PRASAR’s Fight for Rights of Delhi’s Silicosis Sufferers: Grassroot organization improves lives of former stone-crushers

**Overview**

From the early years of India's Independence in the 1950s until 1992, stone-crushers working in the southern suburbs of New Delhi have been providing construction contractors with cut stone quarried from the nearby Aravalli Mountain Ranges. Although medical studies carried out in the 1980s linked the stone-cutting operations with occupational diseases like silicosis, leading to court injunctions that banned stone-crushing operations in the southern Delhi suburb of Lal Kuan, nothing was done to actually help the people who had contracted these diseases. In the late 1990s, a group of aid workers working in Lal Kuan on an education improvement initiative were struck by the high incidence of silicosis in the area, and they decided to take up the cause of the silicosis victims. The author of this paper formed an NGO called PRASAR, which started to lobby for compensation for those who had contracted occupational diseases over the previous 30 years, and launched a series of initiatives to improve the conditions for Lal Kuan’s impoverished and marginalised residents.

**High Rates of Occupational Disease in Lal Kuan**

In 1999, a few eager, young aid workers travelled to the village of Lal Kuan, located in the south of New Delhi, to help the local community get more children into schools. When the aid workers arrived they were struck by the dire conditions the locals, who in the past had mostly worked in the nearby stone-crushing units, had to face on a daily basis. They lived in a filthy environment, with poor health and sanitary conditions, little access to schooling, and a diet totally lacking in nutrition. Walking along Lal Kuan’s streets, passing the open drains, festering garbage and the pockmarked roads, the aid workers had little doubt that the local’s situation was grim (Barkataky, 2007).

Something else that shocked the team was the abnormally high rate of tuberculosis (TB) amongst the local community. After further investigation, the team discovered that most of those who were suffering or had died from TB had at some stage worked in the stone crushing units near Lal Kuan.

During their time in Lal Kuan, the team members met Dr Muralidhar, a Health Expert who argued that the widespread disease among the former workers from

**Summary of Issues**

- For centuries, Delhi has been a political and commercial centre in India, and has seen many reincarnations, being built, torn down and rebuilt countless times;
- Delhi has been built, for the most part, from the red sandstone quarried in the nearby Aravalli Ranges and cut in Delhi’s stone-crushing plants;
- For the last 35 years, these stone-crushing units have been based in New Delhi’s poor southern suburbs, particularly Lal Kuan, and a massive construction boom saw these units multiply rapidly;
- Even though court injunctions based on medical studies linking stone-crushing to occupational disease shutdown Delhi’s stone-crushing units in 1992, nothing was done to help the former workers who had contracted these diseases;
- PRASAR was formed in the late 1990s to redress this situation, and fight for the rights of Lal Kuan’s silicosis sufferers;
- After years of lobbying the government for change and legal wrangling, PRASAR made a significant breakthrough in May 2007, when the government formed a taskforce to investigate the plight of Lal Kuan’s silicosis victims and make recommendations for a suitable response strategy.
the stone crushing units might not have originally been caused by the deadly infectious condition of tuberculosis. When doctors from Lala Ram Swarup TB and Respiratory Diseases Hospital in Mehrauli, New Delhi, took some chest x-rays from a number of so-called 'TB' patients who had previously worked in the stone-crushing units around Lal Kuan, what they found was quite astonishing. The x-rays showed that the patients' lungs were marked by inflammation and scarring in the form of nodular lesions in the upper lobes of the lungs caused by the inhalation of crystalline silica dust - a condition known as silicosis (WHO, 2000).

Even though the patients might have been suffering from TB, Dr Muralidhar claimed that it was only because they contracted silicosis first, which damaged their pulmonary system, making them more susceptible to infection by the mycobacteria that causes TB.

New Delhi - Geography and Development

Regional Geography

Most of the stones used in the construction of Delhi's buildings, forts and monuments have been quarried from the nearby Aravalli Mountain Range. After centuries of stone quarrying, it’s little surprise that parts of the mountain range have been seriously impacted and its structural integrity has been irreversibly altered.

The Aravalli range is a range of mountains in western India running approximately 300 miles (560 kms) from northeast to southwest across the State of Rajasthan.

The northern end of the range continues as isolated hills and rocky ridges into state of Haryana, and ends in Delhi. Divided into the Sambhar-Sirohi and the Sambhar-Khetri ranges, the hills contain a variety of minerals, including large amounts of quartzite. Most of the hills are 2000 to 3000 feet (300 to 400 meters) in altitude and from 6 to 60 miles (10 to 100 kms) in width (The India Center, 2008).

New Delhi is located at a juncture of the Ganges River Valley and the Indus River Valley where the Deccan Plateau and Thar Desert nudge up against the Himalaya Mountains, creating a corridor where the city is situated.

Urban Development

The Delhi Ridge runs to the west of New Delhi and there used to be a hill, Raisina Hill that rose 15 meters where New Delhi now stands. But during the city’s construction, from 1911 to 1940, the top 40 percent of Raisina Hill was lopped off forming a low plateau on which the government building of the new capital of India was to be erected.

In 1931, the colonial capital city was formally inaugurated, and by 1947, India had gained its independence. In recognition of this historic occasion, the new government drafted plans to give the city a facelift, reflecting the nation’s joy of new-found independence. To supply the new bustling construction sites springing up around the city, stone quarrying operations were set-up around Anand Parbat, in the city's north-east.

From the early days, the government of New Delhi and local construction contractors adopted a strategy of “mine, raze and grab”, where they quarried the city’s hilly terrain, razing the hills, after which there was a mad rush to claim the flattened, more valuable land.

For further information visit the Artisanal and Small-scale Mining in Asia-Pacific Portal on http://www.asmasiapacific.org
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Most of the mine workers toiling away in Delhi’s stone quarries were recruited from the Dalit\(^1\) community from the neighbouring state of Rajasthan.

Once all the land at Anand Parbat had been snapped up, prospective developers moved on to the village suburbs of Timarpur and Chandraval, located near the Inter-State Bus Terminal and Kashmere Gate in the city’s north, trying to buy up as much land as possible. This mad scramble to seize land continued on into the 1970s.

When developers moved into Anand Parbat, the stone quarry workers were forced to shutdown their operations, so they started quarrying in the area around the suburb of Dhaula Kuan, just south-west of the city centre. But local government and developers had their sights set on this land as well, snatching it up quickly, forcing the stone quarry workers to shift their operations. Finally they decided to settle down in the area south of the city centre stretching from east to west, and including Tajpur, Badarpur, Lal Kuan, Lakadpur, Anangpur, Surajkund, Kusum Pahadi, Rajokri and Bhati Mines.

\(^1\) In the Indian caste system, a Dalit, sometimes called ‘untouchable’ or ‘outcast’, is a person who, according to traditional Hindu belief, does not have any ‘varnas’. Varna refers to the Hindu belief that most humans were created from different parts of the body of the divinity Purusha. The part from which a varna was created defines a person’s social status with regard to issues such as whom they may marry and which professions they may hold. Dalits fall outside the varnas system and have historically been prevented from doing any but the most menial jobs. (Source: [http://news.bbc.co.uk/2/hi/south_asia/6050408.stm](http://news.bbc.co.uk/2/hi/south_asia/6050408.stm))
Delhi’s History - A City with Nine Lives

Over the centuries, Delhi has gone through many transformations and has been torn down and rebuilt countless times by successive rulers. The sheer number and beauty of its edifices reflect the types of Indian architecture from the time of the imperial Gupta dynasty 1,600 years ago to the period of British rule with such architects as Sir Edwin Lutyens and Sir Herbert Baker (Britannica Website, 2008). Since the Muslim rulers first arrived about a millennium ago, nine cities have been built in this location, including the most recent incarnation of New Delhi, which was constructed under the British Raj in the early 20th century.

Most of the structures that have been erected are built of stone, and this has fuelled a massive masonry and stone quarrying industry that has existed in the region for time immemorial. Carving out incredibly elaborate designs into the locally quarried red sandstone, Delhi’s stone masons developed a unique style that marks the city from all other Indian cities. Since the first urban settlements sprung up in the region, about 5,000 years ago, many of the local population have worked either as stone masons or labourers in nearby stone quarries. Following brief timeline recapitulates Delhi’s long history of stone masonry and stone cutting and the city’s nine architectural reincarnations:

- Legend has it that the first city of Delhi, known as Indraprastha, was founded by the legendary Pandavas around 1400 BCE. The epic Indian tale, the Mahabharata, tells of how Lord Krishna gave the land to the Pandavas to appease them after they had their kingdom taken off them by the rival Kauravas clan. The land, around present day New Delhi, was thickly covered with babul trees, a prickly tree with yellow flowers, so was unusable, but the Pandavas cleared the land and erected the glorious city of Indraprastha (Indiasite Website, 2008).

- The second city of Delhi, Lal Kot, was built by Rajput Tomaras in 1060, and was captured and enlarged by the Rajput king Prithviraj in the 12th century. In 1206 Delhi’s first Sultan, the turkic ruler Qutb-ud-din Aybak, became famous for laying the foundations of the Qutub Minar, India’s tallest stone tower. Delhi continued to expand outwards over the following years under the kings of the Sultanate dynasties, Khiljis, Tughluqs Sayyids and Lodis (India Tourism Website, 2008).

- In 1296 Ala-ud-din Khilji entered Delhi with his uncle’s head on a pike, proclaiming himself the King of Delhi and the second ruler of the Khilji dynasty of India. Over the next twenty years he established the imperial capital of his kingdom, Delhi’s third city. He is also credited for constructing Siri Fort which helped protect the city’s population against frequent invasions by marauding Mongol or Mughal tribes from the north.

- Between 1320 and 1412 the Tughluq rulers founded the fourth and fifth cities of Delhi. Described as the ‘lunatic king’, Mohammad-bin-Tughluq, the Sultan of Delhi from 1325 to 1351, forcibly moved Delhi’s government offices and the entire population from Dehli to Devagiri, 700 miles south. Just two years later, the Sultan was forced to move the entire capital back to its original location due to an inadequate water supply. At this time he started constructing Delhi’s fourth city called Jahanpanah close to the present day Qutub Minar (Lane Poole, 1903).

- When Mohammed died from a fatal disease, power shifted into the hands of his cousin, Feroze Shah Tughluq, a heavy-handed ruler who led the Muslim Tughluq Dynasty from 1351 to 1388. He established Delhi’s sixth city, which was known as Ferozabad and was located in the vicinity of the present day Feroz Shah Kotla fort (Banerjee, 1967).

- Construction on the seventh city was started by Humayun, the second Mughal emperor, in 1534. But Humayun was defeated by his arch-rival, Sher Shah Suri, and was forced into exile. Suri, who was a far more able ruler than Humayun, continued expanding Delhi’s seventh city, building many notable structures.

- The fifth ruler of the Mughal Empire in India, Emperor Shah Jahan was known as the “King of the World’, and is considered by many to be one of the greatest Mughal sultans. Shah Jahan reigned during the Golden Age of Mughals, and erected some of the most impressive monuments, one of which is the celebrated Taj Mahal, which he built for his wife’s tomb in Agra. He also founded Shahjahanabad, now known as old Delhi, between 1638 and 1649, which boasts some of the most stunning architecture in India including the Red Fort, which has been dubbed the most magnificent monument in the East (Bloom and Blair, 1994).

- Delhi served as the capital of the Mughal Empire between 1649 and 1857, but when the British Raj took control of India during the 19th century, the capital shifted to Calcutta. Frustrated by the fact that India’s administrative centre was now on the nation’s eastern fringes, Britain’s King George V announced in 1911 that the capital would be moved back to Delhi in the heart of India, where it remains today.

- Two leading British architects, Sir Edwin Lutyens and Sir Herbert Baker were commissioned to design a modern city, called New Delhi, and in 1912 construction commenced on what was affectionately Delhi’s ninth city. Lutyens differed from the more conservative British architects of the day, as he was interested in incorporating traditional Indian design features into his architectural plans, which is evident in the eastern motifs of many of his buildings (Hopkins and Stamp, 2002).
Stone-Crushers Move to Lal Kuan

Lal Kuan is a small village suburb near Mehrauli-Badarpur Road in the city’s south. Over the years, the district has become a centre for mining and stone quarrying activities, and a major supplier to New Delhi’s construction contractors. In the past there were about 100 crushing facilities in the area employing about 4,000 migrant manual labourers.

Stone-crushing activities continued in Lal Kuan until 1992, when a Supreme Court Ruling ordered all mechanical stone-crushing units shutdown, as medical studies revealed that they were linked to causing occupational diseases. Since stone-crushing activities first started in Lal Kuan more than 35 years ago, both mechanical and manual stone crushing units operated day and night to produce enough stone to supply New Delhi’s booming construction industry.

Most of the stone quarry labourers were migrant workers from several different states and many different sub-castes, including the Chamar, Kori, Mali, Kumaha and Balmiki of Rajasthan to the south-west; the Chamar, Balmiki, Darzi, Koli, Chimphi, Sikka, Bhimar, Fakir, Dhobi and Nai of Uttar Pradesh to the south-east; the Kisnore, Gadiyra, Bhangi, Chamar, Nai, Dhanu and Kumhar of Bihar to the far south-east, and; the Aherwa, Dhasur, Bhimar, Chamar, Kori, Dhobi, Dhanu, Balmiki and Kumahar of Chhattisgarh and Madhya Pradesh to the south (see Map on page 3).

Example of architecture near Qutub Minar, the tallest brick minaret in the world. Built in 1193, it is located in Delhi.

shutdown all mechanical stone crushing operations, and operators simply relocated their crushing units to Pali, in Faridabad, in the far south of the state of Haryana, where local authorities were far more accommodating, and they could avoid prosecution.

Meanwhile the area around Lal Kuan was turning into a major hub for transporting stones, and many of the stone cutters and crushers who had previously been employed in the crushing units started working as porters and truck drivers. The labourers who couldn’t find work in the manual crushing units or the transport sector hit the dusty road and made their way to Pali to work in the mechanical crushing units there.

But even though the AIIMS’s study had highlighted the plight of the stone crushers and cutters and the deadly scourge they’d been facing for generations which lead to the court injunctions shutting down many of Delhi’s mechanical stone crushing units, little was done to actually help the victims - the stone workers who had already contracted silicosis. Some reports estimate that at least 3,000 stone-cutters living in the southern suburbs of Delhi have died in the last 13 years from silicosis, tuberculosis and other respiratory diseases.

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2 Public interest litigation, in Indian law, means litigation for the protection of public interest.
Silicosis: What Kind of Disease Is It?

Silicosis is caused by the inhalation of particles of free crystalline silica, SiO2, which is one of the most common minerals in the earth’s crust. Silica is found in sand, many rocks such as granite, sandstone, flint and slate, and in some coal and metallic ores, and the three most common forms are quartz, tridymite and cristobalite. A progressive disease that belongs to a group of lung disorders called pneumoconiosis, Silicosis is classified by the International Agency for Research on Cancer (IARC) as a Group 1 human lung carcinogen (WHO, 2000).

The dust containing silica particles is found in the industries like stone mining, stone crushing, stone blasting, pottery work, quarrying stones and metal grinding. Despite the fact that silicosis has been known for many centuries, and is largely preventable, it is still a widespread phenomenon.

Respirable silica dust may be invisible to the naked eye and is so light that it can remain airborne for a long time. Consequently, it can travel long distances in the air, affecting populations not otherwise considered to be at risk (WHO, 2000).

Silicosis comes in four types, depending on exposure amounts and durations, including Chronic (Classic) Silicosis, Complicated Silicosis, Accelerated Silicosis or Acute Silicosis. Some of the major symptoms of General Silicosis are (BBC Website, 2008; Rothschild, 2006):

- Cough, with or without phlegm
- Fever
- Shortness of breath, particularly on exertion
- Blue tinted nails (indicative of oxygen deficiency)
- Chest pain
- Decreased appetite and weight loss

Common symptoms of Chronic Silicosis include:

- May take 15 years or more to develop
- Mild lung impairment
- Can progress to more advanced forms of illness
- Weight loss
- Shortness of breath
- Fibrosis
- Greater risk of tuberculosis

Common symptoms of Accelerated Silicosis include:

- Presents after 5 to 10 years of extreme exposure
- May lead to rheumatoid arthritis and / or autoimmune disorders
- Progressive, massive fibrosis can cause lung failure

Common symptoms of Acute Silicosis include:

- Presents after 6 months to 2 years of highly intense exposure
- Marked weight loss
- Severe breathing difficulties (shortness of breath)
- Higher risk of Tuberculosis

Severe complications and illness may occur throughout the body as the silica particles continue to wreak their havoc. This can result in diseases of the kidney (glomerulonephritis), liver, and spleen, in addition to an unraveling of the immune system. As the immune system becomes more and more vulnerable the lungs lose their respiratory capacity, not to mention their ability to battle bacteria and infection, making victims much more susceptible to contracting diseases like TB (Rothschild, 2006).

Inflammation and scarring in the form of nodular lesions in the lung’s upper lobes compromises the lungs, forcing the heart to work harder making it more difficult to pump blood to the rest of the body. Specifically, lung damage strains the right side of the heart which can lead to cor pulmonale, a type of heart failure (Rothschild, 2006).

As silicosis has such a long dormant period, it often takes decades for the symptoms to present themselves. Medical experts agree that tuberculosis is more commonly linked to the advanced form of silicosis, such as the chronic, accelerated and acute forms.
Back in 1999 a small team of PRASAR volunteers were working on a series of youth education initiatives in the Lal Kuan neighbourhood when they began to notice the abnormally high rate of premature deaths and illness amongst the local community. The team, led by the author of this paper, began to probe deeper, linking the widespread disease back to the initial discovery of silicosis by the AIIMS’s investigators back in the 1980s.

Despite the fact that most of the district’s crushing and cutting units had closed shop in 1992, many locals were still suffering from the debilitating condition, and related diseases like TB and silicotuberculosis.

According to medical experts, chronic silicosis will often develop and progress many years after the occupational exposure has stopped (WHO, 2000; Silicosis Website, 2008). So it’s not surprisingly that the first signs of silicosis were starting to show in labourers who hadn’t worked in the stone-crushing units for decades.

PRASAR’s director, Mr Azad, realised that the plight of the silicosis victims was the most pressing issue facing the local community, so the NGO shifted its focus from child education to helping former stone-crushers.

The NGO focused its attention to helping Lal Kuan’s silicosis victims gain fair compensation and medical benefits, and access to rehabilitation schemes. Although PRASAR themselves have recorded 17 confirmed silicosis-related fatalities, it’s likely that many more Lal Kuan residents have died due to exposure to the silica dust over the last three decades.

PRASAR began to dig deeper to find out exactly who was being affected by silicosis and silico-tuberculosis, and to understand the history of how the disease spread through Lal Kuan’s community.

PRASAR set about tracing the disease’s epidemiology, and tried to gain an insight into the silicosis victims present day situation. This was achieved by undertaking a series of clinical examinations so victims could be accurately diagnosed, and interviewing locals about their previous jobs and their current living conditions.

During their time in Lal Kuan, the PRASAR team interviewed many locals who often talked about the terrible conditions in the past. One villager recalled, “When mining and crushing activities were still going on, everything in Lal Kuan was covered by a thick layer of dust. Sometimes it was even hard to breathe”.

Not Just India - Worldwide Problem

Silicosis is a worldwide problem.

- In India, a prevalence of 55% was found in one group of workers, many of them very young, engaged in the quarrying of shale sedimentary rock and subsequent work in small, poorly ventilated sheds. Studies on silicotic pencil workers in Central India demonstrated high mortality rates; the mean age at death was 35 years and the mean duration of the exposure was 12 years.

- The Colombian Government estimates that 1.8 million workers in the country are at risk of developing the disease.

- During the period 1991 to 1995, China recorded more than 500,000 cases of silicosis, with around 6,000 new cases and more than 24,000 deaths occurring each year mostly among older workers.

- In Vietnam the cumulative number of diagnosed cases has now reached 9,000. They constitute 90% of all cases of occupationally compensated diseases. Some 18% of workers engaged in surface coal mining, quarrying, foundry and metallurgy have been found to have silicosis (WHO, 2000).
As was the case of Panni Ram (see above), in the past, local doctors have prescribed special medications that fight the mycobacterium that causes tuberculosis, rather than treating the root cause of silicosis. These government-assigned doctors have little or no experience with silicosis, often failing to diagnose the patients correctly, assuming that they’re suffering from tuberculosis. Besides they feel the diagnosis fits as Lal Kuan is a crowded, impoverished district with poor sanitary conditions – a perfect breeding ground for the bacteria that causes TB (eMedicine Health Website, 2008).

It appears that government authorities are in a state of denial. As PRASAR’s director, Mr Azad, explains, “If patients don’t improve after being treated with three or four courses of tuberculosis medication, something’s wrong... clearly they’re suffering from another condition... and chances are it’s silicosis. But government officials won’t admit to this since it means that the silicosis victims would be eligible for financial compensation.”

In an attempt to bolster their ranks PRASAR has joined forces with some other local NGOs, including the Delhi Forum, Toxics Link, Popular Education and Action Centre (PEACE), Human Rights Law Network, and the Centre for Education and Communication to form a coalition called the Khaan Mazdoor Adhikar Manch.

One of the coalition’s first actions was to petition the National Human Rights Commission (NHRC) demanding that India’s Ministry of Labour fairly compensate those affected by silicosis, particularly those from Delhi’s southern suburbs, and offer them access to rehabilitation programs.

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**Personal Stories: Panni Ram**

Most of those suffering with silicosis and silicosis-related conditions aren’t originally locals, but migrant workers who moved to the district in the hope of finding jobs in the many stone-crushing and cutting units that crowded the village suburb’s narrow alleyways.

One of these migrant workers is Panni Ram, a 60 year old who’s lived in the suburb since his family moved there decades ago. Since his early childhood, Panni Ram has toiled away in the local stone-crushing units, earning a small income that helped his family eke out a meagre existence.

Tragically, both his parents died of undiagnosed respiratory-related illness years ago, and now he and his wife are suffering from silicosis. This story has been repeated again and again in households across Lal Kuan. Even though the AIIMS’s studies of the early 1980s and extensive investigations by PRASAR makes it hard to deny the link between stone-crushing and cutting activities and the high incidence of respiratory-related disease, patients are still being treated for tuberculosis by government doctors.

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**Ignored and Misdiagnosed**

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To date central and state governments have largely ignored the plight of Lal Kuan’s silicosis victims. Although PRASAR has lodged a series petitions to both state and federal government ministries, pushing for recognition and compensation for former stone-crushers and cutters, they’ve had little success. Frustrated with this lack of progress, the NGO has followed the example of the activists in the mid-1980s, and brought their case to India’s Supreme Court, and a number of public interest litigation trials are currently pending.

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3 The Delhi Forum’s goals are to represent the concerns of the social action groups and peoples’ movements in the National Capital of India. (See for more at http://www.aidprojects.org/)
4 Toxics Link is an NGO that works for environmental justice, and for a toxic-free society. (See for more at http://www.toxicslink.org/)
5 The Popular Education And Action Centre (PEACE) works towards strengthening social action at the grassroots. (See for more at http://www.appealgroup.net/peace.htm)
6 The Human Rights Law Network (HRLN) provides pro-bono legal services to those with little or no access to the justice system. (See for more at http://www.hrln.org)
No Social Benefits for India’s Informal Sector

Amended in 1984 and 2000, the Workmen’s Compensation Act, 1923, is a legal provision that guarantees workers financial compensation if workers are injured or become ill due to work-related activities. According to Part C of Schedule III of the Act, an employee who “…contracts any disease specified therein as an occupational disease peculiar to that employment…”, is entitled to appropriate compensation. Even though silicosis is one of the occupational diseases listed in Schedule III of the Act, the legal provision only covers those employed in the organised labour sector, which constitutes a mere 6 per cent of India’s work force (Frost, 2003). Since stone-cutters typically worked in the informal, unregulated market, they weren’t protected by this legislation (Indian Railways Website, 2008).

Despite the fact that the former stone-crushers and cutters of Lal Kuan aren’t even covered by the Workmen’s Compensation Act 1923, it probably wouldn’t matter if they were, as it usually takes years for claims to be processed. Even worse, according to some reports, employers across India often refuse to pay-out compensation to their employees, even if they work in the formal job market, claiming that their employees contracted their illness outside the workplace. Although it’s easy to prove when an injury is work-related, linking disease to the workplace is much harder, and it often requires extensive studies and clinical trials (Mancha, 2007).

Three other major legal provisions aiming to ensure the health and safety of India’s unskilled labourers are: the Factory Act 1948, a social legislation which has been enacted for occupational safety, health and welfare of workers at work places; the Mines Act 1952, which ensures that employees are treated adequately in the case of work-related disease or injury; and, the Employees’ State Insurance Act 1948 (ESI), which is supposed to provide employees with benefits in the case of sickness, maternity and workplace-related injury (Indian Government Website, 2008).

India’s has a checkered history when it comes to industrial and mining accidents. In the aftermath of the 1987 Bhopal gas tragedy, when up to 8,000 people died when gas leaked from a pesticide factory in Bhopal in the state of Madhya Pradesh, the government was forced to amend the Factory Act so its focus shifted from disaster or disease management to disaster or disease prevention. Unfortunately these changes haven’t improved the lives of those suffering from silicosis, as once again those that work in the informal market aren’t covered by the legislation (Toxic Link Website, 2008).

Similarly, although the ESI Act offers a comprehensive range of benefits, it only covers about 7.2 million insured employees, all of whom work in the formal sector. In absolute terms, these numbers are impressive, but compared to the total size of India’s labour market they’re really quite uninspiring (Siddiqui, 1989).

Canada’s workplace legislation presents a stark contrast to India’s, and is an example of a comprehensive, effective and workable system that ensures the rights of all workers. The Canadian occupational health and safety framework emphasises prevention and is based on three fundamental rights, ‘the right to know’, ‘the right to participate’, and ‘the right to refuse’ (HRSD Canada Website, 2008).

- Right to Know - It is the employee’s right to be informed of all known or foreseeable risks which exist in the workplace and could endanger health or safety.
- Right to Participate - Every employee has the right to be involved in everything that touches on questions of health and safety at work.
- Right to Refuse - Any employee, subject to Part II of the Canada Labour Code has the right to refuse dangerous work as long as:
  - the refusal does not put the life, health or safety of another person directly in danger; or
  - the danger in question in not a normal condition of employment.

India’s labour laws, on the other hand, inadequately safeguard workers, particularly those working in the traditional and informal sector, which accounts for over 90 per cent of the nation’s labour force. Since there’s no way for the government to regulate the informal sector, employers can operate with total impunity, treating their employees as they wish and offering them no benefits or job security. Many of these informal enterprises are family-run businesses, where there’s no corporate structure whatsoever (Treacy, 2003).

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“Since there’s no way for the government to regulate the informal sector, employers can operate with total impunity, treating their employees as they wish and offering them no benefits or job security.”
Faulty University Medical Programs

Apart from the being ignored by the central government and failing to gain compensation, another obstacle to improving the lives of Lal Kuan’s silicosis victims is that in the past locally deployed health workers have had little or no experience with silicosis. While interviewing villagers, PRASAR discovered that most patients had been being treated with tuberculosis medication for two or three years, but despite the fact that their conditions were deteriorating, the same regime continued. In most cases, health workers simply couldn’t see the link between the high incidence of illness and occupational and environmental factors. PRASAR’s director, SA Azad, suggested that the failure to correctly diagnose patients reflected a major flaw in India’s medical and health science degrees, and that there should be a greater focus on occupational health and safety related themes in these courses.

India’s National Institute of Health and Family Welfare estimates that out of the 11 million cases of occupational diseases worldwide, 1.9 million cases, or about 17 per cent, are found in India (NIHFW Website, 2008). According to SA Azad, if India’s health services are to treat these millions of cases more effectively, health educators will have to teach doctors and other medical staff how to communicate more effectively with patients asking them about their medical and occupational history so they can make a more accurate diagnosis.

7 The same institute estimates that of the 0.7 million deaths from occupational diseases worldwide about 0.12 million are in India, again about 17 per cent.

Things Take a Turn

Things took a major turn in October 24, 2005, when the Chief Minister of Delhi, Ms. Sheila Dixit, convened a meeting in Delhi Secretariat to discuss the high incidence of silicosis in the Lal Kuan area. The meeting was attended by some key players in national and regional politics, including the Government of Delhi’s Health Minister; the Union Minister of Consumer Affairs, Food and Public Distribution; Principal Secretary of Health and Family Welfare; Director of Social Welfare; Divisional Commissioner; and, Director of Health Services (DHS).

A few days before the meeting, Mr Satish Sinha of Toxics Link and Mr Azad of PRASAR joined some Lal Kuan locals at the Chief Minister’s residence to discuss the plight of the silicosis victims, and possible strategies that could be adopted to improve their situation.

Several critical issues came up in both of these forums, and both the politicians and the main stakeholders decided that an action plan was needed to address these issues. The action plan incorporated a number of proposed initiatives, including to:

- Construct a multi-purpose community centre for the treatment of occupational diseases to be located in Tejpur, near Lal Kuan;
- Ensure that the centre can adequately deal with victims of occupational disease by employing a resident medical officer to be assigned by Director of Health Services; Coordinate facility’s development with the Public Work’s Department to ensure the centre is fitted out with the necessary equipment;
- Rig up a van to serve as a mobile medical unit consisting of a doctor, a health worker and a nurse that will travel around the area during the week providing treatment for sufferers of silicosis and other occupational diseases, and distributing free medication;
- Assemble a team of medical professionals to be headed by Dr K S Baghotia, the State Programme Officer of Directorate of Health Services; Dr T K Joshi, Director of the Centre for Occupational Environment and Health (COEH) at New Delhi’s Maulana Azad Medical College; Dr. Neeraj Gupta, also from the COEH; and an expert in tuberculosis;
- Get the team to conduct a comprehensive health survey of persons affected by silicosis and other occupational diseases in the Lal Kuan district, including pulmonary function testing, chest radiography tests, and interviews on medical and occupational history (COEH, 2005);

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- Get the team to design an action plan incorporating early diagnosis, early treatment and rehabilitation to minimise the impacts of silicosis and related occupational diseases;
- Form a joint task force with the Department of Social Welfare and the Divisional Commissioner’s office to ensure that the regional health survey is effectively implemented;
- Ensure that Lal Kuan’s silicosis victims are covered by the Antyodaya Anna Yojana Scheme, a major government-sponsored food initiative that guarantees basic food items for India’s poorest families;
- Set about trying to secure fair compensation and government pensions for all silicosis victims; and,
- Work with the Department of Social Welfare and the Department of Health to develop a training and placement scheme that helps Lal Kuan’s victims of silicosis and its jobless residents develop the skills necessary to find work in areas other than stone-crushing and cutting.

PRASAR Surveys

In April 2004 PRASAR conducted a survey to get a better understanding of the socioeconomic and medical problems facing Lal Kuan’s community, particularly the those that used to work in the stone-crushing units. Entitled “The Stone Industry and Its Impact on Workers and Environment”, the study was funded by the Heinrich Boell Foundation, an international political non-profit organisation striving to promote social justice and environmental awareness.

In July 2005, PRASAR followed up this survey with another study, called “The Survey on Primary Health and Sanitation in Lal Kuan” which investigated the region’s health and sanitation conditions. The findings of these studies were later used as evidence in a lawsuit filed by PRASAR against the Government of Delhi’s Health Department.

From September to October, 2005, another study, the one mentioned above, was conducted in the Lal Kuan area to estimate the number of silicosis victims in the area.

The October 2005 Survey - The Methodology

The survey investigated two different groups:
- Current victims of silicosis and
- Victims who have died from silicosis-related conditions.

Not surprisingly, the survey focused greater attention on those silicosis victims who were still fighting to survive, as these people could still be helped. It was still vital, however, to get as much information on victims who had already died due to silicosis-related diseases. This information would help investigators gain a deeper insight into the disease’s epidemiology so they could design more effective response strategies. It also helped them identify those who were close to the deceased, as these people were often prime candidates for contracting the disease as well, as they had often been exposed to the deadly silica dust particles.

The survey was designed to take a sample of Lal Kuan’s population, and 201 locals were selected to participate in the study. Of these 201 participants, 143 were to be tested for the presence of silicosis on the basis of occupational history and existing symptoms. Meanwhile investigators identified and interviewed 55 locals who were related to victims who had died due to silicosis-related to learn more about how the disease spreads.

The survey revealed that out of the 146 participants tested for silicosis, 83 appeared to display all the telltale signs of suffering from silicosis. Of the sample group more than 50 per cent have contracted silicosis or silicosis-related diseases - an astonishing result.

Based on the survey’s findings it was strongly recommended that those close relatives of the 55 deceased silicosis victims undergo relevant tests for pulmonary conditions including chest x-rays.

PRASAR Uses Survey’s Findings to Raise Public Awareness on Plight of Silicosis Suffers

PRASAR knew that once the survey went public, there would be irrefutable proof of the scourge facing Lal Kuan’s community, and they hoped that this would attract wider public and media attention. By putting the plight of the former stone-workers on the public agenda, PRASAR, and their affiliates, felt they’d have better luck in future public interest litigation cases.

To raise the public’s awareness about the plight of Lal Kuan’s silicosis victims even more, PRASAR set about publishing booklets, newsletters and reports describing their situation.

In this way, PRASAR hoped to attract the attention of like-minded people and organisations, both in India and across the globe, who were working in the field of occupational health and safety. By doing this, PRASAR attempted to create an open forum where there was a free exchange of information on cases of occupational diseases around the world, and the best ways of dealing them.

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PRASAR’s Awareness and Advocacy Programs

Since 2002, PRASAR has launched a number of awareness generation and advocacy programs, organising workshops that raise awareness on the themes of health, education, silicosis and the rights of Delhi’s residents, especially in Lal Kuan area. Not surprisingly there’s been a specific focus on the link between working in the area of stone-crushing and mining, and occupational disease.

During these workshops, mineworkers and stone-crushers, both current and former, find out about the dangers of being exposed to the deadly silica dusts, and the best ways of avoiding dust infection. These awareness generation workshops have inspired a series of advocacy campaigns, and the silicosis victim’s plights has been taken all the way to India’s National Human Rights Commission, the High Court of Delhi, and the Supreme Court.

NGOs working with Lal Kuan’s community also understand that the linchpin to any successful poverty alleviation program, which is ultimately what these organisations were trying to implement, was to make sure all the children were given adequate schooling. By getting the kids into school, they had a much better shot at gaining the necessary skills that would help them find jobs offering higher pay and brighter future prospects – only in this way could they break the cycle of poverty in which these marginalised are often trapped.

But the harsh reality is that so many of Lal Kuan’s parents feel that their children should help contribute to the family’s income, and instead of going to school, the kids end up toiling away next to their parents in the stone quarries and crushing units. Reports suggest that at least 1,000 children have dropped out of regular schools, and are either employed or are roaming the streets idly.

Since 2000, PRASAR and other NGOs have been developing a program that will give more kids access to schooling, either on a formal or informal level. Lal Kuan’s parents have got behind this program wholeheartedly, and are a big reason why the program has been such a success to date.

“…PRASAR attempted to create an open forum where there was a free exchange of information on cases of occupational diseases around the world, and the best ways of dealing them.”

PRASAR’s Education Initiatives

PRASAR’s activities in Lal Kuan haven’t been limited to helping the district’s silicosis victims. While the NGO was working in this southern Delhi suburb, they noticed that the average academic level of local primary school students appeared to be much lower when compared to other parts of Delhi. The NGO decided that this was another critical issue that needed urgent attention, and they started to think about how they could improve the situation for these impoverished, poorly educated children.

In April, 2000, PRASAR invited the district’s main stakeholders, including village leaders and community members, to workshop ideas on how to give the local kids access to better schooling. During the forum, participants decided to carry out a survey of local households to find out the school drop-out rate in the area.

The survey’s results were telling. Of Lal Kuan’s 70,000 residents, 14,000 were aged 14 years or below. The survey revealed that out of these 14,000 children only 6,000 attended school, with 80 per cent going to government schools and the rest in private institutions. The remaining 8,000 didn’t go to school at all, usually working with their parents, or working on the street as hawkers, rag pickers, shoe shiners, porters, Dhaba boys and in other self-employed activities (HRW Website, 1996).

When representatives from PRASAR saw the survey’s results, they realised the situation was more serious than expected. Working together with community leaders and other main stakeholders PRASAR launched a series of initiatives aimed at getting more kids into schools. One of the key initiatives was setting up a number of non-formal education centers (NFECs), where the timetable was flexible so kids could also spend time working, and crèches, known locally as Balbadis. Construction of the centres was delayed for some time
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while PRASAR and community leaders scraped together enough money to get the project off the ground.

PRASAR first started their educational improvement program to fight the high rates of illiteracy in Lal Kuan, ambitiously setting a target of wiping out illiteracy altogether in the district. One of the NFECs teachers’ new responsibilities was to prepare kids up to the age of 11 years so they could make the successful transition into mainstream primary education system. The initiative also promised to give kids support during their schooling years, so they wouldn’t become disillusioned with their new life and drop out.

After actively promoting their educational improvement initiative to India’s corporate sector, PRASAR and local leaders successfully secured the financial backing of Hindustan Computer Ltd (HCL), one of the nation’s largest electronics, computing and IT companies. The division that helps fund worthwhile development and welfare projects, Hindustan Pero System (HPS), provided PRASAR with the funds. Now that they had adequate funding, they could launch the program’s initial phase, and in October 2000 PRASAR convened a one-week training program for local teachers.

Pratham, a local organisation that specialised in running training programs for teachers working in the informal schooling system of NFECs and balbadis, was contracted to set-up the traineeship courses. Twenty local teachers were accepted to undergo an intensive training course where they attended a series of workshops. During these workshop sessions they learnt the best approaches to teaching kids who had no previous schooling, and came from the most impoverished parts of the community. Teachers were split evenly between the NFECs and balbadis, and by the first year the program had attracted an impressive 425 children in twenty NFECs and balbadis.

With these newly trained teachers, the school improvement initiative was given a major boost. But PRASAR and others involved in the program were faced with one potential problem - how could they stop the kids from dropping out? To avoid this situation, the program’s main stakeholders encouraged teachers to adopt a novel teaching approach. Instead of using traditional, and often uninspiring, teaching methods, there was an emphasis on making the learning process fun and interesting by including a ‘play-way method’ in both the NFECs and the balbadis. This fun teaching method can partially explain the program’s success. Also, in an attempt to empower the community’s most marginalised groups, women and children, PRASAR and community leaders decided to only recruit female teachers, as well as offering more student positions to girls.

The female teachers were also encouraged to join the Mahila Mandale Scheme, a support network to help them through any potentially difficult times. First formed in 1952, under the government’s Community Development Programme, the scheme was strengthened during the Indira Gandhi administration, and aims to: “draw rural women into the mainstream and enable them to function as instruments of social change by providing them with programs in which they will have a stake or a sustained interest, such as improving their income or productivity and employability or employment” (Berkes et al., 1997).

By November 2000, the program had expanded rapidly and was enjoying considerable success. But with limited funding, the program’s managers could only afford to pay teachers a small salary; with balbadi teachers getting INR 500 (AUD 12.70) and NFEC teachers earning INR 750 (AUD 19) for a day’s work.

Since most of the children enrolled in the NFECs and balbadis came from poor families who couldn’t afford to pay tuition fees, PRASAR insisted that the program be offered free of charge. Parents, however, were encouraged to make a small donation of INR 10 (AUD 0.25) every month to help pay for the students’ learning materials. Inspired by the initiative’s rapid success, teachers, parents and children worked together to ensure that things continued to improve.

Unfortunately HPS withdrew funding after the program’s first year, and although everyone in the community has worked hard to keep the program up and running, there are severe financial constraints. One of the main driving forces that is keeping the program alive is the incredible enthusiasm of the parents and children. It’s hard for volunteers and teachers to give up when they’re getting such a groundswell of support from Lal Kuan’s community. Even though there’s a chance that funding will run dry, the program still exists - largely due to the community’s goodwill.

“Instead of using traditional, and often uninspiring, teaching methods, there was an emphasis on making the learning process fun and interesting by including a ‘play-way method’ in both the NFECs and the balbadis.”

PRASAR organises a rally to promote their education initiatives.

“One of the main driving forces that is keeping the program alive is the incredible enthusiasm of the parents and children.”

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Conclusion

To date, PRASAR has launched a series of intervention and advocacy programs that have brought new hope to the thousands of poor workers around the country suffering from various occupational diseases, and put many of Lal Kuan’s kids back in school. They’ve also developed a unique approach to dealing with the problem of occupational diseases and their causes, by launching programs that include all the main stakeholders, and work from within the system with existing policies.

PRASAR’s ceaseless efforts have focused the media’s and the wider public’s interest back on the issue of occupational diseases, highlighting the fact that current occupational and health government policies need serious reviewing and reworking. Only in this way can government authorities, business interests, health providers and NGOs develop strategies that can effectively deal with this epidemic - one that’s destroying so many Indian lives.

Ever since June 2003, PRASAR has been fighting a drawn-out legal battle before the National Human Rights Commission (NHRC), demanding that the central government recognise the plight of Lal Kuan’s former stone-crushers who are suffering from silicosis. After years of furious litigation, in May 2007, PRASAR received a letter from the NHRC stating that a new governmental taskforce would be set up to investigate the links between mining and occupational disease, particularly silicosis, and the potential impacts on the miner’s lives and nation’s socioeconomic context.

Significantly, the letter stressed that making policy decisions on this issue was to be given priority status by the NHRC, who were to work in association with the Ministry of Labour and Employment, the Director General of Factory Advice Services, the Director General of Mines Safety, the National institute of Family Health, the Ministry of Health and Family Welfare, the Ministry of Commerce and Industries, the Indian Council of Medical Research, and the National Institute of Occupational Health.

The taskforce were to review the situation on the ground and make recommendations on a suitable response strategy, including appropriate legislative amendments that would help improve the former stone-crushers’ lives. Once made, the recommendations would be submitted to the both central and state government representatives, who would decide on what legislative changes should be made. Without doubt, PRASAR sees the creation of this Taskforce as a major victory for India’s mineworkers and a vindication of the organisations tireless work for Lal Kuan’s silicosis sufferers. Many Indians would agree, as PRASAR’s successes have been praised by the media since the news broke out.
Case Study No. 9, written by SA Azad, 2007

Bibliography
Lane Poole S., 1903. Medieval India under Mohammedan Rule. G.P Putnam’s Sons.
The India Center, 2008, Physical Features. www.thedinindiancenter.com/physical-features.html


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ASM Asia-Pacific Case Study Series
This series of case studies documents concrete examples of equitable, effective, and sustainable local-level partnerships including small-scale miners or their communities as a guide to develop better policy and practice in the Asia-Pacific region.
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