

Feasibility Study for Setting Standards in Natural Stone Sector in Rajasthan

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In collaboration with

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Preface

Standard setting programmes are different from corporate social responsibility (CSR) initiatives in form, though there are similarities in their content. The latter consists of enterprise-driven principles and values that the companies themselves define, unilaterally and voluntarily, on social and environmental policies. These principles and values will have implications for both internal public (workers, shareholders, investors) and external public (institutions of public governance, community, civil society organisations and other enterprises) stakeholders. The standard setting programmes, while using the social and environmental standards as market incentives for enterprises, are premised more as a collaborative exercise among various stakeholders, and have a wider outreach. However, both encourage managements to observe laws above the minimum level required, implement laws that are considered difficult to implement, and devise methods where none exist. The standard setting, at least in theory, anticipates the involvement of stakeholders other than the business to be part of standard setting and, later, its monitoring.

Pressure by the consumers on the social and environmental conditions of production and the consumers' engagement with the producers are considered precursors to the 'standard setting' process. There could be many reasons for consumers to be interested in the conditions of production. Mass consumption goods that involve labour-intensive production processes, as in the case of garments, where intensification of work and reduction in labour cost are used as measures to bring down overall production cost, attract consumer interest. The extractive industries, which are known to have substantial economic, social, political, and environmental impacts, have also attracted significant consumer interest. The natural-stone industry is an extractive industry. Natural-stone products are being used in public buildings, commercial places, and parks, as pathways, and also for funerary requirements.

In 2005, the European Union (EU) imported 15,228 thousand tonnes of natural stone worth 3,242 million Euros. The increasing domestic demand has another side to it; Europe is reducing its production and processing of natural stone. Germany is one of the top five importers of natural-stone products, accounting for 16 per cent of total EU imports for the year 2005.

About twenty-seven per cent of the natural-stone products in the international market are from India, with Rajasthan accounting for about 10 per cent. In Rajasthan, around 152,780 hectares of land are reported to be under active mining, with natural stone categorised under 'minor mines' spread over 92,949 hectares. Granite, limestone, marble, slate and sandstone are major categories among the minor minerals. Rajasthan accounts for 91 per cent of the total marble reserves in India and is the largest sandstone producing state in the country.

Along with the issues of ecological and environmental destruction, and irreparable loss of cultivable lands, it is the deplorable conditions of the workers who are engaged in the mines and quarries that accentuate the need for standard setting in the industry. In Rajasthan, workers, around 300 thousand officially and much more unofficially, work in extremely vulnerable and precarious conditions. They face occupational

health hazards and diseases like silicosis and tuberculosis. Child and forced labour are widespread. Mostly, migrant workers live in shacks without basic amenities like drinking water and toilets. The system of piece-rate wage, which camouflages intensification of work and family labour, is a means to deny minimum wages to the workers. Workers are not organised, there are no systems of representation or collective bargaining, and any attempt to organise them is forcibly put down.

This does not mean that the mining and quarrying in Rajasthan is not regulated. The Marble Policy of Rajasthan State, 2002, and Granite Policy of Rajasthan State, 2002, provide the overarching framework. It is observed that thirty government departments are directly associated with the natural-stone sector. The Mine and Mineral Act, 1974; Mine and Mineral Regulation, 1985; Mine and Mineral Regulation, 1997; and Rajasthan Minor Mineral Concession Rules, 1986 (amended up to 2004), are among the laws that regulate mining and quarrying operations in the state.

The Trade Union Act, 1926; The Bonded Labour System (Abolition) Act, 1976; The Payment of Wages Act, 1936; The Minimum Wages Act, 1948; Child Labour (Prohibition and Regulation) Act, 1986; The Equal Remuneration Act, 1976; Inter-State Migrant Workmen Act, 1979; The Dangerous Machines (Regulation) Act, 1983; The Trade Unions Act, 1926; Contract Labour (Regulation and Abolition) Act, 1970; and Maternity Benefits Act, 1961, are among the many laws that regulate the employment and conditions of work in mines and quarries, and provide social security for them. There are additional laws like The Shops and Commercial Establishments Act, 1958, the Factories Act, 1948, and the Boilers Act, 1923, which generally provide the rules and regulations related to processing units.

What is, therefore, striking is the total failure in the enforcement of provisions of the laws, augmented by the mineral policies of the government which deregulate mineral production and propose withdrawal of the state from the active role of regulating employment and working conditions as well as ensuring welfare of workers. Nonobservance of legal provisions by the employers, failure of the state in enforcement and withdrawal as an active regulator, and non-existence of forceful representative bodies of the workers, create conditions for the non-state actors to intervene on social, environmental and economic consequences of mining and quarrying in Rajasthan.

In Germany, which is one of the top importers of natural stone from India, bad labour conditions in the production of tombstones, especially child labour, is receiving the attention of the media. A related issue being discussed in Germany is the observance of standards in public procurement of natural stone for pavements of roads and graveyards. About 70 cities and Bavaria in Germany declared that they will be working towards a child labour-free public procurement. Subsequently, *terre des hommes* was asked by consumers, architects, stone importers and cities on what possibly could be done. The managing director of the German organisation of natural-stone businesses (Deutscher Naturstein-Verband) was also interested in a code of conduct, as they were affected by very cheap imports from India and China. The organisation had asked the EU for an anti-dumping regulation towards India, though it was not entertained. A German activist founded the label 'Xertifix' for natural-stone

imports from India, but labelling does not cover major rights violations in the stone industry. Marshalls, a member of Ethical Trade Initiative (ETI), launched their corporate social responsibility initiative, but operates only along its supply chain. Globe Stone Initiative (GSI), an initiative by the Natural Stone Exchange (NSNX), a global natural-stone procurement platform, does not include trade unions or civil society organisations.

terre des hommes proposed that the process of standard setting in India should be on the basis of a multi-stakeholder dialogue, which should be supported by a coordinated and joint process with stakeholders in the consumer countries. The Centre for Education and Communication (CEC), a terre des hommes partner in India, conducted 'The feasibility study for setting standards in natural stone industry in Rajasthan' to capture the perspectives of stakeholders in India on the idea and need for setting standards in the industry, and to identify core components of a possible standard.

A refreshing finding of the study, which collected perspectives from exporters, mine owners, processing factories, government, trade unions, workers and local bodies, is that the stakeholders affirm the need and possibility of setting standards in the industry, though the modalities of reaching there are not so clear. However, it suggests that the standards will not reach deep if the small mine and quarry owners, who constitute about 90 per cent of enterprises in the industry, are not organised based on cooperative principles, along the lines of worker cooperatives already existing in the mines of Rajasthan. It also emphasises the multi-stakeholder character of the process of standard setting as well as the necessary linkages it should have with stakeholders in the consuming countries.

Nevertheless, it is important to keep in view a possible market distortion if the standard setting is confined to stones from India alone. This results from the cataclysmic changes that are occurring in the structuring of value chain for natural-stone industries. While China supplies 35 per cent of natural stone to the European Union, India supplies only 25 per cent. Moreover, while 90 per cent of China's exports to the European Union are finished products, in the case of India it is only 52 per cent. In 2006, China imported 37.3 per cent of the total world exports of raw stone materials, and India contributed 52.6 per cent of China's total raw granite imports.

J John
Executive Director, CEC

Chapter 1: Introduction

The present study seeks to assess the feasibility of setting standards in stone quarries with the case study of the natural stone industry in the Indian state of Rajasthan. India is one of the major producers and suppliers of natural stone and granite products. In minerals category, besides iron ore, natural stone is the second largest foreign-exchange earner for India.¹

While India is a major player in the global stone industry and provides huge revenue to the government, workers involved in quarrying and processing activities in India survive in precarious and vulnerable living conditions. Various studies and information from the field reveal the existence of exploitative employment practices such as use of child labour and different forms of bonded labour, low wages, hazardous working conditions, and large-scale involvement of informal workers. Callous disregard towards health and safety measures results in workers suffering diseases like tuberculosis, silicosis and various other respiratory problems. There were violent repressions by quarry owners on the initiatives taken towards freedom of association. Coupled with this, the stone industry's disregard for environmental regulations has led to transformation of agricultural land into unproductive land, deforestation, and air, water and noise pollution.

In 1991, a study group on bonded labour in its report to the National Commission on Rural Labour reported prevalence of bonded labour in stone quarries and crushers, and sandstone, marble and slate mines in Rajasthan and other states such as Haryana, Uttar Pradesh, Madhya Pradesh, Karnataka and Tamil Nadu². A report from the Human Rights Watch (1996), based on the survey of 100 bonded children in five states including Rajasthan, identified the involvement of bonded child labour in stone quarries besides other agriculture and non-agriculture occupations³. In 1997, based on a Supreme Court order, National Human Rights Commission (NHRC) was entrusted with the responsibility of monitoring the implementation of Bonded Labour System (Abolition) Act. Subsequently, NHRC started monitoring the implementation of the act and identified 13 states as bonded labour-prone states, among which Rajasthan was also included⁴. The existence and contemporary forms of bondage in various industries including the stone quarries of Rajasthan have been analysed in a book, *Labour Vulnerability and Debt Bondage in Contemporary India*, published by Centre for Education and Communication (CEC)⁵. There is also an exclusive report by CEC on bonded labour in the mining sector of Rajasthan⁶.

¹ Press Release 14 Jan 2003, GOI, Ministry of Commerce
http://commerce.nic.in/pressrelease/pressrelease_detail.asp?id=682

² Ravi S Srivastava, Bonded Labour in India, Working Paper, WP/43/2005, International Labour Office, Geneva, April 2005 p. 22

³ ibid 29

⁴ ibid 43

⁵ Labour Vulnerability and Debt Bondage in Contemporary India, Centre for Education and Communication, March, 2008

⁶ 'Analysing the Effectiveness of the Programmes for the Eradication of the Bonded Labour System', Centre for Education and Communication (CEC), 2007

The Mine Labour Protection Campaign survey carried out in the year 2001 states that 97 per cent of workers in sandstone mines are indebted and a majority of them are in bondage. These debts are passed on from one family member to the other or from one generation to the next, and can even cause a worker to be sold to another contractor⁷. Confirming this trend, a report from the ministry of labour, government of India, states that till March 31, 2004, the number of bonded labourers identified and released are 7,488, among which 6,331 are rehabilitated⁸. Notwithstanding the rehabilitation efforts of the government, various reports and information from activists say that the lack of employment alternatives and an improper rehabilitation system push them back into bondage.

The report on sandstone quarrying in Budhpura by the India Committee of the Netherlands revealed that many quarries were being conducted with precarious working conditions, corrupt trading practices and disastrous environmental management. The report said that children often start work long before they reach the age of 14, and are asked to perform highly dangerous tasks. CEC's earlier fact-finding exercise also reiterated the existing precarious working conditions and the total absence of the state machinery⁹.

According to Rana Sengupta of the Mine Labour Protection Campaign (MLPC), working conditions in the Makrana marble quarries are extremely dangerous. 'Each month an average of three men die and 30 are injured'¹⁰. The same report states that safety rules are flouted without the fear of prosecution. Miners engage in dangerous works like 'fixing dynamite in rock faces with just minutes to haul themselves out of the mine using a rope.'

Poor working conditions in the stone quarries of Rajasthan lead to severe occupational health hazards and diseases. Dangerous diseases like silicosis and tuberculosis are widespread among the quarry workers of Rajasthan. According to a study conducted in the state by Prof. PK Gupta and his associates at the department of chest diseases of Dr SN Medical College, Jodhpur, and the NGO Gramin Vikas Vigyan Samiti (GRAVIS), radiological investigations showed that 56 per cent of mineworkers were affected with silicosis or silicatuberculosis¹¹.

Thus, findings of various studies and reports on stone quarries evidently expose the absence of state machineries and the complete failure of all laws and policies relating to the rights of the workers in the stone industry. Though there are legislations to protect the rights of workers and for eradication of child labour, forced labour, and bonded labour, thousands of workers in the stone industry are still working and living in precarious conditions. Employers in the stone industry are known for their money and muscle power, and political influence, and their brutal means of suppressing dissent.

⁷ *ibid* 23

⁸ *ibid* 6

⁹ Fact-finding Study on Working Condition of Labour in Sandstone Quarries of Rajasthan, CEC, 2002

¹⁰ Miners pay heavy price for India's famed marble, *Stone Review*, Vol. 4, No. 1 January 2008, p. 62

¹¹ Kuntala Lahiri Dutt (2006), "Gendered Livelihood in Small Mines and Quarries in India: Living on the Edge", Rajiv Gandhi Institute for Contemporary Studies, Australia South Asia Research Centre, p. 27

There is generally absence of trade unions and other support mechanisms for the workers. The agencies that want to intervene and promote workers' welfare have to face the prevailing hostile environment and even threats to life. The following statement by an activist explains this 'hostile environment' in the quarries of Rajasthan.

“Murder and mayhem is nothing to these people. If they are challenged (quarry owners), they will kill the workers and bury the bodies in the quarries¹².”

The prevalence of vulnerable working conditions and the involvement of child and forced labour in the stone quarries of Rajasthan demand setting of standards in the sector. However, it is essential to examine the viability of setting standards and the perceptions of stakeholders, and to devise appropriate strategies for further intervention. With this background, the current study intends to explore the feasibility of standards setting based on a multi-stakeholder dialogue.

Definition of Standard Setting

The process of standard setting is often referred to as the implementation of a certain code of conduct in production and trading of a particular product. The standards are created based on national and international laws and regulations, basically to ensure sustainable production with due respect to labour and environmental norms. Though the societal, labour, environment and other operational norms and criteria have been prescribed by various laws, their stringent implementation remains a challenge. The prime task of any standard-setting process is implementation of these norms and ensuring consistency of their compliance. The standard-setting process, which is implemented adopting various methods, is quite prevalent in other sectors like tea, oil and garments. The process can be in the form of either government initiative or private voluntary initiation by civil societies, corporate groups, etc. Some of the voluntary initiatives in the natural-stone sector are discussed below¹³.

Marshall's Landscape House Corporate Social Responsibility¹⁴

Marshall's is a British building-materials company specialising in landscape products. The company sources from India and China, and particularly from three dedicated suppliers, of whom two are in China and one is in India¹⁵. Marshall's is a part of Ethical Trade Initiative (ETI) and has adopted its base code. It also conducts independent auditing on its suppliers and pays for the process of auditing. Marshall's is committed to make its suppliers to not use child labour, provide protective equipments and pay adequate wages to workers. It is also funding a local school in India where the children of workers in its supplier base are studying. Marshall is also funding a local NGO in Hadoti Hast Shilp Sansthan. Marshall limits its effort to its

¹² Quoted from *ibid.* p. 32

¹³ The various initiatives are discussed based on the study CREM, India Committee of the Netherlands and SOMO, (2006) “From Quarry to Graveyard: Corporate Social Responsibility in the Natural Stone Sector”

¹⁴ Source: http://www.marshall's.co.uk/group/PDF/csr_report_2007.pdf

¹⁵ The Indian supplier is Stoneshippers India in Kota, Rajasthan

own direct supplier. It is up to the suppliers to demand compliance from their subcontractors with the standards set by it.

Xertifix

Earlier, in August 2004, a television documentary, *Gravestones*, made by children sparked off a discussion on working conditions in Indian stone quarries. Consequent initiatives resulted in the creation of a certificate Xertifix, which is awarded to Indian companies with fair production conditions that are regularly controlled. The basis of this certificate was Indian laws. It aimed to make producers comply with minimum social standards, but was not an attempt to create general conditions of fair trading. These included measures such as ban on children under 16 years working in quarries, access to drinking water, shady shelter for workers, and provision of mouth masks and necessary ear plugs to workers. The initiative called for active participation of importers of stones and manufacturers in India¹⁶.

NSNX's Globe Stone Initiative (GSI)¹⁷

Natural Stone Exchange (NSNX) is a global natural-stone procurement platform that specialises in developing countries such as China, Turkey, Brazil, India, Iran, and Egypt. It has local offices and a network of partners in each country, and procures goods for its customers. It supplies stone products to North American and EU buyers. NSNX also claims to have a strong procurement capability from the Mainland China market, with strategic partnership with trading companies. It has its offices in China, Hong Kong Turkey and Australia. The GSI's objective is to promote good labour and employment practices in global supply chains in the natural-stone industry. It seeks to encourage and promote continuous improvement of both commercial and social concerns in the natural-stone industry by means of continuous recording, inspection, evaluation and communication of its goals. It aims to employ both social and economic measures to ensure its suppliers improve current unsound practices.

GSI's stated goals include:

- elimination of child labour;
- elimination of unsafe work environments;
- elimination of environmentally dangerous production practices;
- promotion of employment of single mothers;
- support for women in the industry;
- support of education among stone industry-worker families;
- support for sculptors and other artists to procure stone materials economically;
- informing, educating and training suppliers, workers, inspectors, buyers;
- promotion of the use of natural stone in sculpting and other art forms; and
- increasing the use of natural stone products.

GSI's list of stakeholders does not include trade unions or civil society organisations; instead, it stresses on the role of government. This initiative seems to lack a genuine multi-stakeholder perspective to promote standards.

¹⁶ A certificate for stone from India, Stone Report, August 10, 2004, Source: <http://www.stonereport.com/ihtml/detail-e.htm?aclnews=10:0:615::India:0:44:>

¹⁷ <http://www.nsnx.com/ENG/site/gsi.jsp>

Communities Artisanal and Small-scale Mining CASM¹⁸

The Communities Artisanal and Small-scale Mining (CASM) initiative was launched in 2001. CASM is a global networking and coordination facility with a stated mission to “reduce poverty by improving the environmental, social and economic performance of artisanal and small-scale mining in developing countries.” CASM is currently chaired by the UK's Department for International Development and is housed at the World Bank headquarters in Washington, D.C.

Resourced by a multi-donor trust fund, CASM currently receives its core funding from the United Kingdom and the World Bank, supplemented by programme support from Japan, Canada, France and the United States, amongst others. Its activities range from ASM initiatives in many countries – working with companies, governments, civil society and miners themselves – through to engagement in international development policy dialogues¹⁹.

'Genuine Stone' of The Natural Stone Council (NSC)²⁰

The Natural Stone Council is a collaboration of businesses and trade associations that have come together to promote the use of genuine stone in commercial and residential applications. Its stated goal is to increase the understanding of, preference for, and consumption of genuine stone. It has also created a 'Genuine Stone' logo, which is a registered trademark. It is basically a brand-building exercise. The NSC will function as a licensor of the trademark. The licensee should adhere to various guidelines of NSC. Its affiliated organisations consist of trade associations and not-for-profit organisations that support trade, such as Allied Stone Industries, Building Stone Institute, Elberton Granite Association, Indiana Limestone Institute, Marble Institute of America, National Building and Granite Quarries Association, and National Slate Association.

In December 2008, NSC launched a survey for environmental assessment of the stone industry in the USA. In its survey, it is aiming at collecting data on production process, energy and water usage, and other daily operations in US quarries²¹. It aims to provide an environmentally sustainable tag to its trademark 'Genuine Stone' and reach out to the environmental and green-building communities. However, no specific statement in this regard is available on its website. As of now, it aims to build only on the nature of stone and its purity. It has no component of social aspects involved in stone production. One needs to see the possibilities of including social aspects also as criteria for being 'genuine stone'.

Fair Stone Initiative²²

Fair Stone Initiative is taken by the International Section of the International Social Security Association (ISSA) on Prevention of Occupational Risks in the Mining

¹⁸ <http://www.artisanalmining.org>

¹⁹ Its organisational structure and functional details can be accessed from <http://www.artisanalmining.org>

²⁰ <http://www.genuinestone.com/>

²¹ <http://www.marble-institute.com/pressroom/nscpr120307.pdf>

²² <http://fairstone.win--win.de/>

Industries. Founded in 1927, ISSA has its headquarters in Geneva, Switzerland. Its constitutional mandate is “to co-operate, at the international level, in the promotion and development of social security throughout the world (...) in order to advance the social and economic conditions of the population on the basis of social justice.”²³

The aim of the International Section of the ISSA on Prevention of Occupational Risks in the Mining Industries is to improve social security in mining worldwide²⁴. In the Fair Stone Initiative, German importers are working together with Chinese natural-stone operations to improve the labour situation in Chinese companies.

The long-term objective of the initiative is to participate in the introduction of an official Fair Stone seal that is both generally recognised and upholds specific standards for fair-traded natural-stone products.

The Mutual Accident Insurance Association for the Stone and Quarry Industry (StBG) supplies expertise in assessing the operational hazards and stress factors as well as basic and advanced training possibilities based on onsite inspections and deficit analysis. Independent assessors will carry out evaluations based on which the official seal 'Fair Stone' will be granted for a limited period of time if minimum requirements have been met. Suggestions concerning prerequisites for awarding the Fair Stone seal will be processed by the German Mutual Accident Insurance Association for the Stone and Quarry Industry in cooperation with the Mining Section of the ISSA, plus the German-Chinese joint-venture companies and the WIN=WIN management consultancy involved in the project.

Under the initiative till now, in both China and India, more than 30 local employers have signed a declaration stating that they will not permit any exploitative child labour or forced labour in their businesses²⁵.

There are a number of corporate management (based in EU) and government initiatives that focus on the ecological and socio-economic aspects of quarrying. Interviews with stakeholders revealed that there are no CSR issues in the process of decision-making between importers and exporters. Concerns of the importers are confined to the quality of the product and timely delivery. Apart from this, no other guideline or conditionality is placed on the exporters in India.

The aforesaid initiatives seem to operate with limited scope, and their impact is hardly visible in the Indian natural-stone sector. Further, most of the initiatives provide no space for the cooperation of civil societies and trade unions. No viable mechanism to organise labour and actively involve them in standards setting and monitoring processes has been proposed. There is also lack of understanding about the nature and structure of Indian stone sector and its variation in the context of region and type of stone. Although major issues like child labour, bonded labour, and living wage have been addressed, these need to be understood in their contemporary forms and the standards created accordingly. Moreover, there are also other issues like gender and

²³ <http://www.issa.int/aiss/About-ISSA/Mission>

²⁴ <http://mining.prevention.issa.int/>

²⁵ Further information on this initiative can be obtained from <http://fairstone.win--win.de/>

tribal discrimination, collapse of the agrarian economy and food security for local communities, health and safety, and environmental degradation – all call for serious attention. Investigation is also needed to explore the scope and limitation of the Multi-stakeholder Initiative (MSI) and the certification initiative.

Objectives

The present study primarily aims at investigating the feasibility of setting standards in stone quarries and the possibilities of successful implementation and sustainability of the process. Following are the major objectives of the study:

1. To identify components and scope of standards in terms of coverage, working conditions, wages, housing, education, health of workers in the stone quarries of Rajasthan
2. To analyse the possibilities of involving various stakeholders in the process of standard setting
 - Mapping partners and their profile
 - Possibilities of involving state authorities
 - Explore the possibilities of involving the manufacturers and industrial associations in the process of setting standards and implementing them
3. To identify key partners and their role in the process of setting standards and implementing and sustaining them
4. To devise essential strategies for implantation and sustainability of the process
5. To determine the size and scope of institutional structure for creating, implementing and sustaining the standards and personnel
6. To estimate the total cost for standards setting

Methodology

Through desk research, background information was obtained on legislation pertaining to the regulation of stone quarry operations, the structure of the export industry and the forward and backward linkages of trade, the existing fair trade practices, and the regulation of employment and working conditions. In addition, the desk research also covers the aspects of mapping and profiling key partners for future activities.

The basic criterion for selection of the fields is their engagement in the stone export business, particularly with Germany. According to CAPEXIL's report on 'Itemwise and Countrywise Export of Granite, Natural Stones and Products Panel from India during 2004-2005', Germany imports four categories of stone products from India, viz. granites, marbles, slates and other stones. The export value of these products in 2004-05 was Rs 10,410.01 lakh (in case of granite products), Rs 299.84 lakh (in case of marbles), Rs 122.15 lakh (in case of slates) and Rs 1,694.36 lakh (in case of other stone products). Since there was no particular report providing export details of stone products from Rajasthan, the research zeroed in on three places where granite, marble and other stones are largely being produced for European countries. Officials in Centre for the Development of Stone (CDOS) helped us to identify the export quarry clusters in Rajasthan. Prominent among them are Jalore for granite, Kota for other stone products, and Udaipur and Rajsamand for marbles. Jalore is popularly known as the 'granite capital of Rajasthan'. Kota produces more than twenty varieties of stones;

all have high demand in foreign countries. Green marbles constitute 90 per cent of the Indian marble products that are being exported. Udaipur and Rajsamand are important places where green marbles are being quarried and processed. Udaipur is also known for its granite products. Considering all these facts, it was decided to take up Kota, Jalore, Udaipur and Rajsamand districts of Rajasthan for the fieldwork.

Field investigation was carried out to get information from the workers for a detailed analysis of workers' profile, prevailing employment relations, wages, working conditions, and status of housing, health and education of the workers in the industry, through the questionnaire-and-interview method. In addition to that, employers and managers, social activists and government officials were interviewed for their views on the need for CoC to regulate employment relations and working conditions, conflicts between existing legal structures and CoC, possibilities of making a business case for following standards, CoC as a non-tariff barrier, and various means of implementation and sustaining the process.

The study is not an empirical or sample-based exercise. It consists more of case studies and qualitative information assimilated through extensive fieldwork, meeting stakeholders, focus group discussions (FGD) with workers, and one-to-one interviews.

In order to gain experts' comments, the preliminary report of the study was shared with representatives of civil societies, trade unions, workers' unions, workers' cooperatives, businesses and government officials during the stakeholders' consultations.

Chapter 2: Global Trends and Indian Stone Industry

2.1. Introduction

This chapter analyses the global trends in the sector and the Indian stone industry. For the purpose of standards setting with the involvement of various stakeholders at global level, it is important to understand the links between the Indian stone industry and the international market. This chapter delineates various operational aspects including global production, trade and marketing. In addition to that, it explores the relationship between exporters from India and importers in developed countries with particular focus on the European Union.

2.2. Market Segmentation

Market segments are differentiated based on end users of natural stones and their products. Accordingly, the market is segmented along four product categories. They are:

- 1) Natural stone processing industry
- 2) Building industry
- 3) Funerary industry
- 4) Consumer market

Here, the natural stone-processing industry uses raw and semi-finished products, and the other three segments use finished products. Slabs and raw blocks are sold to the processing industry. The latter, in turn, processes custom-made products and various other products, and sends these to the other three segments of the market. Around 80 per cent of the natural-stone products are consumed by the building industry. These include products such as;

- natural stone tiles used in floors, walls, tiles for interior and exterior coverings
- custom-made products like kitchen countertops, balustrades, fireplaces, windowsills, fountains
- municipal furnishings
- garden and landscape constructions like tiles and flagstones

The funerary industry absorbs finished natural-stone products such as gravestones, tombstones and urns. It is the second largest market segment absorbing 10-15 per cent of the finished natural-stone products. Consumer markets consume comparatively less finished natural-stone products (around 1-5 per cent). Products under this market segmentation are flagstones, garden art, birdhouses, fountains, decorative balls and vases. In recent times, natural stones are being used in many places and for different purposes. These are fast becoming affordable luxury and fashionable products. Natural-stone products are being used in public buildings, in commercial places, in parks, and even as pathways. The trend towards high-quality processing makes the product more attractable and is being used as an alternative product for woollen carpets, wooden floors and ceramic tiles.

2.3. Trends in International Production and Consumption of Natural Stone and Products

The natural-stone sector is undergoing a major development and rise in production with the involvement of an increasing number of countries in production. Since 1990, the natural-stone production has increased by 7.3 per cent and the volume of trade has grown by 9.2 per cent. The year 2006 particularly recorded a phenomenal growth with 8.8 per cent and 14.7 per cent of production and volume of trade, respectively, as compared to the year 2005. In recent years, global consumption has benefited from a dynamic demand in the US market (+12 per cent) and other dynamic zones such as the Far East²⁶. The major producers – China, India, Italy, Iran, Turkey, Spain, and Brazil – account for 70.8 per cent of global extraction.

The important role of trade in the development of the industry can be understood from the fact that the trade of stone exceeded 41.3 million tonnes. It had a more or less equal share of worked and unworked materials, at the level of 43.6 per cent and 56.4 per cent, respectively. It clearly shows the dominance of global consumption, which refers to the transformation of materials from the country of origin to other countries²⁷. These developments can also be attributed to the development in technology and techniques in exploiting stone resources.

The forecasts for production suggest that by 2025 the volume of stones extracted globally should rise to roughly 440 million tonnes, equal to 4.8 million equivalent square metres, with quantitative international trade of a billion metres²⁸.

China is a leading player in the global stone sector. One of the main business policies behind China's dominance is its strategy to import raw stone from the global market (see table 1). In 2006 China imported 37.3 per cent of the total world exports of raw stone materials, while Italy holds a distant second place with a share of 14.1 per cent.

Table 1: Main countries importing raw stone materials (2006)

	1,000 tonnes	%
China	5,757	37.3
Italy	2,175	14.1
Taiwan	950	6.2
Spain	828	5.4
USA	491	3.2
Canada	374	2.4
Germany	331	2.1

²⁶ CBI Market Survey, The Natural Stone and Stone Products in the EU, July 2007. Source: www.cbi.eu

²⁷ Ibid

²⁸ These figures are lower than the point already reached by ceramics sector in 2006. Source: Stone Review, Vol. 4, No. 1, January 2008, p. 60

Source: Marmo Machine Classic, edition 198, 2007 ANNO 31

From 2001 to 2006, China's stone imports increased enormously, with an overall increase of 194 per cent. Granite imports increased by 125 per cent, and marble and polishable limestone by 273 per cent.

In case of granite imports, around 75.7 per cent originate in India and Brazil. India's contribution is 52.6 per cent of China's total raw granite imports²⁹. Thus, while the Indian stone industry is capable of producing final products, there is stiff competition from China in terms of value-added products in the international market.

Increasing global production and competition are constantly dragging the prices down and challenging the margins. It also have implications on wages and working conditions. Thus it is imperative to consider the dominant role of China in the process of setting standards in the global stone sector.

With the changes in the economic policies, in information technology, and in production technology in the stone industry, the supply chain and other aspects of a long-term relationship among exporters and importers are coming under pressure. A new trend is emerging wherein stones are extracted in one country, which was the main contractor to a second country, processed in a third country, and installed by labour from a fourth country³⁰. Such a trend will have implications such as limiting the role of developing country players to extracting, while big players move into other aspects of the production chain. This also opens up the option to achieve competitiveness by processing the stone in less cost in a third country.

- Both the global production and the consumption of natural-stone products have increased.
- Consistent development in natural-stone production in future has been forecasted.
- China, India, Italy, Iran, Turkey, Spain and Brazil are major producers, and they account for 70.8 per cent of global extraction.
- China's strategic approach – that is, importing raw materials and then exporting them as finished products – has made it a dominant player in this sector.
- There is stiff competition from China in the international market in terms of value-added products.

²⁹ For details on China's business policy, see China: Raw hunger still growing, Marmo Machine Classic, edition 198, 2007, ANNO 31, pp. 26-47

³⁰ CBI Market Survey: The Natural Stone and Stone Products in the EU, p. 17

2.4. Trends in EU Market: More Consumption and Less Production³¹

Countries in the European Union are the traditional users of natural-stone products and account for the highest per-capita consumption worldwide. The top 10 consuming countries in the European Union represent more than 27 per cent of the total global consumption of finished products, in square-metre equivalent. In 2004, the European Union consumed 82.3 million tonnes of natural stone, of which 39 per cent were finished products, with value of €7.3 billion.

Experts predict further growth in global consumption over the coming years. Increased demand for natural-stone products is expected in Germany and the central European countries because of higher investment in the stone industry.

While the global production level has increased in recent years, the production level of EU countries has stagnated. The EU 15 now accounts for 26 per cent of the global stone production, and in 2005 the EU 25 produced 77.8 billion tonnes of natural-stone products. The biggest producers of intermediate stone are Italy (52% of the EU production), Spain (20%), Greece (12%), Poland and France. For finished products, they are Italy (51%), Germany (18%), Spain (17%), Portugal and Hungary.

Increasing domestic demand and stagnation in EU production have thrown up opportunities for developing country players to play a major role in EU markets. Further, increasing availability of technology to developing countries to improve production quality and lack investment in EU are also major positive factors for these countries.

2.4.1. Imports to the EU

In 2005, the European Union imported 15.228 thousand tonnes of natural stone worth 3,242 million euros. The top five EU importers, in terms of value, are Italy (17% of total EU imports), Germany (16%), the UK (15%), France (13%), and Spain (9%). These countries represent 70 per cent of total imports of the European Union. The next five importers are Belgium (8%), The Netherlands (6%), Austria (3%), Ireland (3%), and Denmark (2%).

The European Union imports about 35 per cent of intermediate products and 65 per cent of finished products. It imports mainly siliceous stone (47%), calcareous stone (21%), slate (15%), and other natural stones (17%)³².

Developing countries account for 49 per cent of the natural stones imported to the European Union. The top five exporting developing countries to the European Union are China, India, Brazil, Turkey and South Africa. The biggest buyers of natural stones from developing countries are Italy, the United Kingdom, Germany and

³¹ This section is based on CBI Market Survey: The Natural Stone and Stone Products in the EU, July 2007, CBI Market Information Database, Source: www.cbi.eu

³² Siliceous stone is composed mainly of silica or quartz-like particles. Types of siliceous stone include granite, slate and sandstone. Calcareous stone is composed mainly of calcium carbonate. Types of calcareous stone include marble, travertine, limestone and onyx. Source: <http://marbleoftheworld.com/noteonstone.htm>

Belgium. The share of finished products is also increasing vis-à-vis the share of intermediate products.

2.4.2. Suppliers to EU

Leading natural-stone suppliers (including both finished and intermediate products) to the European Union are China (35%), India (25%), Brazil (11%), Turkey (10%), and South Africa (7%). These exporters represented 88 per cent of total value of imported natural-stone products. According to reports, since 2000 China has increased its exports to the European Union and outpaced India. China's competitive processing industry and its strategy to export value-added finished products produced from locally sourced material or imported raw material played a crucial role in increasing the value of its exports. Around 90 per cent of China's exports to the European Union are finished products, while it is 63 per cent for Turkey, 52 per cent for India, 37 per cent for Brazil, and 32 per cent for Egypt.

- There is more demand, but less production of natural stones in EU countries.
- It provides an opportunity for developing countries to play a major role in the EU natural-stone market.
- Among the EU countries, Italy, Germany, France and Spain are major importers of natural-stone products.
- China, India, Brazil, Turkey and South Africa are major exporters.

2.4.3. Market Size

In 2005, the worldwide consumption of finished natural-stone products reached 50 million tonnes, which is equivalent to 930 million square metres of stone material. China and the United States are the most important consumers of natural-stone products on a worldwide level (respectively 12% and 9% of the global consumption in square metres), and remain the main drivers and indicators of global consumption trends. Other important consuming countries are India (7%), South Korea (4%), Japan (4%), Taiwan (2%), and Brazil (2%).

In this context, the European Union still holds the position of one of the world's largest consuming regions: in square metre equivalent, the top 10 EU consuming countries represent more than 27 per cent of the total global consumption of finished products. Two EU countries, Italy and Spain (with 7% and 6%, respectively), are in the global top five consuming countries. The per-capita consumption in the European Union is also traditionally above the global average of one square metre per 100 inhabitants. Six countries (Switzerland, Greece, Belgium, Spain, Portugal and Italy) consume more than one square metre per capita.

2.5. Trends in German Stone Industry³³

The following passage analyses the trends in the German natural-stone industry. Germany is one of the major traditional players in the natural-stone industry in the European Union. It has a considerable production capacity and a developed processing industry. The arrival of new technologies in extraction and the large supply of natural stone have led to drop in average prices in the German stone market. The population of Germany is ageing, and it is predicted that there will be more demand for funerary products such as tombstones and urns. There is also an increasing demand for bigger-size products. It is predicted that the growing demand from the building sector will have a positive impact on the consumption of natural stone in Germany³⁴. There is also a proposal for reconstructing buildings destroyed during the Second World War, and this may provide much work for stone masons in the years to come³⁵.

The German market can be segmented into four categories based on the usage of natural-stone products. They are: 1) building industry, 2) processing industry, 3) funeral industry, and 4) retail and consumer markets.

2.5.1. Consumption in Germany

Being one of the major EU consumers of natural stones, Germany ranks third with 9 per cent of the total EU consumption in quantity. In the backdrop of an impressive progress in the global stone industry, Germany showed a slight drop in production and consumption for the year 2002-04. (See Table 2)

**Table 2: German Consumption - 2002 – 2004 value in
€ million; volume in 1,000 tonnes**

Product group	2002		2003		2004	
	Volume	Value	Volume	Value	Volume	Value
Blocks and slabs	535	-	423	-	146	-
Landscape design	1,122	75	1,000	88	659	71
Monumental and funeral	8,660	93	8,265	734	6,200	680
Total	10,317	168	9,688	822	7,005	751

Source: Eurostat (2006)

One of the major aspects of the consumption trend is that in 2002-04 the drop in consumption in terms of volume is 30 per cent, while the drop in value terms is only 12 per cent. According to a market survey, the trend to outsource the processing work to lower wage countries and importing them as finished products has led to the increase in the value of imported products³⁶.

2.5.2. Production

Similar to the trend in consumption, production of natural stone in Germany has also faced a significant slump in the years 2002-04. (See Table 3) A major factor that has

³³ This section is based on CBI Market Survey, The Natural Stone and Stone Products Market in Germany, July 2007

³⁴ CBI Market Survey: The Natural Stone and Stone Products in Germany

³⁵ 'Germany: Much to do for stone Masons', Stone Review, Vol. 5. No. 1, January 2009, p. 40

³⁶ . Ibid. p. 1

affected production is increasing competition from foreign suppliers. As a result, Germany imports almost all of its raw materials and a large amount of finished products from abroad.

Table 3: German production split into different categories, 2002-2004; value in € million; volume in 1, 000 tonnes

Product group	2002		2003		2004	
	Volume	Value	Volume	Value	Volume	Value
Blocks and slabs	275	n.a.	61	n.a.	5	n.a.
Landscape design	246	18	115	13	102	10
Monumental and funeral	8,701	444	7,662	429	5,571	385

In production, the outsourcing of natural-stone processing is one of the major recent trends in the German natural-stone industry. In particular, the funerary art mainly comes from China and India.

2.5.3. Trade Channels in Germany

Wholesalers and importers directly procure from supplying countries, and the market is dominated by large companies such as Rossittis and HABU importer. Processors mostly buy their raw materials from wholesalers/importers or quarry their own stones. Depending on the size of the company, processors also directly buy from supplying countries. Processed stones are mostly sold to retailers by the processors. Major processing companies are Meures Natural Stone and Westerwald-Trachyt. Retailers buy their products from importers/wholesalers and the processing industry. In addition to that, large retailers also directly procure from the supplying countries. Major retailers are Meylahn Nature Stone and Jona Stone (online shop). Apart from these players, other major organisations that buy stones from supplier countries for large building projects are Federal German Building Agency and Hochtief.

Exporters from supplying countries enter the German market through agents. Importers in Germany usually deal with the agents of suppliers in the supplying country. It is the agents who procure goods according to the specific requirements of the importers. In some instances, importers directly deal with suppliers, particularly in the case of big-volume imports with a long-term strategy.

2.5.4. Import and Export in Germany

Germany is one of the top five importers of natural-stone products, accounting for 16 per cent of total EU imports for the year 2005. However, during 2002-05, there was a significant drop of 14 per cent in the imports of Germany. (See Tables 4 and 5)

Table 4: German imports in 2002 – 2005; value in € million ; volume in 1,000 tonnes

2002		2003		2004		2005		
Volume	Value	Volume	Value	Volume	Value	Volume	Value	Value 05/02
2,141	600	2,311	531	1,774	473	1,785	491	-14%

Table 5: Imports by leading suppliers to Germany, 2002-2005

	2002 € mn	2003 € mn	2004 € mn	2005 € mn	Leading suppliers in 2005 (% share)	Share %
Intra EU	381	354	276	270	Italy (27%), Spain (13%), The Netherlands (5%), Poland (2%), Portugal (2%)	55%
Extra EU	31	25	24	17	Norway (1%), Switzerland (1%), Israel (0.2%), Bulgaria (0.2%), Romania (0.2%)	4%
DC*	158	152	173	204	China (27%), India (9%), Brazil (2%), Turkey (2%), Pakistan (0.4%), South Africa (0.2%), Vietnam (0.2%), Croatia (0.2%), Egypt (0.2%), Indonesia (0.1%)	42%

Among Germany's natural stone and stone products imports, 55 per cent come from within European Union and 42 per cent are from developing country suppliers. It is important to note that from 2002-05 developing countries increased their overall market share in Germany from 28 per cent to 42 per cent. This trend is expected to continue for the next few years, and soon developing countries will become the largest suppliers to Germany. Germany's main suppliers of natural stone and products are China and India. From 2002 to 2005, China recorded 13 per cent increase in the value of its export to Germany, while India just managed one per cent.

Table 6: Most important developing countries supplying to Germany in 2005

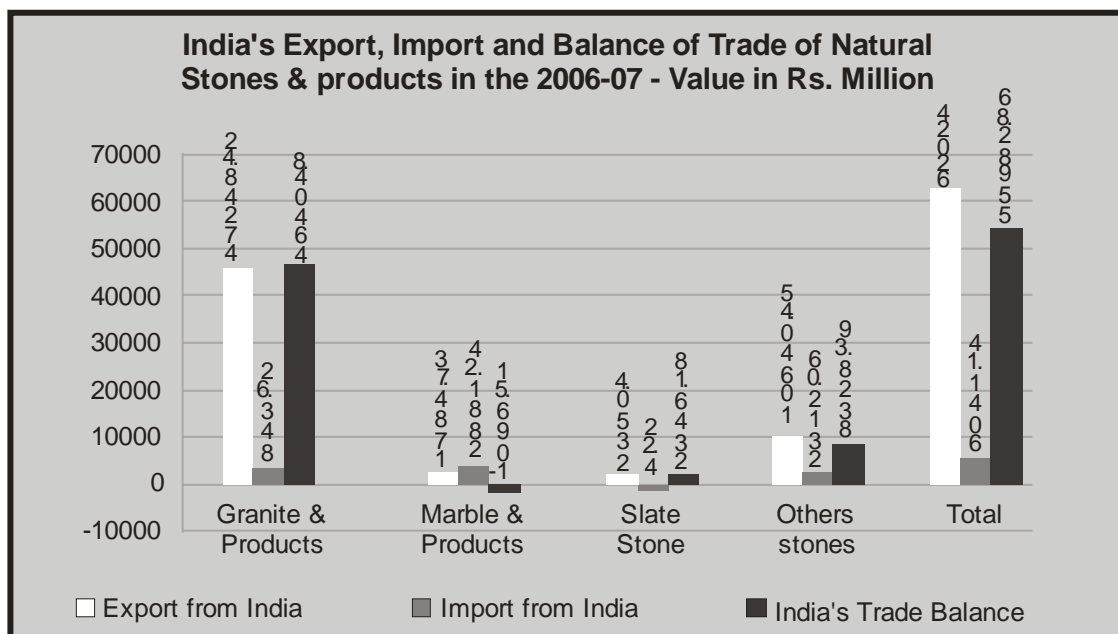
Developing country	Value (in € million)	% of total German Imports	Value '(2002- 2005)
China	132	27	13%
India	44	9	1%
Brazil	9	2	0.50%
Turkey	8	2	-1%
Pakistan	2	0.4	-0.30%

- Germany imports almost all of its raw materials and large amount of finished products from abroad
- Germany's import of natural stones from developing countries is consistently increasing
- China and India are major suppliers to Germany

2.6. Trends in Indian Stone Industry

The natural stone sector in India consists of large-scale as well as small and medium enterprises (SME). The Indian stone industry is an important player in the global market. Since 1987, the industry has travelled a long way; exports of granite and marble jumped from just Rs 60 crore in 1987 to over Rs 3,650 crore in 2005. The industry had earned foreign exchange in excess of \$590 million in 2003-04³⁷. Further, with the increased demand for value-added products in the world market, exports of granites, marbles and stones from the country crossed Rs 4,000 crore in 2006-07³⁸. (See figure 1)

Figure 1: India's export, import and balance of trade of natural stones & products in 2006-07 – value in Rs million



Source: CAPEXIL

³⁷ However, the foreign exchange has fallen to \$570 million in 2005. Lack of uniform policy hits stone industry, Business Standard, Bangalore, February 02, 2006

³⁸ Arawind Gowda, Granite Exports Cross Rs 4000 Crore, Business Standard, April 19, 2007

It is important to note that the growth of Indian exports has almost doubled from 2002-03 to 2006-07. (See Table 7)

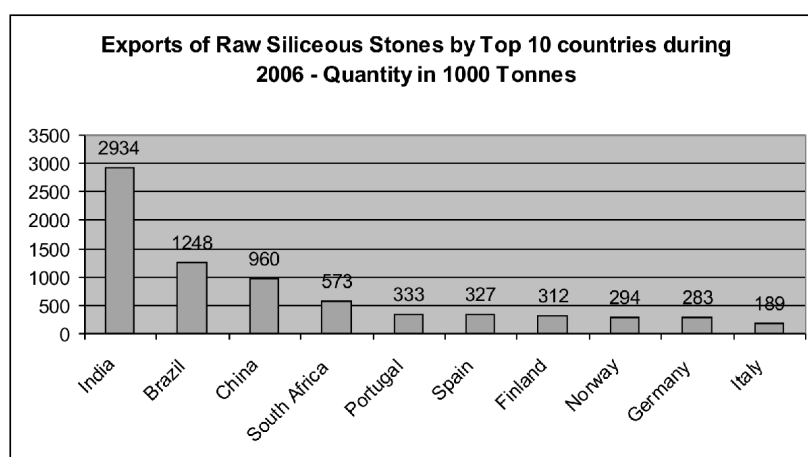
Table 7: Export data of Indian stones (in Rs Million and US\$)

Particulars	Value in	2002-03	2003-04	2004-05	2005-06	2006-07
Granite & products	Indian rupee	24,605.8	26,538	25,622.7	34,905.9	47,248.4
	US\$	622.93	671.85	648.67	883.69	1,196.16
Marble & products	Indian rupee	2,291.5	1,992.6	1,683.4	1,669	1,784.7
	US\$	58.01	50.44	42.62	42.25	45.18
Slate stone	Indian rupee	1,391.5	1,459.8	1,855.1	2,107.4	2,350.5
	US\$	35.23	36.96	46.96	53.35	59.5
Other stones & products	Indian rupee	3,502.3	4,096.2	5,275.3	6,937.6	10,640.4
	US\$	88.84	103.7	133.55	175.63	269.38
Total	Indian rupee	31,791.1	34,086.6	34,436.5	45,619.9	62,024
	US\$	804.84	862.95	871.81	1,154.93	1,570.23

Source: CAPEXIL

While value-added products (polished granites and marbles, slabs, tiles, monuments and landscape materials) accounted for 80 per cent of the exports, granite-cut blocks (raw and unpolished) formed the remaining segment. India is one of the major exporters of the raw siliceous. (See figure 2)

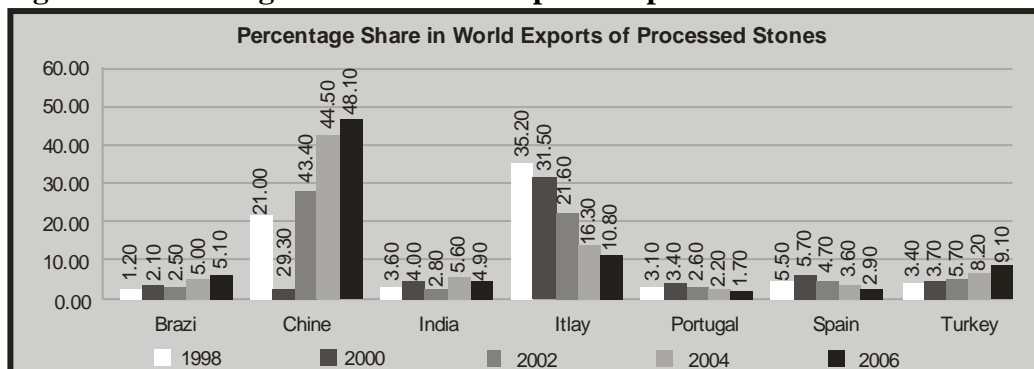
Figure 2: Exports of raw siliceous stones by top 10 countries during 2006 – quantity in 000 tonnes



Source: CAPEXIL

Raw granites and marbles are also exported to China, Japan, Taiwan, Germany, Singapore and Russia. China is the main consumer of unpolished granites, which are exported after value addition. India is among the leading granite-exporting countries and a close competitor to China and Italy, which are the other major players in the industry. The demand for value-added products has increased significantly in the USA and many European countries, driving the growth of exports. However, India's percentage share in world exports of processed stone for the year 2006 stands at a mere 4.90 per cent. (See figure 3)

Figure 3: Percentage share in world exports of processed stones

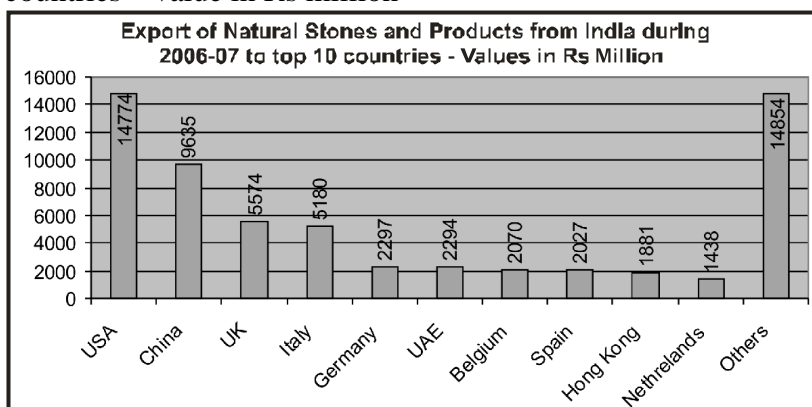


Source: CAPEXIL

With the availability of advanced technology, the Indian stone quarries have undergone major changes in their operations. Industrialists³⁹ claim that the technological developments helped the industry by way of facilitating modernisation and production of good-quality blocks, and resulting in reduction in wastage. In addition, they are also concerned about facing certain problems since 2006, such as high depreciation of the US dollar,⁴⁰ steep increase in oil prices⁴¹, increased cost of steel and consequent increased cost of machines and tools, appreciation of the euro⁴², and high ocean freight-rate increase.

The top ten importers of natural-stone products from India were China, the USA, Italy, Hong Kong, Taiwan (Taipei), Germany, the United Kingdom, Spain, Netherlands, and Belgium⁴³. (See figure 4)

Figure 4: Exports of natural stones and products from India during 2006-07 to top 10 countries – value in Rs million



Source: CAPEXIL

³⁹ R. Veeramani, The Indian Stone Scenario, STONA 2008 Souvenir p. 5

⁴⁰ 95 per cent of business in the natural-stone industry in India is done in US dollar. Ibid

⁴¹ In India 99 per cent of the quarries are working only with fuel oil, and industrialists feel that it increases its production cost. Ibid

⁴² As most of the import of machines and consumables are from Europe, appreciation of the euro is affecting the stone industry. Ibid. p. 6

⁴³ <http://www.worldstonefairs.com/fairoverview.php?fairid=123&mmenuvar=1&smenuvar=130>

- India ranks third in overall natural-stone export
- Ranks first in exporting silicosis products like sandstone
- Ranks fifth in exporting marble products
- Twenty-seven per cent of the natural-stone products in the international market is from India

2.7. Trade Channel for the Indian Exporters – A Case of EU Countries

The channel for the export of natural stones to the European Union is the processing industry, importers/wholesalers, distributors, retailers and end users. The processing industry consists of medium- or large-scale companies who are time manufacturers and stonemasons. Southern Europe is dominated by more of stonemasons and the craft is traditional, while the processing industry in Northern Europe is standardised. Large-scale companies often directly import raw materials in the form of slabs and blocks, and then turn them into finished products such as tiles and other materials. Small firms in the processing industry often depend on the importer distributors and wholesalers.

Importers and wholesalers, who are also big players by themselves in production and have their own quarries, import raw materials and intermediary inputs, and make them finished products to sell in the European Union. They do not import finished products. They are mainly involved in the distributing activity.

The distributors stock the imported stones and have showrooms and sales representatives to sell their stones to retailers, processing industries and contractors. They import both raw materials and finished products.

As most of the retailers buy lesser quantities of the stones, they rarely use the channel of import and mostly depend on importers/wholesalers, distributors and processing units.

2.8.1. All-India Granites and Stone Association (AIGSA)⁴⁴

AIGSA is a not-for-profit organisation and registered as a society in Bangalore in the year 1983. It is the first all-India body for the natural-stone industry of India. AIGSA consists of entrepreneurs from natural-stone quarrying, processing and trading professions in granites, marbles, sandstones, slates and similar materials, and manufacturers of machines and artisans. It engages in lobbying activity with central and state governments. It works as the apex body of the stone trade and industry, and currently has 480 members, of whom 320 are life members.

⁴⁴ Based on the interaction with AIGSA officials and STONA 2008 Souvenir

The association organised its first international stone fair, STONA, in 1987 and claims that it is the first of its kind in Asia. Subsequently, since 1992 AIGSA has been organising STONA fair every two years. Besides private sponsors, some of these stone fairs in recent times were sponsored by the government of Karnataka and supported by the ministry of mines, GOI, the ministry of commerce, CAPEXIL and UNIDO. AIGSA has been recognised by the central and state governments' departments as the apex body for the natural-stone industries of India, and frequently nominated or invited to be part of committees dealing with the natural-stone industry. It is also a member of Federation of Indian Mining Industries (FIMI), Federation of Indian Chambers of Commerce and Industry (FICCI), and Karnataka Chamber of Commerce and Industry (KCCI). AIGSA has plans to enhance its research & development activities and establish training schools for stone working.

2.8.2. Centre for Development of Stones (CDOS)⁴⁵

CDOS is a society registered under Rajasthan Society Registration Act 1958. It was set up in 1998 by the government of Rajasthan and Rajasthan State Industrial Development and Investment Corporation Ltd (RIICO), as announced in the industrial policy. It is located in the Sitapura Industrial Area in Jaipur, Rajasthan.

Functions of the CDOS are carried out by the chief executive officer under the overall guidance and authority of a governing board consisting of 43 members. The board consists of elected members from trade and industry, along with experts and representatives of the government of India, the government of Rajasthan, United Nations Industrial Development Organization (UNIDO), RIICO, and international agencies. The chairman of the governing board is nominated by RIICO. The vice chairman is elected by the governing board from its members of the trade for a term of three years. CDOS also has an executive committee consisting of eight members, for dealing with day-to-day affairs and other responsibilities.

CDOS has been conceived as a centre of excellence with state-of-the-art work facilities, with the mission to develop, promote and support the dimensional stone industry. Among other aspects, the centre was formed with the intention to act as trade information centre, trade promotion centre, school of stone technology and training facility, and research and development centre with testing facility. Presently, the centre has over 150 members representing organisations from all over India.

From 2000 onwards, CODS has been organising International Stone Industry Exhibition in India, Stonemart, every two years. Participants from over 42 countries and 1,200 overseas trade visitors visited Stonemart in 2005. Stonedge is the official magazine of CDOS.

⁴⁵ Based on the information brochure of CDOS and interview with CDOS officials.

Chapter 3: Natural Stone in Rajasthan: Structure and Functions

3.1. The Natural Stone Industry in Rajasthan

The mining sector in Rajasthan remains one of the major income generators to the state exchequer. Next to agriculture, it is the second largest sector in terms of employment. At present, there are 38 major minerals and 21 small minerals being mined in various parts of the state, yielding net revenue of Rs 11,655.845 lakh per year and giving direct employment to 287,003 individuals.⁴⁶ Around 152,779.74 hectares of land are reported to be under active mining. Of these, the natural stone comes under the category of 'minor mines', spread over 92,948.65 hectares of land and generating Rs 8,130,334.865 thousands as state revenue. Granite, limestone, marble slate and sandstone are major categories among the minor minerals, which have great value in the international market. (See Table 8)

Table 8: Minor mineral statistics year 2006-07

Mineral	Leases	Area	Production (000 tons)	Sale value	Revenue	Employment
Granite	598	1,385.86	335.092	2,340.533	44,029.594	2,934
Marble	2,019	2,998.80	6,815.437	59,638.246	1,017,346.634	38,356
Slate stone	32	49.40	3.216	7.567	1,008.137	92,008
Limestone (Dimn)	375	2,388.66	4,306.851	23,179.227	263,527.710	6,998
Limestone (Burni)	350	13,859.43	4,002.344	5,103.655	212,531.510	3,327
Sandstone	1,257	29,557.00	7,807.073	33,965.900	475,333.775	92,008

Source: Minor Mineral Statistics Year 2006-07, Mines and Geology department, Udaipur

Marble: Marble is a crystalline, compact variety of metamorphosed limestone, composed mainly of calcite (a crystalline form of calcium carbonate, CaCO_3). Marble products are extensively used for flooring, funerary work, structural work, etc.⁴⁷

The history of the marble industry in India dates back to the medieval period. Rajasthan accounts for 91 per cent of the total marble reserves in India. Nagaur, Udaipur, Rajsamand, Banswara, Dungarpur, Jaipur, Sirohi, Bhilwara, Ajmer, Bundi, Alwar and Pali are some important locations where marble clusters are found. The major marble varieties include white, greyish, pink, onyx, block, and white and green.⁴⁸

Ninety per cent of marble that is exported to other countries is green marble. In India, the green marble is available only at Kesariyaji in Udaipur district of Rajasthan. The marble has good demand in the Middle East countries as green is an auspicious colour for Muslims.

⁴⁶ The figure shows only the employment in mines/quarries.

⁴⁷ RK Sinha and SK Pandey, 'Marble An Overview', in SS Rathore and V Lakshmi Narayana (ed), Safety and Technology in Marble Mining and Processing in New Millennium, 2000

⁴⁸ Centre for Development of Stones (CDOS)

Sandstone: Sandstone is a sedimentary rock formed by the consolidation and compaction of sand, and held together by natural cement such as silica. Like sand, sandstone may be in any colour, but the most common colours are tan, brown, yellow, red, grey and white. Sandstone that is easily split and has an attractive colour is used as building stone. Sandstone is also an important source of sand for the glass industry and the construction industry, where it is used as filler in cement and plaster. Crushed sandstone is used as road fill and railroad ballast. Silica-cemented sandstone is used as firebrick in industrial furnaces.

Rajasthan is the largest sandstone producing state in India. The history of sandstone quarrying also goes back to the medieval period. Sandstone deposit of an estimated 900 million tonnes is spread over the districts of Bharatpur, Dholpur, Kota, Jodhpur, Sawai-Madhopur, Bundi, Chittorgarh, Bikaner, Jhalawar, Pali and Jaisalmer. Cobbles, tiles, slabs, steps, paving stone/flagstone, garden accessories, etc., are certain sandstone products that are exported. Some countries prefer to import the raw sandstone blocks as well. About 10 per cent of sandstone products that are sold in the international market are from Rajasthan.⁴⁹

Granite: It is a common, coarse-grained, light-coloured, hard igneous rock consisting chiefly of quartz, orthoclase or microcline, and mica, used in monuments and for building. Granites can be pink to dark grey or even black, depending on their chemistry and mineralogy.

India accounts for over 20 per cent of the world resources in granite. Granite reserves in India are estimated at over 1,690 million cubic metres.⁵⁰ Granite quarrying in Rajasthan began a few decades ago. Jalore district is an important granite centre of Rajasthan and produces a wide variety of granite stones. Granite deposits are also found in other districts like Barmer, Jalore, Pali, Sirohi, Alwar, Jaipur, Jhunjhunu, Tonk, Ajmer, Bhilwara, Sikar and Udaipur. The categories of granite produced in Rajasthan include mokalsar green, nagina green, rosy pink, grey granite, blue pearl, china pink, bala flower, copper silk, golden pearl, imperial pink, merry gold, rakhi green, royal cream, royal touch, and sunrise yellow.⁵¹

3.2. Mining and Processing of Natural Stone in Rajasthan

The mining industry in Rajasthan consists of large-scale and small and medium enterprises. The process of mining is operated on leases and is approved by the government. Large numbers of players operate on a small scale. The mining activity has three definite stages. They are: 1) removal of the overburden; 2) extracting the raw blocks; and 3) processing.

Stage 1

Overburden, soil and fractured rock pieces are removed both manually and by using machines. There are three processes in carrying out this work: drilling (by using a jackhammer for small-diameter blast holes and a large-diameter drill machine for

⁴⁹ Centre for Development of Stones (CDOS)

⁵⁰ Alok Kumar and Kulveer Singh, 'Indian Stone Industry An Insight'

⁵¹ *ibid*

drilling deep holes for blasting; blasting (adopting controlled blasting method); and mucking and removing the blasted materials.

Stage 2

The extraction of raw blocks, being done manually and by using machines, requires three activities: 1) drilling, 2) cutting, and 3) lifting the raw blocks. Holes up to the required depth are drilled vertically across the bed of deposit by using a jackhammer. In case of deep-hole drilling, LD 4 drill machines are used. Wire saw and diamond belt-saw machines are used to cut the in situ rocks. Jib/derrick cranes are used for lifting the raw blocks. In case of manual detachment of blocks, small holes at close intervals are drilled and then the wedges are hammered till the blocks separate from the in situ mass. In some cases, hydraulic jack, excavator, hydraulic pressure, etc., are also adopted to split the raw blocks.

Stage 3

The raw blocks undergo different stages of processing. At first, the blocks are cut into the desired shape using gang saw and multi-blade gang saw machines, then they are sent to tilling plants or wheel cutters in order to produce uniformly sized tiles, and finally they are polished in polishing plants (multi-head polishing units) before they go for final cutting in cutting units. The work of polishing itself has several stages up to mirror polish depending upon the requirement of the consumers. There are two types of polishing, viz. wax polishing (the stone is smoothened with the help of three abrasives) and mirror/granite/gloss polishing (the stone is smoothened with the help of seven abrasives).

3.3. Size and Structure of Quarries/Mines

There is no specific data with regard to the categories of quarries/mines based on their size. The general perception is that more than 90 per cent of the quarries come under small-scale categories, while the rest is either medium- or large-scale. The early mines and mineral policies allowed issue of license over small areas as well. The Marble Policy 1994 increased the requirement of minimum working areas for granting license to 2.25 hectares and set a maximum of up to 11.25 hectares. In Marble Development and Conversion Rules 2002, the criterion for minimum plot area is mentioned as not less than four hectares. The new rules allowed the issue of license for quarrying in areas with maximum area of up to 50 hectares of land. The same regulations are followed in granting license for other stones like sandstone and granite. Therefore, most of the old mines/quarries come under small-scale category.

The word 'quarry' is used generally to mean the opencast stone extraction, while the word 'mine' is meant for deep underground extraction. The use of the term 'natural stone sector' is to denote the entire stone industry, which includes the activities of quarrying/mining, processing and trading.

3.4. Diverse Working Conditions

The nature of work varies in marble, granite and sandstone quarries and processing units. In case of granite, the stone is generally extracted from the tops of hillocks.

Both opencast quarrying and underground mining are followed to get marbles and sandstone. Comparatively, the marble mines are deeper than the rest (up to 60 m). Occupational risk is distinctly higher in the underground quarrying and the granite stonecutting over hilltops.

Similarly, it is also observed that the advantage of technological development and the use of machineries are more in marble quarries, while most of the sandstone and granite quarries depend primarily upon traditional methods and manual labour. The processing units are generally located outside the quarry areas. However, in case of sandstone, certain stages of processing like stonecutting, dressing and edge cutting (generally by using manual labour) are done at the surrounding areas of the quarries. Sometimes, the raw sandstone blocks are transported to far-off places where they are processed both manually and by using gang saws. The hand-chiselled cobbles, which have a good market in European countries, are produced from sandstone wastes. The work is generally done at the quarry area itself. A good number of female workers and adolescent boys and girls are engaged in this. Generally, the marble and granite blocks are brought to the processing units, which are located away from the actual quarry areas, for cutting and further processing. Most of the work during the processing activities is done through machines. But it still requires a good amount of both skilled and unskilled labour. Approximately, ten to fifty workers are employed in one processing unit.

3.5. Employment

The above table only gives details associated with mines/quarries. The employment and revenue generated from the processing units of various minerals (minor) are not given. The processing units are registered under Rajasthan Shops and Commercial Establishments Acts and the Factory and Boiler Act, and are inspected by the state departments, which implement the respective acts. Presumably, the amount of workforce involved in the processing units is many folds higher than that in quarries.

Government data gives a very meagre figure of the actual workforce employed. Several private estimates generally give a larger figure of the workforce involved in different stone mines and in different clusters. For example, the number of workers directly employed in sandstone quarries of Jodhpur is estimated to be around 35,000. And an equal amount of workers are said to be engaged in loading, transportation, dressing and other activities related to sandstone mining in the same region.⁵² The number of workers involved in sandstone quarry work is estimated around one lakh.⁵³

⁵² See, SS Rathore, Sushil Bhandari and TP Gupta, 'Improvement in Technology for Waste Reduction in Sandstone Quarries of Jodhpur Area', paper presented in a national workshop on Reduction of Waste Generation in Mining and its Utilisation', organised by Mining Engineers' Association of India, Rajasthan Chapter, on May 18, 2008

⁵³ P Madhavan and Dr Sanjay Raj, Budhpura 'Ground Zero' Sandstone Quarrying in India, December 2005

3.6. Law and Government Policies

In addition to various acts associated with the employment- and labour-related regulations, the Mine and Mineral Act, 1974, Mine and Mineral Regulation, 1985, Mine and Mineral Regulation, 1997, and Rajasthan Minor Mineral Concession Rules, 1986 (amended up to 2004), state enough procedures for the operation of stone quarries. There are also specific policies for granite and marble quarries. They are the Marble Policy of Rajasthan State, 2002, and Granite Policy of Rajasthan State, 2002.

The Shops and Commercial Establishments Acts and Factory and Boiler Act generally provide the rules and regulations related to processing units.

3.7. Bureaucratic Structure

There are around thirty government departments directly associated with the natural-stone sector. Quarry license is obtained from the directorate of mine and geology, Rajasthan. It is also responsible for collecting royalties and other revenues from the quarries. At divisional level, the inspectors, mining engineers and superintendents in charge of mining engineers are responsible for issuing license, collecting royalties, and inspection.

The labour laws and regulations for quarries/mines are enforced and inspected by the office of labour commissioner (central). The assistant labour commissioner (central) and the labour enforcement officer are divisional-level implementing/inspecting authorities.

The directorate of mines and safety looks after safety-related issues in mines including stone/marble quarries. The district divisional magistrate also has the necessary power to intervene in quarrying activity, particularly issues like bonded labour.

The state forest department takes necessary action if quarrying is happening in forestlands. A 'no objection certificate' must be sought from the forest department before granting a license on a particular land for quarry.

If processing units have less than 10 labourers, it is registered under the Rajasthan Shops and Commercial Establishments Act. License is issued by the concerned municipal corporation, and the district assistant labour officers enforce/inspect the labour laws and regulations there.

If they have more than 10 employees, they are considered to be factories and registered under the Factory and Boiler Act. Concerned authorities of the department check license and other labour-related regulations there.

Indian Bureau of Mines comes under the jurisdiction of the central government and looks primarily upon environment-friendly mining. In this regard, it also organises workshops and training programmes.

3.8. Supply Chain

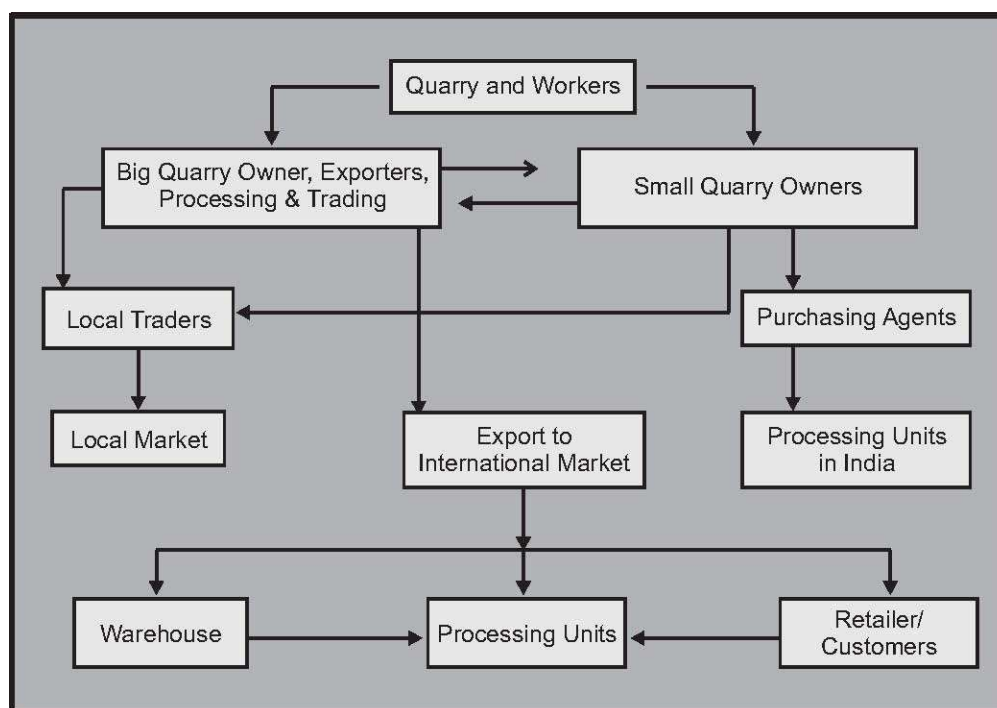
This section deals with the supply chain of the stone industry in India and its export market.

3.9. Supply Chain of Indian Stone Industry

It is not possible to have a definite map of a uniform supply chain for all natural-stone products. Nonetheless, certain key factors and processes in the supply chain can be pointed out (see figure 1). Apart from quarry workers, major players in the sector are big quarry owners/ exporters/ processors/ traders and small quarry owners.

Stone quarries in Rajasthan consist of large-scale and small and medium quarrying and processing companies. Most of the big quarry owners are dominant players in the supply chain, and most of them have their own processing companies and well-established long-term networks through which they directly export the products, besides supplying to domestic markets through traders and retailers. In a few instances, they also depend on small quarry owners for a specific variety of quality products. The relationship between big players and small quarry owners is interdependent, but often asymmetrical, where the balance of power is in favour of big players. Small quarry owners largely depend on the big players to process their goods and sell them to the big players either for international or domestic markets. In other instances, they sell their goods to the purchasing agents, who in turn process them and sell them in domestic and international markets.

Figure 5: Supply chain of the Indian stone industry



Very rarely are the independent processing units seen to be procuring stones for processing and selling in the market. As there are a large number of small-scale processing units, different functions of polishing are performed in different units

owned by different people. For example, different owners can own cutting and polishing plants. Semi-polished stones are sometimes sent to other advanced plants for further polishing.

Natural stones can be exported at any stage of its processing. Generally, countries like Italy and Germany import raw blocks of sandstone and marbles from Rajasthan. Due to their advanced technology, the quality of their processing is better than that in India. Similarly, semi-polished and polished stones are also being exported to various foreign countries.

Other important players in the supply chain are wholesale traders, who store the raw stone blocks and sell them to processing units. The finished products are also bought by wholesale traders and then sold to domestic and international traders.

Chapter 4: Mines, People and Issues: Perspectives from the Ground

4.1. Introduction

Based on the information gathered during the field research, the chapter investigates the current situation in the natural-stone sector and the various socio-economic and environmental issues associated with it.

Preceding the analysis of the feasibility of the standard-setting process, it is essential to have a baseline assessment. The basic question is whether certain issues exist, and if so, to what extent? Do all stakeholders agree with it? What are the main deterrents? Would it be practically possible to initiate a dialogue between them? Once these questions are discussed, it would become easy to develop a viable strategy/mechanism for the standard-setting process.

The issues in the natural-stone sector are numerous. They vary from region to region based on the nature of the stone quarried/processed (marble, sandstone, granite, etc.), ownership and working area (small or big), the degree of the government's and the civil society's involvement (for example, most of the issues are solved if society's initiatives and effective bureaucratic interventions are present), and the size of the workforce in a specific quarry/processing unit.

In the course of the research, the quarry clusters located in Dabi, Bundi, Kehlwa, Agariya, Piplantri, Kheseriaji, Sokrota and Dhulgaun, and the stone processing units in Kota, Udaipur and Jalore were visited. Crucial sustainability issues related to the marble, granite and sandstone quarries and the processing units were singled out for discussion with the local stakeholders.

The stakeholders have expressed divergent views on the issues as well as on the possibility of initiating a standard-setting process. Views of individuals within a certain category of stakeholders vary. For instance, some bureaucrats are more radical in their approach and critical about the way the government deals with the issues. Similarly, the attitude of NGOs, trade unions and individual activists differ from one to the other. The concerns of big quarry owners do not necessarily match those of the small quarry owners. The same can be said for the workers in their respective ownerships.

The feedback and differences of opinions obtained during these discussions enable us to examine the characteristic features of different categories of stakeholders, intervention options, components, strategies and constraints, regarding the standard-setting process. The next chapter will focus upon these aspects.

I. Socio-economic Issues

4.2.1. License and Unauthorised Mining

Quarries, both legal and illegal, have mushroomed in large numbers over the years. The number of applications for mining/quarrying license is consistently increasing every year. New areas are being explored and brought into active mining with or without legal sanctions. The general perspective is that the unauthorised mines outnumber the authorised ones.

License and Inspection: The competent authority at local level to issue license/lease for mining/quarrying is the superintendent in charge of the mining engineers department. Under him, there are a few mining engineers, who are also vested with the power of granting license, though with certain limitations. The application for a license is sent to several other departments such as the forest department, the collectorate, the block tehsildar, and sometimes even the village councils in order to get a no objection certificate (NOC). The initial license is up to a period of 20 years. It can be further extended to a period of 60 years. There are short-time permits and a prospecting license (for a maximum of two years) as well.

According to the existing laws, quarrying/mining would be permitted only on government and privately owned lands. Such activities are prohibited on forestlands.

The processing can be done at the mining site as well as in a location outside the mining areas. If the quarried/processed stones are being transported to other places for further process or for trade, it requires a ravanna, an authorisation from the quarry lessee. The inspectors of the mining engineers department check the vehicles that carry the stones (both raw stones and finished/semi-finished stones). The mines/quarries on government and privately owned lands come under the jurisdiction of the mining engineer. If there is any illegal quarrying over the forestlands, the department of forest has the power to intervene and take necessary action.

If vehicles transport the quarried stone without obtaining a ravanna, they will be pursued. They will have to pay ten times the total value of the stone that is being carried. In case of non-payment, the vehicle will be taken into the nearest police station and an FIR will be filed. If illegal quarrying takes place, the concerned authority has the right to raid the mining site. The quarry will be ceased, tools confiscated, and finally an FIR will be launched. And all of it is done within 24 hours (junior mining engineer, Kota).

License for Processing Units: The processing work like stonecutting, sawing, edge cutting, polishing, packing and exporting is carried out outside the mining areas. For instance, though there is no quarry in Kota (city), there are several business establishments where the aforesaid works are being done. In Udaipur, the raw marbles are being brought from the periphery of the district or from neighbouring districts like Rajsamand and Ajmer for processing and trading. Therefore, a good number of the workforce, which is involved in the stone industry, is employed in industries or business establishments located away from the actual mining areas. These business establishments are not under the jurisdiction of mining engineers. They have to get their license from the concerned municipal corporation under the Shops and Commercial Establishments Act, in case the establishment employs less than 10 employees. In case the number of employees is more than ten, they will have to procure a license under the Factory and Boiler Act (chief inspector, office of district assistant labour commissioner, Kota).

During the field visit in sandstone clusters, it has been observed that the stonework is done not only by the licensee, but also by other local businessmen. There is no restriction on carrying the stone anywhere within the premises of the mining locality. Generally, the raw stone from the quarry is taken to the frontier regions (of mines) via local transports like camel carts, small trucks and tractors. It is doubtful whether these processing centres possess the requisite license for their business. A local person told

the researcher that if he had five lakh rupees, he would be able to buy raw stones from the quarry owners and start a sandstone cutting business.

Similar cases can also be seen in the mining/quarry areas. There are a number of illegal mines under the shadow of one legal establishment. Sometimes, the quarry owners extend their quarrying activity into adjoining lands without the required permit. Some kind of a mutual beneficial understanding is said to exist between the legal and illegal mine owners.

In fact, it is very difficult to distinguish the forestland from the government and privately owned lands. They are generally located side by side, and even the local people do not exactly know which category a particular piece of land belongs to. There is also a possibility to get the license for a particular tract located in a government-owned land and then extending the mining activities into the neighbouring forestland. Since the concerned authority only can identify the category of lands based on the land survey record, it is difficult for the common people to discern the existence of illegal mines. Investigations have uncovered the fact that even in the government-owned lands there are a good number of quarries that are operating without any legal permission. The officials of the mining engineers department visit the mines only if they receive any complaint or if they come to know something through media reports (junior mining engineer, Kota). For the purpose of transportation, the quarrying license of another licensee can easily be used.

Signboards giving details about the name of the licensee, the details of land, the period, etc., are not seen, particularly in the sandstone and granite mining areas. In marble quarries in the Kehlwa and Agariya clusters of Rajsamand districts, signboards are there, but there is no detail about the number of workers, wages, working hours, other benefits, etc.

The practice of subleasing the quarry license is quite prevalent, particularly in the Kota region. The big leaseholders sublease their license to quarry certain areas to contractors. The contract is generally for one year. If the quarry land is subleased to another person, the actual licensee will not intervene in the quarrying activities there. These sublease holders, thus, acquire the position of a small mine owner and maintain direct dealing with both domestic and international traders. In this context, the mining is happening in the permitted land but not by the authorised lessee. There is, in addition, the maximum possibility for human and labour rights violation in such quarries operated by the sublease holders.

4.2.2. Stakeholders' Views

Civil Societies: From the perspective of civil society activists, most of the societal problems related to stone sectors arise out of illegal mining. The people who are involved in illegal mining are mercenaries and notorious for the indiscriminate use of muscle power. They generally maintain a good rapport with corrupt politicians and government officials, in order to get their work done. In several cases, they have attacked activists of trade unions and civil societies. Even some honest government officials were badly assaulted by them. A good number of workforces are being employed in such mines. The civil societies do not have any access to interact with them (Malay, Prayatan; Sri Latha Swaminathan, AICCTU).

A rough estimation about illegal quarries given by civil society activists shows that in Dholpur, 500 out of 590 mines are operating illegally. Similarly, in Rajsamand, there are more than 1,500 mines, but the government records show only 235 license holders (Malay, Prayatan; Sanjai, AGIVIKA).

The civil societies also raise the issue of the complex structure of the mine and geology department. For instance, most of the marbles that are being processed and traded in Udaipur are from Rajsamand (Rajsamand is just three hours away from Udaipur). However, the director general of mine and safety, Udaipur, does not have the power to inspect the Rajsamand mines. They actually come under the jurisdiction of the mine and safety department of Ajmer, and Ajmer is very far from Rajsamand. Hence, the officers hardly ever visit the place (Sanjai, AGIVIKA).

Government: The government officials respond to these issues in four ways. First, some officials are very conscious about their 'government rules' and assert that there are no cases of illegal mining. For instance, when the researcher discussed the abovementioned with the superintendent of the mining engineers department, Kota, he first denied the issue, and then when the researcher pointed out certain reports pertaining to the same, he replied, "I do not think that there is any illegal quarrying as such. There could probably be a few cases, however." He further stated that under the Kota division there are five major mines and 265 minor mines. All come under the four mining engineers' office. They undergo periodical inspection. Moreover, the process of getting the license is very easy; anyone who wishes to get into the business can apply.

Second, some officials agree that illegal mining is an issue and explain how they are dealing with these issues. First of all, in their opinion, getting a license is a long process; the application is circulated in different departments for the fulfilment of the required procedures. Concerned authorities regularly inspect the vehicles that carry stones from the mining areas. If they do not have ravanana, penalty is imposed. They also have the power to visit the mine sites, whereupon they can confiscate the tools and take necessary legal actions if the mine is found illegal. It is almost a routine duty for them. Several cases against illegal activities have been filed, and some are still pending (junior mining engineer, Kota).

During the inspection/checking, government servants have had bad experience with unauthorised mine owners. The junior mining engineer, Kota, recalls that 'there were instances when we had to run more than two kilometres in order to escape the attacks of such people'. Several other officials also recounted similar instances. In brief, the illegal quarry owners are very arrogant and have links with politicians. There are enough legal procedure, rules and regulations, but there is no protection for the genuine bureaucrats. They strongly believe that it can be solved if there is political will.

"I do not say that there are no illegal mines in forestlands. Our duty is to give 'no-objection certificate' if the proposed land for mining does not fall under a forestland. Whenever I have the time, I will go for inspection." Director, Department of Forest, Kota

Nowadays, officers form a team with the cooperation of members of the forest and police department before the site inspection. It helps to take immediate action. If the illegal quarry exists over the forestland, the concerned officers from the forest department initiate legal actions.

The third category of respondents criticises the corrupt officials and the involvement of politicians. These respondents generally do not want to disclose their identity, but are ready to support genuine efforts, as and when undertaken by civil societies or any other agencies. In their opinion, most of the government officials who deal with issuing licenses, revenue collection, inspection, etc., are highly corrupt. The directorate of mine and geology department is a rich department. Even the ranks and files are in a position to receive a huge amount of bribe. 'A promotion at the directorate level will cost more than one crore rupees'. There is a strong network existing amongst politicians, bureaucrats and mine owners. Honest government officials are not able to work effectively since they do not have amnesty. They, too, believe that 'it can be solved, if there is a political will' (identity undisclosed).

Finally, some respondents analyse the reasons behind the proliferation of illegal activities in the mining sector. A lot of factors have been brought to light regarding the same. A few have been mentioned here.

- The Indian state has banned mining activities in certain regions of Aravalli and Haryana. Due to this, there is a huge demand for stones. Ruthless prospectors with a thirst for money and a nexus with corrupt bureaucrats and politicians started digging wherever opportunity struck. Thus, it became the easiest way for making money.
- The penalty for illegal mining, transporting and storing illegally quarried stones, etc., is very less. In case of liquor, on the other hand, the penalty is very high. Hence, it effectively controls the illegal activity in this sector. But in the stone sector, a person can quarry and transport stones throughout the year without having to suffer any major losses. If he is caught (which happens very rarely), he can easily pay the required fine and continue with his activities (labour enforcement officer, Udaipur).
- Most of the forestland does not have much of a forest cover. 'Mainly barren rocks make up for the absence of flora and fauna'. These barren forestlands are rich in various mineral deposits. It becomes very tough to prevent the people from prospecting such 'gold mines'.

Owners: The owners are generally not interested in discussing the issue. They neither deny nor accept the existence of illegal quarrying. Rather, they tend to put the blame on the hard process of procuring a license.

“The industry has better prospect in future, but the government regulations are not encouraging.” Sandstone quarry owner)

The process is not easy. The applicants have to wait for quite a long time. The file is sent to several departments. The departments tend to impede progress until their 'extra' demands are fulfilled. The applicants keep following the movement of their files and cough up money at every stage. Initially, the license is given only for twenty years, and then it can be extended for another forty years. Renewal and getting an extension is another highly tiring process (owner identity undisclosed).

Owners also raise the issue of the forestlands. Maximum stone deposits are found in the forests. There is a need for changes in the existing government policy in this regard.

Analysis

- A majority of the stakeholders agree that illegal mining exists.
- Corruption is an important factor.
- We do not know for sure whether the stones quarried from these mines go to the international market. But there is a high possibility that they do, since the illegal mines operate under the shadow of the legal ones. The traders in the supply chain also purchase from different sources.
- Legal operation of a quarry or processing unit should be a component of the standard-setting process.

4.3.1. Collapse of the Local Agrarian Economy

The marble and sandstone mines/quarries are going deeper. Even underground quarrying has become tough in such old mines. Several quarries have already been abandoned since the mines have reached their maximum depth. The quarry activities are also stopped if they do not yield stones with the expected quality.

Due to the restricted working area, the mine/quarry owners tend to throw the waste in nearby agricultural lands and forestlands. They also purchase agricultural land from farmers. These lands are generally used for dumping wastes.

The abandoned quarries can be filled with waste stone materials. But it is very hard to grow anything in these areas. Plantation is generally preferred to be done in places other than the mining areas.

In marble quarries/processing units, the marble slurry is being dumped into the nearby agriculture lands. It adversely affects the productivity and the water absorption capacity of the land.

In sandstone quarry areas, the quarrying has disturbed the traditional surface water-harvesting arrangements. Water reservoirs like ponds and lakes, which used to get rainwater through canals, have become dry. Instead, the rainwater gets into the quarry pits and gets stored there, leaving the water useful neither for agriculture nor for drinking purposes.

In other words, sandstone and marble quarries exist at the cost of agriculture.

4.3.2. Stakeholders' Views

Civil Societies and Independent Activists: Since it is also an environment- and tribal-related issue, various civil society and independent activists show concern about it. They analyse the future of both these industries. Agricultural land is being radically converted into a dumping zone. If the quarrying is over, the owners may shift to other places. But the local communities will have to face a pathetic economic condition after that.

“After twenty years there will be no mining as well as no agricultural land for cultivation.”
Identity Undisclosed

DS Paliwal, an independent activist, was against any sort of mining. According to him, 'mining activities convert the farmers into daily-wage labourers in mining or force them to migrate to far-off places'. There is need for a special campaign in order to protect the agricultural land, he further suggested.

A lot of other interrelated issues came up during the discussion. There are reports suggesting that Thar Desert is extending towards the Rajsamand areas. Madan Modi, an independent activist and formerly with MLPC, particularly emphasised these aspects.

Almost all activists who were interviewed registered their opinion against poor surface water management. The water bodies are completely blocked from getting water from the traditional canals. And ground water level has depleted to a great extent.

Another contention relates to the encroachment of outsiders. The mine owners are basically outsiders; they are not investing their money in a particular district. There is no development in the local district where the mines are located. Therefore, it is not beneficial to the local people. Rather, their fertile land, which was generating income for the last one thousand years or so, has now become a dumping ground.

An activist examined the economy of Rajsamand district. After 20 years, the economy of the district will totally collapse. There is no infrastructure for disposing the waste materials; it is harmful to the environment and creates waterlogging. Furthermore, the water resources that provide water for agriculture are not getting enough rainwater.

'So, what would happen to the economy of Rajsamand district is a big question. It is time to think whether the mining activity will be a profitable business or not,' states an activist (identity undisclosed).

There are also several allegations and suggestions.

More than ninety per cent of quarry owners in Rajasthan are small, operating on limited area. This ninety per cent of mine (quarry) owners are 'not doing anything'. If they were to invest money for the development of the local communities, there would be an eco-balance. 'Involve the people in the mining, say fifty per cent of the employment for the local people. Then, there will not be any quarrelling as we see in Assam. You involve the people locally; you give them their share, and see things take a turn for the better' (identity undisclosed).

'The people should think that the mine is important for them; they should think that they earn their bread and butter because of this industry. They should understand that this mine owner educates our children, this mine owner gives loans to us, develops roads for us. If they understand this much, there will not be any dispute' (identity undisclosed).

Sarpanch: Piplantri is one of the villages in Rajsamand district where a good number of marble quarries are located. The village sarpanch shared his views on various aspects with the researcher.

According to him, the village council should be consulted before a particular tract of land is allowed for quarry operation. A lot of agricultural land has gone into the hands of marble mine owners in their villages. Basically, there is no plantation in mining areas. And most of the agricultural lands have become barren due to the water slurry

evicted from the marble mines. Nowadays, agriculture and herding have become impossible for the people of Piplantri (Mr Shyam Sunder Paliwal, sarpanch of gram panchayat, Piplantri, Rajsamand).

Government: The mining engineer, Kota, and the additional director, mines and geology, Jodhpur, responded to this question. According to them, the government takes the necessary action if it comes to know that there is illegal mining in agricultural land. Necessary steps are then taken to rehabilitate the abandoned quarries. Various suggestions are offered for the management of waste generated from marble quarries/processing units. But the quarry owners are least bothered and never pay any heed to the government's suggestions. Certain specific places have been identified as dump grounds for waste marble slurry.

Business: Business makes its escape by saying that the stone is generally found in hillocks and mountainous regions, and not in agricultural land. Waste is thrown in far-off places or in places that are allocated for waste disposal. Most of the waste management system requires huge amount of investment, and all mine owners cannot afford it. Some mine owners may carelessly throw the wastes over agricultural land. That it should be banned is a unanimous view of various marble and sandstone owners in Rajsamand and Kota districts.

Key Questions

- Can agriculture and mining go side by side without disturbing each other?
- Which sector in the long run will help in the development of the local people?
- The open question is, should the sustainable production in natural stone be at the cost of consistent downfall in agrarian production?
- Is the agricultural downfall a major threat to the food security?

4.4.1. Loss of Traditional Resource of Indigenous Community Subsistence

The issue is more or less similar to the previous one. (i) The agricultural land is either converted into mining or polluted by throwing mine wastes. (ii) The local water reservoirs have lost their regeneration capacity. (iii) Quarry workers and owners are outsiders to the quarry locality, and generally, the local people are not employed in quarries. Very few of them are employed in surface mining. (iv) Pasture lands for grazing cattle are also getting depleted radically. (v) The flora and fauna on forestlands face serious threat due to these quarries. All these factors pose a severe threat to the traditional subsistence activities of indigenous communities.

4.4.2. Stakeholders' Views

Sarpanch: This is one of the major aspects discussed with the sarpanch of Piplantri. His views are based on the ground situation in his village.

The local people do not get employment in quarries because they generally go to mines around 8-9 a.m. and return to their houses by 5 p.m. The mine owners prefer workers who can stay in quarries and work during the night as well. Therefore, they employ workers from other districts and states. Usually, the local residents are

employed for loading and unloading the stones/marbles from trucks and removing of extra burdens. The marble slurry also pollutes the grazing lands. As a result, herds get fatal diseases. A sarpanch does not have any right to collect taxes from the quarries. Sometimes, one per cent royalty is given for the development of quarry areas. It is not enough. At least 10 per cent of the royalty income should be given to the local bodies to undertake environment and watershed development programmes in the quarry areas. All revenue from quarries goes to the state; nothing is given to the village panchayat.

Civil Society and Activists: Activists stress on the unfair give-and-take relationship by emphasising the fact that what is being taken away from the local communities is far more than what is actually being given back to them.

They have raised several questions; most of them are similar to what was discussed in the previous section. Are the mine owners spending their money on local districts? Do they give a certain percentage of their profit to the local gram panchayat? Are they employing the local people? Are they using their money for the development of the particular district? They themselves are profiting out of it, but are they thinking of the local people, the very community because of which they are benefiting? (Identity undisclosed)

Business: Business addresses its problem by employing local people in their quarries. Tribal/local workers are not much familiar with the quarry works. Nowadays, there is no demand for unskilled labour, particularly in marble mining/quarrying. We (small quarry owners) contribute to various development activities in the quarry areas.

Government: The recent government policies with regard to granite and marble have given special reservation to the ST/SC people in allotment of leases for quarrying. Most of the government officials stressed these procedures.

To put it in the words of the mining engineer, Jalore, “There is a special provision for the SC/ST people to apply for quarry license. Licenses have been issued to people belonging to these sections. Various training programmes are organised. Workers can get benefit out of it.”

Workers: Tribal workers feel that since they are not familiar with the stone works, they are not able to find space either in the ownership or in the workforce. But their natural resource is being taken away from them.

Moreover, quarrying requires investment of more money and a strong nexus with a lot of traders, bureaucrats and politicians. These are impossible demands for a tribal man. In some cases, licenses are issued to people belonging to SC/ST communities, but the quarrying is done by other people belonging to different communities.

Key Questions

- How are we going to address the issue of safeguarding the basic needs of local people in the standard-setting process?
- During his interview in Stonedge, a mine owner from Gujarat says that his company with the collaboration of Gujarat government has initiated a training centre for tribal workers to employ them in marble and granite processing.⁵⁴ He hopes to have a trained workforce of

⁵⁴ 'Always a Step Ahead An Interview with Kiren Trivedi, CEO, Kiren Trivedi Group', Stonedge, Special issue, '09, CDOS

5,000 tribals over a period of five years. Can similar initiatives be possible in Rajasthan? Can these initiatives lead to empowerment of local tribal communities?

II. Labour Issues

4.5.1. Forced Labour

The cases of bonded labour have seemingly reduced, but they are yet to completely disappear from the natural-stone industry of Rajasthan.

A trade union activist, who has done extensive fieldwork in Ramkanjimandi of Kota region, asserts that she had witnessed several cases of bonded labour. According to her, villagers in Orissa borrowed money from local moneylenders. Due to their inability in paying back their debt, they were sold to some quarry owners in Ramkanjimandi. Likewise, they were also transferred from one quarry owner to another as slaves (Sri Latha Swaminathan, AICCTU).

However, cases such as the above are rare. It needs an extensive fieldwork throughout Rajasthan to comprehend the real situation. At present, a prevalent practice that can lead to being bonded to a particular quarry is borrowing advance money from quarry owners. Especially in the Dabi region of Kota district, it was witnessed that there was hardly any worker without debt.

When the researcher called on a worker, he was talking to a quarry owner, requesting him to pay his debt to his present owner, so that he could shift to the new owner's quarry. Later, he explained that it was the usual practice in Dabi. An owner can pay the debt of a worker and, thus, employ him in his quarry. "Stones in the present quarry are very hard and we are not able to cut more pieces. That is why I want to shift to another quarry. Here, I had gradually borrowed money to marry off my daughters. Now the total amount has culminated into Rs 70,000. Two of my sons are also working in the same quarry. Hopefully, we will settle our debts soon. We want to go back to our village in Tamil Nadu," he further added.

Another worker from the same region also narrated a similar story. He is a third-generation stone cutter in his family. He had barely managed to settle his father's debts when he had to borrow around Rs 60,000 again, when his wife suddenly took ill. He informed, "I have three daughters now, and all have attained marriageable age. But I do not have a single penny to marry them off." He also wants to go back to his state, Tamil Nadu.

The researcher heard similar stories of personal anguish from several workers. Each expressed the connection between indebtedness and forced labour.

4.5.2. Stakeholders Views

Government: The government seems to have the least knowledge about this issue. According to the government officials, bonded labour has become history. There is no such case at present in Rajasthan. If there were such a case, the district divisional magistrate would have to pass the verdict necessary for taking action. Borrowing money is based on the personal trust between owners and workers; the state does not have any role.

Civil Societies: NGOs and trade union activists stressed on what was observed in the field. According to Sanjai, former MLPC and an activist, because of the indebtedness workers are forced to work in quarries for generations. As per Srilatha Swaminathan, there were also cases where the tribal workers were being transferred to mine owners by the local village sarpanch on account of the debt owed to them.

All civil society activists suggested that the government should initiate some welfare scheme for the stone workers. Loan facilities should also be made available to them.

Business: Business looks at the issue as if it is one of their labour welfare measures.

'There are no forced workers in mines and processing units. Workers tend to come up with some or the other monetary requirements. We need to help them at the time of urgency since they are the backbone of our business. Basically, we are losing our money this way. Some workers will not turn up again and we are not charging any interest.' This is the prevalent view amongst the owners of sandstone quarries in the Kota district.

Workers: Workers borrow money from owners whenever there is a sudden urgency. They do not need to pay interest. They have to work in the particular mine till the settlement of the debt. If they want to shift to other mines/stone cutting units, they will request the new owner to replace the debt. Owners are basically ready to give money since there is shortage of skilled labour.

Some senior workers think that giving advance money is one of the ways to keep the workers in particular quarry/processing units. One said, "We generally prefer to work in small quarries/processing units (sandstone) since owners here are ready to give advance money. In big units there is less possibility to get advance amount." (Murukesan, sandstone worker).

Key Questions

- Up to what extent does indebtedness determine bonded labour? How does it affect the individual's choice to work?
- What would be the alternatives for 'the advance' borrowing?
- Since we are not clear about the intensity of debt as well as bondage, how can the code of conduct be formulated with regard to free choice of work?

4.6.1. Child Labour

According to the Indian law, children should not enter the mining area. On the contrary, children are very prominent in this vicinity.

During the field research, the researcher observed many adolescent boys (12 to 18 years) working in sandstone and marble quarries and processing units.

Both women and children do not have work in underground quarrying. However, children were seen engaging in preparing tea and food for other workers/managers. Female child workers are also seen in cobble cutting, collecting kerosene from granite slurry, etc. Children are often brought and employed by their parents or relatives and made to work on the basis of daily wages.

The researcher was informed that as the quarries go deeper, the child workers are shifted to other places or other industries. In sandstone quarries and processing units, it was observed that children (below ten years old) accompany their parents and most of them assist their parents in their work.

Hundreds of children along with their mothers are engaged in collecting kerosene from the slurry released from the gang saw granite processing units in Jalore. The granite contains more than 60 per cent of silica, which is hazardous to health.

It is said that due to the pressure from various fronts, the proportion of child labour in mines/ quarries has reduced in recent times. But the issue needs a little deeper understanding. Basically, the engagement of children in quarry activities is high where the surface mining is in function. Now, a majority of marble and sandstone quarries have become old and deep. Therefore, in these areas the number of children employed in labour seems to have reduced (Madan Modi, activist).

In this context, what really happened was that the women and children were shifted to some new quarry areas for above-the-surface quarry work. Some of them were sent to Gujarat to work in weaving mills.

4.6.2. Stakeholders' Views

Government: The government views in this regard are twofold. The first tends to state that the proportion of child workers has reduced radically.

The labour enforcement officer of Udaipur and the district assistant labour officer in Kota discussed this issue in detail. There were a few cases of child labour for which they have taken action based on filed cases against owners.

According to them, the parents ask their children to help them in their work. Children sometimes stay with their parents at their workplace. They can take action only if they receive complaints/statements. Workers generally do not reveal their real age and hide the children at the time of inspection.

The second view expresses the limitation of the government in dealing with this issue. Corruption and political intervention are cited as major constraints. To put it in the words of an officer (identity undisclosed) in the Centre for Development of Stones, Jaipur:

‘Throughout Rajasthan, including Dholpur, child labour and bonded labour are a common sight. Government agencies, civil societies and trade unions are well aware of this, but they are not able to interfere beyond a certain extent since the nexus between the quarry owners, the politicians and the local big shots is very strong. Government officials are well aware of all the illegalities in stone industries, but they have limited power.’

‘There are some good officials who tried to bring certain regularities in mines, but they were threatened and forced to get a transfer. The situation in Dholpur and Kota regions is worse; no one, including state representatives, can dare to speak about mine-related issues. And most of the government officials are bribed, and they are highly corrupt.’

Civil Societies and Activists: The civil society activists expressed what was observed in the field by the researcher. However, there are a few additions.

According to Madan Modi, who had worked extensively on child labour in the stone quarries of Rajasthan, child labour is still a case in several mines and processing units, particularly in sandstone processing. As the mines go deeper, children are being replaced from mines to owners' houses as domestic help.

According to Malay, who is working with sandstone workers in Dholpur, there are lots of illegal mines/quarries. Social activists have no access to interact with workers and check the working conditions there.

An activist-cum-government officer, who is working for the welfare of tribal people, relates that there are a lot of adolescent tribal girls below eighteen years of age working in stone quarries. They are hundreds in number (identity undisclosed).

Business: The business strongly denies the existence of child labour. The general opinion is that there is no child labour in their mines/factories. Work in the natural-stone sector is very hard. Children cannot do this. The government rules related to child labour are very strict.

Workers: Sandstone workers confirmed the engagement of child workers in sandstone cutting. 'A few children are working in sandstone cutting and cobble cutting. They, like the female workers, get daily wage.'

The marble quarry workers justify the issue by saying that 'they are not allowed to do any hard work. They assist sometimes in making chapatis for us.'

Key Questions

- Except business, all other stakeholders attest to the presence of children in quarry and processing units.
- The proportion of child workers varies from place to place. It is more where female workers are engaged in quarry work.
- Is it possible to create standards so that the children, who are not directly involved/employed in quarry work but engaged in some auxiliary activities like preparing food for workers and managers, can be monitored?

4.7.1. Work Wage and Working Hours

Employment based on piece rate is being followed in all quarries. In sandstone cutting, 90 paise per foot is being paid. Depending upon the nature of the stone, the worker earns Rs 90-Rs 150 per day.

In granite mines, wages are paid based on cutting a truckload of stone. Here, eight people have to work for twelve hours to load a truck and to earn Rs 800.

Granite and marble processing unit workers generally get monthly wages. Piece rate is also followed in some places. Machine operators, supervisors, and foremen receive a monthly salary. Women and children are paid on a daily-wage basis.

In sandstone and marble sectors, the wage is given to the contractor, who will distribute it to the workers. According to the minimum wage policy of Rajasthan, the

minimum wage for non-skilled labour, semi-skilled labour and skilled labour is Rs 100, Rs 107, and Rs 150, respectively.

The table here shows details about the current wage practices in quarry and processing units. It is based on the information collected from workers and owners during the interview.

Table 9: Wages in quarries/mines and factories/processing plants of Rajasthan (in Rs)

Part of stone industry	Skilled		Semi/Unskilled	
	Man	Woman	Man	Woman
Sandstone quarries	200-250	-	90-100	70-80
Sandstone processing	200-250	-	90-150	70-80
Marble quarries	150-200	-	90-100	-
Marble processing	90-150	-	90-100	-
Granite stone quarries	90-100	-	70-80	-
Granite processing	100-125	-	80-90	70-80

(Note: In case of piece rate, the average income of the worker per day is given)

Working hours vary across different stone quarries based on the nature of work. Those who are paid on daily and monthly basis generally work for 12 hours a day. The workers employed on a piece-rate basis do not follow any regular timing. However, on an average they also work for 12 hours per day. Wire-saw operators in marble and sandstone quarries work on both piece-rate and monthly-rate basis.

Certain big quarries have permanent employees like foremen, supervisors, and machine operators. They work approximately 10 to 12 hours per day.

Migrant labourers, who generally stay at the quarry site, prefer to work on piece rate and work day and night if electricity facility is available in quarries.

Granite quarrying is usually being done manually. Some quarries use cranes to remove the overburden. Here, the wage is calculated on the basis of cutting of a truckload of stones. The workers employed in extracting granite blocks usually work from 8 a.m. to 7 p.m.

In case of processing units, the marble and granite processing is mainly done by machines. In sandstone processing, except in a few sandstone polishing units, all other processing is being done by deploying manual labour. The working hours in these processing units are almost similar to those for the workers employed in monthly and piece-rate basis in quarries.

4.7.2. Stakeholders' Views

Government: The government officials convert the piece rate into daily wage calculating the number of pieces produced for eight hours. If it comes to lesser than the minimum wage, they take action.

However, in this case too, the government complains that during their inspection, workers do not reveal the real wage due to the fear of losing their work. If there are any violations with regard to minimum wage, the officials need the statement of the

worker to take any action, which they generally do not get (labour enforcement officer, Udaipur, and chief inspector, district labour office, Udaipur and Kota).

Business: Business says that the piece rate is quite convenient to both workers and owners/contractors. Monthly wage is not possible since workers come to work whenever they wish to, and stop working accordingly.

Business also points out that the Indian industries have a tendency to produce more during the festival seasons. There would be good sales around the time of divali and holi. But the workers generally tend to take long leaves during those days. They just take leave or stop working in a particular industry during that time.

Civil Societies and Activists: The activists analyse why this system is prevalent in the stone sector.

“Certain plot of land is being allocated to a family. Wage is being calculated on this basis. However, to be sure, wage is very less, does not comply with the fixed minimum wages.” Mr Malai, Prayatan

Workers work for more hours and get less payment. The working and living conditions in stone quarries and processing units are worse; therefore, the workers do not enjoy their work. The minimum wage prescribed by the government is not enough in the case of stone workers. The work related to stone quarries is not only tough; the workers also have to work in hazardous situations. If they are employed on a daily/monthly wage basis, they do not get any weekly off along with the payment, and so they tend to work on piece-rate basis (DS Paliwal, activist).

Workers: One disadvantage, according to workers, in the piece-rate method is that one can produce more pieces only if the raw block is soft. If the blocks are rough, it is very hard to cut them. In such cases, one can only produce half of the usual production. They also want to be with their family and friends at the time of festivals.

Key Questions

- Piece rate and temporary employment will be the major constraints in creating a standard.
- Is it possible to have a standard without disturbing the existing practices?
- Is permanent employment with a living wage and other allowances more beneficial than the current practice?
- Is it possible to make changes in the working hours based on climatic variations?
- Is the minimum wage set by the Rajasthan state appropriate to the quarry workers, who live/work in hazardous and unsafe conditions?

4.8.1. Contract Labourers

Big quarries tend to allocate their work to contractors, who are locally known as 'paya holders'. The contractors can be classified in two categories.

Sometimes, a worker will take the initiative to mobilise other workers so as to negotiate employment with the owner. Here, the worker himself is a contractor and he often will get a little extra amount for being the leader of the group (the contractor

gets Re 1 per foot, while others receive 90 paise per foot. This practice was particularly noticed in sandstone cutting (processing) at the quarry sites.

In other cases, certain individuals will control a good number of different categories of workers including unskilled, semi-skilled and skilled. They will bargain with larger quarry owners and get the work done on piece rate. In this case, the contractor is not a worker; he acts as a middle man between owners and workers, and supervises the quarry activity.

There is a good demand for these contractors amongst the owners, since most of the labour-related problems are being taken care of and settled by the contractors themselves. The owners can easily escape their responsibility of maintaining various laws and regulations associated with the welfare of the workers. The contractors themselves fix wages, working hours, allowances, etc.

The contractors, most of who are illiterate but have practical field experience, will not allow anyone to intervene in their work. It is impossible to expect them to maintain regulations related to labour and safety measures in quarries.

It was informed that after the implementation of the Contract Labour Act, most of the big quarry owners stopped employing workers directly.

4.8.2. Stakeholders' Views

Civil Societies: The contractors are not aware of most of the labour and environment regulations. Most of them are money-minded and try to produce as much as possible with minimum expenditure. Owners also benefit out of this system since they can easily ignore various requirements of industrial regulations (Sanjai, AGIVIKA).

Government: Subleasing of mines can continue but with proper compliance.

Business: The total life of mines is 15 years. At the beginning the production tends to be high, but in the course of ten years or so, production slows down. Thereafter, the owners make agreements with the contractors and allow them to carry on with the quarry activities. Thereupon, all responsibilities are taken over by the concerned contractors.

According to small quarry owners, they need to hire the services of contractors for quarry activities in order to better handle the tough process of following the rules related to PF, ESI, minimum wages, education, pollution and plantation, waste management, etc. These are big issues, which are out of the capacity of small quarry owners.

Ex-foreman: Shobhag Singh, an ex-foreman of Associated Stone Industries (ASI), Kota, shared his experience on several aspects. According to him, the total number of permanent workers in ASI was more than ten thousand, but after the Contract Labour Act, it reduced to one thousand.

Analysis

- Major labour rights violation took place under contractors.
- The contractors and the company should assure that the labour rights are adhered to.
- Standard-setting process should consider how the contractors address labour's rights.

4.9.1. Training

The quarry activity largely requires the involvement of both semi-skilled and skilled labour force. A short-term training will increase the productivity of labour as well as the productivity of the stones. But there is hardly any training programme for the workers.

Most of the tribal workers, who are generally employed for unskilled work, remain unskilled for generations. Previously, it was more of a family occupation. The skill was handed down from one generation to another. The work, nowadays, is learnt at the work site. A good number of adolescent boys work in quarries and processing units for several years as a 'trainee'. During this time, they are forced to do hard jobs and paid meagre wages. It is advantageous to both the contractors and the owners.

Similarly, if the semi-skilled labourers undergo a few days' training, they can develop their skill in different sorts of stone works and, thereby, demand more wages. Both the government and the business establishments are ignorant of this issue.

A few workshops have been organised (by CDOS) for semi-skilled labourers to train them on how to cope with the new technological developments. These training programmes are said to be unsuccessful due to low turnout of workers.

Quarry owners, managers, contractors, and sublease holders, among others, also have to undergo training for sustainable mining. Most of them are ignorant of various issues related to occupational safety and the environment. A majority of accidents take place due to negligence and inadequate knowledge about certain scientific methods.

4.9.2. Stakeholders' Views

Government: The directorate of mines and safety (DMS) and Centre for Development of Stones (CDOS) organised several workshops for workers and owners for environment-friendly and safety mining. The officers of these institutions complain about the lack of interest among the owners and workers. 'We gave them wage compensation to attend the workshop. But workers turned up only for the free lunch and to get the wage compensation. For the rest of the time, they were in the quarry' (identity undisclosed).

They also organised workshops for quarry owners; following painstaking efforts they were able to collect 50 owners for the first day, but their number drastically reduced to five by the second day.

Therefore, most of the government schemes with regard to standards setting in stone quarries have less impact. An officer, who showed great concern about the importance of training, told the researcher, 'I don't think these programmes are meant to be successful. These are organised simply for our records' (identity undisclosed).

Quarry owners are not ready to invest money for safety mechanism or to deploy more machines that are eco-friendly. Rather, they prefer to blast the stones using manual labour. The method is harmful to both workers and the environment.

Activists: 'If factory owners are ready to give even a month's training to the workers, most of the problems, particularly the ones related to safety, could be solved. For example, very basic training on how to use the machines, safety measures, etc., will not take more than 10 days. And both owners and workers will benefit out of it. While handling the machines, there will not be any damage, mishandling, etc., and production will also increase. Another aspect of it is that the workers will become semi-skilled enabling them to earn more salary, and perhaps also help in organising the workers into a unit. Therefore, short-time training is particularly important. There is an immediate need for such a mechanism' (identity undisclosed).

Quarry Owners: Workers are traditionally well trained in their work. They do not need any training. A new worker will stay in the quarries and processing units for a few months, and thereby learn the work.

Key Questions

- In the context of increasing mechanisation in the natural-stone sector, training becomes vital.
- The training will promote the unskilled labourers into semi-skilled or skilled labourers.
- Are some sections of workers deprived of the chance to learn the work and thus remain unskilled for generations?
- Can training, evolution, promotion, etc., be part of the standard requirements?

4.10.1. Freedom of Association

Despite the fact that millions of workers are engaged in stone quarries and processing units, no trade union/workers' union is active in mobilising these workers for collective bargaining. Several reasons can be identified for the failure of trade unions in mobilising the workers. Prevalence of piece-rate work, employment through contractors, and non-availability of work in quarries during the monsoons are some of the crucial factors.

A few local trade unions associated with INTUC operate in different parts of Udaipur district. But their role in the development of the working and living conditions of the stone workers is hardly visible. It is alleged that some trade unions are more inclined towards acting in favour of owners/contractors than workers.

“If workers are organised, half the problems in quarries and processing units can be solved.” Identity undisclosed

4.10.2. Stakeholders' Views

NGOs and Individual Activists: The owners take collective decisions to deal with various issues including the labour-related ones. On the other hand, workers do not have even a minor association. A few trade unions have tried to influence the workers, but have been unsuccessful in mobilising them. They generally work with their political interests.

The quarry owners give out their work on contract. The workforce is directly accountable to the contractors. Their fear of these mercenaries prevents them from

coming forward for any sort of collective struggle. All they can do, as a result, is act in favour of their owners.

Mine/quarry owners will not encourage the formation of any sort of worker organisation or trade union. They will say that 'we do not have the required number of workers to organise unions'.

There is a need for strong constitutional support for the development of trade unions in the stone sectors of Rajasthan.

Business: Business has a negative approach towards trade unionism. According to the owners who were interviewed, trade unions do not have any role in the natural-stone sectors. Even workers do not wish to join any trade union. Trade unions are simply a way of wasting the hard-earned money of ordinary workers.

Some owners opine that since most of the employees are temporary and work under the contractors, it is impossible to organise a trade union. However, the owners also said that they would welcome the formation of unions under a fair deal.

Another opinion is that civil societies/trade unions should not meddle with business because they do not have any scope here. Owners suggest that they should, instead, educate the workers about the influence of alcohol through awareness campaigns. And they should demand for the state to formulate various welfare schemes for stone industry workers.

Government: The government is very keen on supporting the formation of unions in the natural-stone sector. All officers stressed this aspect as important for organising the sector. It was also pointed out that individual workers always speak in support of owners, probably due to the fear of losing their sole means of income. In such a case, nobody can take action.

Workers: Perspectives of workers vary. During the interview at the work-site they are reluctant to speak about their sufferings. They express that they are living a hand-to-mouth life, where there is no chance for collective bargaining with business. Interactions at residential areas focus much upon the hardship of life in quarries and processing units. Workers agree that if there is cooperation, there is possibility of wage hike. Members of workers cooperatives seem to have realised the betterment of life after they formed cooperatives.

Key questions

- More than 90 per cent of stone quarries and processing units do not have adequate workers to form a union.
- Workers are employed on a temporary piece-rate basis.
- What alternative ways do we have to mobilise workers, if not through trade unions?
- Will the formation of a small 'quarry owners' cooperative' be helpful in organizing the workers in any way?

4.11.1. Occupational Safety and Health

Occupational safety has become a crucial issue with the increasing mechanisation process in quarries. Illiterate owners/contractors and untrained labourers were incompatible with the requirements related to deployment and operation of machineries. It is said that the 'rate of accidents also increased suddenly because of instant introduction of heavy machines, non-deployment of mine managers/mining engineers, no deployment of other competent persons, non-availability of training facilities, and non-adoption of proper planning in marble quarries.'⁵⁵

For safety in underground mining, 'the bench system' is being suggested as essential. Benches should be made with a minimum height. It would ensure safety and prevent fatal accidents. But most of the quarry owners including big mine owners are ignorant of this point. They insist upon the maximum bench height in order to get more marble/stone blocks. Several accidents take place because this point is overlooked. In some mines, though they have reached maximum depth for open-caste mining, there are no benches at all.

Since most of the quarries are on small leases, the owners tend to exploit maximum blocks ignoring some essential safety measures. Similarly, due to the restricted space, the quarry owners/ contractors dump the waste materials over the benches.

There is no proper way to ensure a completely safe working ground; mine walls overhanging precariously are a common sight. Incidents of sidewalls collapsing seem to be on the rise, as seen in reports, and the minefields are turning killer fields.⁵⁶

In marble and sandstone quarries, the overburden is generally removed by employing the blasting method. Blasting is also adopted to split the otherwise unbreakable blocks. It poses serious problems to both workers as well as inhabitants in surrounding areas. 'Most of the mine owners do not possess the license for magazines and do not appoint qualified blasters. They procure explosives illegally and conduct blasting by unqualified blasters.'⁵⁷

Providing personal protective equipments like helmets, earmuffs, goggles, hand gloves, protective footwear, and safety belts, and training the workers on how to use

⁵⁵ HR Bantia, 'Pragmatic Approach for Introduction of Improved Safety Status in Marble Quarries', in SS Rathore, V Lakshmi Narayana, Safety and Technology in Marble Mining and Processing in New Millennium, Udaipur, March 2000, p. 94

⁵⁶ *ibid*, p. 97

⁵⁷ *ibid*, p. 95

these materials are largely ignored by the mine owners. This hesitant attitude towards investing even a small amount for personal safety of the workers is causing a lot of occupational hazards. Maximum injuries take place due to the accidental fall of materials/stones over workers. Further, the breaking of moving rope in wire saw is another source of accident. Improper installation of wire saw in quarries is one of the major reasons for such breakage.

Sandstone contains 90 per cent of silica; granite and marble have more than 60 per cent of the same. The dust generated during the wire-saw cutting in quarries contains high doses of silica, which is harmful to human health. The silica particles tend to get deposited in the lungs, eventually leading to silicosis, a disease prevalent amongst the quarry workers. Since the disease manifests itself several years after the onset, most of the workers are not aware of its initial stages. Reports state that one out of every three quarry workers suffer from the disease, bringing about their untimely death.

4.11.2. Stakeholders' Views

Civil Societies and Individual Activists: Activists have stressed upon various aspects with regard to occupational safety and health. The summary of the discussion is as follows:

- There is no proper record of the accidents that take place in quarries and processing units. When accidents happen in a quarry, the owner somehow makes it seem to be the poor worker's fault. He fortifies his position further by arranging three workers as witnesses and bribing them with small amounts in order to settle the issue. He cannot afford legal action to be taken since it will cost him around five to six lakh rupees.
- Health and safety issues are very important. If we roughly calculate, the average death age of mine workers would be about 35 to 40. Most of them attain premature death at the age of 40. The government programmes are not accessible to the mineworkers. An awareness campaign is an urgent need.
- During the processes of stonecutting, stone blasting, etc., there is a chance that the worker might lose his eyesight and hearing power. Adequate safety materials are not provided to prevent the same even though this would cost the quarry owners not more than a few hundred rupees. It has been seen in practice only in big industries like cement.

Government: Opinion of government officers with regard to training, safety, etc., has already been discussed. Labour inspectors and labour enforcement officers have pointed out that the government's regulatory measurements are inadequate.

Business: The gist of the argument presented by business in this regard is as follows: There are lots of impractical requirements related to safety, all of which can obviously not be implemented by the mine/quarry owners. The quarry license is for a limited period, the quarry area is limited, the workers are temporary, and the availability of good stone materials is uncertain. In this situation, we cannot invest more money on safety.

The owners also agree that in case of accidents they would like to settle the issue on their own, without the intervention of the government.

Ex-foreman: In case of accidents in the quarry site, the management will personally settle the issue with workers without informing the director general of mine and safety.

Analysis

- Frequent accidents in quarries and the silicosis problem are two major areas of concern.
- Small quarry owners (above 90 per cent) are not able to invest money on required safety arrangements and necessary machines.
- Both owners and workers are ignorant about the usage of small safety materials like mask, ear muff, spectacles, etc.
- Accidents are compensated for privately.
- Health and safety need special attention in the standard-setting process.

4.12.1. Migration and Living Condition

Both interstate and intrastate migrations are prevalent. Workers from Orissa, Bihar, Uttar Pradesh, Tamil Nadu, and Andhra Pradesh were found in quarries during the field visits. Most of the workers from other states were living permanently in nearby settlements meant for the workers. And some of them had arranged makeshift houses using the sandstone waste pieces at the quarry site, and were living there for years.

There is a substantial worker migration taking place within the state, from one district to another. Workers who come from neighbouring districts temporarily settle down in the quarry site itself. During the rainy season, they go back to their villages for agricultural work.

Workers who live at the worksite are generally cut off from the mainstream. They hardly have any access to basic civic amenities like education, transport arrangements, and drinking water. Children of these migrant workers are a vulnerable section, being adversely affected by the migration. Migrants are generally family workers, with all members of the family including children involved in one or the other quarry-related work. Either schools are not accessible to these children or they cannot join schools due to their migratory lifestyle. Even children who were earlier able to attend school are made to discontinue their studies once they reach the age suitable for them to engage in quarry work.

4.12.2. Stakeholders' Views

Civil Society and Activists: One important point that emerged during the discussion with civil society activists was about the condition of quarry workers in revenue villages. The government has categorised certain high-revenue yielding villages as 'revenue villages' and gives special attention to their infrastructure development.

“No crèches. No rest shelter. No drinking water. There are around 200 mine clusters in Rajasthan. No cluster has adequate facilities. No proper food. No proper dress. No health centres.” Government officer, identity undisclosed

Civil society activists say that the mineworkers do not benefit from this status. Quarries are not located in the heart of the revenue village. They are on the periphery

of the revenue village. There are no proper roads/transport between quarry areas and the village. Hundreds of workers are living in the mine areas. Schools, health facility, etc., are not accessible to them.

Owners: The collective voice of owners with regard to the living conditions of the workers is that they do provide viable facilities. It is impossible to run a school and maintain a hospital near each and every mine.

Analysis

- Housing and accessibility to schools, health centres and transport arrangements have been stressed in the discussion.
- Failure of government programmes and hesitation of owners in spending money for labour welfare are major constraints.
- The issue of local communities versus migrant labour is another problem in the context of a revenue village.

4.13.1: Absence of Records and Signboards

A quarry/mine owner is supposed to maintain 18 to 20 registers covering every detail related to work. But it is hardly so in practice. No details with regard to employment, wage and other allowances, production, etc., is maintained. The inspecting authorities are generally bribed with handsome money. In big marble and sandstone quarries, records related to wages and advances for permanent employees and managerial staffs are kept. But these quarries allocate a major part of their work on contract, and then it becomes the responsibility of the contractors to keep things registered/recorded.

Under contract work, there is hardly any need for written documents about employment, payment, wage transaction, etc. It is mainly based on mutual understanding between workers and contractors. The workers employed on piece-rate basis keep their finished pieces separately. The pieces are counted at the time of loading them on to the truck. The workers generally keep the figure in their mind, while the contractors note them down in their pocket notebook. No signature, muster roll, or pay slip is required for receiving/paying of the wage in quarries.

Most of the contractors and small quarry owners are illiterates. They will usually not appoint any educated person to assist them in their business. Not in a single quarry is the exact figure of production, employment, payment, etc., provided to the government authorities.

The same is the case in the processing/polishing units as well. For marble and granite, processing is mainly done using machines. Both machine operators and helpers are paid on a monthly basis, without any record being there of the same. Processing units always tend to give false data about workers and wages to authorities. Generally, the number of workers in the processing plants is high, but in order to escape the Factory and Boiler Act's statutory requirements, they provide a record showing a minimum number of workers.

During the field visits to quarries and processing units, signboards detailing employment, wage, labour rights, etc., were observed to be absent. Some marble quarries posted boards giving details about the name of the owner, license number,

allocated areas, etc. Along with this, a few big quarries had signboards with regard to their commitment to the environment. But signboards related to labour rights/labour details were not found even in a single case. The same was seen in case of the processing/polishing units.

4.13.2. Stakeholders' Views

Civil Societies: Whatever is being registered by the quarry owners in their records is almost always wrong. They will show some records at the time of inspection (if any).

Foreman: Quarry owners generally maintain two types of records. One is for their own use, in which the real figures related to production, expenditure, number of labourers, wages, etc., is noted. Another is for the government, to be shown at the time of inspection.

Key Questions

- Can the recordkeeping be simplified? Can certain essential aspects be identified as mandatory (for recording)?
- Signboards about labour force, labour welfare measures, etc., and details of labour rights become necessary since the outsider is not aware about what is happening in the mines/quarries.

Business: 'The government should simplify the record procedures. It is not practical to maintain all records!' (Bundi Silica Group, Kota)

4.14.1. Working Condition

Less attention is paid to the improvement of working condition in quarries and processing units. Even minimum requirements for workplace safety are not followed. With the mechanisation process, marble and sandstone quarries tend to deploy various machines, which require enough workspace to carry out quarry operation. During the field research, it was found that even in the quarries where underground quarrying takes place at the depth of 60 metres, the workers are seen working without any helmet and other protective materials. The wire-saw cutting generates a terrible amount of dust, which usually circulates within the pit for a while. The workers are generally exposed to these dust particles as they work without using facemasks. In marble mines, the workers are freely walking barefoot over the marble slurry, which is extremely hazardous. This is the case in other stone quarries also.

Except in a few big marble quarries, proper rest sheds, drinking water and toilet facilities, etc., are not seen. In sandstone quarry areas, the rest shelter is made by the workers themselves, by using two vertical and two horizontal slabs of sandstones. They also have to take care of drinking water and toilet arrangements on their own. Drinking water is usually brought in a small pot from far-off places. Big marble quarries have concrete buildings, which are used for multiple purposes like rest shed, houses for workers, and management offices. But during a visit to the building, it was observed that more than ten workers were resting in a small room. Nonetheless, the condition here is relatively better than in hundreds of other quarries. Accidents in

quarries are a frequent occurrence. But the first-aid box can be seen nowhere in a quarry site.

The working condition is more or less the same in the processing units. Relatively, the processing units have a good number of permanent workers. Certain standards like health facilities, safety measures, weekly offs, permanent toilet and drinking water arrangements, bonus, PF allowance, etc., can and should be maintained. But owners are not ready to spend even a minuscule amount of money in this regard.

4.14.2. Stakeholders' Views

Business: Regulations/requirements related to workers are not possible to fulfil since most of the workers are working temporarily. The wage and other benefits are decided based on the demand and trend in the market.

According to small quarry owners, the biggest drawback in the mining policies is that the rules are the same for all irrespective of the size of quarries and capital investment. The majority of marble mines belong to politicians, bureaucrats and other powerful persons. They have direct connections with state authorities and are in a position to influence decisions and policies in their own favour. The small mine owners turn out to be victims of the same. They do not have enough capital to invest on certain standards, thus, in fact, helping the big mine owners strengthen their monopoly.

Workers: To workers, the wage is important. We maintain the account and accordingly receive our wage.

Government: No owner maintains proper records. They also make the workers lie to the government authorities.

4.15.1. Gender Issues

Women are highly discriminated in terms of employment and wage. They are generally employed in surface mining for removing overburden, loading waste on to the trucks, small-stone cutting, cobble cutting, etc., on both piece-rate and daily-wage basis.

A discriminatory practice prevalent in southern Rajasthan is the exploitation of tribal women by the tribal men. The tribesmen who have connections with the quarry owners bring 10 to 15 tribal women from remote villages and make them work in quarries. The middleman is paid accordingly, and he then distributes the amount among the workers after deducting his commission. In this practice, the tribal women workers only get half of their actual wage.

4.15.2. Stakeholders' Views

Most of the points discussed above were collected from civil society activists. The government did not discuss this issue. Business says that the quarry works require skilled labour of the kind not possible to be had from women.

Further, it is said that during their work in quarries, the owners and contractors sexually exploit women. Once the overcast mining turns into an underground mining, the women workers find no work in the quarries. They have to look for other sources of income. Since agriculture gives only seasonal employment to men and women, a good number of women, who were previously engaged in quarries and subjected to sexual harassment, turn out to become sex workers. The rate of sex workers and HIV patients has increased alarmingly in recent times, and most of them belong to the

Key Questions

- Is it right to say that certain employment opportunities in mines/quarries should be created for accommodating women workers?
- Can it be incorporated in the code of conduct for quarries?

III. Environmental Issues

4.16. Land Degradation

The deplorable physical appearance of the mining area would shock any outsider visiting the area. The mining area may be small, but the area where the wastes are being dumped is a sight to see. There is no proper planning for waste disposal, and everywhere one can find a great manmade mount of waste materials. The overburden and non-commercial marble and sandstone pieces were carelessly disposed over forest, grass and agricultural lands. This was leading to the degradation of fertile land. 'It is estimated that in the region of southern Rajasthan nearly 15,000 hectares of land, which was earlier demarcated as forestland or productive land, has now been converted into wasteland/unproductive land by the marble sector activities.'⁵⁸

The marble slurry is another source of land degradation. The slurry is generated when marble blocks are cut using wire-saw and gang-saw machines. Slurry is basically a mixture of marble powders, fine particles and water. It contains the highest percentage of silica. It is said that 990,000 tonnes of dry marble powder in the form of slurry are generated per year in Rajasthan. The marble slurry is generally dumped over the nearby agricultural land. It adversely affects the productivity of land, water absorption and water percolation. The depletion of groundwater level is also said to be due to the impact of marble slurry.

4.17. Groundwater

There are various factors that account for groundwater depletion. In sandstone areas, the natural water channels are disturbed due to mining. As a result, the water reservoirs do not get adequate rainwater from these canals. This is also the case in the marble quarries. The gradual deepening of mining activity results in changes in the sub-surface water flow system, 'reduction in recharge intensity, lowering of water table, drying of existing aquifers, etc.'

⁵⁸ Vinod Agarwal and Mukesh Jagetia, 'Marble Resource Utilization and Environmental Influences', in SS Rathore, V Lakshmi Narayana, Safety and Technology in Marble Mining and Processing in New Millennium, Udaipur, March 2000, p. 224

4.18.1. Water and Air Pollution

If dumping is done in the surrounding water bodies, it pollutes the water going to the main water bodies. Furthermore, if the rainwater from the quarry area flows into the local water bodies, it transports marble slurry and particles to nearby agricultural lands, lakes, rivers, etc., resulting in water pollution and subsequent contamination of groundwater.

It is said that in the marble quarry areas, 80 per cent of the workers work in a noisy environment. According to an estimate, an air compressor makes 83 to 85 dB and a jackhammer drill makes 79-100 dB. The intensity of noise generated by the wire-saw and gang-saw machines is also very high. Moreover, there is frequent blasting in the quarry areas.

4.18.2. Stakeholders' Views

Stakeholders' views on various environment-related issues have been discussed.

4.19. Views of Stakeholders on Standards Setting

A majority of stakeholders including government and local civil societies were not much aware of the concepts like standards, multi-stakeholder initiative (MSI), ethical trade and fair trade. Thus, the researcher found it very tough to explain these initiatives to the business, particularly to the small quarry owners. Local civil societies were also not able to perceive this issue in a broader context. Nonetheless, they were extremely conscious about labour and environmental issues at the local level, and insisted upon cooperation among various agencies and stakeholders to work out strategies to deal with these issues.

Aspects related to monitoring through the representatives of NGOs and trade unions were not entertained by the businessmen. Any discussions in this regard were ultimately shifted to narrating their personal problems like huge capital investment, non-availability of labour, strict governmental procedures, etc.

Business suggested that there should be more cooperation between government and business in order to initiate various labour welfare schemes. Government should extend financial assistance and subsidies. From the business point of view, they believe that as the government is earning huge sums of money in terms of royalty and revenues, it should also share the corporate social responsibility of mines/quarries. If the government assured their assistance, small mine owners who do not have the required capital to invest in certain standards would be enabled in implementing those standards. There are also lots of impracticable rules and regulations that the government should do away with by revising certain policies and regulations. Small quarries can be encouraged to form a cluster, and then those clusters can take the responsibilities of education, health facility, living arrangements, etc., for workers. If the license period and lease area are extended, they said that the owners would not hesitate to invest more on CSR aspects. As the workers are not permanent employees, they leave their work anytime without any prior information. Furthermore, as these

workers are interested only in working on piece-rate basis, certain regulations related to working hours, monthly wage, other allowances, etc., cannot be followed.

Workers: The basic demand of workers was hike in the existing piece rate. When the researcher explained to them the various labour rights and welfare practices prevalent in other industries, they opined that permanent employment with other allowances including PF, ESI, and bonus would immensely benefit them. They said that if medical and educational facilities and habitation arrangement were assured, most of the problems could be solved. However, workers were highly sceptical about the practicability of these initiatives. When asked about unionisation and becoming member of a trade union, the workers said that they did not know the exact nature of trade unions, but thought that any sort of workers' union would certainly facilitate a collective effort.

Government: The government demanded the support and cooperation of other stakeholders, namely, quarry owners, workers and civil societies, for their various initiatives. They said that they are ready to take help and extend possible cooperation to any stakeholder group. They also reiterated the point that if workers were aware of their rights and were to organise into a union, most of the problems related to labour could be solved. NGOs and trade unions should work towards this.

Civil Societies: According to civil society activists, creating standards and monitoring may not be possible without the collaboration of civil societies. Civil societies should be given adequate representation in each stage of policymaking. Activists should be allowed to visit quarries/mining and interact with workers. It would help to understand the workers' condition and address their issues to various agencies. Government should initiate a monitoring committee with adequate representations from workers, civil societies and local communities. Both government and business should assure that certain portion of their income is spent on the development of the society. Small quarry owners and workers should be encouraged to form cooperatives. This would help the small quarry owners to undertake various social welfare measures collectively. In case of workers, they can get quarry license on their cooperative name and work independently without being subjected to any kind of exploitation.

4.20. Conclusion

Despite differences in opinion on various issues, the majority of stakeholders agree on the following aspects:

- Need for collective effort
- Workers' empowerment and freedom of association
- Concerns over local communities and environment
- High compliance costs and limited resources of small quarry owners
- Corruption and political intervention

Having outlined the overall nature of issues in the natural-stone sector, the following chapter will examine the characteristics of stakeholders and the feasible intervention options.

Chapter 5: Role and Characteristics of Stakeholders

5.1. Introduction

A range of issues discussed in the previous chapter visualises a complex picture of the natural-stone sector in Rajasthan. One of the major constraints for creating a standard appears to be the lack of coordination among the key stakeholders and agencies. Presumably, the process may not be possible if we fail to get the support of even one stakeholder. In this context, identifying various possibilities as to how the stakeholders can be brought together on to a single platform becomes crucial.

During the field study, the stakeholders were asked to share their views on creating a viable mechanism for standard setting, and the extent of their collaboration with other stakeholders in sustaining the process. One positive element that emerged during the discussion was the stakeholders' high awareness about the problems and their interests in extending their cooperation. Significantly, the business showed keen interests in learning to deal with labour-and environment-related issues. Some big quarry owners have already begun to advertise their commitments to labour welfare measures and eco-friendly mining.

There are also several isolated initiatives by NGOs and trade unions to organise workers, establish cooperatives, protect the rights of indigenous communities, safeguard the environment and natural resources, and assure women empowerment and child rights.

In marble and sandstone quarry regions, where quarrying has been going on for several decades, the impact of the stone business on different sections of society is very clear. As a result, there is demand from the people to organise the sector and implement certain regulatory measures. Several government officers have expressed genuine concern over the sustainability issues associated with this sector.

Although there is relatively less pressure from buyers and consumers, their support can be achieved through a systematic campaign.

The following section studies the prevalent characteristics of key stakeholders.

5.2. Characteristics of Stakeholders and Feasible Intervention Options

Big Quarry Owners: Big quarry owners hold quarry leases on relatively larger areas for long period (up to 60 years). They usually divide their quarry work and distribute it to different contractors/sub-lessees. The quarried stone is then processed in their own processing units. In certain cases, the big leaseholders sublease their license to contractors for a short period, and in that case, they do not intervene in the activities of contractors. Having control over different categories of workers, the contractors fix their rate with owners on piece-rate basis and pay their workers on the same basis.

Where the quarrying is done under the direct supervision/management of the main licensee, most of the labour and environment-related regulations are respected. They relatively invest a huge amount to deploy machineries and appoint technical

persons/experts to monitor the quarrying. Generally, due to the pressure from several fronts, the big quarries undertake plantation activities either individually or in collaboration with NGOs. Some of them have a separate management for executing and monitoring their plantation projects. The plantation is done at places other than quarry areas. Some big quarry owners contribute to the construction of religious centres, elementary school building, and sometimes to the renovation of local roads.

Owners of big quarries, especially in case of marbles and sandstones, do not share their orders (export) with small quarry owners. There exists high level of competition within the big quarry owners and between big and small quarry owners. However, in case of granite, it was found that several owners, irrespective of big and small categories, share their orders (export).

Feasible Intervention Options

- Minimising the practice of contracting and subleasing the quarry license
- Pressurising the contractors and sub-leaseholders to follow the 'codes' agreed to by the main lessee
- Facilitate the buyers/civil societies to visit and check codes in quarries under contract and subleasing
- Proper training and certificate for contractors and sublease holders
- As a principle employer, the lessee should take responsibility to implement codes and CSR-related aspects
- Implement various occupational safety measures and cooperate with government and civil societies to organise training programmes for workers

Small Quarry Owners: The category of small quarry owners includes a considerable number of illegal quarry owners as well. It is believed that approximately 90 per cent of quarries in Rajasthan fall under the small-scale industry category. The license period of these quarries varies from 2 to 20 years. This can be extended and renewed. The tendency to spend less and earn more can be observed in small quarry owners. Operating on a relatively small lease area, the deployment of machineries is very less. The number of workforce employed in a quarry varies between 10 and 20. The labour and environment laws are found to be largely violated, and no sincere steps have been taken with regard to occupational safety and health. Appointment of managerial staff and technical persons is also absent.

The functioning of small-scale owners is almost similar to that of the contractors and sublease holders of the big quarries. They employ their workers directly, but generally on piece-rate basis. Distributing chocolates during the Independence Day and Republic Day celebrations in local schools is the maximum that small quarry owners do in the name of corporate social responsibility. Sometimes, monetary help is given for the construction of religious centres.

Feasible Intervention Options

- Forming clusters or cooperatives of small quarries and pressurising the small quarry cooperatives to implement the 'codes' and to be responsible for their sustainability
- Minimum working area for quarry operation can be further increased as to facilitate deployment of machines in quarries
- Developing infrastructure facilities like road, electricity, health centres and schools before granting license for quarrying in a particular area
- Financial assistance and subsidies for implementing labour-related measures
- Simplifying/modifying government procedures to make them practical for small quarry cooperatives
- Worker under one cooperative/cluster can be encouraged to form union and initiate collective bargaining with owners/government
- Small quarry cooperatives/clusters should take collective responsibility for community and labour-related issues
- Forming a monitoring committee with the cooperation of government, NGOs, local village assemblies, small quarry cooperatives and workers' union
- Provide adequate protective materials to workers and cooperate with government and civil societies to organise training programmes for workers

Government: As mentioned in the previous section, there are around 30 government departments (both central and the state) that directly deal with quarry activities. These departments function independently without any necessary collaboration with others. They tend to inspect/implement only what is prescribed to them. For example, the inspector from mining engineer office will not bother about labour and safety rules violation. It is also not his duty to take necessary action if some illegal mining is going on in the forestland. Inspector from labour enforcement office can check for compliance with labour laws only in quarries/mines. Even if the labour laws are violated in processing units adjacent to the quarries, he does not have any power to intervene. Similarly, district labour officer cannot take action if a child is working in a quarry. In case of bonded/forced labour, all concerned officials have to wait to get the permission/certificate from district divisional magistrate in order to take the appropriate action.

Feasible Intervention Options

- Simplify bureaucratic complexity and organise a coordination committee with officials of different departments
- Regularise the periodical visits/ inspections with cooperation of other departments and stakeholders
- Strengthen the infrastructure facilities of government departments and provide advanced communication equipments
- Draft a uniform plan and regulations, giving due consideration to the differences in marble, granite and sandstone quarrying

- Implement various welfare schemes for stone quarry workers and encourage workers to form cooperatives/unions
- Unify the small quarries into several clusters and extend financial assistance and subsidies to these clusters to implement standards
- Undertake a feasibility study to bring quarries and processing units under the jurisdiction of one government department
- Consult with local communities, civil societies and people's councils while granting lease on new areas
- Effective implementation of Rural Employment Guarantee Scheme will stop migration from rural areas to quarries
- Undertake proper survey and improve the record keeping
- Allocate certain lands for dumping waste and maintain them through levy and selling the waste for reproduction
- Organise training programmes, or allocate fund to civil societies or other concerned bodies to conduct workshops for workers and owners
- Establish 'model quarries'

Similarly, given the limited infrastructure facility and manpower, it is impossible to inspect all quarries/processing units by an inspecting officer of a concerned department. Until and unless they receive any specific complaint, they generally do not inspect the quarry/processing units. Even during their rare visit, if they find any violation they can take action only if they receive a statement from a witness or victim. Without the eyewitness's statement, they cannot file a case or take action. They generally find no cooperation from owners and workers. The workers, in particular, tend to lie and speak in favour of management/owner. Above all, most of the government officials are corrupt and maintain good relationship with quarry owners and politicians.

Civil Societies: The role of civil societies is significant for the overall development of living conditions of people in Rajasthan. In case of mines/quarries, the civil societies can be appreciated for their consistent engagement in eradicating/minimising child labour and bonded labour. At present, most of the NGOs are engaged in issues related to rural development, women empowerment, tribal empowerment, rural education and environment-related aspects. Direct intervention of NGOs in mining and mine/quarry workers is less. Further, there is complete absence of cooperation between civil societies and quarry owners. The few NGOs that were active in working for the mine/quarry workers seem to have lost their interest and shifted their focus on to other fields. This is primarily due to the existing hostile situation, non-cooperation of owners and workers, and lack of funding support. However, campaigns related to environment and tribal development issues, initiated by civil societies, seem to have strengthened. These initiatives have also made a positive impact on the mine/quarry sector.

Attempts of trade unions are not successful in mobilising/organising mine/quarry workers. Previously, like the NGOs, a few trade unions had tried to organise the stone workers. But due to the complexity of the working nature, temporary employment, migratory nature of worker, prevalence of piece rate-based employment, and

inadequate support from workers and owners, trade unions were unable to make their presence felt effectively in the natural-stone sector. Trade unionists faced severe threats from owners in several cases. Also, there is no mutual trust and cooperation between NGOs and trade unions.

Feasible Intervention Options

- Mobilise monetary resources in order to undertake various welfare activities related to stone workers
- Represent in policymaking and monitoring process
- Coordinate with buyers demand and to execute codes in their supply quarries/processing units
- Encourage workers and small quarry owners to form cooperatives
- Mobilise workers to negotiate with owners and government
- Engage in dialogue with various stakeholders on behalf of stone workers and local communities

Workers: Generally, the workers are not aware of their rights. Most of them are migrants from neighbouring districts or states. They stay temporarily at the worksite or in the surrounding workers' settlements. Due to non-employment in stone sector during the rainy season, they tend to go back to their villages to engage in the agrarian sector. Employed largely on piece-rate basis, the unskilled and semi-skilled labour gets less than the prescribed minimum wage. Women workers are paid less than the male workers. Workers have to work for long hours in hazardous conditions, without using any safety materials. The work is learnt at the worksite and there is no prior training. They do not avail of any special financial support or benefit from welfare schemes designed for the workers. Their lack of interest in unions and collective bargaining handicaps them from negotiating for their rights with the owners/contractors/sublease holders. Almost all workers in small stone quarries and processing units borrow money in advance from the owners/contractors/sublease holders. Due to poverty, frequent migration and lack of access to schools, the workers involve/encourage their children to assist them in their work. Habits like chewing or smoking of tobacco and drinking liquor were found to be highly prevalent among these workers. Their active engagement in stonework is for 15 to 20 years, and then they generally attain premature death due to various diseases.

Feasible Intervention Options

- Learn your rights
- Cooperate with civil societies and government in their various initiatives
- Form cooperatives and unions
- Attend various training programmes organised by different agencies
- Send your children to school

Buyers and Consumers: Buyers and consumers are not sensitive enough about human and environment rights violations associated with natural-stone industries. Foreign buyers directly deal with big quarry owners or exporters/stockists, who receive their stocks from both big and small quarry owners. The basic demands of the

buyers, at the time of business agreement, are related to the quality of stone and its price. Buyers rarely visit quarries/processing units. Even if they visit the worksite, they only check on the quality of the stone blocks. Local buyers and retailers never visit the quarry site, but approach the processing units and fix their price according to the quality of the stone. The basic demands of the consumers are generally for good stone products at low prices.

Feasible Intervention Options

- Demand implementation of code of conduct in quarries and processing units
- Visit quarries to verify whether these standards are implemented and sustained
- Check implementation of standards throughout the supply chain
- Cooperate in the multi-stakeholder initiative
- Cooperate with local civil society organisations in the process of implementation and monitoring

Local Communities: Local communities have increasingly begun to realise the impact of unorganised mining/quarrying. Loss of traditional economic resources, water resources, agricultural fields, etc., and serious environmental problems such as land degradation and water, noise and air pollution are some of the major concerns for local communities. The proportion of local communities either in the quarry workforce or in the ownership is very less. Local communities do not have any significant role in granting license.

Feasible Intervention Options

- Support civil society initiatives
- Insist with government to ensure the participation/representation of local communities in decision making with regard to stone quarry license

Conclusion

The characteristics of stakeholders have been examined in this chapter. The feasible intervention options, given in the boxes, highlight the expected role of stakeholders for the successful implementation of standards. The next chapter moves a little further in critically examining the feasibility and sustainability of standard-setting process.

Chapter 6: Standards Setting Feasibility and Sustainability

6.1. Introduction

Are the standards only for export-based quarries? Or, do we also need to have certain regulations in the quarries that produce for the domestic market? Quarries generally export a part of their product, and the rest is sold in the domestic market. Very few quarries/processing units depend exclusively on the international market. At this juncture, is it feasible to implement the requisite standards via the importers? To what extent would such initiatives strengthen the working conditions of labourers?

If we strive for a process that will address the interests of all sections of workers, it will have to be preceded by a strategy that involves the local market. Can local buyers be sensitised to impose stringent standards on their suppliers? If not, how can the standards be implemented and monitored? Is it through supporting the government in the implementation of its policies, or through mobilising the workers and the local communities to be conscious of their rights?

In addition, there are some basic questions. What should consist of standards, what are the basic requirements, and what would be the risks of monitoring and implementing those standards?

The chapter answers these questions to some extent.

6.2. Baseline Requirement for Creating a Standard

For any sort of standard-setting mechanism, certain aspects can be stated as basic requirements.

1. Union/Cooperative/SHG of Workers: Unionisation of workers in whatever adoptable/legitimate form is necessary. The successful implementation of standards would primarily depend upon the success in mobilising workers for collective bargaining. Workers need to be sensitised in these aspects. If there is no possibility for the operation of trade unions, the workers' cooperatives and self-help groups (SHG) can be other options. They can be formed and monitored with the help of local NGOs. The workers may not take interest in such initiatives, especially if they do not find any immediate benefits like wage hike and loans.

Strategies are to be developed considering these aspects. Implementing various government welfare schemes through cooperatives/SHGs will encourage workers to become members of such bodies.

2. Cooperatives for Small Quarry Owners: Before standardising the process, one should consider the point that small quarry owners occupy more than 90 per cent of this sector. As discussed in the previous chapter, the individual small quarry owners cannot uphold most of the standards/requirements. Higher compliance costs and stringency of standards will ultimately push the small quarry operators out of the market.

In this regard, clustering small quarries or developing small quarry owners' cooperatives can be one feasible option. Such cooperatives can take collective

responsibility to address various social and environmental needs. It will also help in implementation of certain safety measures at quarries. Due to the limited working area, deployment of certain machines and removal of waste seem to be problematic. However, it can be solved with the collaboration of neighbouring quarries. The surface water arrangement can also be effectively managed if quarries come together. Government can draw special schemes to form clusters and support small quarry owners with subsidies and loans.

In several places, there are small quarry owners' associations. But it seems that the prime purpose of these unions is to focus on tackling certain situations (for example: sudden pressure from government on certain requirements, public outcries, etc.).

3. Social Premium: The concept of social premium is proposed to address various concerns of workers and to undertake community-based initiatives and services. It is practiced in several fair trade initiatives. Under this, extra money is paid to the owners and workers to spend collectively on the social development aspects.

This practice can be modified to suit the situation in the natural-stone sector. All relevant stakeholders can contribute to the social premium and collectively undertake certain welfare projects. It should include the interests/needs of not only the workers, but also the local communities living in the vicinity of quarries.

4. Standards Applicable to Different Environments: The proposed standards should be relevant to all range of owners in different stone industries like marble, sandstone and granite. As discussed, within Rajasthan the structure and function of these industries vary significantly. Initiatives should give due consideration to this aspect.

5. Codes for Hired Labour/ Contract Labour: A majority of workers in the stone quarries/processing units are employed by the contractors/sublease holders. Thus, specific responsibilities of owners and contractors need to be clearly codified.

6.3. Components of Standards and Constraints

The process of standard setting can begin at the labour-intensive stages of the supply chain. The standards should consist of the basic codes focusing on socially and environmentally sustainable production.

Component	Constraints
<i>a. Employment is freely chosen</i>	<ul style="list-style-type: none"> a. Poverty and indebtedness b. Lack of welfare facilities like loan, credit schemes, micro credit system and SHG
<i>b. Freedom of association</i>	<ul style="list-style-type: none"> a. Temporary workforce b. Small quarries and small number of workers in quarry/processing unit c. Illiteracy and no awareness of basic rights d. Workers not informed about the benefit of association

	e. Reluctant approach of trade unions towards stone sector workers
c. Working condition is safe and hygienic	a. Hesitation of owners to invest in safety measures and advanced machineries b. Lack of financial assistance and subsidies for small quarry owners c. Quarry owners are not well informed about the standard-setting process d. No demand from workers for such measures e. Restricted working area
d. Child labour is not used	a. Poverty b. No access to schools c. Illiterate parents
e. Living wages are paid	a. Prevalence of piece rate-based employment b. Contract labour c. Temporary employment
f. Working hours are not excessive	a. Piece rate-based employment
g. Regular employment is provided	a. No work in quarries during the rainy season (July to September) b. Stone workers shift from stonework to agriculture
h. Local (tribal) communities have representation in workforce and ownership	<ul style="list-style-type: none"> Local labour is not skilled Owners may not prefer local employers since they may not work for extra time
i. Quarries or processing units should have the required licenses	a. Corruption b. Long governmental procedures c. Owners' preference to earn quick money
j. Rights of contract labour are respected	a. Hostile attitude of contractors
k. Environmental codes are respected	a. Non-availability of proper waste-disposal arrangement b. Limited infrastructure facility High cost of machineries <ul style="list-style-type: none"> Lack of financial assistance and subsidies

6.4. Feasibility of Multi-stakeholder Initiative (MSI)

It has been proposed as an effective mechanism to implement 'codes' in industries that engage in export business. With the cooperation of international importers, civil societies, trade unions and various actors at different stages in the supply chain, certain specific codes are framed based on relevant international and national standards.

Primarily, it is the responsibility of the purchasing companies to ensure that these standards are complied with throughout its supply chain, while other partners should assist in the implementation of standards, ensuring and monitoring their sustainability and certifying the products if they are produced with adherence to the prescribed codes. Consumers are determining players in such initiatives, wherein consumers

should feel that the products they consume are produced without any human and environmental rights violation. They should prefer to buy those products even if they are relatively costlier.

At different levels, awareness campaigns among the consumers are being initiated. Purchasing companies are being convinced to join in the initiative, ensuring the sustainability of the business to the producers. The ultimate aims of the initiative are twofold. First, it has to ensure that the human rights and environment laws are respected while producing and trading the product, and second, it has to facilitate sustainable production. Similar initiatives appear to be successful in industries like oil, garments and tea.

As mentioned in chapter 1, there are a few civil society initiatives in this direction in the natural-stone sector, like the German Xertifix, the British Marshalls, the Dutch initiative Sustainable Natural Stone, the Dutch foundation Stichting Milieukeur and Elim Foundation.

Except Marshalls, the focus of the aforesaid other initiatives is mainly on south Indian granite quarries. During the field research in Rajasthan, it was observed that no quarry owner, processor and exporter was aware of these initiatives. The major contribution of the Rajasthan natural-stone sector to the export trade is its marble (green marble) and sandstone blocks, and finished products. The granite products are being exported, but the industry is still in its incipient stage.

It was also observed during interviews with quarry owners/management that the export demand for granite, marble and other stones including sandstone and slate has decreased in recent years. White marble, limestone (kota stone) and other major stone products in Rajasthan are primarily sold in local markets.

Nonetheless, the owners of different stone quarries in Rajasthan are highly optimistic about the future of the industry, particularly its prospects in the international market.

According to them, the external demand for all categories of stone products in Rajasthan is likely to increase in the years to come. In such a situation, the Multi-Stakeholders Initiative with collaboration of international traders and civil societies will have a significant role in the process of standard setting.

Before any initiative, it is important to undertake a detailed survey of the function of the industry as a whole in Rajasthan. As mentioned, approximately 90 per cent of the sector is under the control of small quarry owners. Further, even the 10 per cent of big quarry owners share a major part of the quarry works with contractors and sublease holders. Any international-level initiative in this context may only help a few quarry owners who can afford the compliance cost for the standards.

Therefore in Multi-Stakeholders Initiative, preference for business deal can be given to cooperatives of small quarry owners and to cooperatives of stone workers if these cooperatives ensure adherence to the prescribed standards in their quarries/processing units. It would further encourage the formation of more cooperatives. Thus, the entire industry can be restructured and organised. Moreover, it would also help in the unification of workers.

In such an initiative, the role of local civil societies in India is very important. They can be involved in the monitoring, training and certifying process.

6.5. Feasibility of Certification

Given the complexity of the supply chain, certifying the stone products seems to be a risky task. Certification initiatives should incorporate an effective monitoring mechanism. In case of natural stone, at the primary level, the contractors, sub-lessee, small quarry owners/processing units, transporters and stockists are to be monitored.

Further, if products are certified as 'no involvement of bonded labour and child labour', it should be clear whether this includes the labour bound to certain quarries because of indebtedness (advance money) and the children who are engaged in preparing food for the other workers, as also the children who collect kerosene from the marble slurry and sell them to the processing unit owners.

If products were certified without proper monitoring, it would convey a negative impression to the consumers. Thus, certifying a part of the supply chain may be viable.

6.6. The Indian Civil Society and Initiatives by the Government

Mine Labour Protection Campaign (MLPC): It is a pioneering initiative for the welfare of mine labour in Rajasthan. MLPC has facilitated the mines workers in organising cooperatives and SHGs. It has set up labour assistance centres and 24-hour helplines. In some mines, it has formed unions and provides paralegal assistance to workers. 'The role of the unions is to safeguard the rights of mine workers. These unions operate on membership basis and the role of MLPC is to build their capacities through trainings, exposures and legal assistance.' Around 10 crèches are run by MLPC for the benefit of quarry workers. It has formed district- and tehsil-level committees, through which it operates. Currently it is engaged in collecting the data of 1,000 quarry workers. The data includes wage slip, identity card, pension and insurance scheme, and migration. However, the active involvement of MLPC in mineworker issues seems to have weakened in the recent years. In certain districts, MLPC has failed to focus on the granite and sandstone quarrying being carried out in large-scale amounts.

Hanuman Van Vikas Sabha (HVVS): It is a local NGO based at Karagate village in Udaipur district. HVVS has initiated/facilitated the formation of a workers' cooperative. The cooperative has 265 registered members, who all belong to the Bheel tribe. Short-time permit (STP) has been obtained to quarry masonry stones. Members are allowed to quarry stone in specified areas of the villages. For each truckload of stones, they pay Rs 50 to the cooperative office, and the rest of the amount is paid to the workers. The deposited money is used for paying royalties/taxes to the government. The number of women workers is higher than male workers. Through the cooperatives, the indigenous people become workers as well as owners. It is said that there has been a significant development in the living condition of these tribal stoneworkers after the establishment of the cooperatives. The secretary of the cooperative says that the government ignores their application for the long-term lease.

The workers of the cooperatives organised by HVVS are engaged in masonry stone quarrying. The stones are sold in the local market. The initiative is significant because it can be a model, and such cooperatives can be initiated in other stone sectors as well.

Eco-friendly Mining: The department of mines and geology of Rajasthan state has drawn up guidelines for eco-friendly mining. They guide the quarry owners about usage of overburden for plantation, surface water management of the quarry areas, avoiding water and air pollution, and ill effects of deforestation in quarry areas. It requests the lessee to plant 'a specific number of trees based on their area of lease so that they survive for longer time to come'. Detailed norms for plantation for each leaseholder/quarry license holder are also given.

Vision 2020: The department of mines and geology of Rajasthan has formulated vision 2020 for sustainable mining. Some proposals made under this are imbibing new technologies, simplifying government procedures, human resource renewal plan, eco-friendly mining, promoting underground mining, dust management, and new safety mechanism.

Associated Stone Industries (ASI): ASI is one of the larger groups involved in the sandstone and kota stone (limestone) quarrying in the Ramkanjimandi region of Kota district in Rajasthan. ASI publicises its corporate social responsibility as a way to strengthen its business case. According to ASI's website, the following measures have been initiated.

- a. Safety in the workplace and manufacturing process
- b. Concern for ecological balance, which is looked after and promoted by ASI Plantation Limited, a group company of ASI
- c. Residential colonies for workers and free education for the children of its employees
- d. Medical centre for workers (Kotah Stone Mariam Hospital) at Ramkanjimandi

However, during the field research it was observed that ASI distributes a major part of its quarry work to contractors. Thus, a major part of the workforce involved in its quarries comes under contract labour. We do not know whether these contract labourers are entitled to the above-said initiatives.

Paryavaran Vikas Sanstha (PVS): The NGO was established by the marble mines owners of Udaipur in 2006, after the Supreme Court's intervention in the issue of environmental condition in mining areas. The organisation undertakes plantation activities in the mining areas. They have a target of planting 20 trees for each mine. The organisation has also contributed to the construction of the road from Kelwa to Sapol, stretching about 13.5 kilometres. Though similar NGOs working on environment-related issues are numerous, the PVS initiative is significant since it was started with the effort of mine owners themselves.

6.7. Strategy and Role of Key Partners for Implementing and Sustaining Standards

A suitable implementation strategy would be to bring the industry and the government into the process.

Civil societies can pressurise the industry to implement codes, possibly through four ways.

- They can coordinate with international buyers, retailers and consumers to ensure that certain basic standards are implemented and upheld by their supplier.
- They can pressurise the government to take necessary actions if the regulations prescribed by the government are being violated.
- They can make the workers and local communities aware of their rights, and organise them to force the industry to abide by their social and environmental responsibilities.
- The civil societies can speak to the industry stakeholders directly and make them realise the necessity of standards for the betterment of society and environment.

The process may begin with identifying the suitable/committed national and international civil society partners. The international society would have considerable network among the government and import companies. It would also have the ability to pursue international consumers to buy the recommended products. The Indian civil society should have an experience of organising and mobilising workers.

The specific role of the international society would be to engage with the foreign companies that are involved in natural-stone trade in India, and with mutual cooperation they can negotiate with Indian suppliers/quarry owners. The international civil societies and importing companies can also have a dialogue with the Indian government and autonomous government organisations like Centre for Development of Stones (CDOS), either directly or through the home government or a partner company.

The inclusion of CDOS in the process is important since it has a wide network with Indian natural-stone exporters and has experience of organising workshops and training for quarry owners and workers. It also looks into the promotion of the stone export business.

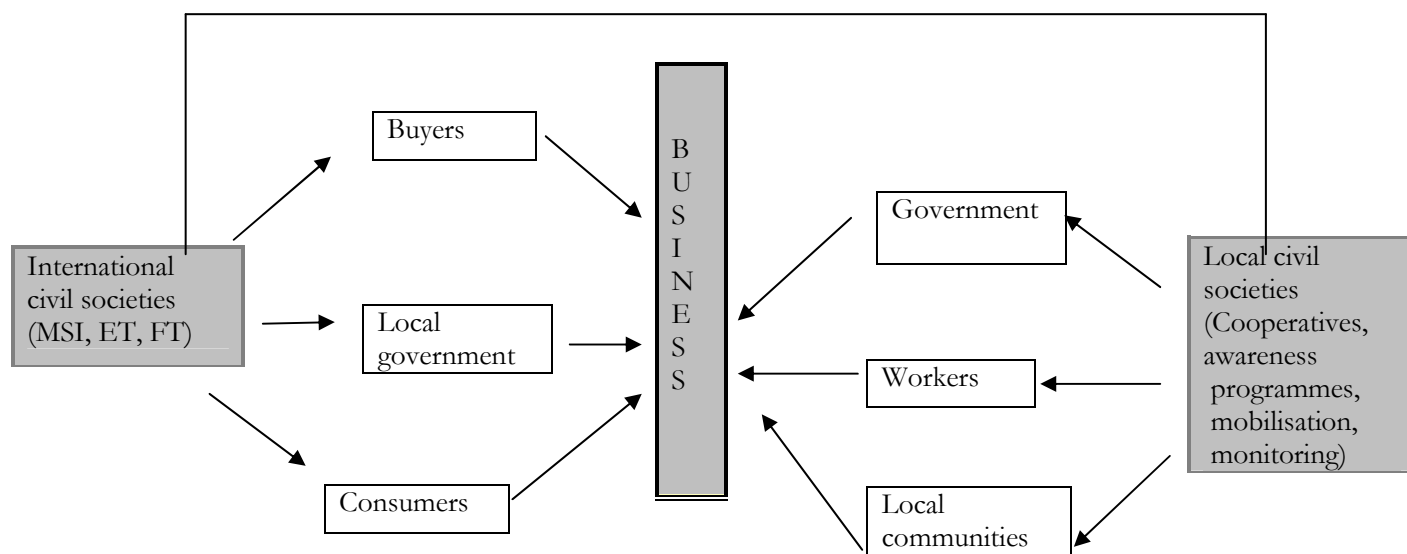
Indian civil society partners can assist their international partners by informing them about the ground situation and the issues that are to be addressed/focused in the process. They can also help the foreign buyers in monitoring/assisting the process of standards setting initiated by them.

Indian civil society can have dialogues with local officials, quarry owners and local communities, in addition to mobilising the workers to form unions and cooperatives. The unions/cooperatives formed by workers can be motivated to negotiate with the industry and the government. If considerable pressure from the workers and the local civil societies is mounted on the government, it would eventually compel the industry to adhere to the social and environmental codes.

The local retailers and consumers are excluded since most of the local retailers are themselves either quarry or processing unit owners. The Indian consumers are not well informed about social and environmental issues associated with stone products. However, a campaign targeting the local consumers is possible, and both the government and the local NGOs can initiate it.

The costs for organising workshops and training programmes can be borne by government institutions like CDOS. Civil societies can also look for financial sources from other agencies for its functioning at the ground level.

In sum, for effective implementation of codes of conduct in the natural-stone industry, there should an initiative from the above as well as from below. The initiative from the above can be in the form of MSI, while the one from below should focus upon certain constructive works at the ground level. The following diagram explains the proposed strategy for standard setting.



6.8. Business Case in Implementing Standards

Since the stone sector is labour-intensive, the social, environmental and other welfare measures are closely associated with the business case. It was realised during the field study that the producers are aware of regulations, but they do not have adequate knowledge about implementing the code and its benefits.

Basically, the welfare of the labour is directly linked with the productivity of the industry as a whole.

6.9. Implementation and Monitoring

The standards should be applied throughout the supply chain. But at the beginning, rigorous implementation and monitoring is needed at the labour-intensive stages of the supply chain. It may begin with quarries including sub-leased quarries, contracted quarries, and processing units.

Monitoring mechanism can be framed based on the nature of the initiative (like MSI in export products supply chain and local initiatives for overall domestic market). The national and international partners (civil societies) can identify certain core stages in the supply chain, and accordingly the structure of the monitoring body can be

constructed. At all levels, the monitoring body should have the representatives of labour unions, NGOs, village councils, business and government. Most of the constraints in the monitoring process can be solved if labour unions are organised, workers are empowered, and the local communities are sensitised.

Provide living wage, allowances, family welfare, improvement of living condition	→	Workers will be interested to work permanently
Occupational safety, health and training	→	Increase the productivity of labour; increase in production
Assure child labour- and forced labour-free environment	→	Gain the support of local communities and civil societies. Increase in export business
Form small quarry owners' cooperatives	→	Meet the cost collectively for certain CSR measures like schools and health centres
Provide safety materials and training for workers	→	Escape avoidable accidents and save your compensation amount
Encourage formation of workers' union	→	Negotiate with workers' representatives. Achieve a common understanding and gain cooperation of workers. Increase profit
Adhere to basic environment codes	→	Gain the support of civil society and local communities. Ensure sustainable production

There is also a need to develop a strategy for action in case of noncompliance with the standards. In MSI and certification initiatives, the non-compliant quarries/processing units can be excluded from the initiative.

6.10. Potential Risks

1. Limitations of Stakeholders' Support: At any point of time, the stakeholders may withdraw their support. The cooperation of government officers is uncertain. The active officials may be forced to move to other places.

It may not be possible to achieve the support of certain quarry owners and contractors who have traditionally impeded progress in bringing down labour rights abuse. They may look for options for quick money without any necessary spending.

NGOs may disassociate themselves from the initiative if there is a hostile situation and lack of pecuniary assistance. Trade unions may end up in ideological clashes. As a result, the concerns of workers may be sidelined.

If the situation is not favourable, the workers migrate to other places.

2. Monitoring Workers' Cooperative: If workers have formed a cooperative and obtained a license for quarrying, the cooperative needs monitoring. Sometimes, workers are highly ignorant of certain safety measures.

3. Small Quarry Owners' Cooperative: If co-ops of small quarry owners are formed with the aim to undertake CSR and safety measure aspects collectively, there is a risk of negative impact. The small quarry owners may use their cooperatives to strengthen their position against the workers, subsequently exploiting them and ignoring the real purpose of the co-ops.

4. Spending Social Premium: If the proposed social premium is collected, it needs to be spent towards community-based services for the development of decent living conditions for the workers and the local communities. The social premium can easily be misused in favour of certain sections.

5. Fluctuation in the International Market: If there is fluctuation in the international market, the international buyers may shift their focus to other countries. In such a case, the MSI may become unsuccessful.

6.11. Conclusion

The chapter has attempted to examine various aspects of feasibility. Given the complex nature of the natural-stone sector, we are not able to evolve a definite mechanism for standard setting. However, it has been stressed that there should be efforts from different fronts toward restructuring the entire sector. Further, there is need for the collaboration of various international and local initiatives.

Chapter 7: Conclusion and Suggestions for further Research

Primarily, the study has initiated a dialogue with relevant stakeholders to discuss standards and their implementation. An encouraging sign that was observed during the research was that the stakeholders including the business and the government, were ready to spare time and discuss the various sustainability issues.

During the in-depth interviews and stakeholders consultations, all the crucial issues were discussed. All the stakeholders accepted the issues as major barriers in sustainable production in the natural-stone sector.

Since we have not yet developed the specific code of conduct for different stages in the supply chain and its implementation and monitoring strategies, these aspects were not discussed.

The study has also enabled the identification of certain potential partners at the local level who can be further involved in the process.

Interest shown by individual activists, journalists, government officials, village council heads, and village-and block-level NGOs in the process was also found to be striking. Their cooperation is important for further activities in the future.

The issues related to workers and local communities need immediate attention.

Some of the major challenges for standard setting are as follows:

1. Unorganised workers
2. Small-scale quarries (more than 90 per cent)
3. Piece-rate wage and temporary employment
4. Contract labour
5. Inability of small quarry owners to meet the compliance cost
6. Reluctant approach to community-based development and services

The four baseline requirements are:

- 1 Organising workers' union, co-ops and SHGs, and motivating them for collective bargaining. If unions are formed, it would also be easy to involve them in the monitoring process
- 2 Clustering small quarries and encouraging formation of small quarry owners' cooperatives would enable the small quarry operators to meet the compliance cost collectively and undertake community development activities together. The workers within a cluster or co-ops can organise into a union
- 3 Some sort of social premium is needed to address the community-based issues. The key actors in the supply chain and government can contribute a certain prescribed percent in their income to the social premium
- 4 Standards need to be created with the consideration of variations in the natural-stone sector

Initiatives in the form of MSI /Fair Trade seem to be feasible. But it would only benefit a small percent of the workforce, which involves a few big quarries and

processing units. There is a possibility of exclusion of small quarry owners (90 per cent) from the market. The exclusion will also affect the living conditions of a large number of workforce engaged in these quarries. MSI should be framed in such a way that it should help the restructuring of natural-stone sector in Rajasthan as a whole. Preference for business deals can be given to cooperatives of small quarry owners and to the cooperatives of stone workers if these cooperatives ensure the prescribed standards in their quarries/processing units.

Given the complexity of the supply chain and the ground reality, certifying the products may not be possible until and unless there is an effective mechanism for monitoring them. At the primary level, stones are quarried not by actual lessee, but by contractors and sublease holders. Thus, their commitment to the compliance of codes is doubtful.

Workers lose the right to choice of work due to the prevalent practice of borrowing advance money. There are a number of child workers who are indirectly engaged in production. Certification initiatives should consider all these aspects.

What emerges from the preliminary dialogue with local stakeholders is that there is a need for constructive work like forming workers'/small quarry owners' cooperatives and sensitisation programmes for owners, workers and local communities at the ground level. A strategy can be developed by aligning the international-level multi-stakeholders initiatives with the local community service-based initiatives. This would help immensely in setting standards. For example, the international civil society can make the importers buy their products from the cooperatives formed through the local initiatives.

Suggestions

- The study has provided a comprehensive picture of the natural-stone sector of Rajasthan and examined in detail various aspects associated with the standard-setting process. However, certain aspects need much more deep understanding. They are:
 - The possibility of bringing mines/quarries and processing units under one regulation
 - Feasibility of organising small quarry owners' cooperatives
 - Drafting specific codes of conduct for small quarry owners' cooperatives
 - Success and failure of existing workers' cooperatives
 - Code of conduct for workers' cooperatives
 - Feasibility of getting government and business support for organising cooperatives and training programmes for workers
- The study has identified components of standards and constraints in implementing them. There is a need for further research about ways to overcome these constraints.

- Similarly, baseline requirements for the standard-setting process and potential risks in initiating the process have been identified. How these requirements can be met and these risks challenged, call for a deeper analysis.
- Given the very complex situation of the industry, the standard-setting initiation seems to be a long-winded process. It requires a series of high-level discussions with stakeholders at various levels.
- Codes of conduct need to be discussed one by one, and then presented for approval to stakeholders.
- We have so far discussed with stakeholders who are associated with the natural-stone sector of Rajasthan. Examples from stone sector of other states and standard setting initiatives in other industries can also be included for further discussion.
- An experts committee and a working committee for standard setting could be formed.
- There is need for translation of this report in Hindi. It can be distributed to local stakeholders to gain their views.

List of Stakeholders

Government

Mr ML Bhati, Superintendent Mining Engineers, Kota
Mr SL Mode, Junior Mining Engineer, Kota
Mr Chauhan, Director, Department of Forest, Kota
Mr Joshi, Assistant Labour Commissioner (central), Kota
Mr Anil Agarwal, Chief Inspector, Office of District Assistant Labour Commissioner, Kota District
Mr SS Chauhan, Labour Enforcement Officer, Udaipur
Deputy Director, Directorate of Mines and Safety, Udaipur
Chief Inspector, Office of District Assistant Labour Commissioner, Udaipur
Deputy Director, Centre for Development of Stones (CDOS)

Civil Society

Mr Rana Sengupta, MLPC, Jodhpur
Mr Man Singh, Aravalli, Jaipur
Mr Prakash Tyagi, GRAVIS, Jodhpur
Mr Malai, Prayatan, Dholpur
Mrs Neema, CECOEDECON, Swaraji Bhavan, Jaipur
Mr Raj Karan Yadav, Hanuman Van Vikas Samiti, Karagate, Sakroad, Udaipur
Mr Ashish Bhatnagar, HEADS, Hiran Magri, Udaipur
Mr Sanjai, AGIAVIKA, Udaipur
Jumbu Kumar Jain, Gramin Yuva Prashikshan Samith, DadaBadi, Kota

Activists

Mr PS Paliwal, Social Activist, Udaipur
Mr Madan Mody, Advocate and Social Activist, Udaipur

Cooperatives

Mr Chuni Lal, Secretary, Stone Workers Cooperative, Karagate, Udaipur

Trade Union

Ms Srilatha Swaminathan, AICCTU, Jaipur

Academician

Dr SS Rathore, Head, Mine Engineering, College of Technology and Engineering, MPUA, Udaipur

Village Council

Mr Shyam Sunder Paliwal, Sarpanch of Gram Panchayat, Pilantri, Rajsamand

Ex-foreman

Mr Shri Shobhag Singh, Ex-foreman, Associated Stone Industries (ASI), Ramkanjimandi, Kota, Rajasthan

Owners/Management/Traders/Stockists/Workers

Al-Rehman Stone Industry (sandstone) Guda, Rajpura Bundi, Rajasthan

Mahawar Stocks (sandstone), Dadabari, Kota Rajasthan

Ramesh Kumar, Prem Nagar IIIrd, worker, Mahendra Stone Industry, Road No. 5, Indraprasth Industrial Area, Kota, Rajasthan

Usman & Co. (kota stone), Heeria Khedi, Ramkanjimandi, Kota, Rajasthan

Sri Jadon Stone Industry (kota stone), Dabadeh Ramkanjimandi, Kota Rajasthan

Menaria Marbles (trader/stockist), Bhuwana, Udaipur, Rajasthan

Dee Jay Neelam Marble Factory (white and green marble mines and processing factory owner), Bhuwana, Udaipur, Rajasthan

Vikas Marbles (mines & processor owner), Umraya, Rajsamand, Rajasthan

Upendra Jha, Dy Secretary, Paryavaran Vikas Samiti, Kalika Palace Hotel, Amet Chauraha N.H. 8, Kehlwa, Rajsamand, Rajasthan

Ajij Khan, Granite Mines Owner, Dhawala, Jalore, Rajasthan

Yaswant Granite Industry, Phase-III Ricco Industrial Area, Jalore, Rajasthan

Bundi Silica (sandstone), Dabi-Palaka, Bundi, Rajasthan

Badri Lal Yogi, Prem Nagar IIIrd Worker of sandstone polish factory, Rajasthan Stone Industry, Road No.4 Masjid Wali factory, Kota, Rajasthan

Lal Chand, Prem Nagar IIIrd, worker, Mahendra Stone Industry, Road No. 5, Indraprasth Industrial Area, Kota, Rajasthan

Abdul Kareem Stone Co. (sandstone), Modak Ramkanjimandi, Kota, Rajasthan

Kuber Marbles (trader/stockist), Bhuwana, Udaipur, Rajasthan

Kalka Marble Mines, Kehlwa, Rajsamand, Rajasthan

CP Chobisa Apna Sansthan, Bhuwana, Udaipur, Rajasthan

Arvind Mahendra Granite, Dhawala, Jalore, Rajasthan

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Abbreviations

AICCTU - All India Central Council of Trade Unions

AIGSA - All-India Granites and Stone Association

ASI - Associated Stone Industries

CASM - Communities Artisanal and Small-scale Mining

CDOS - Centre for Development of Stones

CECOEDECON - Centre for Community Economics and Development Consultant Society

CoC - Code of Conduct

CSR - Corporate Social Responsibility

DMS - Directorate of Mines and Safety

ETI - Ethical Trade Initiative

EU - European Union

FGD - Focus Group Discussions

FICCI - Federation of Indian Chambers of Commerce and Industry

FIMI - Federation of Indian Mining Industries

GRAVIS - Gramin Vikas Vigyan Samiti

GSI - Globe Stone Initiative

HEADS - Human Employment Ability Development Society

HVVS - Hanuman Van Vikas Sabha

INTUC - Indian National Trade Union Congress

ISSA - International Social Security Association

KCCI - Karnataka Chamber of Commerce and Industry

MLPC - Mine Labour Protection Campaign

MPUA - Maharana Pratap University of Agriculture and Technology

MSI - Multi-Stakeholder Initiative

NGO - Non-Governmental organisation

NHRC – National Human Rights Commission

NOC - No Objection Certificate

NSC - Natural Stone Council

NSNX - Natural Stone Network Exchange

OSH - Occupational Safety and Health

PVS - Paryavaran Vikas Sanstha

RIICO - Rajasthan State Industrial Development and Investment Corporation Ltd

SC - Scheduled Caste

SHG - Self-Help Groups

SME - Small and Medium Enterprises

ST - Scheduled Tribe

STP - Short-Time Permit

UNIDO - United Nations Industrial Development Organization