020). The number of strikes recorded by the China Labour Bulletin Strike Map in the mining and manufacturing sections across the country as well as within Fujian and Shandong are noted below in the table. Note that numbers are for the mining or manufacturing sector as a whole, not specifically the stone sector.

*Number of strikes*

Sector	Country	Fujian	Shandong
Mining	19	0	2
Manufacturing	191	11	12

The government is trying to improve the freedom of association situation and a trade union reform initiative was launched in 2015. The reform initiative had two main objectives: 1. “eliminate four impediments” to the ACFTU’s work: regimentation, bureaucratisation, elitism, and frivolousness; and 2. “increase three positive attributes” of the organization: political consciousness, progressiveness, and popular legitimacy. However, it seems that China’s workers are still struggling to find fair representation.

**Exposure to freedom of association risk in the stone industry**

In addition, the fact that the stone sector is fragmented by many small enterprises and many of the workers are migrant workers creates additional challenges for the stone workers to access collective bargaining power through a trade union. As a result, weak trade union representation leads to a lack of support and safety net for workers in need, thus increasing the risks of violation of workers' rights.

## 5.2.8 Discrimination

**Global standards**

Discrimination is covered by two of ILOs 8 fundamental conventions, the Discrimination Convention 111, 1958 and the Equal Remuneration Convention 100. The convention states that “all human beings, irrespective of race, creed or sex, have the right to pursue both their material well-being and their spiritual development in conditions of freedom and dignity, of economic security and equal opportunity, and considering further that discrimination constitutes a violation of rights enunciated by the Universal Declaration of Human Rights”. Both are ratified by China.

**Discrimination legislation in China**

The Constitution of the People’s Republic of China does include a point that all citizens are equal and that ethnic minorities, people with religious beliefs, and women are not to be discriminated against in any aspect of civil life, including employment. In addition, there are a number of laws and government policies designed to promote employment equality.

These laws mainly refer to discrimination in the workplace, however, as has been discussed in other sections of this report, there are other policies and practices such as those around Uighur minorities, domestic migrant workers and prison labour maybe considered to conflict with these anti-discrimination laws. These are not covered in this section as they are discussed elsewhere.

## **Enforcement of discrimination legislation in China**

Despite anti-discrimination laws being in place, there are reports that employment discrimination is pervasive and still widely tolerated, practiced by both private employers and government institutions. The laws that protect employees seem to be hampered by technical shortcomings, ineffective enforcement and conflicting legislation.

## **The current situation in China and the stone industry**

Gender discrimination appears to exist in all areas of employment, from the recruitment process, remuneration and career advancement, training, work-life balance, working conditions, and regarding workplace violence and sexual harassment. In general, men are preferred for physically demanding jobs, such as those in the stone industry, as well as white-collar managerial and civil service positions and work related to engineering and technology. There are even specific legal provisions that “protect” women from employment in logging, underground mining, setting up power lines or scaffolding. Employers tend to request photos with job applications, leaving women vulnerable to recruitment discrimination based on their looks and age. There have been numerous legal cases where women attempt to sue for sexual harassment in the workplace, however, few are successful, and some result in the accuser being forced to apologise and financially compensate their alleged abuser (Bulletin, China Labour, 2020).

Age provides another source of discrimination, however, it has been reported that age discrimination has become slightly less problematic over the last decade due to China’s rapidly aging workforce and due to a decline of young workers from the countryside (Bulletin, China Labour, 2020). It is likely that stone industry employers also seek out a younger, fitter workforce, due to the nature of the work.

Workers with physical and mental disabilities are also subject to considerable discrimination in China. Physical disabilities, such as limited sight, hearing and mobility are considered, if not legally but culturally, grounds for job refusal. There seems to be a reluctance in employers to create more accessible and inclusive working environments. Again, although no specific reports of this exists, it is likely that people with physical disabilities are selected against in the recruitment process in the stone industry.

Discrimination against workers with HBV and HIV has also been an issue in China. There are an estimated 120 million people in China living with HBV, the virus that causes Hepatitis B; nearly ten percent of the country’s entire population. Despite the fact that daily contact poses no risk to others, large parts of the Chinese population believe that Hepatitis B is a contagious disease that can be spread through casual contact at school or in the workplace. As a result, people with HBV were systematically excluded from public and private sector employment until the mid-2000s. This began to change only when anti-discrimination activists started filing lawsuits against employers, including local governments.

Homosexuality was a crime in China up to 1997 and was only removed from China’s official list of mental disorders in 2001. The cultural stigma remains, but it has been reported that most employers operate what could best be described as a “don’t ask don’t tell” policy (Bulletin, China Labour, 2020).

## **Discrimination risk in the stone industry**

Although there is very little literature on workplace discrimination in the stone sector, aside from Uighur and migrant worker issues, it is highly likely that workers in the sector are selected based on their gender and level of fitness.

## 5.3 Health and safety risks

### Global standards

The relevant ILO Conventions for health and safety, including the Chemical Convention C170, the Occupational Safety and Health Convention C155 and the Working Environment Convention C148, outline the fact that the employer has a responsibility to provide a healthy and safe working environment for its employees. China has ratified the Chemical Convention C170 and the Occupational Safety and Health Convention C155, though not the Working Environment (Air Pollution, Noise and Vibration) Convention C148 (International Labour Organisation, n.d.).

### Health and safety legislation in China

Health and safety issues with the same intention as the aforementioned ILO conventions are also specified in Chinese national legislation. The Labour Law (1994) (The Government of China, 1994) and the Work Safety Law (2002) (The Government of China, 2002) set out the legal foundation on OHS, which provide the main legal framework for the rights and responsibilities of workers, employers and government agencies in creating and maintaining a safe workplace.

In the case of a workplace injury or verified occupational disease, Chinese law entitles employees the right to seek remunerations on medical expenses and other forms of compensation. Such cost will be covered by work injury insurance or in the case when such insurance is not purchased for the employees; the employers must bear such cost (Xu X., 2018).

Specific to the stone industry, there are a few high-level guides provided by the State Administration of Work Safety on regulating dust concentrations, including (Li S., 2018):

- The Technical Specification for Dust Prevention in Stone Processing Technology provides concise technical guidance on site selection and layout, preventive measures, personal protective equipment.
- Regulations around Warning Label of Workplace Occupational Hazards and Measurement of Airborne Dust in Workplace guide how companies should measure the concentration of airborne dust and set up appropriate warnings
- The Notice about Strengthening Dust Hazard Management in Cement Manufacturing and Stone Processing Enterprises (2013) covers the use of protective equipment and safety practices

For NIHL, Chinese law requires hearing protection for noise levels exceeding 85 dB during a working day of eight hours. The noise level should not exceed 115 dB at any time

### Enforcement of health and safety legislation in the stone sector in China

There is widespread non-compliance with OHS laws and regulations on the ground, partly due to the fact that most stone processing enterprises are small. Many of these private companies have not established the necessary safeguards for workers' safety, or in some cases, they are even operating illegally. This leads to poor or even non-existent OHS management. There is generally low awareness of OHS risks or low importance attached to these issues by the company's management and front-line workers. There is almost no relevant occupational safety training provided, and the awareness of prevention and treatment of occupational diseases is poor. Dust concentration in the workplace commonly exceeds the national limit. The cutting and grinding processes of stone processing are mostly dry operations, and the venues were mostly semi-open or open-air, without exhaust and dust removal equipment. This results in secondary re-suspension of dust and high concentrations of dust both inside the factory and in the surrounding area. Some companies do not provide the appropriate

respiratory protection to workers, thus putting workers' health at risk. There was inadequate supervision from the local government. (Gao , Liao , Zhang , & Sun , 2014) (Chen, Li, & Lin, 2015). (Qu, Sun, Sun, & Bian, April 2020). (Li , et al., 2015),

The non-compliance on OHS regulation reflects weak law enforcement (Li S. , 2018):

Stone mining and processing pose several occupational health and safety hazards, which mainly lead to the following occupational diseases or injuries, including blast injuries, Silicosis, Noise Induced Hearing Loss (NIHL), chemical poisoning, spinal or muscle strain and electrocution (Li S. , 2018):

Among these, silicosis and pneumoconiosis are the most commonly reported and studied occupational diseases. There is also corresponding national laws and regulation which set out national limits on dust and noise exposures during work.

### 5.3.1 Silicosis and pneumoconiosis

Silicosis is a type of severe pneumoconiosis<sup>10</sup> caused by inhalation of dust containing free crystalline silica. It can result in conditions such as lung fibrosis and emphysema. The form and severity in which silicosis manifests itself depend on the type and extent of exposure to silica dust: chronic, accelerated and acute forms are all recognised. In later stages, the critical condition can become disabling and is often fatal (SwedWatch, SOMO and IHLO, 2008).

Pneumoconiosis is the most prevalent occupational disease in China (Love Save Pneumoconiosis, 2020). In 2018, out of a total of 23,497 cases of occupational diseases reported by the National Health Commission, 19,468 cases of them were pneumoconiosis, accounting for more than 83% of the total cases. Workers in the mining and construction sectors are most at risk of developing occupational pneumoconiosis.

Recognising the heavy social cost of silicosis, China has set out the Regulation on the Prevention and Treatment of Pneumoconiosis in 1987 (The Government of China, 1987). However, based on the reports cited above, which observed multiple non-compliances, this regulation is poorly executed and enforced.

### 5.3.2 Safety and wellbeing of truck drivers

Transport, including truck driving being part of the value chain of natural stone, it is important to also consider their health and safety risks.. Based on the report of the Transfar Foundation (2018), 95.8% of the drivers are male, with an average age of 36.6. 79.1% of them are rural migrant workers and 62.4% of them have education level lower or equivalent to secondary school.

Most truck drivers work long hours, which can increase the risks of road accidents. 42.1% of the drivers drive 8-12 hours a day and 9.2% of the drivers drive more than 12 hours a day. Compounded with the fact that loaded trucks, particularly with heavy cargo such as stone products, fatigue driving can lead to significant risks of injury or even fatality if a road accident happens.

Truck driving is socially perceived to be a "masculine job". On top of the widespread social stigmatisation and discrimination, female drivers also faced higher risks of harassment and security issues (Transfar Foundation, 2018).

## Exposure to Health and Safety risk in the stone industry

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<sup>10</sup> There are 3 main types of pneumoconiosis: asbestosis, silicosis, and coal workers' pneumoconiosis. As their names imply, they are caused by inhalation of asbestos fibres, silica dust, and coal mine dust.



In the stone sector, it is clear that there is a very significant risk to workers health posed from both silicosis and truck driving.

## 5.4 Social risks related to the environment

### **The current situation in China and the stone industry**

While the stone industry can bring about economic opportunities, the sectors' activities also spark environmental disputes at the community level caused by issues such as dust pollution, noise pollution, damage to landscape and vegetation, solid waste pollution and water pollution. Since most stone mining and processing companies are small enterprises, they usually have invested very little on environmental management.

A study in Shandong Rizhao Jietou Town with 216 mining companies and 869 stone processing companies (Gao S., 2010) mainly producing granite, showed that 90% of villagers wished to be compensated for the environmental damages, On average, the surveyed community was willing to pay RMB 26.8 per month from their increased income to remediate the environmental damage, while hoping to accept RMB 101.1 per month in compensation from the stone companies (Gao S. , 2010).

In Fujian, since 2014, a series of environmental non-compliance among stone companies have been discovered in Zhangpu County, Zhangzhou City through community complaints and these violations have been prosecuted accordingly by the government (Ministry of Ecology and Environment, 2019). The non-compliance included:

- Prevalence of illegal stone mining which led to mass destruction of vegetation cover, soil erosion and water pollution.
- Many mines failed to fulfil their responsibilities of ecological restoration and their attempts to remedy such failure were perfunctory and for appearance-sake only.
- Many stone processing companies did not dispose of solid waste and effluents properly. The stone powder generated during stone processing was dumped directly onto nearby farmland and woods, which lead to severe water pollution and soil pollution.

These environmental transgressions have directly harmed the interest of the local community, who repeatedly filed strong complaints against these stone companies.

In some other areas, environmental disputes have also led to high-profile litigation and decade-long resentment. In Shaanxi province, Shuangxi Village, two stone mining and processing companies open since 2008 have caused severe damage to the local environment, including dust, water pollution, land erosion and damage to road which was partially crowd-sourced by villagers. In 2013, these stone companies were reported by villagers to the local environmental agency, who issued a fine and a stop-work order until the relevant environmental permits were approved. However, the dispute did not end there and continued to escalate into a decade-long feud with multiple litigations. In 2019, the village activists who reported the stone factories were sued for slandering and sentenced to jail for two and a half years. Until now, the case is still under trial (Qu & Wan, 2019). These cases demonstrate that when improperly managed, environmental impacts pose a significant risk to stone companies through local community disputes.

The issue of environmental restoration of old mining sites can pose further challenges. In areas where historical pollution exists, responsible parties can often not be identified. As a result, sourcing funding to treat environmental pollution is impossible. Usually, the local government will not agree to set aside

budgets for costly restoration and the local community suffers lasting impacts of ecological degradation. Fortunately, MNR has recently proposed to change its approach of “polluters pay” to “restorers benefit” (Du, 2019). Under the latter approach, polluted land will be sold to new owner who are willing to bear the cost of restoration at a discounted price. This suggestion by MNR is currently under review. If it is passed, it would bring about positive environmental benefits and economic opportunities to local communities affected by this issue.

### **Social risks related to the environment in the stone industry**

Community disputes can lead to bad relations between communities and companies and cause disruption to operations, which may have financial and reputational consequences further up the supply chain. In addition, as environmental regulations tighten within China, many mines have been closed due to environmental non-compliance, adding to operational disruptions throughout the supply chain.

## **5.5 Impacts of COVID-19**

The stone industry has been heavily impacted by upstream production limitation and reduced demand downstream. COVID-19 has a heavy toll on the Chinese economy. The national GDP has contracted by 6.8%, the first negative growth reported by the country since 1970s. Demand from individual customers and real estate project has cooled off. In February and March 2020, the sale of marble has dropped by more than 90% for due to reduced customer demand as well as the suspension of construction work in many parts of the country. Marble was more impacted than granite, because marble was used often in indoor decoration which has been stopped out of considerations of social distancing, while granite was used more often in outdoor construction.

Multiple stone conventions, including the Xiamen International Stone Fair, have been postponed. This has led to disruptions to the business plan of many companies as stone fairs are usually the best opportunities to market new products and equipment.

As for international trade, both the import of unprocessed stone blocks and the export of processed stone products were heavily impacted. Due to the widespread cancellation of flights, transportation fee over maritime shipping has increased drastically. Some ports also stopped operation altogether. The price of shipping has more than doubled for many major routes. While online transaction helped to facilitate the trade of the more homogenous products such as granite and artificial stones, e-commerce is not as applicable for marble. The trade of marble has been stopped almost completely as its pattern and colours are more varied and cannot be easily accessed through photos and emails.

Reduced domestic demand and global trade pose serious financial challenges for stone companies and will in turn, impact workers. The diminished market demand will have a significant financial impact on the workers in the stone industry, who are mostly paid on a piece-rate basis. Many of the workers might lose their jobs or have their pay and other benefits reduced. The migrant workers are likely to be impacted the most, as their mobility is reduced during this period and many of them are not protected by a formal employment contract.

## 6 Local sources of further information

<b>S/N</b>	<b>Stakeholder</b>	<b>Description</b>
1	Save Love Pneumoconiosis	An NGO dedicated to assist migrant workers with pneumoconiosis in China and to influence public policy
2	China Stone Chamber –Hou Jianhua	The national industry association on stone. Hou is the lead author for many researches cited in this report
3	Xiamen Stone Chamber	Stone association for Xiamen city
4	Fujian Stone Chamber	Stone association for Fujian province
5	Shandong Stone Chamber	Stone association for Shandong province
6	Laizhou Stone Chamber	Stone association for Laizhou city
7	Stone Journal	A journal focused on the stone industry
8	China Labour Bulletin	An NGO based in HK that supports and actively engages with the workers' movement in China. This report also cites multiple publications by CLB.
9	Stone suppliers	Selected stone suppliers involved in stone mining and processing, and their workers
10	Transport provider	Representatives from transport provider – e.g. truck drivers

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