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agenda

ISSUE 15 2009

Collateral damage

On the fast lane to growth, millions of India's workers are dying or falling prey to occupational diseases every year

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Introduction: Work can kill by Madhumita Dutta, Rakhil Gaitonde, Nityanand Jayaraman and R Sukanya	2
Voices from the ground: Testimonies of workers	4
Status of occupational safety and health in India by Sanjiv Pandita	7
Salt pains by Anosh Malekar	10
The judicial response to workplace safety by Mihir Desai	15
Heat, dust and chemical exposure: A photofeature by P Madhavan	19
The destruction of construction by Roger Moody	24
Fashionable and famous — at the garment worker's cost by Suhasini Singh	30
The dust that kills by Jagdish Patel	32
Poisoned by pesticides by Kavitha Kuruganti	35
'Controlled use': First world ideals, third world realities by Madhumita Dutta	38
Dark side of the chip by Amanda Hawes and Ted Smith	40
Sewer rats by Vidya Venkat	43
Cyber-coolies: Interview with labour lawyers Vinod Shetty and Ketaki Rege	46
ESI roadblocks by Suhasini Singh and R Sukanya	49
It's a long road to compensation	50
The ESI run-around	50
Mercury rising Text by Nityanand Jayaraman. Photographs by Sudhanshu Malhotra	52
Survival over safety, livelihood over health by Shalini Sharma	56
The neutrality of science by Rakhil Gaitonde	59

This issue has been guest-edited by Madhumita Dutta, Rakhil Gaitonde, Nityanand Jayaraman and R Sukanya

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Work can kill

India's road to developed-nation status is littered with the bodies of its workers. If at least 40,000 workers die every year at work, and lakhs more, particularly in the informal sector, fall prey to occupational diseases, it's just collateral damage

MADHUMITA DUTTA
RAKHAL GAITONDE
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R SUKANYA

“WORK KILLS AN INDIAN EVERY FIVE MINUTES, the equivalent of a Bhopal every month,” according to a 2001 paper written by Stirling Smith, a UK-based occupational safety expert. Work as a killer of 100,000 people every year should have set alarm bells ringing. But the government is not alarmed. The labour ministry puts the figure of workplace casualties at 1,624.

Occupational diseases, according to Smith, affect roughly 2 million new workers each year. The labour ministry has no figure for this.

Even the International Labour Organisation (ILO) estimates that at least 40,000 workers lose their lives at work each year in India.

It is a fact that Smith's 2001 estimates, extrapolated from UK occupational safety and health figures, are the only close-to-real data that we have of work-related injuries and deaths in India. A decade on, we still do not have authoritative data on occupational health in the country.

According to an ILO report titled 'Decent Work — Safe Work, ILO Introductory Report to the XVIIth World Congress on Safety and Health at Work', lack of data on occupational safety and health is due to poor reporting systems and coverage. “India reports 222 fatal accidents while the Czech Republic, which has a working population of about 1% of India, reports 231,” the ILO report notes. So, does it mean we have better safety at work than European Union member, the Czech Republic?

Despite a surfeit of agencies — the Ministry of Labour, National Institute of Occupational Health, Directorate General of Factories Advice Service and Labour Institutes, Director General of Mines Safety — and an impressive array of labour laws, the pathetic quality of data on workplace-related injuries and fatalities is not merely frustrating. It is intriguing.

Labour activists and trade unions concede that most of the casualties are of workers living at or below the poverty line; most of the deaths are among contract workers rather than those who form the rank and file of organised sector unions. The absence of information on casualties, then, takes on a class dimension, giving the lie to India's claim of equality of all people regardless of economic standing.

Can this apathy be attributed to the ruling elite's class bias

which sees workers as a resource to be exploited and expended? The slew of anti-labour policies, laws and responses of the legislature and judiciary in recent times would suggest such an explanation. Another factor, a far more powerful and sinister one, also contributes to the criminal silence surrounding the disease and death of Indian workers. Just as it is a fact that victims of workplace injuries are predominantly from economically weaker sections of society, it is also a fact that those who stand to gain are economically powerful, often with corporate social responsibility profiles that would put Mother Teresa to shame.

Take the case of the construction industry. Our newspapers are replete with two-column-inch stories about workers being crushed to death, or dying after falling from a height at this IT industry construction site, or that road project. Keeping construction costs viable, it seems, requires a surplus of dispensable labour — a resource that India pretends to have in abundance.

Death and injury from accidents in the Indian construction sector is widespread. Globally, 17% of all work-related fatalities are in the construction sector, according to the ILO. Equally alarming is the number of people who succumb to dust-related illnesses — asbestosis, silicosis — mostly in the production of raw material for construction.

Unfortunately, institutions like the National Institute of Occupational Health (NIOH), which were set up to help workers realise their aspirations for safe workplaces, appear to be working with industry to publish made-to-order studies masquerading as science. The NIOH's ongoing study on white asbestos — a carcinogenic fibre banned in over 40 countries — is supposed to be neutral, scientific and rigorous enough to inform the nation's policy on this deadly fibre. But, with 25% funding from the asbestos industry, a review committee stacked with asbestos-cement manufacturers, and a research institute that lacks integrity, the study's conclusions are already becoming evident.

The NIOH has suggested that the hazards of asbestos can be addressed through “controlled use” and stringent implementation of workplace safety standards. Countries like Denmark, Norway, Sweden and Switzerland have opted for national bans on *all* forms of asbestos, indicating that “controlled use” is too much trouble or unviable.



“Controlled use” in the Indian context is clearly a joke.

An Ahmedabad-based electricity-generation company compelled its workers, who had contracted a debilitating respiratory disease called asbestosis in the factory, to an out-of-court settlement. The company tried to persuade victims to sign a document stating that they did not suffer from the disease, and that the company was giving them money on “humanitarian grounds”. Thanks to the lawyer engaged by the victims, this disclaimer was thwarted. But most workers do not even get offered compensation, let alone enjoy the luxury of engaging a lawyer to represent them.

One can understand industry’s motives to absolve itself of liability or possible legal action. But what stops a worker or a trade union from reporting accidents or diseases? Out of an estimated 500 million-strong workforce in India, nearly 92% are in the unorganised sector, including the farming sector. With informalisation of jobs even in the formal sectors, trade unions have been pushed to a corner where the top priority

seems to be fighting for job security and decent wages. Interviews with trade unionists reveal that all of them believe occupational safety to be a critical issue. Equally, all feel that strained resources and a hostile anti-labour environment have forced them to relegate occupational safety to an occasional crisis-time concern.

If, as Gandhi said, the means to an end matters, then the road that India is taking to the elusive and misguided notion of “developed”-nation status, littered as it is with the bodies of Indian workers, is hardly a justifiable means.

Madhumita Dutta is a Chennai-based activist and a member of Corporate Accountability Desk-The Other Media. Rakhil Gaitonde, a post-graduate in community medicine, works with communities on issues of health systems, accountability, and governance. He is based in Thirukazhukundram, Tamil Nadu, and is associated with the Bangalore-based Community Health Cell. Nityanand Jayaraman is an independent journalist and researcher focusing on investigating corporate abuses of the environment and human rights. He is based in Chennai and is associated with the International Campaign for Justice in Bhopal. R Sukanya researches and teaches public health. She also works with the Community Health Cell, Bangalore

Voices from the ground

The testimonies of people affected by conditions in the workplace that have altered their lives forever

Name: Saraswathy

Age: 19 years

Injury: Mechanical

Consequence: Lost three fingers on her right hand and is unable to work anymore

“I live with my grandmother and younger sister at Senneer Kuppam, in Poovirudhavalli, Chennai. I worked in a small plastic bag manufacturing unit in Poovirudhavalli for a year, earning Rs 2,000 a month. My job was to dry the plastic. On two occasions before the accident, I was asked to work on a cutting machine with sharp blades which keep rolling as the operator holds the plastic tight to stop it getting entangled.

“Though there is a person assigned for that job, I was asked to do it. The second time I operated the machine, my scarf got caught in the blades. I refused to work on the machine after that because I was scared.

“The day the accident happened, I was unwell and decided to stay home. But my colleagues wanted me to come to work as I keep the workplace atmosphere alive. Six of us work in that place, and I am the youngest of all. That day I was asked to operate the machine. When I refused, I was shouted at. So I decided to work on the machine even though I was scared. While I was holding the plastic tight to stop it from getting entangled, the blades cut three fingers on my right hand. I screamed in pain. The owner (Selvaraj) was standing right outside the work area, but he did not bother to switch off the machine. I had to pull my hand out and turn the machine off.

“I was taken to Stanley government hospital immediately. I filed a complaint at the local police station. Selvaraj was arrested and kept at the police station for five minutes. His brother, who is a public prosecutor, bailed him out. I approached the police commissioner, S R Jangid, to look into the issue. After that Selvaraj offered to pay me Rs 30,000 as compensation. However, he didn't turn up with the money.

“My sister Bharathy is doing the same work in another small company, while I await justice.” — **Jeny Dolly Antony**



Name: Getsie Florence

Age: 35 years

“I am secretary of the Tamil Nadu Subhiksham All Unorganised Workers Welfare Union, a registered union with 25,000 members across the state. I have seven years of experience in unionising unorganised sector workers. I was part of the Unorganised Construction Workers Union. My motivation to start a union for unorganised workers was driven by personal experience.

My younger brother Isaac is a victim of a workplace-related accident.

“In 2001, Voltas International was constructing a building for the National Institute of Ocean Technology in Pallikaranai, Chennai. Because it was Christmas season, Isaac decided to work at the site for a month so that he could earn some extra money for the festival.

“The ceiling of the building was supposed to look like waves. For this, the workers had to lift 16 slabs to the top of the building. Lifting one slab to the top took seven hours. A task that had to be done using a winch was instead done by 12 workers, six on either side. While they were lifting the seventh slab, the chain got locked. One of the workers was asked to release the chain. When the chain was released suddenly, the slab fell down pulling the 12 workers with it. All of them were severely injured. Five have died, one is in a coma, and my brother has recovered. If the construction company had given them belts to wear, they would have hung in the air. No safety gear was given to the workers. This incident, which changed our lives forever, motivated me to start a union for unorganised sector workers, in 2002.

“Safety is very important for a worker. I acknowledge the fact that not many unions work on occupational safety and health among workers. Workers consider safety gear an additional burden. They feel that it hampers their effectiveness. While safety gear has to be convenient for workers to use, it is important to let workers know that they have the right to a safe workplace. I strongly feel unions should take up the occupational safety and health issue. Subhiksham will definitely concentrate on occupational safety and health.”

— **Jeny Dolly Antony**



Name: Amalu

Age: 34 years

Occupation: Stone quarry worker



"I have been working in a quarry since I was really young. My husband Sankar works in the same quarry. I have three children who are studying now. I have been working in this quarry for three years.

"I leave home every day at 7 in the morning and get back at 7 in the evening. The maximum that I can earn in a day is Rs 250. For every load of stone we get Rs 60, which has to be shared between four people. We can't take a single day off. So I end up working even if I am unwell. It is very difficult, especially when I have my periods. But I am used to it now, after so many years.

"One has to be very careful in a quarry. People can fall off the cliff and die. You must watch every step. There is a lot of dust; sometimes you can't even see the person standing right in front of you.

"When I leave home every morning, there is no certainty of my coming back. Only when I get out of the quarry in the evening do I even think about what to cook for my children. I get back home, cook, wash the clothes, and sleep at around 11 pm. I wake up at 5 in the morning. That is my routine." — **Jeny Dolly Antony**

Jeny Dolly Antony works on occupational health and safety and is part of a voluntary collective called Vettiver, based in Chennai

Name: Sadayan Gounder

Age: 68 years

Occupation: Works in a mercury cell house that manufactures caustic soda chlorine

"I joined work at Chemplast's (Sanmar) Plant III in Mettur, Tamil Nadu, in 1965. I was placed in the mercury cell house. My work involved collecting mercury and caustic lye, and filling steel containers with mercury. When it is full, you can't



even move the container: mercury is *that* heavy.

"There is a lot of lye around. Even if a drop falls on your skin, it will make a hole. A lot of mercury falls on the floor from the cells. We were given plastic cups to scoop the mercury up and fill it into jars. We were given gloves, but we never wore them because they were a hindrance. We would bend and scoop the mercury up with our bare hands. The atmosphere inside the cell house was oppressive — there were a lot of fumes.

"Between the mercury and the lye, it is difficult for new people not to get affected by it. The chlorine was such that if it hit you, you couldn't talk for a while. Your nose and throat would just go dry and you couldn't do anything. We were given onions and buttermilk to eat and drink as an antidote to the toxic gases.

"Around 1975, I started noticing problems. My skin became dry. It looked like the skin a snake sheds, with scales and white patches all over. Gradually, other complications began. My face and body swelled up. I was being seen by a skin doctor referred by the company.

"When I first fell ill, I couldn't return to work for 10 months because the government hospital doctor would not give me a fitness certificate. He said I was too sick to work, and that my health was not good because of working with lye.

"In 1976, the general manager, who was a good man, took me back with the assurance that he would change my section. But I was appointed to the same section. Slowly, my condition got worse. I couldn't work any more because the skin problem was persistent. My hands would shake; I had absolutely no appetite. I couldn't even walk.

"In 1988, I was forced to sign up for voluntary retirement as the manager of the plant felt that I was no longer fit to work. I received no compensation for the injuries.

"In 2003, the skin doctor finally referred me to a neurologist at Gokulam hospital in Salem. Since then I have been on medication for a neurological disorder." — **Lakshmi Premkumar**

Lakshmi Premkumar works on environmental justice issues and supports community struggles against industrial pollution. She is also part of the Chennai-based voluntary collective Vettiver

Name: Gauri (name changed)

Age: 19 years

Occupation: Worker in the Nokia SEZ

Gauri (name changed), a 19-year-old worker at Salcomp, inside the Nokia Special Economic Zone (SEZ), is one among

thousands of young women and men being recruited to work at various electronics industries in Sriperumbudur. The small town, 50 km south of Chennai, is being aggressively promoted by the Tamil Nadu government as a manufacturing hub, and is home to big players like Dell, Foxconn, Motorola and Flextronics, among others.

Salcomp, the Finland-based mobile charger manufacturer, set up the 9 million euro production facility at the Nokia SEZ Park in early-2007. It currently employs around 1,000 women workers, both on contract and permanent employment. Salcomp targeted a production of 100 million chargers by mid-2008.

To meet these targets, like most factories in the SEZ, production is round-the-clock. The Nokia SEZ Park houses Nokia's own mobile phone assembling unit along with seven of its vendors who manufacture components for Nokia mobile phones.

With their characteristic high levels of security and surveillance, SEZs overwhelm workers into submission, even as companies use corporate social responsibility (CSR) initiatives to camouflage the persistent health and safety issues in the workplace, and create an atmosphere of fear to intimidate workers and ensure they do not talk about their problems.

Gauri says: "I was excited when I first heard about the job at the Nokia SEZ. My friend and I applied together after we saw an advertisement at our local school. I opted to take the job instead of doing a degree, because it is a reputed foreign company that manufactures chargers for Nokia mobiles.

"I travel two hours every day from my home near Ambattur to the factory, along with 30 others from the area, in the company bus. Most workers come from villages in nearby districts and stay at hostels and rented accommodation near the factory.

"Our line supervisors constantly increase our hourly targets and we are under a lot of stress because of this. Our shifts change every month and since we work night shift too, my sleep is affected. When I first started it was very difficult. I came home with a severe backache because we were never given any breaks and had to stand for hours together. But slowly I am getting used to it.

"In most departments, workers involved in assembling are expected to stand without any back support. We were told that there was a possibility of earning up to Rs 5,000, and that we would receive confirmations in a year. But it has been over a year now and I earn only Rs 3,300. My family does not depend on my salary. But many of my co-workers discontinued their degrees because they needed this job to support their families.

"Recently, one of the buses was involved in an accident. Several workers who were injured were not taken to hospital and had to bear their own medical expenses." — **Meghna Sukumar**

Meghna Sukumar is a labour organiser and researcher with the Chennai-based Penn Thozhilalar Sangam (Women Workers Association)



Name: Kaliappan

Age: 55 years

Occupation: Saltpan worker, Marakkanam, Villupuram district

"I am 55 years old and have been a saltpan worker for the past 35 years. I am a member of the Marakkanam Adi Dravidar Salt Producers Society, a cooperative formed in 1937. I perform various tasks in the saltpans, including scraping salt from the bed in hot brine, transferring salt from the bed to the

drying platform, loading and unloading salt bags.

"About 15 years ago, I started having this skin condition with white marks on my legs. I went to the general hospital in Pondicherry where they gave me some medication. It was cured for around six months; then it came back. I went to a private hospital and spent about Rs 1,000, but to no avail. So I just live with the condition.

"The problem intensifies in the salt production season, between January and September, and subsides at other times. It itches quite a bit and during those times I am unable to get into the brine. I am then forced to do other work such as loading/unloading. I don't know the name of this condition; I have observed it, in less severe form, in other saltpan workers too.

"There are protective boots available to prevent this condition. But it's impossible to work with the boots on, so we don't wear them. They are heavy and with them on we are unable to carry salt for long distances. Also, the boots get stuck in the mud on the beds, so they are of no use. Instead we wear rubber-soled sandals, which are easier to handle. But they do not stop such problems from occurring.

"Also, my eyesight and those of everyone who works with me, has worsened because of the reflection of sunlight on the salt. I cannot see the numbers on a wall clock or the words in a magazine. Young or old, we all face the same problems.

"We don't have any medical insurance as we are all daily wage labourers. As Society members we get provident fund, but no medical insurance. There was an eye camp organised in our region, but we didn't get any glasses!" — **Chandrika Ramanujam**

Chandrika Ramanujam is a labour organiser working amongst saltpan workers. She is associated with the Unorganised Workers Federation

Status of occupational safety and health in India

India has had legislation on occupational safety and health for 50 years. But regulatory authorities are limited to 1,400 safety officers, 1,154 factory inspectors, and 27 medical inspectors. These numbers are grossly inadequate even for the inspection of formal units that only employ about 10% of India's total workforce let alone the millions who work in the informal sector with absolutely no safeguards

SANJIV PANDITA

NUSRAT CAN FEEL THE SILICA DUST going deep into her lungs. The whole room is covered with white silica powder. She works in a small home-based unit polishing agate stones in Khambat district of Gujarat.

Polishing of semi-precious stones, a home-based industry in this town, has wreaked havoc on the health of the entire community. Nusrat's husband, like hundreds of others in the village, died of silicosis (a lung disease caused by inhaling silica dust). Nusrat fears she too will die. But she has no alternative source of livelihood, and she has three children to feed. Her concern now is that if she dies, her elder son will have to take up the same job, and possibly suffer the same fate.

This vicious circle of death and poverty epitomises the work situation of millions of workers in India.

In June 2008, at the XVII World Congress on Safety and Health at Work, organised by the International Labour Organisation (ILO) (1) in Seoul, Korea, India's labour secretary Sudha Pillai was invited to speak on strategies and programmes for safety and health in the future. This was surprising, considering India's dismal health and safety record, with safety being accorded low priority by both government and industry.

The labour secretary's presentation highlighted this aspect — it was devoid of any visual representations, data or numbers on the present status of occupational safety and health in



Sudharak Olwe

Key OSH legislations

- Factories Act, 1948, amended in 1954, 1970, 1976, 1987
- Mines Act, 1952
- Dock Workers (Safety, Health and Welfare) Act, 1986
- Plantation Labour Act, 1951
- Explosives Act, 1884
- Petroleum Act, 1934
- Insecticide Act, 1968
- Indian Boilers Act, 1923
- Indian Electricity Act, 1910
- Dangerous Machines (Regulations) Act, 1983
- Indian Atomic Energy Act, 1962
- Radiological Protection Rules, 1971
- Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989

The Directorate General of Factory Advice Service and Labour Institutes (DGFASLI) assists the labour ministry in formulating national policies on occupational safety and health in factories and docks, and enforcing them through inspectorates of factories and inspectorates of dock safety. Similarly, the Director General of Mines Safety (DGMS), Ministry of Labour, is responsible for the health and safety of mine workers and implementation of the Mines Act, 1952.

There are also two key laws covering worker compensation and welfare. They are:

- Workmen's Compensation Law, by which a worker can claim compensation under establishments covered by the Factories Act.
- Employees Sate Insurance Act (ESI Act), which is a contributory social insurance scheme that protects the interests of workers in contingencies such as sickness, maternity, employment injury causing temporary or permanent physical disability or death, loss of wages or loss of earning capacity. As of March 2006, there were 35.4 million beneficiaries under this scheme.

India. Pillai spoke at length about the Indian government's future strategies towards improving health and safety at work. But these improvements can only be made if the government has a clear view of the present situation.

It is estimated that unsafe work conditions is one of the leading causes of death and disability among India's working population. These deaths are needless and preventable. Unlike growth rates and GDP figures that are flaunted every quarter, the figures of dying and ailing workers who make this growth possible are never recorded or spoken about. The only way to get an idea of the scale of the problem is from data released by the ILO (2), which estimates that around 403,000 people in India die every year due to work-related problems. To give some idea of the scale — more than 1,000 workers die every day from work-related diseases; that's about 46 every hour!

Though these figures are alarming, they might be a conservative estimate as the ILO does not receive complete and reliable data from India. For example, in 2003, India

reported 179 fatal accidents, while the ILO put the estimate at 47,000.

There are no reliable figures for occupational diseases either. The ILO arrives at figures by extrapolating them from developed countries like Denmark where every accident and disease is reported.

Legal framework

Safety and health occupy a significant place in India's Constitution, which prohibits employment of children under the age of 14 in factories, mines and hazardous occupations. This policy aims to protect the health and strength of all workers by discouraging employment in occupations unsuitable to the worker's age and strength. It is the policy of the State to make provisions to secure just and humane conditions at work. The Constitution provides a broad framework under which policies and programmes for occupational health and safety can be established.

Legislation on occupational health and safety has existed in India for over 50 years. The principal health and safety laws are based on the British Factories Act. The Factories Act, 1948 has been amended from time to time, especially after the Bhopal gas disaster, which could have been prevented. The amendment demanded a shift away from dealing with disaster (or disease) to prevention of its occurrence. The Factories (Amendment) Act came into force on December 1, 1987. A special chapter on occupational health and safety to safeguard workers employed in hazardous industries was added. In this chapter, pre-employment and periodic medical examinations and monitoring of the work environment are mandatory for industries defined as hazardous under the Act. A maximum permissible limit has been laid down for a number of chemicals.

The Act is implemented by state factory inspectorates, supported by industrial hygiene laboratories. There are similar provisions under the Mines Act. The Factories Act is applicable only to factories that employ 10 or more workers; it covers only a small proportion of workers.

ILO conventions

The International Labour Organisation frames key conventions for protecting the rights of workers; many of them are specifically on occupational health and safety. These conventions, once ratified by member states, form guiding principles for the formulation of national policies and laws. The ILO has 18 conventions that are targeted at addressing the issue of occupational safety and health (OSH). Though India has ratified 41 ILO conventions and treaties on labour welfare and labour rights to date, it has ratified only three conventions on OSH. India is still to ratify important conventions like Convention 155 on occupational safety and health and the working environment, Convention 161 on occupational health services, Convention 167 on safety and health in construction, Convention 176 on safety and health in mines, Convention 184 on safety and health in agriculture, Convention 187, the promotional framework for

occupational safety and health.

Lax implementation

In spite of having a good legal framework for the protection of workers, India suffers from the chronic problem of lax implementation. Regulatory bodies, including the inspectorates, are ill-equipped and severely understaffed. According to a DGFASLI report (1998), the country has 1,400 safety officers, 1,154 factory inspectors, and 27 medical inspectors. These numbers are grossly inadequate even for the inspection of formal units that only employ about 10% of India's total workforce.

Occupational diseases and their diagnosis

Accidents, despite being visible, are still grossly underreported in the Indian context. The reporting of insidious occupational diseases therefore stands little chance. If we analyse the details of workers who die because of their work environment, we find that, surprisingly, most of them succumb to occupational cancers and other work-related illnesses. This is contrary to the common belief that most work-related deaths are caused by accidents. In most places, occupational safety and health invariably means prevention of accidents; very little attention is paid to occupational diseases. An accident-free workplace by no means implies a safe workplace.

Occupational diseases — including cancers caused by various materials in the workplace like asbestos, carcinogenic (cancer-causing) chemicals, silica, cotton, dust, and radiation, job stress and work shifts — usually take a long time to develop (from a few months to more than 10 years). And given changing work practices, most industries tend to hire workers on short-term contract. By the time they develop a disease, therefore, it is almost impossible to link it to their work.

Non-communicable diseases result in more deaths than communicable diseases, except in Africa. Overall, people are more likely to die of work-related diseases than childhood or infectious diseases.

Not many doctors are able to correctly diagnose an occupational disease. In fact, certain occupational diseases like byssinosis (a lung disease caused by cotton dust) and silicosis (a lung disease caused by silica dust) are often wrongly diagnosed as tuberculosis. In a community where having a doctor is a privilege, an OSH specialist is simply out of the question.

Informal sector problems

Most workers in India (90%) work in the vast informal sector. The variable and insecure nature of the work means that more and more workers are pushed into taking up hazardous and precarious employment both in the informal economy as well as informal work in the formal sector. For these workers, employment not only fails to bring about a successful escape from poverty, it may contribute to existing vulnerabilities.

There are other contributory factors that lead to poor working conditions in the informal sector:

- There is very little awareness about workplace hazards due to lack of access to information, or even any kind of formal education. Then too, OSH is given very low priority among informal workers, as having work is more important than the quality of the job. As many workers say: "We might die of work, but if we don't work our families will die of hunger."
- No proper work hours; piece-rate work often leads to exploitation and extended exposure to hazardous chemicals and processes.
- Diagnosis of occupational diseases is difficult even in the formal sector; in the informal sector it is almost impossible. In the absence of proper diagnosis, treatment of occupational illness is next to impossible for workers in this sector.
- No clear distinction between living and working area complicates the problem and exposes relatives and others living in the vicinity to work-related risks.

Effects on women and children

If information on OSH hazards among informal workers is poor, their impact on women's health is even less understood. In addition to paid work, women also do other demanding jobs like cooking, cleaning and taking care of the children. The extended work hours puts tremendous pressure on women's bodies and minds. Women also face an increased risk of musculo-skeletal disorders because of the repetitive nature of the jobs they perform, and having to work in uncomfortable positions for long hours (sometimes they work with babies in their laps or on their backs). Women who work with chemicals like solvents in adhesives, in home-based work, or pesticides out in the fields are also in danger of chemical poisoning. Working pregnant women expose their unborn children to great risks.

Child labour is a big problem in the informal sector in India. Children in the informal sector sometimes have to help their parents, for economic reasons. The growing bodies of children are more susceptible to hazards at the workplace, but since children (legally) are not supposed to work, very few initiatives are targeted at improving their working conditions.

Sanjiv Pandita is a labour activist with the Hong Kong-based Asia Monitor Resource Centre

Endnotes

1 The International Labour Organisation (ILO) is an international tripartite UN agency consisting of representation from workers, employers and governments of its member states. It aims to promote decent work conditions throughout the world

2 'Beyond deaths and injuries: The ILO's role in promoting safe and healthy jobs', the International Labour Organisation, 2008

Salt pains

An estimated 43,000 people — saltpan workers, their families and dependants — engage in salt farming during the September-May season in the Little Rann of Kutch, living and working in conditions that can only be described as medieval. They earn 12 paise a kg of salt produced, suffering all sorts of skin diseases from being constantly immersed in brine. There is no power, no potable water, no schools, no healthcare

ANOSH MALEKAR

“CAN'T YOU SEE WATER? IT'S EVERYWHERE,” my guide Savshibhai joked. It was an old joke, reserved for unsuspecting visitors to the hot, dry, flat wasteland called Little Rann of Kutch in the western Indian state of Gujarat. The water referred to was a huge mirage that surrounded us on all sides. In reality, the Little Rann is a salt-impregnated wilderness, its pitiless landscape made up of cracked brown mudflats stretching out to a bare horizon without even a spot of green.

The only sign of life on the horizon is the hazy outline of men, women and children from the local community of Agariyas engaged in neat square fields of steadily evaporating salt waters. The jagged mural formed by their primitive salt making activity and accompanying poverty completes the landscape.

Life is tough in the Little Rann — the Kutch desert is divided into the Little Rann and the Great Rann — with temperatures touching 50 degrees Celsius in peak summer and dropping to near-zero during the winter nights. In June, the monsoon heralds an invasion by the Arabian Sea from the mouth of the Gulf of Kutch, causing the mudflats to disappear under knee-deep water for four months and, as a consequence, become saline.

The Little Rann spreads over 5,180 sq km and is also known as India's 'Survey Number Zero' because no land survey has been conducted here since the British left in 1947. The area falls under the jurisdiction of six districts in Gujarat — Kutch, Rajkot, Surendranagar, Patan, Jamnagar and Banaskantha — adding to the overall confusion.

It is extremely difficult to find your way around the unmarked mudflats without the help of an expert guide, preferably a local truck driver; it's the only way one can negotiate this barren, inhospitable wilderness without getting lost.

I still remember my first foray into the desert, on a particularly hot summer afternoon in the year 2000. I had chanced upon Bhikabhai at the local salt market in Patdi town on the periphery of the Little Rann. He was busy loading jerrycans of water into his truck, though his main task was to transport salt from the pans for traders in town. I bought my favour by assisting Bhikabhai load the cans, behaving as if I was his officially assigned help. And he agreed to drive me into the Little Rann to meet

the saltpan workers.

It was a drought year across many parts of Gujarat, and I had heard that the situation was very bad across the dry Kutch desert. The saltpan workers cheered our arrival for a simple reason: truck drivers invariably turn up with precious stocks of drinking water. The 20 litres Bhikabhai and I had brought were barely enough for the group of 20 or so men, women and children toiling in the midday heat (the mercury hovered above 45 degrees Celsius). It was virtual hell out there and walking just a few metres was a major effort.

A desperate woman salt worker, with only the tattered end of her sari protecting her infant from the sweltering heat, said: “There is no water, no doctor here. If somebody collapses due to the heat and exhaustion, there is little we can do except pray to god. A medical emergency at night is worse, because there is no power inside the Rann.”

Ignorant about their socio-economic situation, I asked her why the grown-up children, who looked ill and unkempt, were not in school. She said there were no schools, and no hospital. Social activist Prashant Raval, who is also a successful organic farmer from Patdi, explained: “The debt-ridden Agariyas can barely afford basic food. Most children suffer malnutrition and poor eyesight because of lack of vegetables and fruit in their diet.”

A 1999 study of 1,549 salt workers with over 10 years of exposure in working at various salt sites in the Little Rann of Kutch and nearby villages, by the Ahmedabad-based National Institute of Occupational Health (NIOH), showed significantly greater skin and eye symptoms among them. High blood pressure and increases in urinary sodium excretion are also common among those involved in the production of salt.

There is no alternative means of livelihood because very few saltpan workers own farmland at their village of origin. “There is no other work we know. During the rains, we work on other people's farms. Besides that there's nothing,” the woman salt worker said. The fact that most of them are illiterate does not help.

Nearly nine years later, in January 2009, with Savshibhai — a cheerful man in his early-30s, who worked earlier as a truck driver in the desert — for company, I found things hadn't changed much inside the Little Rann. Across the mud and

salt wilderness, there was neither power nor potable water, and malnourishment and illiteracy continued to reign supreme.

The saltpan workers still depend on their acquaintance with truck drivers to provide water and transport during emergencies. Government tankers are irregular, they say, and individual families that procure potable water from private operators spend as much as Rs 2,000-Rs 3,000 a month. Not everybody can afford that.

Leelaben, a middle-aged woman working in the saltpans, said: "Sometimes the men have to pedal miles in search of a wet hole in a dry riverbed or a small breach in the lone pipeline that carries water from a borewell in Odhu village to a handful of saltpans not far from the Rann's periphery. We work like donkeys in the saltpans without a day off, for over eight months. We get to bathe every 15 days. That is the only luxury we can afford here."

An estimated 43,000 people — saltpan workers, their families and dependants — engage in salt farming during the September-May season in the Little Rann, living alongside the saltpans in conditions that can only be described as medieval.

The nature of the Agariyas' existence can be gauged from the fact that even today they use broken pieces of mirror to flash messages during the day across long distances inside the Little Rann; much like the native Americans and

Australian aborigines used fire to send smoke signals!

Salt production in the Little Rann dates back 5,000 years. The British regulated salt making and made Kharaghoda, a remote village on the periphery of the Little Rann, a hub of the salt trade. Local historian-writer Ambubhai Patel says: "Historical sources indicate that by the middle of the 19th century, British India derived 10% of its revenue from the salt monopoly. The saltpan workers of Kharaghoda and other villages on the periphery of the Little Rann were the unsung beasts of burden."

After Independence, domestic salt production was encouraged and in 1953, the country became self-sufficient. Today, India is the third largest producer of salt in the world; some 5 million tonnes of its annual production of 17 million tonnes are exported. All aspects of the salt industry are controlled by the salt commissioner from Jaipur, in Rajasthan.

The country owes this success primarily to centuries of hard slog by some 150,000-odd saltpan workers in coastal and desert regions of the country.

The Agariyas migrate to the desert every year from the 107 villages bordering the Kutch desert after the monsoon. It's a vicious cycle that begins with an Agariya family seeking an advance or loan from a wholesale salt trader who pre-fixes the price at which he will buy the salt at the end of the season, the next year. The advance or loan money helps



Anosh Malekar

meet the running costs of manufacturing salt and afford the family a subsistence living in a temporary shelter on a plot adjoining the pans.

The family, including children, first construct a hut over pits dug in the mudflats to protect themselves from the wind and the sun. They then prepare the fields, hardening the land surface and raising embankments with their bare hands and feet to create about a dozen evaporation pans, measuring approximately 200 feet by 250 feet. Simultaneously, they dig a shallow well and, with the help of Rajkot pumps (a locally manufactured contraption that operates on crude oil), start drawing groundwater from saline aquifers into the first of the pans.

Once the salt making process starts, the Agariyas cannot leave the saltpans unattended because it is essential that saline water keeps flowing without interruption to allow salt crystals to form. It is a series of chores that has remained unchanged for centuries; the brine is transferred from one pan to another through narrow channels to increase the salt content before it reaches the final pan where it starts producing salt. During the four months this process takes, workers regularly scrape the surfaces of the saltpans with heavy wooden rakes to even out the salt, which is slowly captured and dried in the heat, transforming the pans into hard fields of coarse salt ready for harvest.

The salt that the Agariyas produce is known locally as 'Badagara', simply meaning salt produced in the *bada* (big) *agara* (pan), an inland salt in large-grain crystal form, distinct from the marine salt produced in the coastal regions of nearby Saurashtra and the southern peninsula. Gujarat produces 70% of India's salt; inland salt from the Little Rann accounts for almost 40% of that.

Inland salt sells at Rs 3-5 a kg mainly in the markets of north India and Nepal, which does not produce any salt. But the Agariyas of Little Rann get only about 12-15 paise a kg, less than their production cost, in most cases. A chain of middlemen — traders, transporters and retailers — grab most of the profits, leaving little or nothing for the workers.

"Last Janmashthami, we agreed to a price of Rs 15 per 100 kg. Right now, our salt is selling at Rs 45 in Patdi town market," Labhubhai Bababhai said. Labhubhai is from Kharaghoda, now a big village of 12,000 residents. It is barely 7 km from Patdi, the relatively prosperous town of local salt traders. Kharaghoda is sometimes referred to as the 'village of widows' because around 500 local women have lost their husbands at a relatively young age. The death rate here is unusually high, but hardly surprising considering a majority of the dead men are Agariyas.

Most saltpan workers are from the Chuvaliya Koli and dalit communities. Other backward communities like the Vaghris, Bharwads, Rabaris, Ahirs, Sipahis, Fakirs, and Muslims are also engaged in allied activities like transport, loading and unloading, grinding and packaging. But it is the low-caste Kolis and dalits who live and work in hazardous conditions, dominated and exploited for decades by the Barbas, a

higher-caste community, who own the saltpans. Throughout their working lives — they start at the young age of seven or eight years — saltpan workers encounter serious physical and mental health hazards.

Working in extreme temperatures without any protective gear against the intense sun and the salt, many Agariyas suffer blindness and skin damage. Exposed parts of their body get covered in an abrasive coating of salt, drastically reducing their life expectancy. "Even a small cut takes months to heal," Labhubhai said. Lack of money means they cannot afford to buy rubber boots or gloves that would offer some protection to their ravaged limbs.

According to the latest available report prepared by the Union Ministry of Labour and titled 'Working and Living Conditions of Salt Workers in India': "The Agariyas, who depend exclusively on salt processing, live in very poor conditions. There is a lack of basic amenities like drinking water, shelter, education and facilities like gumboots, sunglasses, tools and healthcare... Children are brought up on salty land with no activities for growth. The seasonal workers live on the pan itself... They face health hazards like blisters, burns, cuts, eye-burning, falling hair, headaches and many other ailments. Lower legs and feet develop lesions like ulcers and warts. Skin problems occur like scaling, atrophic scars, keratoderma, callosities, and fissures. This facilitates enhanced absorption of salt into the body, which could be one of the causes of high blood pressure. They also have to drink saline water most of the time. Vitamin A deficiency, night blindness, tuberculosis, infant mortality and gynaecological problems are common."

The late Gujarati writer, Dilip Ranpara, who published a book on the exploitation and sufferings of saltpan workers in the early-90s, has described how an Agariya's hands and legs take more time to burn than his body on the funeral pyre because a lifetime spent working in salt causes them to harden and become nearly acid-proof! Though his book, *Kali Majuri, Dhola Mithoo* (Black Labour, White Salt), is often quoted by social activists at public and official fora, not many people are aware of this darker side of common salt.

Salt, an "essential item", may be a central subject under the seventh schedule of the Constitution, but the working conditions of workers also fall within the purview of state governments. The Centre set up three special committees in the years 1948, 1950 and 1958 to review the progress of the salt industry. It also passed the Salt Cess Act, 1953, which provided for the levy and collection of a cess on salt that would be utilised for labour welfare schemes and development work in the salt industry. In 1954-55, a five-year programme was prepared for development and welfare in the salt industry. A salt development fund was established in 1958, under the Act, to be operated by the Central Salt Board.

But, says a report prepared by the Union Ministry of Labour, "there is no clear separation of funds; as a result, administrative expenses constitute almost 80% of total

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expenditure. This, despite the fact that the Government of India gives budgetary support to the salt commissioner’s office for its running. The salt cess, at Rs 3.50 per metric tonne, has remained unchanged over these years. It is applicable only to salt works of over 100 acres; it is half for those with more than 10 acres but less than 100 acres. Salt works up to 10 acres are exempt from the cess”.

The report further points out that unlike welfare funds where, apart from welfare fund Acts there are separate Acts like the Beedi and Cigar Workers (Terms of Employment) Act 1966, there is no such Act to govern conditions of employment of saltpan workers. The Centre had formulated a code of principles under which assistance from the cess proceeds was to fund welfare works like water supply schemes, including provision of water coolers, storage tanks, water tankers mounted on trailers; construction of labour rest sheds, crèches, toilets; augmentation of medical facilities including conducting health camps; community centres and recreation facilities; educational facilities for the children of salt workers; labour housing, etc.

“However, it is observed that the organisation of the Central Salt Commission has generally been meeting the requirements of drinking water supply to some extent. For the other welfare measures, the salt workers have to depend on the governments of respective states. The thrust and major objective of the Central Salt Commission is to improve skills in the production of salt and its quality control,” the report adds.

The government of Gujarat claims to run a group insurance scheme from 1993 that offers coverage to around 46,000 salt workers across the state. Under the scheme, workers are entitled to Rs 25,000 in case of accidental death or complete

disability, and Rs 12,500 in case of partial disability. It also runs salt workers’ welfare centres where activities such as primary education, primary healthcare, sports and cultural events are conducted. Financial assistance for the construction of *pucca* houses or temporary tent accommodation, and treatment of serious diseases, is also promised. But the implementation of these schemes is at best tardy, say the salt workers.

Thanks to the efforts of Ganatar, an Ahmedabad-based social change organisation, the Gujarat state government has, in recent years, taken some steps to make the saltpan workers’ lives a little more bearable. “The government has sanctioned schools for the Agariya children, promised potable water in tankers in remote saltpans, a weekly medical van service, and a limited number of rubber boots,” says Rupalben of Ganatar.

Ganatar has been educating the children of saltpan workers for over a decade now through a network of mobile Rann *shalas* (desert schools) that operate during the seasonal migration period starting October through to the month of May. Classes up to 7th grade are conducted as supplementary to the mainstream government schools running in the villages. Thus, students enrolled in village schools continue their respective grade education at the mobile schools when they migrate with their parents to the saltpans. And, at the end of the year, they appear for the annual examination at their respective village schools.

Before the mobile schools came into existence, the children of saltpan workers had to leave their schools in the village and accompany their parents to eventually join the swelling masses of child labourers being initiated into a life of backbreaking drudgery. “It was the success of the Rann *shalas* that enabled Ganatar to pursue the Gujarat government to replicate the model inside the Little Rann, besides other areas, for children of migrant communities in the state,” Rupalben claims.

The Gujarat government set aside a grant of Rs 4.70 crore in 2006-07 for social organisations running schools on the lines of Ganatar’s Rann *shalas*; last financial year, the amount was raised to Rs 11.50 crore. In 1996, around 100-odd students joined the first school started by Ganatar. Today, 10,000 children of migrants benefit from the Rann *shala* model. The state funds over 50 schools and 50 hostels for migrant children.

However, it’s a case of too little, too late as thousands of young Agariyas have already been sucked into the vicious cycle of salt making and are faced with a bleak future. The Little Rann has been declared a sanctuary by the Gujarat forest department as it is the habitat of a thriving population of the endangered Asiatic wild ass (*Equus hemionus khur*).

The first set of sanctuary notifications was issued on January 12, 1973, followed by a second notification in 1978. In early-1997, the state government set up an office to survey and settle the claims of traditional dwellers in the sanctuary area, in Surendranagar. Predictably, the saltpan workers have been up in arms ever since. An assemblage of NGOs led by

The Gujarat state government has taken some steps to make the saltpan workers' lives a little more bearable. The government has sanctioned schools for the Agariya children, promised potable water in tankers in remote saltpans, a weekly medical van service, and a limited number of rubber boots

Harinesh Pandya of Janpath and Sukhdev Patel of Ganatar is lobbying the state government to end the uncertainty over the workers' existence inside the Little Rann. Interestingly, while the state forest department has issued eviction notices to the salt workers, the state government has provided nearly 41,000 of them identity cards, certifying them as traditional saltpan workers.

The salt workers were finally issued eviction notices in 2007. But, sensing popular protest in an assembly election year, the state government, led by Gujarat Chief Minister Narendra Modi, promised to try and persuade the Centre to reconsider dislodging the salt workers. The government is presently seeking documented evidence from the Agariyas to establish their right to produce salt inside the wild ass sanctuary. "The state forest department's only concern appears to be to throw the impoverished Agariyas out of the Little Rann. Last year, it even blocked a government plan to lay a pipeline inside the Little Rann to provide potable water to the Agariyas because it would impact the wild ass' grazing area," says local activist Ishwarbhai Desai.

So far, the government continues to delay a mutually agreed settlement. The salt workers say that if given an option they would gladly give up salt-harvesting; anyway, they are treading a thin line for survival and will need more than just salt to sustain them in future. Some of them, like Kantibhai, feel their lot was better off under British rule. "From what we have heard our elders say, they (the British) took good care of our people. Those were glory days at Kharaghoda. The saltpan worker was king then."

Historian-journalist Ambubhai Patel agrees: "Under the British, some 900 families were employed permanently in salt making. Kharaghoda was connected by a broad-gauge line, and the railway link extended into the Little Rann. Also, they built an excellent water supply system whose remnants exist inside the Little Rann to this day."

Savshibhai took me to see another symbol of Kharaghoda's

past glory — Bulkley Market. This is a Gothic structure built in 1905 by a British collector of salt taxes called Mr Bulkley, who, according to the cornerstone, "interested himself greatly in the welfare of the village". He also gave Kharaghoda an excellent hospital equipped with isolation wards for patients with communicable diseases. "If you ask me, I would give the British 90 marks out of 100, and not even 10 to Indian governments for what they have reduced us to," Ambubhai Patel said at the end of the tour.

The saltpan workers of Kharaghoda dismissed the Agariya Kalyan Sannelan (conference for the welfare of salt-makers), organised by the state government in Patdi, in 2007, as a "political farce".

Chief Minister Narendra Modi had announced grand plans to develop the nearby Navlakhi port in Kutch, with a special jetty dedicated for salt export, so as to fetch the best prices for salt workers in the Little Rann of Kutch. "The proposed port will cut transportation costs and give a boost to the local economy, at a time when the railways have failed to provide any concession in freight charges for salt. Besides, the government wanted to develop a Rann-based tourism plan," said a senior aide of the chief minister in Gandhinagar.

The state government also wants to promote prawn culture inside the Little Rann to create new job opportunities for the next generations of salt workers. Modi has promised that the much-touted Rs 11,000 crore scheme for the development of Gujarat's coastal areas and fisheries will percolate down to the salt workers. But one saltpan worker stated the real problem as he looked across the bountiful hot fields of salt: "What good are these grand promises when the government cannot provide us drinking water, medical care and education here?"

The saltpan workers, most of them illiterate, fail to comprehend such grand development initiatives. All they have known is a poverty-stricken existence in the wilderness. Savshibhai, my guide who started life as a child salt worker, said: "We are destined to spend our entire lives in the company of dogs, bicycles and pigeons — the dogs are faithful companions and security, the bicycles the only means of transportation, and the presence of pigeons protects from death due to variable concentrations of carbon dioxide inside the saline aquifers."

As the unrelenting sun beat down on the parched desert, a small group of men gathered under a shed at the Shri Veer Vaccharaj Solanki temple. This is the centre of the Little Rann and a sacred place for the saltpan workers. Mythology has it that King Vaccharaj left his marriage ceremony halfway on hearing that the enemy had taken away cows belonging to his people for slaughter. "He saved the cows but died in battle. We expect our rulers to come to our rescue in similar fashion. But would they ever?" wondered Mahadevbhai, the temple priest.

Nobody had an answer. Outside, the desert was still and the afternoon heat felt unbearable...

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The judicial response to workplace safety

It was only after the 1920s that the law recognised the responsibility of the employer to provide a safe work environment for his employees. Since then, a number of laws and judicial interpretations that deal with occupational safety and health have been passed. But these provide security only to the organised workforce. They have not been effective in dealing with the unorganised sector

MIHIR DESAI

PRIOR TO THE 1920s it was believed that by entering into a contract with the employer, an employee accepted the risks involved in the employment and therefore could not hold the employer liable if he suffered from any injury or disease related to his work. Since the 1920s, however, when the Employers Liability Act was enacted, it was recognised that because of the unequal relationship between employer and employee, no such presumption could be made.

Four laws have been enacted that deal with healthcare for workers. The Factories Act, 1948 prescribes safety conditions for workers in manufacturing processes; the Workmen's Compensation Act deals with compensation to workers who suffer injuries at the workplace, and who suffer from specified occupational diseases; the Employees State Insurance (ESI) Act, 1948, which apart from dealing with compensation is also concerned with access to free medical care for employees (this includes the setting up of dispensaries, hospitals and a panel of doctors whom employees can approach); and the Maternity Benefit Act which is concerned with providing paid medical leave to pregnant women workers, coupled with certain other benefits. Apart from these general laws, certain specific Acts too have been passed which, to a limited extent, also deal with workers' healthcare. These include the Beedi and Cigar Workers Act, the Mines Act, and others.

All these laws recognise that it is the responsibility of the employer to provide a safe work environment for his employees.

Over the years, these laws have been amended to bring in more and more detailed safety provisions for employees, though most, especially the safety laws, are implemented more in the breach.

Many of the enactments are over 50 years old and obviously a lot of litigation has taken place on these issues. The Workmen's Compensation Act and the ESI Act especially have been regularly used by employees who suffer from employment-related injuries and diseases. There is an overwhelming amount of litigation concerning whether a particular injury or disease is employment-related or not.

This article will look at other aspects, mainly those flowing from the Supreme Court's assertion that workers have a fundamental right to work in a healthy environment.

In *Consumer Education and Research Centre v Union of India*

(1), the Supreme Court was concerned with the rights of employees in the asbestos manufacturing industry. This was a public interest litigation on the work conditions and their health effects on workers.

The Supreme Court held that the right to health of a worker is an integral facet of a meaningful right to life, to have not only a meaningful existence but also robust health and vigour without which a worker would lead a life of misery. Lack of health denudes his livelihood. The compelling economic need to work in an industry should not be at the cost of the health and vigour of the worker. Facilities and opportunities, as enjoined in Article 38, should be provided to protect the health of the worker. Provisions for medical tests and treatment improve a worker's health, increasing production and making service more efficient. The court further held that *continued treatment, while in service or after retirement, is a moral, legal and constitutional concomitant duty of the employer and the State. Therefore, it must be held that the right to health and medical care is a fundamental right under 21 read with Article 39 (c), 41 and 43 of the Constitution to make the life of the workman meaningful and purposeful with dignity of person.*

Right to life includes protection of a worker's health and strength and is a minimum requirement enabling a person to live with dignity. *The State (central and state) government or an industry, public or private, is enjoined to take all such action which will promote health, strength and vigour of the workman during the period of employment and leisure and health even after retirement as basic essentials to live the life of health and happiness.*

The Supreme Court went on to observe that the right to human dignity, development of responsibility, social protection, right to rest and leisure are a worker's fundamental human rights, as assured by the Charter of Human Rights, in the Preamble and Articles 38 and 39 of the Constitution. Health enables a worker to enjoy the fruits of his labour, keeping him physically fit and mentally alert, and leading a successful life, economically, socially and culturally. *Medical facilities to protect the health of workers are, therefore, the fundamental and human rights of the workman.*

The court observed:

The Employees State Insurance Act and Workmen's

Compensation Act provide for payment of mandatory compensation for injury or death caused to the workman while in employment. Since the Act does not provide for payment of compensation after cessation of employment, it becomes necessary to protect such persons from the respective dates of cessation of their employment till date. Liquidated damages by way of compensation are accepted principles of compensation.

The court, while allowing the petition, ordered, in respect of the asbestos industry:

All the industries are directed

(1) to maintain and keep maintaining the health record of every worker up to a minimum period of 40 years from the beginning of the employment or 15 years after retirement or cessation of the employment whichever is later;

(2) the membrane filter test to detect asbestos fibre should be adopted by all the factories or establishments on a par with the Metalliferous Mines Regulations, 1961 and Vienna Convention and rules issued thereunder;

(3) all whether covered by Employees State Insurance Act or Workmen’s Compensation Act or otherwise are directed to compulsorily ensure health coverage to every worker;

(4)

(5) the Union and all the state governments are directed to consider inclusion of such of those small-scale factory or factories or industries to protect health hazards of the workers engaged in the manufacture of asbestos or its ancillary products;

(6) the appropriate inspector of factories in particular of the State of Gujarat, is directed to send all the workers, examined by the ESI hospital concerned, for re-examination by the National Institute of Occupational Health to detect whether all or any of them are suffering from asbestosis. In case of a positive finding, that all or any of them are suffering from occupational health hazards, each such worker shall be entitled to compensation in a sum of Rs 1 lakh payable by the factory or industry or establishment concerned within a period of three months from the date of certification by the National Institute of Occupational Health.

In *Rajangam, Secretary, Dist Beedi Worker’s Union v State of Tamil Nadu* (2), the issue concerned the work conditions of employees in beedi manufacturing and allied industries. A large number of children are employed in this occupation.

The Supreme Court passed directions:

In view of the health hazard involved in the manufacturing process, every worker including children, if employed, should be insured for a minimum amount of Rs 50,000 and the premium should be paid by the employer and the incidence should not be passed on to the workman.

Bandhua Mukti Morcha v Union of India (3) concerned the issue of release of bonded labourers especially from stone quarries in Haryana. The Supreme Court appointed a

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committee to look into work conditions in stone quarries. The committee’s report stated that due to a large number of stone-crushing machines operating at the site, the air was laden with dust, making it difficult to breathe. Workers were forced to work and were not allowed to leave the quarries. They did not even have clean water to drink and were living in *jhuggies* with stones piled one on top of the other as walls, and straw covering the top, which did not afford them any protection against the sun and the rain and which were so low that a person could hardly stand inside them. A few workers were suffering from tuberculosis. Workers were not paid compensation for injuries caused in accidents arising in the course of employment. There were no facilities for medical treatment or schooling for children.

The court held:

It is the fundamental right of everyone under Article 21 to live with human dignity, free from exploitation. This right to live with human dignity enshrined in Article 21 derives its life and breath from the Directive Principles of State Policy and particularly Clauses (e) and (f) of Article 39 and Articles 41 and 42 and at least, therefore, it must include protection of the health and strength of workers, men and women, and children of tender age, against abuse, opportunities and facilities for children to develop in a healthy manner and in conditions of freedom and dignity, educational facilities, just and humane conditions of work and maternity relief. These are the minimum requirements which must exist in order to enable a person to live with human dignity and neither the central nor the state government has the right to take any action which will deprive a person of the enjoyment of these basic essentials. Since the Directive Principles of State Policy contained in Clause (e) and (f) of Articles 39, 41 and 42 are not enforceable in a court of law, it may not be possible to compel the State through the judicial process to make provisions by statutory enactment or executive fiat for

ensuring these basic essentials which go to make up a life of human dignity, but where legislation is already enacted by the State providing these basic requirements to the persons, particularly belonging to weaker sections of the community and thus investing their right to live with basic human dignity, the State can certainly be obligated to ensure observance of such legislation, for inaction on the part of the State in securing implementation of such legislation would amount to denial of protection under Article 21, more so in the context of Article 256 which provides that the executive power of every state shall be so exercised as to ensure compliance with laws made by Parliament and any existing laws which apply in that state.

In the *Asiad Construction Workers case (4)*, another bench of the Supreme Court had expressed that the State is under a constitutional obligation to see that there is no violation of the fundamental right of any person, particularly when he belongs to a weaker section of the community and is unable to wage a legal battle against a strong and powerful opponent who is exploiting him. The central government is therefore bound to ensure observance of various social welfare and labour laws enacted by Parliament for the purpose of securing to the workmen a life of basic human dignity in compliance with the Directive Principles of State Policy. The State of Haryana must therefore ensure that mine leasees or contractors, to whom it is giving its mines for stone quarrying operations, observe various social welfare and labour laws enacted for the benefit of the workmen. This is a constitutional obligation which can be enforced against the central government and the State of Haryana by a writ petition under Article 32 (5).

The Supreme Court also issued various directions to the state and central governments; some of the important directions concerning health are:

- The central government and the government of Haryana will immediately ensure that mine leasees and stone-crusher owners start supplying clean drinking water to workers on a scale of at least two litres for every worker, by keeping suitable vessels in a shaded place at conveniently accessible points. Such vessels shall be kept in a clean and hygienic condition and shall be emptied, cleaned and refilled every day. The appropriate authorities of the central government and the government of Haryana will strictly supervise the enforcement of this direction and initiate necessary action if there are any defaults.
- The central government and state government will ensure that conservancy facilities in the form of latrines and urinals, in accordance with the provisions contained in Section 20 of the Mines Act, 1950 and Rules 33 to 36 of the Mines Rules, 1955 are provided.
- The central government and state government will take steps to immediately ensure that appropriate and adequate medical and first-aid facilities, as required by Section 21 of the Mines Act, 1952 and Rules 40 to 45-A of the Mines Rules, 1955 are provided to workers.
- The central government and government of Haryana will ensure that every worker who is required to carry out blasting with explosives is not only trained under the Mines Vocational Training Rules, 1966 but also holds first-aid qualification and carries a first-aid outfit whilst on duty, as required by Rule 45 of the Mines Rules, 1955.
- The central government and the state government will immediately take steps to ensure that proper and adequate medical treatment is provided by the mine leasees and owners of the stone-crushers to workers employed by them as also to members of their families, free of cost, and such medical assistance shall be made available to them without any cost of transportation or otherwise, and the doctor's fees as also the cost of medicines prescribed by the doctors, including hospitalisation charges, if any, shall also be reimbursed to them.
- The central government and state government will ensure that the provisions of the Maternity Benefit Act, 1961, the Maternity Benefit (Mines and Circus) Rules, 1963 and the Mines Creche Rules, 1966, where applicable in any particular stone quarry or stone-crusher unit, are given effect to by the mine leasees and stone-crusher owners.
- As soon as a worker employed in a stone quarry or stone-crusher unit receives an injury or contracts a disease in the course of his employment, the concerned mine leasee or stone-crusher unit owner shall immediately report this fact to the chief inspector or inspecting officers of the central government and/or the state government, and such inspecting officers shall immediately provide legal assistance to the worker with a view to enabling him to file a claim for compensation before the appropriate court or authority. They shall also ensure that such claims are pursued vigorously and the amount of compensation awarded to the worker is secured by him.
- Inspecting officers of the central government, as also of the state government, will visit every stone quarry and stone-crusher unit at least once a fortnight and ascertain whether any worker has been injured or is suffering from a disease or illness. If so, they will immediately take all necessary steps to provide medical and legal assistance.
- If the central government and government of Haryana fail to meet any of the obligations set out in Clauses 11, 13, 14 and 15 by the mine leasees and stone-crusher owners within the period specified in those respective clauses, such obligation or obligations to the extent to which they are not performed shall be carried out by the central government and the government of Haryana.

In the case of *Mangesh Salodkar vs Monsanto Chemicals of India Ltd* (Writ Petition No 2820 of 2003, decided by the Bombay High Court on July 13, 2006), the issue concerned conditions of work at plants run by Monsanto Ltd. The company manufactures pesticides and it was alleged that a particular worker had suffered a brain haemorrhage because of the work environment. He survived but suffered major

after-effects. He was paid Rs 3 lakh by the company towards medical expenses, but he filed a petition in the high court. The court initially appointed a commission headed by a retired judge of the high court. The commission, in turn, summoned documents from the factory inspectorate and asked certain experts to go into the conditions of work at the factory. A medical examination was also carried out on some of the other workers. During the pendency of the matter, the dispute between the workers and the employer was resolved as the employer agreed to pay an additional Rs 17.80 lakh to the concerned employee and Rs 7.40 lakh to other employees who had been affected. The commission accordingly filed a report with the high court. Since the dispute between employer and employees had been resolved, the court was not called upon to determine that aspect. However, it did go into other aspects concerning the right of employees to a safe workplace, etc.

The court held that the workers had a fundamental right to health in the workplace. In addition, it observed:

As this case demonstrates, the absence of updated medical records results in a virtual denial of access to justice. In the absence of information, factory workers and all those who espouse the cause of workers cannot realistically attempt to redress the systemic failure on the part of the regulated industry to maintain regulatory standards.

The court issued various directions, including the following:

(iv) The medical examination of workers which is to be conducted under Section 41 E of the Factories Act, 1948 should be such as would enable an identification of diseases and illnesses which are a likely outcome of the process and material used in the factory;

(v) Copies of medical records of workmen must be handed over to them as and when medical examinations are conducted and the appropriate government will consider the issuance of suitable directions mandating the permanent preservation of medical records in electronic form by factories engaged in hazardous processes;

(vi) In respect of factories involved in hazardous processes, safety and occupational health surveys as required by Section 91 A should invariably be carried out at the time of renewal of licences, apart from other times.

The right to a safe working environment has been recognised for nearly 80 years, although over the years it has expanded to include newer areas. In the beginning it was only recognition in principle. This was followed by the recognition that if a worker suffers an injury in the workplace, the employer is liable for compensation. Subsequently, this was expanded to include occupational diseases.

Over time, the modalities and procedures required to fulfil this right have been recognised, including regular medical examinations, handing over medical reports to workers, frequent inspections of work premises. Apart from health,

certain healthcare aspects too have been recognised. These include provisions under the ESI Act for free medical treatment to registered employees, and, under the Factories Act, for regular check-ups, first-aid kits and, in certain circumstances, ambulance rooms and vans.

On paper these laws appear very effective. Even otherwise, to a limited extent and for the organised workforce, they do provide a certain security: government employees have a number of schemes and provisions relating to medical benefits and healthcare. But by and large they have not been effective in dealing with the unorganised sector. To begin with, these laws do not apply to small-scale industries. Also, their implementation in many establishments to which they apply is difficult. For instance, if an employer has not deducted or deposited his ESI contribution, the employee is not entitled to avail of the benefits. Similarly, many occupational diseases are not covered by the Act and sometimes it is difficult to prove in court that a disease has occurred because of employment at a particular workplace.

The court's role, especially in recent times, has also not been very commendable. For instance, in 2006, the Supreme Court held, in Central Mine Planning and Design Institute Ltd (2006 1 SCC 377), that a casual worker was not entitled to benefits under the Workmen's Compensation Act.

In the case of Jyothi Adema (2006 5 SCC 513), a worker had a heart attack in the workplace and died. The Supreme Court, relying on the company doctor's certificate, held that since the job did not involve any stress or strain the worker was not entitled to compensation.

In the case of Shakuntala Shreshti (2007 11 SCC 668) too a worker died of a heart attack in the workplace. The Supreme Court held that the onus was on the worker's heir to prove that the heart attack had been caused by the work. In many cases this would be extremely difficult!

Therefore it can be said that whilst doing an excellent job passing broad directions (which most often are not implementable), the Supreme Court has been restricting the scope of various legislations when it deals with individual cases.

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Endnotes

1 AIR 1995 SC 922

2 SC dated 19/11/1991

3 AIR 1984 SC 802: (1984) 3 SCC 161

4 People's Union v Union of India (1982) 2 SCC 235

5 p 183, para 10

Heat, dust and chemical exposure

Photographs and text by P MADHAVAN



A boy from a soapstone crushing unit in Udaipur, Rajasthan.

Asbestos fibre, a toxic mineral, and soapstone are mostly found together; crushed soapstone is always contaminated with asbestos fibre.

Soapstone is mined and used to make talcum powder and other cosmetic products in India. Workers in these crushing units work for 10-12 hours a day. The factory and their bodies are almost always covered in dust. They wear no protection and must inhale the soapstone dust mixed with asbestos fibre whilst they work. They take the dust back home with them on their bodies and in their clothes.



A boy fills holes with explosives for stone blasting. The Government of India, in Metalliferous Mines Regulations 1961, specifies that only a trained certified blaster can be employed in the trade. There is a high incidence of blindness arising out of accidents in the mining industry where gunpowder is regularly used for blasting.



Andhra Pradesh is a granite hotspot, producing an estimated 10,7242 million cubic metres. The world-renowned Kuppam green and grey, black galaxy granite, Srikakulam blue, Warangal and Khammam black, the tan brown of Karimnagar, tiger skin of Chittoor, etc, occur in huge quantities here. Granite worth about Rs 3,000 million (US\$60 million) is exported from the state. There are significant opportunities for making novel products from polished granite; they enjoy good demand in the international market.

The condition of workers in the quarries, however, is pathetic. They are exposed to stone dust which leads to silicosis. Apart from diseases, the accident rate in the quarries is high due to improper safety apparatus and procedures.



Venomous snake bites are fairly common among tea garden workers. And while not nearly as dangerous, the overbearing presence of leeches in the rainy season — and it rains a lot — is a chronic nuisance for tea pluckers walking among the tea bushes.

The women have no protection from the rain or the leeches; some apply pesticide paste on their legs or wrap plastic sheets around their wrists to evade the pests.

A huge amount of pesticide is sprayed in tea plantations, affecting the workers. Toxic runoff from the plantations also contaminates water sources in the area.

Workers in the salt industry are constantly exposed to direct sunlight, salt dust and brine. Brine workers have a high risk of developing Pterygium (conjunctiva) probably due to exposure to sunlight reflected both from the brine surface and from salt crystals.

According to a Central Salt Commissioner's Office study on salt workers, India has around 150,000 salt workers who live with their families for eight months in a year in an extremely harsh environment without basic socio-economic amenities like drinking water, schools and hospitals. Or any knowledge of their statutory rights. This is a labour-intensive industry involving the risk of blindness, high blood pressure, skin lesions, knee injuries, back pain, exhaustion, tuberculosis and chronic cough. Also epidemics like malaria.

Coupled with this is the fact that most workers are from the backward castes; they are unorganised, are paid low wages (on a no-work-no-pay basis), and suffer exploitation at the hands of intermediaries in the salt business, including moneylenders.



Punjab's lethal pesticide legacy can be traced back to the Green Revolution of the 1960s and 1970s, when high-yielding varieties were introduced in the region's relatively arid Malwa belt.

Initially, the move was successful as yields and prices soared. But farmers soon discovered that the crop was highly susceptible to pests and ended up spending huge amounts on pesticides. As pests such as the pink bollworm and aphids became increasingly resistant to chemical spraying, farmers reacted by spraying more chemicals, sometimes even mixing two or more pesticides together.

Pesticide companies blame farmers for not adhering to prescribed quantities and not using protective gear. Workers who spray the chemicals blame landlords for not investing in protective gear, and companies for not properly informing them of the dangers of exposure to pesticides. Farmers claim it is greedy dealers who push them to spray more; they also blame the government for its failure to change policies after the harmful side-effects of the Green Revolution began showing. Research by Punjabi University in Patiala established evidence of DNA damage among agricultural workers exposed to pesticides. Damaged genes can give rise to a range of cancers as well as neurological and reproductive disorders.

Cotton workers are susceptible to various morbid health conditions ranging from chronic respiratory diseases (byssinosis), brought on by cotton dust inhalation, to anaemia due to nutritional deficiencies, varicose veins to lower back pain because of their work posture.

These workers in Bhatinda district, Punjab, work in this cotton mill without any personal protection, increasing their health risk.



Sanganer, near Jaipur in Rajasthan, is famous for its fine hand block printing in subdued colours. Hand block printing was patronised by the royal family. Sanganer has become an export hub for hand block prints. Screen-printing too is done here.

Most of the work in Sanganer is done manually. Before being dyed and screen-printed, the cotton cloth is acid bleached. The worker adds acid to the water and mixes it with his bare hands. He wears no protection for his eyes, nose, hands or legs.

The workers, mostly migrants from Bihar and Uttar Pradesh, suffer various lung and skin diseases, many of which go undiagnosed and untreated.



Textile industries must satisfy ever-increasing demands in terms of quality, variety, fastness of dyes, and other technical requirements.

A recent study conducted under the national Biodiversity Strategy and Action Plan (BSAP) reveals that chemical colours have all but wiped out India's vegetable dyes. The Indian textile industry now predominantly uses synthetic dyes like direct dyes, processing dyes, reactive dyes, etc. A large variety of dyes and chemicals are used in an attempt to come up with more attractive shades of fabrics in a highly competitive market.

These dyes pollute the environment and pose a threat to workers. Dyeing of cloth in Sanganer is done manually. The worker turns the cloth inside the dyeing pit, which contains chemical dyes, without any protection to his hands or legs.



Hospitals generate large amounts of infectious waste. Although most hospital waste is classified as general waste — similar in nature to municipal solid waste — and therefore can be disposed of in municipal landfills, a small proportion of infectious waste has to be managed properly in order to minimise the risk to public health.

The quantum of medical waste that is generated in India is estimated to be 1-2 kg per bed per day in a hospital, and 600 gm per bed per day at a general practitioner's clinic. A 100-bedded hospital, for example, will generate 100-200 kg of hospital waste per day. It is estimated that 5-10% of this comprises hazardous/infectious waste (5-10 kg per day).

The occupational health effects of hospital waste depend on the duration of exposure and the dose of toxic components that enters the worker's body from the waste. Unmanaged hospital waste, like this at Shillong General Hospital, constitutes a hazard to people because it contains toxic chemicals and pathogens ready to enter the human body via various routes.



Workers at an asbestos cement roofing sheet making factory in Tamil Nadu. Workers in the factory do not wear protective gear. Fine white cement dust mixed with asbestos is visible everywhere.

In the picture we see an asbestos cement sheet being cut. The process generates a lot of dust which is inhaled by the workers. During lunchtime, the workers sit inside the plant to eat their food as there are no basic facilities like a separate canteen or eating place. Some workers take a brief nap inside the plant after lunch.

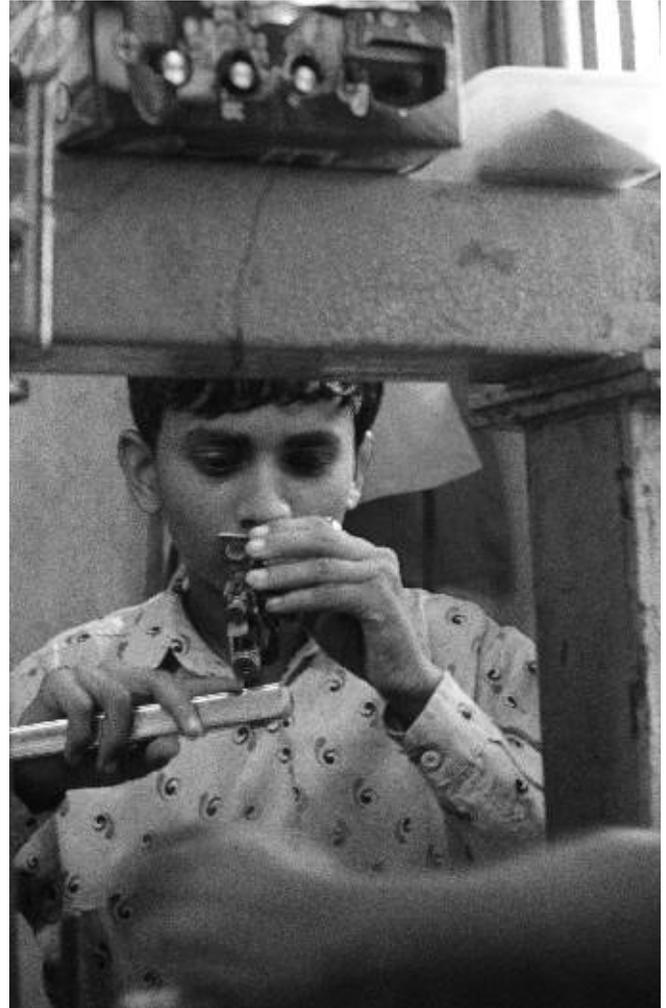
Contract workers are not unionised and are made to do more work than permanent workers. Even unions for permanent workers do not bother much about the occupational safety and health of workers.



A worker in a small-scale thermometer manufacturing unit. Processes and operations connected with the manufacture of mercury thermometers involve two stages. The first is making the glass parts and filling them with mercury; the second, calibrating them. From the safety point of view, the riskiest operation is calibration which is still being done using the most primitive methods.

The calibration process involves several tasks with exposed mercury in which vapour escapes into the air, contaminating the premises.

Since thermometer manufacturing is a small-scale industry in India, manufacturing facilities are usually small rooms with minimal ventilation.



India leads the world in diamond manufacturing, with a 60% share in value, 85% share in volume, and 92% share in the number of pieces produced. Rough diamonds have been mined in India since historic times. But it was only after 1962 that diamond processing, cutting and polishing developed as an industry.

Nearly 80% of India's natural diamond processing is done in Gujarat, and Surat and Navsari in particular.

In the early-'70s, the industry was estimated to have around 1,200 units providing employment to about 20,000 workers. Currently, there are more than 6,000 diamond cutting units in Surat, some of them employing over 1,000 persons each.

Breathing in cobalt-containing dust causes various respiratory problems including asthma and interstitial lung disease. Occupational asthma caused by cobalt chloride has been diagnosed in workers polishing diamonds in Surat, Gujarat's diamond city.

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The destruction of construction

Half-a-million labourers are employed in the natural stone industry of Rajasthan alone, so it's impossible to calculate exactly how many people toil all over India to supply the stone, cement and bricks of the boom-time construction industry. Yet, India still clings to elementary methods of extraction, using bonded labourers, many of them female and under 14, with absolutely no safeguards

ROGER MOODY

THE MARKET FOR CONSTRUCTION MATERIAL IS MASSIVE. China, the world's biggest producer and consumer of cement, churns out more than 30 billion tonnes of it a year. Sandstone production from the Indian state of Rajasthan doubled between 1995 and 2000 (from 4,106 to 8,369 million tonnes), meeting an estimated 10% of global demand (1). Such demand is accelerating, not just due to rising consumer expectations of "quality" housing and ever more roads; it's also the inevitable consequence of devastation caused by climate change and war. Just one project, the Iraqi government's 'Rebuild Iraq 2007', was worth at least a hundred billion dollars to building contractors, and such high returns are not exceptional. Hanson, one of the world's leading brick manufacturers, had assets of 8 billion pounds when taken over by Heidelberg Cement in mid-2007. French cement producer Lafarge made over 5 billion euros worth of sales in the third quarter of 2008 alone.

Due to their weight and size, big stones usually don't travel far. The main exceptions are certain grades of sandstone, granite, slate, limestone, quartzite and marble.

The extraction of all types of building stone carries implications for the health of workers and nearby communities. Marble is exported all over the globe, primarily from Italy, China and India where workers are lowered in 'cradles' into deep and precarious pits. High-quality cement also crosses borders with ease, as a new cohort of multinational cement suppliers has emerged over the past 10 years, consolidating control through mergers and acquisitions. Cimenterie Nationale of France, for example, accesses markets in Syria and Iraq, north Africa, the US and Canada, while some Indian manufacturers have been selling to the United Arab Emirates (2).

If you buy Gujarat Ambuja cement in India, in reality you're helping line the pockets of the Schmidheiny family of Switzerland. Their Holcim conglomerate snapped up the company for US\$800 million in 2005, marking the costliest foreign takeover of any Indian domestic company until that date (3).

Such world players naturally benefit from the lower cost of raw materials, fuel and labour available in the global South, especially in Asia. They have a clear and well-thought-out strategy of amalgamation with smaller, regionally-based companies.

Yet, on the ground, the two Asia-Pacific countries with the biggest potential for "growth" in construction — China and India — still cling to elementary methods of extraction, milling and processing, although mechanisation is gradually increasing. These operations centre on small pits and makeshift kilns in thousands of locations where labourers toil under derisory 'contracts' (often none at all), bound to often quasi-criminal middlemen. Commonly dubbed a 'mafia' in India, these entrepreneurs are not a peculiarly Asian breed. As two British researchers observed in 2004: "It is not Polish bricklayers who drag UK construction down — rather, the sector's brutish nature makes it rely, for much of its existence, upon the almost feudal practice of day labouring. (4)"

'Broken — just like the stone we break'

Though Turkey, Iran, Brazil and South Africa are among the rising exporters of natural stone (5), India and China are by far the dominant producers. The world's most populous country has more quarries than its neighbour, but also imports Indian stone before 'dressing' and re-exporting it, so trade statistics can be misleading. Regrettably, there is a dearth of detail on working conditions in Chinese mines in general, and quarries in particular. But, according to government statistics, 75% of all occupational diseases in the country is pneumoconiosis (6), of which the primary causes are dust in coal mines, silica inhalation (most acute during sand-blasting) and noxious emissions from cement kilns (7).

It's impossible to calculate exactly how many people toil by the sweat of their brow to supply the bedrock of our infrastructure and to beautify our shelters. One source puts the global figure of direct employees in the construction industry at 110 million (8). But this is inevitably a guesstimate, probably representing only half the true number. Consider that there are as many as 6,000 types of natural stone being worked on in any given day, and that 9 million tonnes were imported into the European Union alone in 2007 (9). It requires an awful lot of fingers — many of them tiny — to deliver such variety and tonnage.

A large proportion of the global workforce is peripatetic, seasonal, or recruited locally for a specific project — a bypass, a bridge or a block of flats. Hundreds of thousands of labourers are female, and under 14 years of age;



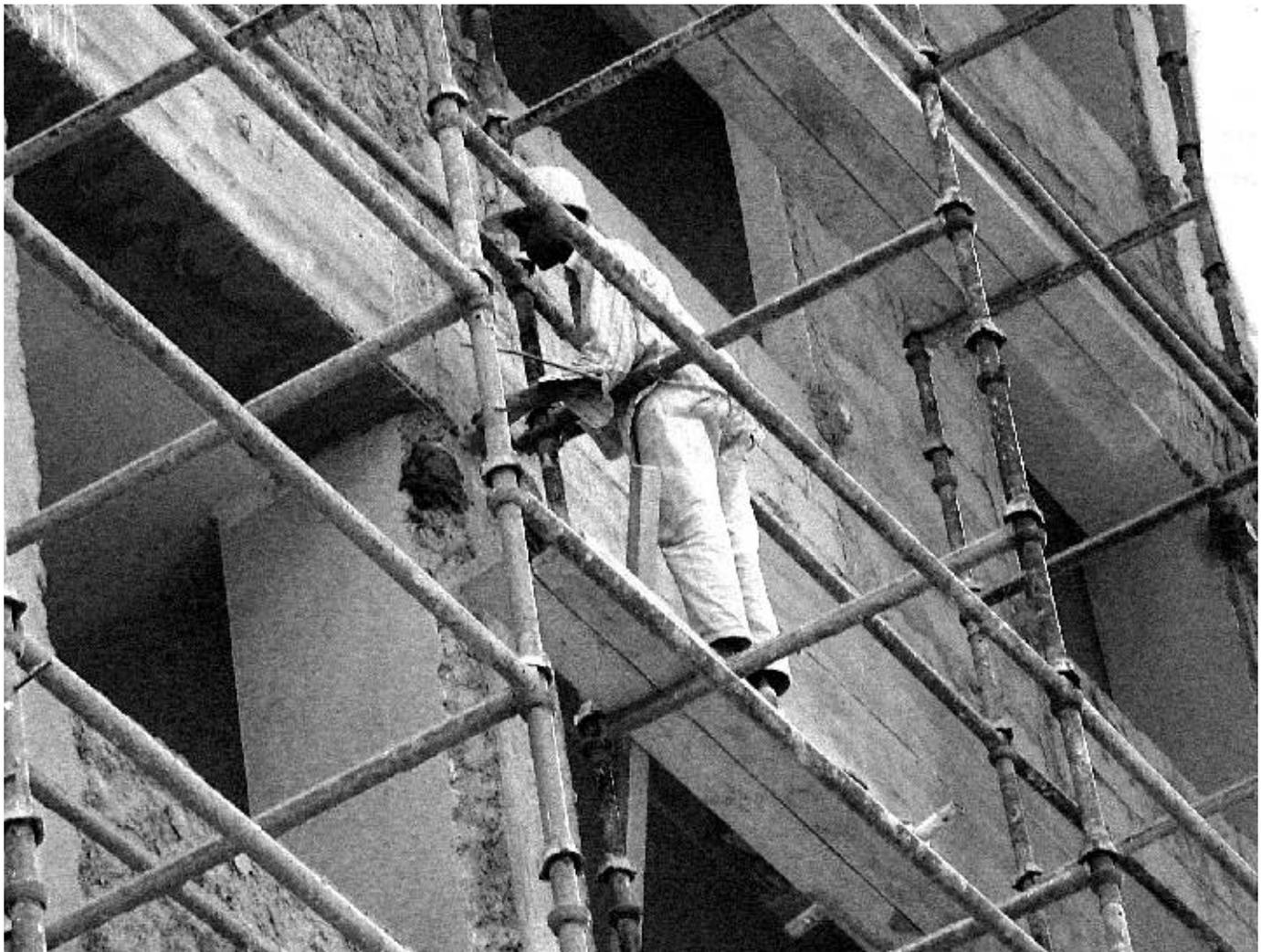
unregistered because they have been illegally recruited. Conditions for construction employees, wherever they work around the world, are always potentially hazardous, as recognised by key ILO conventions (10). In theory, these standards are incorporated into national legislation by virtually all those countries where violations are most common. However, the rules are consistently breached — and not just in South Asia. A 2005 survey of one site in Zambia found “a number of women with children strapped to their backs, crushing the stones without any protective clothing” (11).

Undoubtedly the most insidious impacts derive from mine owners’ use of ‘bonded labour’, a system synonymous with slavery. It makes “owing one’s soul to the company store” — that immortal jingle coined by country and western singer Merle Travis, to reflect his family’s experience in the Kentucky coal mines of the 1930s — seem a mild irritant in comparison (12).

Bonded labour condemns millions of women and children to work off debts, and the interest accrued on them, by a male

head of the family, sometimes for several generations. The system is most prevalent in India, and particularly damaging to women, despite the government’s ratification, more than 50 years ago, of ILO Convention No 29 against forced labour, and its promulgating its own Bonded Labour System (Abolition) Act in 1976. The latter purportedly frees all bonded labourers and guarantees total liquidation of their debts. But examples of successful enforcement are few and far between. It would be a grave mistake to dismiss widespread contraventions of the rules as merely capricious, or to blame them solely on site foremen and local bosses. Burma’s own forced labour, which is ubiquitous in quarries, gem mines and on road and rail construction projects, is press-ganged by the military regime itself.

In India and Pakistan, abuse of workers is often systemic, rooted in discrimination and casteism, endorsed by powerful political figures at the local and state level. The bigger the potential profits in delivery from mine to manufacture, the more lucrative will be the corrupt rake-offs. A 2005 study judged that half-a-million Indian workers are employed in



the natural stone industry in Rajasthan alone (13). Examining conditions in one village, Budhpura, the authors commented: "Quarry owners are generally not involved in retail selling, processing or exporting of sandstone... (The) buyers are generally traders with collection centres or warehouses in Kota, Jaipur, or in Delhi... sell(ing) crude or roughly trimmed sandstone to domestic and international customers. (14)"

The majority of stone cutters in the district belong to the so-called scheduled castes. However, decision-making lies entirely in the hands of the dominant upper castes who, in the Budhpura village elections of February 2005, won all the seats, with the vital posts going to quarry owners (15). Although discrimination against scheduled castes is expressly forbidden under Article 15 of the Indian Constitution, industrial encroachment has forced many of them to sell land to the government's revenue department. Their farms and plots are then leased out for quarrying and — in an exiguous inversion of natural justice — the farmers end up working as quarry labourers themselves, or as petty contractors.

The layers of quarry dust that settle on the leaves stall the growth and flowering of crops. Water levels in wells and ponds in the (Budhpura) area dropped drastically due to the frequent deepening of quarry pits around the village, rendering them ideal breeding grounds for malarial mosquitoes (16). Wages have fallen too — by up to 15% of late, despite the increase in sandstone exports. Hired out to sub-contractors, the labour squads never work directly under the quarry owner. "(They) cannot claim any medical expenses, insurance cover, earned holidays, or any other compensation in the event of accident or death. No records are maintained... making it difficult for them to avail or claim compensation or any other benefits accrued on the quarrying company or from the government. (17)" Basic sanitation and adequate fresh water are non-existent. Instead, most residents use quarry water to wash clothes and bathe, and women walk up to 2 km for drinking water.

As for environmental despoliation: "In the Budhpura quarries... the amount of usable stone has never been more than 25% of all the material upturned... The quarrying waste is dumped in forest areas as well as on land belonging to the revenue department, generally without permission, destroying the natural vegetation and ecology of the area." If a quarry proves no longer profitable, "the owner abandons it... to move on to new areas... There is no specific legislation in India which covers the requirements for environmental protection during the closure of a mine"(18).

Many observers (including this author) can testify that basic safeguards, mandatory for quarry workers in the global North, are almost invariably not applied to stone breakers in South Asia. Occasionally they wear helmets, sometimes boots, but only exceptionally are they provided with breathing masks, gloves and special clothing. Mine owners may claim to offer all these items, blaming their workers for

Fighting back: Some examples

April 2003-2005: Three Punjabi youths from India, tricked by human traffickers into believing they would get lucrative jobs in western countries, are instead sold by agents to Lebanese brick kilns in 2003. After further payment for a flight to Istanbul, they are arrested by the Turkish authorities and sent to Iran where they suffer three months in jail. Finally they are deported to Pakistan, allowed to spend a year as refugees in a Hindu temple, and returned to India in early-2005 (28).

2006: 'Courage Village' is established in Pakistan's Punjab province as a safe haven for freed brick kiln and agricultural labourers, thanks to the efforts of peace activist Aslam Khwaja and businessman Kaleem Sheikh (29).

January 2006: Forty-four bonded labourers, including 28 children, from a brick kiln in Ranchi, capital of the Indian state of Jharkhand, are rescued by the police. They were receiving nothing but food for their toil. The police took action after one bonded labourer managed to escape and inform the police about the plight of the others (30).

not requesting them; in practice, the equipment rarely exists. In any case, day labourers will rarely ask for protective gear, either because it's cumbersome to wear in the heat, or they fear being sacked as potential troublemakers. Consequently, they always face the dangers of rock falls, blasting, and contracting serious occupational diseases, specifically silicosis, pneumoconiosis, bronchitis and tuberculosis. They take their meals in or around the pits, have to urinate and defecate behind trees (especially humiliating for women) and, if seriously injured, customarily have to travel miles before reaching hospital. Accident compensation, when there is any, is negligible, while pensions, healthcare or the right to organise a union are consistently denied.

But this type of attrition doesn't stop (or even start) at the mining site. It is also grounded in a fundamental failure — shared by regulatory regimes and the public perception — to distinguish the digging up of rocks from other forms of mining such as open-pit coal, iron, bauxite or diamond extraction, where workers face similar risks. By operating a 'quarry', bosses in India can safely ignore the environmental and workplace standards legally imposed on other mining operations. The duty of inspecting stone mines resides with the state, not central, government; trained officers from the Indian Bureau of Mines and Directorate General of Mine Safety (DGMS) have no authority to control what goes on. Pits with a design output below a certain tonnage do not require environmental impact assessments, so most quarries will be exempt. Nonetheless, owners will regularly apply for several leases under different names, effectively ending up with plots that extend to five or more hectares.

Managers of metal mines also wash their hands of responsibility to workers by depending on the pernicious contract labour system. The author visited several such Indian operations between 2000 and 2006. One iron mine in

Orissa was officially operated by the state mining company in a joint venture with UK's Rio Tinto. In practice, the companies bought ore from a haulage firm employing 20 or so local men and youths. Under the lea of a crumbling, almost vertical cliff, they smashed rocks by sledgehammer, sorting and pitching them into trucks with their bare hands. The reward was the national minimum wage of roughly one dollar for a 10-hour day, but only provided they collectively filled a 10-tonne truck. A high-ranking Indian team, which inspected iron ore and granite mines in the Bellary district of Karnataka in April 2005, was appalled to discover around 200,000 girls and boys, from the ages of five years up, "working in the most hazardous conditions and leading a 'pits' of an existence between survival and death". It concluded that "(t)he entire chain of mining operators, including central and state governments, all the private, public and illegal mine owners in the district, the traders, buyers, national and multinational companies connected to iron ore mining and processing, contractors and others involved in the mine extraction, processing and marketing, are equally responsible for the existence of child labour. (19)"

Gradually — but far too sluggishly — the health predicament of South Asian and Chinese stone breakers is being addressed. Some Indian state governments now have legislation on their books designed to tackle silicosis as an occupational disease; officially, the diagnosis of pneumoconiosis covers silicosis as well as asbestosis and any disease accompanied by pulmonary tuberculosis (TB). Unfortunately, enforcement of the law is weak at best, while patchy implementation has led to further insecurity. After agitation by residents of Delhi's Lal Kuan area in 1992, several silica stone quarries were closed by order of the Indian Supreme Court. This left the mainly tribal workers stranded and bereft of compensation, since they could not prove a link between their silicosis and their previous employment. It was not for another 15 years that the Lal Kuan workers achieved any success, when India's Supreme Court imposed restrictions on dust exposure in 10 of the country's states ('Azad delivers — but Delhi govt?', *Civil Society*, New Delhi, March 1, 2007).

All too often, driven by expediency, a doctor will wrongly identify TB as the sole culprit even though it is a direct result of silicosis, displaying similar symptoms. According to Dr T K Joshi of the department of occupational and environmental medicine at the Maulana Azad Medical College in Delhi, silica is "perhaps the most toxic particulate matter that can destroy human life... Crystalline silica dust causes a fibrogenic reaction in the lungs. The ability to breathe is compromised. Blood vessels get obstructed and you could have heart failure. It also has the unique ability to destroy macrophages in the lungs. Therefore, immunity is compromised... In crowded places like India, it is impossible not to be exposed to tubercule bacilli. Those who have silicosis will also get TB, but the difference is that TB can be cured whereas silicosis is irreversible"(20).

A high-ranking Indian team, which inspected iron ore and granite mines in the Bellary district of Karnataka in April 2005, was appalled to discover around 200,000 girls and boys, from the ages of five years up, "working in the most hazardous conditions and leading a 'pits' of an existence between survival and death"

Bricks in the wall

The scouring out of clay, fashioning it with water, and subsequent baking into pots or bricks attracts little critical attention. However, clay mining is far from innocent of causing damage to water supplies and spreading silica dust. In early-2005, several thousand villagers near Trivandrum, capital of the Indian state of Kerala, indicted seven local clay mining outfits before the state's Human Rights Commission for ruthlessly depleting their water supplies, causing the drying up of many wells (21).

By far the biggest market for clay is the brick making industry, identified in 2001 by a Pakistan human rights commission as exploiting "the most deprived section of society" (22). The commission found that, of 300 brick kilns in Multan city alone, only 98 were registered with the labour department. Workers were legally entitled to two dollars daily for making 1,000 bricks, but claimed never to receive even this derisory amount. Rape of women, and the imprisonment of dissident male workers in chains by kiln owners, was common practice. Although labourers have a constitutional right to establish their own union, no one had ventured to do so. Bonded labour practices were common:

"The (workers) wake up early in the morning irrespective of the season, and prepare mud to produce bricks with cold water... They (take) loans from their kiln owner for marriages of their daughters or sons, which they are not able to pay back throughout their lives, because the interest rate on the loan is so high that the actual loan remains payable while the instalments paid only cover the interest. (23)"

A group of brick kiln workers in Lahore in 2006 did dare to

organise. Shortly afterwards, one of its leaders was attacked by an armed group of men and beaten to death in his own courtyard. Shoukat Masih and his family had spent many years opposing the use of bonded labour ('haris' or 'debt slaves') in Punjab's brick kilns. Finally, he helped form a union to file complaints with the government, which were usually ignored. In late-2005, Masih was sold by one brick kiln owner to another for \$3,300, without his knowledge or consent. Thereupon he told his story to a local reporter, triggering the attack that felled him. Masih's father is convinced his son was targeted by a secretive protection racket called 'the SP group', allegedly set up by local kiln owners (24).

Cement: The burning question

Cement is anything but a pure product, conjured up through some benevolent alchemy. Depending on the quality desired, its basic ingredient of mined limestone requires the addition of gypsum, quarried shale, clay, marble, iron ore, calcium silicate, dolomite, and chlorine. For some brands, high alumina clays — a by-product of bauxite mining — are much sought after. Sulphate-rich rocks go into the manufacture of 'super sulphate' cement. Most worrying of all, in several countries, chrysotile asbestos — of which Russia and Canada are the key miners and exporters — is added to increase fire resistance. Despite being banned in 40 countries, including throughout the European Union and the US, India's demand for these carcinogenic fibres has been growing by around 9% a year, both for cement and housing (including schools) (25).

Cement mixes are fired together at very high temperatures in kilns fuelled by almost anything that will ignite. The output of this 'miraculous mortar' therefore carries a triple jeopardy. Mining of limestone (which itself is also burned in kilns) gives rise to vast clouds of silica-laden dust and spoil heaps. The raw material contains toxics (sulphates, sulphides, iron pyrites, nitrogen) which, if not captured in the burning process, will deliver sulphur dioxide to the atmosphere, thus triggering acid rain. Conventional fuels (coal, coke, gas, timber, oil) fed to the kilns are often high in sulphur, nitrogen and heavy metals; they are also a major factor in global climate change (26).

The world's big cement manufacturers have taken some steps to limit these egregious impacts. Modern plants install flue gas de-sulphurisation, reduce nitrous oxide output, limit input of high alkaline materials, and capture some of the particulates to avert the potential choking of entire local populations. However, these measures in themselves do not guarantee a significant lowering of greenhouse gas emissions, nor do they cope with other types of pollution; nor may they be applied in different countries even by the same company. Faith in 'tough' enforcement regimes can also be sorely misplaced. Up to now, no limits on mercury emissions have been applied to US cement plants because the federal Environmental Protection Agency (EPA) has "concluded no reasonably priced controls are available (sic)" (27). This malfeasance was dramatically exposed in August 2006, when

Oregon's department of environmental quality revealed that state-based cement kilns were coughing out more airborne mercury than any other single industrial sector.

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Fashionable and famous — at the garment worker's cost

India's success in the global garments market has been at the cost of the basic rights of this industry's predominantly female and migrant labour force. These women work in sweatshops that demand impossible targets of 100-120 garments an hour, with virtually no breaks allowed. Eighty per cent of TB patients registered with the ESIC, accordingly to one official, are garment workers exposed to cotton fluff

SUHASINI SINGH

INDIA HAS MADE A NAME for itself as a garment manufacturing centre of global renown. The textiles and garments industry contributes 16.63% of India's export earnings; around 45% of this comes from garment exports alone. The garments industry provides employment to around 3.5 million people across the country. Delhi, Mumbai, Tirupur, Bangalore and Chennai are the five major garment production hubs, producing exclusively for the exports market. Karnataka has a sizeable presence in the garments and textiles sector; many well-known multinational brands have chosen this state to set up their global sourcing centres.

Leading garment manufacturers like Tommy Hilfiger, Marks & Spencer, Gap, H&M, Matalan, Mothercare, George, etc, employ Karnataka's largest unorganised workforce. In Bangalore alone there are 500,000 workers in the garments industry, in 1,200 factories spread across the city.

But India's niche in the global garments market has been carved out at the cost of lakhs of workers in this industry's predominantly female and migrant labour force.

"My salary gets cut if I take even a day's holiday. All of us feel that there is no job security; we are under constant threat of being fired by our supervisors," says Banu, a garment worker in the Hosur Road area of Bangalore. "Minor mistakes in the work, or non-completion of targets could trigger the management to ask us to leave the job," she adds.

Roughly 80% of garment workers are women between the ages of 21 and 25. Most are semi-skilled migrant workers and the sole earning members in their families.

The phasing out of the Multi Fibre Agreement (MFA) in 2005 was a great opportunity for small factories to increase garment production for exports. As the market became highly competitive, only factories that could produce at the lowest cost survived; many were forced to close shop. Thus, stiff competition was inevitable among different factories in the country and also among the countries of the third world that were able to produce garments at a much lower cost than India. There were instances where India lost orders to China and Bangladesh. Just a couple of years ago, India was at second position in garment exports, after China; today it stands sixth with countries like Bangladesh and Vietnam higher up the ladder. Again, the pressure to produce at

lower and lower costs is adversely impacting the worker at the lowest end of the chain.

Harassment at the workplace

The work of garment workers is physically demanding, calling for impossible targets of 100-120 garments an hour as against the normal rate of 60-70 pieces. And this is made more punishing by the verbal harassment employed to goad women to work faster and longer hours, often skipping lunch to meet their targets.

"I have experienced verbal abuse when I don't meet the production targets. Cloth pieces are thrown at my face," says Shyla, a garment factory worker in Bangalore. "The supervisors shout at us, asking: 'Why have you come to work if you can't work hard? You're getting a salary, aren't you? Why don't you stay at home if you're so slow?'"

"How can you work in peace with somebody shouting at you, ridiculing you, your being a woman, your work, your poverty," Shyla asks. Workers point out that verbal harassment using hurtful, derogatory and gender-insensitive language is an important reason why women leave work.

They say the management is insensitive to the condition of workers. They complain that women who come in late or take leave without notice are suspended and reinstated only after strict disciplinary action. Often, women are prevented from leaving the factory during work hours even for genuine medical reasons. One woman told me that a garment worker who developed labour pains was not allowed to leave work. She lost her child because she didn't reach the hospital in time.

More than a decade after the Supreme Court issued the landmark Visakha judgment in 1997 mandating the creation of gender committees at all workplaces to deal with cases of sexual harassment, this direction is largely being ignored by garment industry employers. In the absence of a non-threatening space where women can report instances of sexual harassment, workers suffer the sexually-loaded comments passed by supervisors in silence. "The supervisor talks to me in a personal way. He does not touch me, but I feel harassed by his way of talking. I have to tolerate it if I want to keep my job," says one worker.

Health: Whose concern is it anyway?

Garment factory work (tailoring, cutting cloth, fixing

buttons, finishing, checking, ironing, packing) is repetitive and monotonous, involving long hours sitting or standing in one position. A 2008 study by Cividep on the Bangalore garments industry reported that nearly half the respondents from among women workers complained of backaches and breathing problems linked to their work.

"I suffer from backache, leg and knee pain due to constant bending over the table to see the needle and running the machine with my leg," says Shylaja, a worker interviewed for the study.

Injuries are common, especially puncture wounds from needles on the fingertips and nails as the cloth is passed through heavy vibrating mechanised machines. A worker can ill afford to report this as she may be declared unfit and removed from the job. In cases of severe puncture wounds through the tips of the fingers, women have had to be hospitalised and have had to stay away from work for at least a month.

Mechanisation brings with it noise; there are no studies or regular checks to detect sound-induced hearing loss. Noise is also a known risk factor for stress.

Very few workers get masks to wear during work. They are constantly engulfed in the fluff of cut pieces of cloth. Women complain of tightness in the chest, breathing difficulties, allergic sneezing, persistent coughs and runny noses. There were no official statistics available at the Employees State Insurance Scheme (ESIS) or its management on the prevalence of respiratory problems or byssinosis, although illnesses like asthma and tuberculosis are frequently reported. The ESI medical officer, in conversation with activists of the Garment Mahila Karmikara Munnade (Garment Women Workers Front), expressed concern over the fact that 80% of all tuberculosis patients registered with the ESI are garment workers.

Workers contribute to the ESI scheme and are entitled to accessible healthcare and social benefits. But this is not the case in practice.

Long hours of sitting, very little water intake, and the fear of going to the toilet causes constipation and piles. In some sweatshops, supervisors keep a check on the number of times a worker takes a toilet break. If it is frequent the worker is asked to leave the job as it is believed speed of production is hampered. As a result, many workers do not drink much water.

The triple burden of household work, looking after children and being productive in the job has a longstanding effect on women's health. They skip their morning meal to rush to the factory, they skip their lunch if there is pressure to meet targets at work, and, when they get home in the evening, the responsibilities of cooking, cleaning and caring take precedence. Shyla says: "We are always on the run; we eat just to satisfy our hunger pangs. It is so difficult to sit down and eat peacefully!"

This circle of hard work, irregular food habits, reduced food

and water intake and limited resources in the context of the gendered role of women leads to undernourishment. Anaemia among women garment workers and complaints of gastric ulcers are very common.

Under the Factories Act, crèche facilities, drinking water facilities, and a canteen have to be made available to workers. Often crèches do exist but are underutilised. Factories provide water, but with no guarantee of its quality. Indeed, in 2004 and 2008 there were outbreaks in Bangalore of gastroenteritis due to contaminated drinking water. In both cases women suffered great physical discomfort, but no action was taken by the regulatory authorities to put in place a mechanism to monitor the quality of drinking water. In many factories, canteens are poorly ventilated and too small to accommodate all the workers. As a consequence, women are forced to sit and eat on the roadside or in an adjoining space.

Maintaining the balance

On average, a family spends Rs 500-600 a week on food and medical care. Although the minimum wage is required to be revised every three to five years, this was last done in June 2001! Taking care of a family on an income of Rs 3,500 (average monthly income of a garment worker) in a city like Bangalore is next to impossible. The only alternative is to borrow, leading to indebtedness.

The garments industry, second in terms of foreign exchange earnings, has not escaped the impact of the global financial crisis; orders from the West are drying up. Being a labour-intensive sector, the brunt of this has been borne by garment workers by way of job and wage cuts. One company in Mysore Road has stopped providing transportation to people from nearby villages, as a cost-cutting measure. With no transport facilities from their village, around 600 workers have indirectly been thrown out of their job.

Retrenchment had always been a problem among garment workers. Often, when a worker takes leave for personal or medical reasons she is not reinstated. Sometimes management tells workers "to take leave" after five years are up, to avoid paying benefits. When the workers return they are not always given their jobs back. If this happens, especially these days, it's next to impossible to find a new job in another factory.

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The dust that kills

The longest word in the English language is the full form of silicosis. No one knows it, just as no one knows that 10 million workers in India are at risk of silicosis, a fatal disease often mistaken for tuberculosis. Some industries, like the slate pencil industry in Mandsaur, report a 59% prevalence of silicosis

JAGDISH PATEL

DUST MAY SEEM INCONSEQUENTIAL, but it can — and does — kill. Dust is a serious occupational hazard and a major cause of occupational disease and work-induced mortality. Workplace dust often contains toxic elements. Respiratory illness among workers in the stone crushing industry is a significant problem all over the world. It's estimated that 1 million people worldwide die annually from respiratory illnesses; 1.7 million are affected in India alone. Billions of rupees are spent annually on their treatment (1).

At least 100,000 workers are reported to have died due to exposure to asbestos, according to the International Labour Organisation. Workers at the Sheffield factory in England, who were exposed to iron dust whilst sharpening knives and scissors, were known to die at a very young age, of siderosis, a lung disease caused by iron dust. Coal miners exposed to coal dust suffer coal miners' pneumoconiosis, while workers exposed to cotton, jute or hemp dust could get byssinosis.

Workers engaged in various different industrial operations are exposed to dust: size reduction, surface cleaning (grinding, buffing, fettling), materials cleaning (like cotton cleaning, using combing machines), cutting, mixing, spraying/sprinkling, packing, materials handling (charging, downloading/dumping), housekeeping (road cleaning, etc), repair and maintenance, drilling, etc.

Crystalline silica, asbestos, soft coal, metal dust and other materials have a fibrogenic effect on the lungs. They also irritate the eyes and respiratory tract, causing reddening, swelling, itching, watering, sneezing, coughing and throat irritation. Dust of vegetable or animal origin can cause bronchial asthma or alveolitis; they include flour, pollen, animal hair, feathers, mould, fungus and insects. Bakers, farmers, librarians, bird breeders, zoo workers and others are particularly at risk.

Prevalence of silicosis

One of the oldest known occupational diseases, silicosis is caused by the inhalation of silica dust. The full name of the illness is 45 letters long (the longest word in the English language) — pneumonoultramicroscopicsilicovolcanokoniosis (2).

Workers in stone crushing, construction, stone quarries, ceramics, glass (all sorts of glass, including electrical lamps, tubes used for TVs and computer screens, glass linings of vessels, etc), foundries, slate pencils, agate polishing, all mining, manufacture of silicates, abrasives and refractory

bricks, specific types of cement, boiler cleaning, kaolin, soapstone, granite processing, talc, emery stone, etc, face the risk of silicosis, possibly the deadliest of the dust-induced occupational diseases.

Since silica is abundant in the earth's crust, many occupations pose the threat of silica dust inhalation. Exposure to silica dust could lead to different respiratory ailments including silicosis, lung cancer, chronic obstructive lung disease (COPD), bronchitis and emphysema. Pulmonary TB and airway diseases are also believed to be associated with silica exposure, as also auto-immune disorders and chronic renal disease (2).

Although silicosis is fatal and has no cure, it can be prevented if the inhalation of silica dust is minimised. Silica dust of two to five micron size, when inhaled, travels up to the alveoli of the lungs. Sizes larger than this are filtered through the nose or thrown out by cilia in the windpipe. Though highly toxic, silica dust has no smell and offers no warning to the worker. Dust levels can be reduced through engineering controls and good maintenance of the system. The Factories Act has a provision for maintenance of dust levels at work. But many workplaces are not covered by the Act.

In China, 500,000 cases of silicosis were reported between 1991 and 1995. In Korea and China, *tatami* (a carpet woven from *tatami* grass) workers are reported to have contracted silicosis. In Brazil, workers engaged in digging wells have reported a 26% prevalence of silicosis. It is estimated that in India 10 million workers are at risk of the disease (3).

Silicosis in India

In India, silicosis was first diagnosed among Kolar gold mine workers in Karnataka in 1948. Later it was reported in mica miners in Bihar.

Every state in India has reported cases of silicosis. Guntur, in Andhra Pradesh supports thousands of stone crushing units spread across the city. Workers from these units are frequently seen in the pulmonary section of hospitals; they reportedly occupy around 60% of beds here (1).

In Bahargaon village in Pakur district, West Bengal (the country's single largest producer and supplier of granite ballast to Bangladesh), every second labourer working in the stone crushing factories suffers from silicosis or tuberculosis. Bahargaon and adjoining areas host 500 such units that employ nearly 37,500 people.

The slate pencil industry in Mandsaur in Madhya Pradesh reports a huge 59% prevalence of silicosis. One village in Andhra Pradesh is even known as Mundaralla Thanda (Widows' Village) because most of the men in the village have died of silicosis contracted whilst working in stone crushing units.

Godhra is a small town in Gujarat that shot to prominence in 2002 when a railway coach caught fire, killing 59. The incident sparked communal violence all over the state. But few know that Godhra is also a death trap for many tribals as it supports as many as 15 stone crushing units. Alarmed at the amount of dust the units generate, the Gujarat Industrial Development Corporation asked the National Institute of Occupational Health (NIOH) to conduct a study.

The study revealed extremely high levels of silica dust in the workplace. It noted that dust levels were so high that just six months of exposure could cause silicosis. Indeed, hundreds of tribal workers from Gujarat, Rajasthan and Madhya Pradesh have died here in the last 20 years.

A 2006 survey carried out by Khedut Mazdoor Chetna Sangath, a local union of peasants and workers, with assistance from Shilpi Kendra, an Indore-based NGO that works with public health, found that 21 people had died in Malvai village (Shilpi Kendra 2007). By May this year, another 12 had died. Of the 23 families whose members worked in

stone crushing units in Gujarat, only four adults survive (5). And they are a sad sight. Ramla Thavaria, who looks like a stick figure in a Warli painting gone wrong, lies on a *charpai* outside his hut. He used to work in Jyoti Minerals, Balasinor, three years ago, with a team of 14 labourers recruited by Dursingh, a *mukadam* (leader) who was also a relative. Dursingh is now dead, another victim of silicosis. For Rs 50 a day, Ramla fed the crusher with quartz rocks and bagged the silica powder that was produced. The work was strenuous. In the course of their work, Ramla and his fellow workers inhaled huge quantities of the fine silica dust that swirled around them like a fog. After four months of work in the lean summer season, Ramla returned to his home in Malvai. Within a year he fell ill, coughing and wheezing and slowly losing strength in his limbs. Silica choked his lungs, scarring the tissue and impairing oxygen uptake. His muscles simply melted away. Now Ramla cannot work at all and is confined to his bed, confronting imminent death and worrying about how to feed his six children (5).

It is much the same story in Chitrodiya, in Gujarat's Dahod district. Shailesh Soka Damor died on April 22, 2007, at the young age of 19. His sister-in-law Sumitra also died young, in 2005, leaving behind a one-year-old child. Shailesh's brother (Sumitra's husband) Subhash is now sick. He cannot



earn anymore and his old mother has to work in the fields to support them.

Suresh Jokha, from the same village, died on July 10, 2005. His father died on the 16th of the same month.

All of them are suspected to have died of silicosis. In fact, since 2005, at least 15 people from Chitrodiya have succumbed to silicosis.

Shakarpur is 200 km away from Dahod. In October 2007, Pratap Gohil, an agate polisher, died in a hospital in Khambhat (the nearest town). Even as his body was being brought back to the village, wails were heard from another house. They were told that Kantibhai, another agate polisher, had also succumbed.

A couple of weeks later, on October 15, two more agate workers died — Bhikhaji Vankar and Raman Vaghela. In 2007, the death toll in this village was 19; in 2008, 20 polishers died. People in this small village have been acquainted with silicosis for the past 60 years.

In Ahmedabad, in 2001, I met a man at the ESIC (Employees State Insurance Corporation) special medical board. He was accompanying his widowed sister-in-law who was meeting with the medical board in connection with a compensation claim for her dead husband. He told me he knew six workers, all of them young, who had recently died. They all worked in a foundry in Junagadh as sand blasters.

Sand blasting has been banned under the Gujarat Factory Rules since 1974. When I visited Junagadh later, I came across six workers with silicosis working alongside their colleagues.

Stigma and discrimination

Stigma and discrimination associated with HIV/AIDS is well known. But silicosis carries its own stigma. Workers and members of the community, including doctors, label the disease TB since the symptoms are similar. It is in fact common for a silicosis patient to also contract TB. And since TB is infectious, the patient is often isolated from his own family.

Many young people in the agate industry do not find brides as their occupation is known to kill at a young age. In tribal areas of Gujarat, once a man dies of silicosis, his widow is thrown out of the house. Hundreds of widows have been forced to return to their parents. In the agate industry, if a man dies of silicosis, his wife has to continue working on the wheel, shaping the stones and doing the same work that killed her husband. Not only to fill her stomach but also to repay advances taken by her husband from the employer. In Dahod district, tribals have sold their ornaments, cattle and land to get treatment for silicosis. Hundreds of people are in deep debt.

Compensation and the law

Silicosis is a compensable disease under the Employees State Insurance (ESI) Act and the Workmen's Compensation Act. Workers at Alembic Glass in Baroda used to regularly succumb to what was then assumed to be tuberculosis. They never knew the real cause of their illness, nor were they aware of their rights. Then, in 1980, silicosis was diagnosed and also

their rights under the Employees State Insurance Act.

Although the NIOH conducted medical check-ups, few workers could claim compensation under the ESI Act. Workers who were diagnosed with silicosis but were categorised as having 0% disability challenged the decision of the ESIC medical board in the courts. The battle dragged on for over 17 years. Ultimately, the Gujarat High Court passed a judgment ordering the ESIC to pay compensation to all the workers, at the 100% disability rate.

Many affected workers still did not receive compensation. Either they did not possess identity cards or a job history, or were not diagnosed as suffering from silicosis. Many were not aware of the legal provisions or procedure. Or they had no access to legal services or the monetary support required to fight a legal battle.

International response

The ILO/WHO Global Programme for the Elimination of Silicosis (GPES) was established following recommendations in 1995. The joint ILO/WHO committee on occupational health identified the global elimination of silicosis as a priority area for action, obliging countries to place it high on their agendas. India has its own national programme for the elimination of silicosis.

GPES initially focused on secondary prevention, upgrading the skills of physicians and strengthening the system of health surveillance. A silica essential toolkit has been developed, applying the principles of control banding.

Control banding is a risk assessment and management tool used where there is no technical expert, or quantitative exposure data is unavailable. It comprises step-by-step administrative actions to be taken by the employer to eliminate or reduce hazards in the workplace. Employers can be guided on what measures to take to control dust, for instance.

Although a national programme for the elimination of silicosis in India may be in place, the effects are not being seen on the ground. Mortality and morbidity rates are not going down. And the government does not even have figures to compare any progress that could be taking place.

Jagdish Patel, an occupational safety and health (OSH) activist, worked for 20 years with small and medium-scale chemical factories. He got involved in the trade union movement and helped establish VSS Mandal — a pressure group on OSH — and later Peoples' Training and Research Centre. He has been editing a Gujarati bi-monthly on OSH since 1988. He now works full-time for PTRC

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Poisoned by pesticides

Occupational exposure to pesticides is routine among farmers and farm workers. For victims of pesticide poisoning, recovery is not easy. For medical practitioners treating poisoning cases, it is just another source of income. For the pesticide industry, it's business as usual. Meanwhile, the government chooses to turn a blind eye to the issue, preferring to blame the victims for their ignorance and negligence

**KAVITHA
KURUGANTI**

SAMMAIAH WAS AN AGRICULTURAL WORKER in Eturunagaram, in Andhra Pradesh's Warangal district. One day in 2001, after having sprayed pesticides from 8 am to around 3 pm, he was proceeding to wash his hands when he collapsed. He died instantly. The post-mortem report stated that he had died of acute pesticide poisoning; the doctor said that the chemical had seeped into his skin from a towel that was wet with the pesticide he was spraying. He was spraying a mixture of endosulphan and bavistin, a fungicide. For a daily wage of Rs 30, Sammaiah lost his life.

Kattamma and Lingaiah from Gajulagattu village belong to the shepherd community. On September 24, 2004, after breakfast, Kattamma and her husband took their power sprayer out into the fields where they sprayed the DuPont pesticide Avaunt (indoxacarb) from morning until lunch, first on cotton and then on paddy. After lunch, they resumed spraying until 4.30 pm. Lingaiah then had a shower and lay down, complaining of a headache. At first, Kattamma thought it was because they had worked in the hot sun. But when she went to check on him later, she found him unconscious. She rushed him to the local medical practitioner who refused to treat Lingaiah, referring him instead to a bigger hospital. He was taken to a private hospital in Nekkonda and then to Warangal. Two days later, at around 8 am, Lingaiah breathed his last. The post-mortem report attributes the cause of death to pesticide exposure. The family incurred an expense of Rs 40,000 on Lingaiah's medical treatment.

Occupational exposure to pesticides and pesticide poisoning is routine among farmers and farm workers. For victims of pesticide poisoning, recovery is not easy. Most victims, who are daily wagers, hush the matter up for fear of medico-legal implications. For families surviving a fatal case of poisoning, the loss of a breadwinner in the family is irreplaceable. For medical practitioners treating poisoning cases, it is just another source of income. For the pesticide industry, it's business as usual. Meanwhile, the government chooses to turn a blind eye to the issue, preferring to blame the victims for their ignorance and negligence in wrongly handling pesticides.

The exact extent of occupational pesticide poisoning is unclear, and no efforts are forthcoming from the government to begin any surveys to assess the problem. In India, regulatory and support infrastructure to prevent

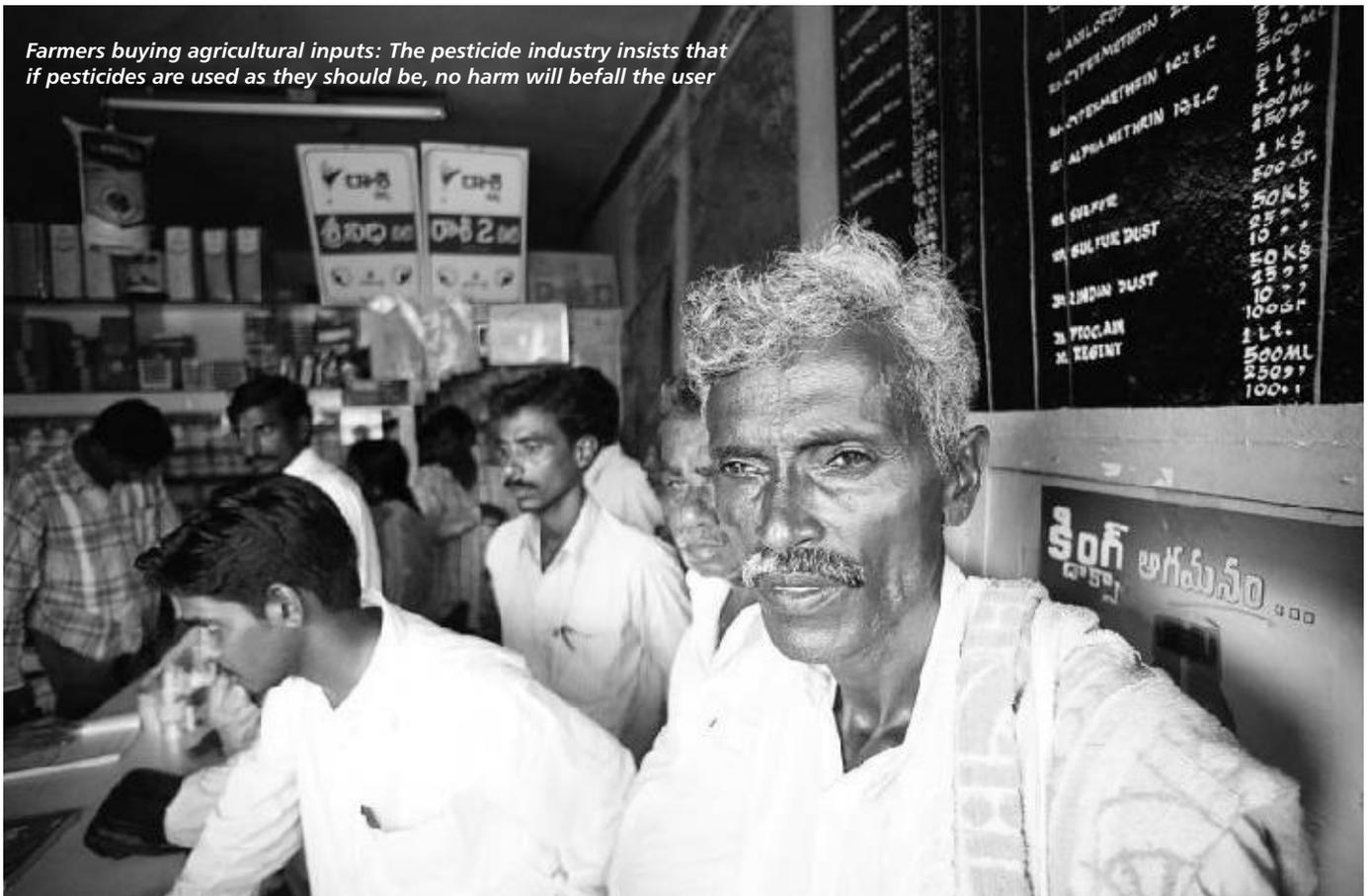
pesticide poisoning, deal with victims of pesticide poisoning, and promote ecological farming alternatives simply do not exist. And the pesticide industry denies that pesticide exposure and poisoning are issues to be contended with. Indeed, they attempt to silence voices that talk about the harmful and unmanageable effects of pesticides. The pesticide industry in India has filed defamation suits against several prominent activists and farmers advocacy groups.

Incidence of acute poisoning

In 2004, the Centre for Sustainable Agriculture (CSA), Secunderabad, and Modern Architects for Rural India (MARI), Warangal, documented a number of acute unintentional poisoning cases that were evident at a few

Numerous conversations with farmers and sprayers reveal that even if there were better awareness about 'safe' pesticide use, the reality of farming conditions make it almost impossible to follow the instructions closely. Firstly, the weather does not permit farmers to work comfortably in protective clothing. Also, many farmers cannot afford to buy and replace protective gear regularly

Desmond Roberts



Farmers buying agricultural inputs: The pesticide industry insists that if pesticides are used as they should be, no harm will befall the user

select hospitals in Warangal. The study obtained information on the number of hospitalisations due to pesticide inhalation (unintentional), as opposed to pesticide ingestion (intentional). Data from one district hospital and six area hospitals revealed that 202 people had suffered unintentional poisoning in just a few months during that year. This could well be a case of under-reporting, as many people do not go to hospital or are referred to private hospitals. Eight deaths due to pesticide inhalation were reported.

There is very little India-specific data on the annual incidence of acute poisoning among agricultural workers, and the number of fatal cases amongst them.

A fact-finding report in January 2002, led by Toxics Link and Community Health Cell, entitled 'Killing Fields of Warangal: Farmer Deaths Due to Exposure to Pesticides in Warangal District', estimated that there could have been more than 1,000 people exposed in Warangal alone in the period between August and December 2001. The widespread poisoning that year was also documented by the Andhra Pradesh Rythu Sangam, a farmers union in the state of Andhra Pradesh.

Victimising the victim

The pesticide industry claims that if pesticides are used as

they should be, no harm will befall either the user or the environment. Cases of pesticide exposure and death are a result of the victim's ignorance and negligence, not a reflection of poor regulation or accountability, say the industry, government, and even the medical and media communities.

Earlier studies have shown that users often have no knowledge of how to use pesticides safely. There is very little awareness about which pesticide to use, when, in what dosage, etc — all of which forms an integral part of 'safe use'. Reports from many parts of India indicate that farmers indiscriminately use mixtures of pesticides and follow the 'extension advice' given to them by dealers and others.

There are no campaigns worth their name being taken up either by the government (agriculture department or health department) or the pesticide industry to educate farmers about the dangers of pesticides. The pesticide industry would have us believe that its products are safe and effective. The images put out in the mass media, including government-sponsored television programmes on agriculture, are those of sprayers using pesticides with ease and without any protective gear. This gives everyone the wrong impression about the 'safety' of pesticides. The fact that there are a lot of images and messages assuring people about the 'safe' nature of pesticides, and not enough about

the dangers of using them, is worth noting.

There's no such thing as 'safe use' of pesticides

As numerous conversations with farmers and sprayers reveal, even if there were better awareness about 'safe' pesticide use, the reality of farming conditions make it almost impossible to follow the instructions closely. Firstly, the weather does not permit farmers to work comfortably in protective clothing. Also, many farmers cannot afford to buy and replace protective gear regularly. As is obvious, torn gloves could present a greater danger if the pesticide gets into the gloves and onto the skin of the sprayer. Similarly, leaking sprayers are a common sight. Faulty equipment exposes the sprayer to even more risk.

On top of it all, there are the social conditions in rural India. High levels of illiteracy prevent farmers and farm workers from reading the instructions on pesticide containers, even if they are properly spelt out. There have been cases where the instructions are not in the local language. Often, the instructions are hard to follow. For instance, "See a doctor immediately" is a difficult instruction given that doctors and medical facilities are often miles away or inaccessible for other reasons.

An agricultural worker hired on daily wages for a day's spraying cannot afford to choose his timings. He usually ends up spraying several tank-loads of pesticide throughout the day, including during the hot afternoons. Further, after finishing spraying a row of crops along the wind direction, the worker considers it a waste of time walking back to the beginning of the next row in order that his spray follows the wind direction. So he ends up spraying against the wind; with a power sprayer this means that great jets of pesticide fall back onto the sprayer.

I have also come across instances where farmers have not revealed to the sprayer the particular pesticide that is being sprayed. In one case, a farmer in Kambalpalli village (in 2004) poured the pesticide Hinosan (Bayer's edifenphos), well-known among farmers for its toxicity, into another container to disguise the contents. He then gave the container to the sprayer to be mixed and used. This proved fatal for the sprayer.

There are other practical problems related to lack of adequate water, etc, in a field situation. Sometimes farmers/workers mix the liquid with their bare hands before filling their sprayer tanks. Sprayers often place their food in a corner of the field they are spraying; they later wash up with whatever little water is available and proceed to eat their food. Sometimes they do not get to have a proper bath at home either.

Existing social problems such as poverty and malnourishment further aggravate the situation. The feudal relationship between landowners and workers in many parts of the country means that the whole issue of pesticides and their effect on workers is neglected, even discounted.

Banned pesticides are still being manufactured and sold in India

India does not have a rational pest management or pesticide policy. While integrated pest management is the official policy, nowhere does the use of pesticides in the country reflect the adoption of such a policy. Although many countries have banned or severely restricted pesticide use, some of these pesticides continue to be produced and marketed in India. Indeed they top the list of most-used pesticides in the country. According to the WHO classification, these include several Class I and Class II pesticides (for example, phorate, edifenphos, aldicarb, triazophos, monocrotophos, methyl parathion, etc).

While talking about the many facets to this problem, the issue of aggressive marketing by the industry cannot be overstated. Even the most toxic pesticides are pushed, with dealers promoting those pesticides that give them the most margins. And so they offer farmers a variety of incentives including prizes in lucky draws, etc. In addition to wall posters, pesticides are marketed on popular vernacular television channels, in newspapers and through village-level campaigns.

Obviously, the aggressive marketing does not highlight the dangers of pesticide use, precautions to be taken, or symptoms to watch out for. Can we allow products that are essentially poisonous to be marketed this way?

Farming without chemical pesticides is possible and viable

What is unconscionable is that toxic pesticides continue to be produced and promoted even though it has been proven time and again that with capacity-building and extension support, farming without the use of synthetic pesticides *is* possible.

This was demonstrated under a unique programme called Community Managed Sustainable Agriculture, on 10 lakh acres of land in 2008, when farmers used ecological practices and principles to grow their crops. The programme was supported by Andhra Pradesh's rural development department.

In the face of such alternatives, to argue in favour of chemical pesticides using outdated Malthusian arguments, and to continue using extremely toxic pesticides that endanger poor agricultural workers is unacceptable. It's time the government acknowledged this and provided proactive support to farmers so that they may shift to ecological, sustainable and healthy ways of farming.

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‘Controlled use’: First world ideals, third world realities

‘Controlled use’ is the basic idea that seems to justify the continued use of dangerous substances such as pesticides and asbestos. But what science informs it? What politics pushes it? Experts say it is no more than sales propaganda from the chemical industry, not only in India but also in western countries where this idea was first mooted as an apology for the use of hazardous substances

MADHUMITA
DUTTA

- Vaddula Venkatareddy, a 35-year-old landless agricultural labourer from Kambalpalli village of Mahbubabad mandal in the Warangal district of Andhra Pradesh, was spraying pesticides under a hot October sun when he suddenly felt dizzy and started vomiting. A day later he died in hospital.
- Sammaiah, an agricultural worker, began spraying pesticide at 8 am in the morning and continued spraying until around 3 pm. His family found him dead at one side of the paddy field where he had gone to wash his hands. The post-mortem report stated he had died of acute pesticide poisoning. The doctor said that the chemical had gone into the skin through a towel soaked in the pesticide he had been spraying. He was spraying a ‘mixture’ of endosulphan and bavistin, as advised by the pesticide dealer.
- Veeranna was spraying a ‘mixture’ of malathion and monocrotophos on a cotton field where he had gone to work as an agricultural labourer. He sprayed from morning till evening, taking a short lunch break in between. In the evening, after getting back home, he started vomiting. He was taken to hospital where he died the following day. Did he use any protective gear that day? “No, no protective clothing since no one else uses it. I mixed the pesticide with a stick and poured it into his tank, and he sprayed,” said Manjula, his wife. “Women do not spray, we mix the pesticide.”
- Sooraiah, a dalit bonded labourer, died after the pesticide he was spraying on a mango tree fell on him. He was found dead under the tree. Do you use protective gear while spraying pesticides? “No protective gear, but we wash our hands thoroughly with soap. Not just us, no one uses protective gear.” What precautions are taken? “We cover our ears and head with a towel; nothing to cover the face.”

Sammaiah, Veeranna, Sooraiah and Venkatareddy are merely a handful among the many Indian farm workers who pay each year with their lives to expose the myth that ‘controlled use’ of practically unmanageable chemicals like pesticides is possible. Their stories were told by surviving members of their family at a public hearing held by the Centre for Sustainable Agriculture in Andhra Pradesh, in 2005 (1).

The ‘reasonable precautions’ prescribed by the pesticide industry are not practical for a variety of reasons. Strangely, even as the death toll mounts, the government does little to recognise that the difference between theory and practice

of ‘safe’ use of pesticides is the difference between life and death.

At the same hearing, Dr Nehru, medical superintendent of Mahbubabad area hospital, also testified. “The sprayers do not use any face mask, cap, gloves, gumboots to protect themselves from exposure. They should use plastic protective gear. Washing hands is not enough. What about all the other body parts which have been exposed? Workers go on spraying without a pause throughout the day. Power sprayers make the situation worse. There are spillovers and the clothes become wet with the poison. There were 35 pesticide poisoning cases admitted in my hospital in just one month.”

Listening to him, one wondered whether Dr Nehru had ever visited a farm during spraying time. Maybe not. Had he known that at temperatures hovering around 40 degrees Celsius, workers can hardly bear wearing a scrap of cloth let alone plastic protective gear, he wouldn’t have made such a suggestion.

We came across similar testimonies in 2002, in Warangal district, where during the peak agricultural season, the sale of pesticides and seeds can touch up to Rs 3 crore a day. Then too the industry blamed the sprayers for not handling the pesticides “properly as advised”. They argued that “these are poisons meant to kill. And our label says so”.

Indeed, the labels do say they are poison. They even tell you how to spray, when to spray, what protective clothing to wear, etc. For instance, ponder the following label on the pesticide can of a multinational company:

Do not inhale the spray mist. Do not mix the spray solution with bare hands. Always use protective clothing like apron, face mask, hand gloves, boots, etc, while application. Bathe or shower and change into clean clothes at the end of the working day. Do not contaminate environment and water sources... The rooms meant for storing shall be well built, dry, well lit, ventilated and of sufficient dimension. Dispose of used containers or packages, surplus material and washings in a safe manner so as to prevent environmental or water pollution. The used package shall not be left outside to prevent their re-use. The packages should be broken and buried away from habitation.

How practical is it for a daily wage labourer like the late Sooraiah or Vaddula Venkatareddy to follow these

precautions against getting poisoned? Or for the farmer who hired them? How many of them can actually read these labels, even in their own language? How realistic is it to expect farmers and labourers to observe the conditions of 'precaution' and 'control' in the fields of Warangal or Vidarbha, or anywhere else in India for that matter?

The industry believes it is realistic. Indeed, many may even supply a set of cheap gloves and plastic overalls for free, or at minimal cost, with each can of pesticide. But even these are one-size-fits-all protective gear. Their responsibility ends there.

While inspecting an unused transparent plastic overall and a pair of gloves on a farm in Warangal, it was clear that it wasn't just the heat that stopped the workers from using them, especially the women who mix the pesticides. It was the size of the garments, which were meant for large-sized men! So it made eminent sense when Kundanapalli Padma, wife of dead worker Ramulu of Khanapur village in Warangal, testified that "no one in the village uses protective gear".

Sadly, however, it's not just the industry that hides behind the ethically untenable plea "don't blame us, we told them what to do". Even the government, which is supposed to protect citizens, echoes the same lame defence. "If users do not use endosulphan properly, why blame endosulphan? Blame the users," was a comment made by Dr M K Pandey, an advisor in the environment ministry at an international UN meeting recently in Rome, Italy.

That the idea of 'controlled use' doesn't work in practice was demonstrated beyond a doubt in the case of aerial spraying of endosulphan, an endocrine disruptor, over government-run cashew plantations in Padre village of Kasargod district in Kerala. Despite a ban on aerial spraying in 1992, the state government sprayed the pesticide over the plantations from the air until 2000. And several pesticide companies continued supplying the state government with pesticides. Over two decades of spraying, this chemical has not only poisoned the water, soil and vegetation, it has also left the community crippled. "Between 1978 and 2000, the government itself poisoned the people of Padre. How will 'controlled use' conditions work for individual farmers or even private companies when the government itself cannot do it?" asks C Jayakumar of the Kerala-based voluntary group Thanal which has been working with endosulphan victims in Padre village.

Besides pesticides, asbestos, an industrial mineral fibre, is another example where industry has been quite successfully using the fallacy of 'controlled use' to continue business as usual.

A current study being conducted by the National Institute of Occupational Health-Ahmedabad, which is part-funded by the asbestos industry, is trying to showcase how 'improvements' in working conditions have brought down workplace exposure to asbestos fibre, thereby eliminating the risk of contracting asbestos-related diseases. In other

words, under 'controlled conditions', asbestos, a known human carcinogen, is safe for Indian workers if handled 'properly'.

In India, over 100,000 workers in the asbestos product manufacturing industry and over a million in the construction industry, mostly unorganised, work with asbestos every day. Besides, India has its own asbestos mines in Andhra Pradesh and Rajasthan. With an annual turnover of Rs 3,000 crore in asbestos cement product manufacturing alone, the industry in India is booming, while the world over this substance is being banned due to public health concerns and the fact that it is not possible to have 'controlled use' conditions for a substance like asbestos. Over 100 major corporations have gone bankrupt paying compensation for health damage to workers and their families.

In fact, in 1999, the World Trade Organisation (WTO) rejected all arguments in favour of 'controlled use' when it upheld France's decision to ban the import of asbestos products from Canada. The WTO's disputes settlement panel rubbished as untenable Canada's argument that by 'controlled use' France could actually reduce the hazards of asbestos to 'insignificance', and concluded that France had every right to determine its own acceptable level of risk for something as dangerous as asbestos.

Politics of 'controlled use'

Let's try to understand 'controlled use', the basic idea that seems to justify the continued use of these dangerous substances. What science informs it? What politics pushes it? "Controlled use is a sales propaganda that the chemical industry has been using for decades, not only in India but also in western countries where this 'idea' was first mooted as an apology for the use of hazardous substances," says Dr Barry Castleman, a noted US-based public health scientist and author of *Asbestos: Medical and Legal Aspects*. The basic argument was that toxic stuff such as pesticides or asbestos would cease to be a threat to health because of precautions taken in manufacture and use (2). In other words, it is possible to mitigate harm from these substances under 'controlled use' conditions.

This may sound persuasive in theory, but what does the evidence in the real world tell us?

To unpack the politics behind the insidious term 'controlled use' it might be revealing to look at the history of the asbestos industry. In the early-1970s, when the evidence of risk to asbestos workers was mounting in the US, the industry resisted all attempts to regulate and put safety labels on its products. The US Asbestos Cement Producers Association rejected suggestions to put a warning about the hazards of sawing asbestos cement products in its brochure for users. "Requiring cancer warnings on asbestos products" was bitterly contested by US asbestos cement pipe producers "whose main market was the sale of conduits for drinking water supply systems," according to Castleman. In his commentary in the *International Journal of Occupational*

Environmental Health (3), titled ‘Controlled Use of Asbestos’, Castleman wrote: “The proposed exposure limit of 2 f/cc already adopted in Britain in 1969 was objected to by the industry in the US as prohibitively costly, and it was warned that the asbestos textile industry was most at risk of losing US jobs to ‘foreign competition’.”

As public awareness about the harm of asbestos to workers and users in the US and Europe increased, there was a global flight of these companies to third world countries. Major asbestos corporations from the US, Europe and Australia set up factories in India, Africa and Latin America which “grossly violated their home-country standard”, according to Castleman. It is worth noting that two of the largest asbestos multinational corporations that controlled the world trade in asbestos — Johns-Manville and Turner and Newell — and operated major interests in India 20 years ago, have now gone into “bankruptcy proceedings over the liabilities in the US from the many lives asbestos destroyed” (4). However, they never owned up to the health damage liabilities that their operations caused to Indian workers.

To promote their products overseas, these companies resorted to the manufactured science and ‘controlled use’ bogey, knowing full well that it had failed in their home countries. Alongside, they also promoted the idea of safe ‘locked-in’ and ‘encapsulated’ asbestos products. This was based on the controversial labelling politics in the US where, relenting to industry pressure, the US Occupational Safety and Health Association did not require labelling of all asbestos products (5), essentially the ones in which asbestos fibres were locked up in cement or some such binding agent. But with the growing number of cases of asbestos-related diseases amongst asbestos product users in the industrialised world, the idea of safe ‘locked-in’ asbestos products was soon debunked. To date, this false argument is being used by the Indian asbestos cement product industry as sales spiel.

“Controlled use of asbestos is the asbestos industry’s way of referring to business as usual, with a false face. Really well-controlled use of asbestos has never existed anywhere in the world, and it isn’t being invented anywhere today,” says Castleman.

The debate over asbestos and its harmful effects has now moved beyond politics. That asbestos cannot be ‘safely used’ is received wisdom now, but India is still stuck in the mud. It continues to propagate the belief, under corporate pressure, that ‘safe’ use of asbestos is possible.

Endnotes

1 ‘Poisoned by Pesticides: Proceedings Report of a Public Hearing on Acute Pesticide Poisoning of Sprayers’, Centre for Sustainable Agriculture (CSA) and Modern Architects of Rural India (MARI), 2005

2 Barry Castleman, “‘Controlled Use’ of Asbestos” *IJOEH*, Vol 9, No 3, 2003

3 *Ibid*

4 *Ibid*

5 *Ibid*

Dark side of the chip

The ‘clean rooms’ of the high-tech electronics industry actually use several toxic chemicals

AMANDA HAWES
TED SMITH

FORTY YEARS AGO, the agricultural valley south of San Francisco was known as the Valley of Heart’s Delight because it produced such abundant fruits and vegetables. Today it is known worldwide as Silicon Valley and many of the workers who used to work in the fields picking fruit and vegetables became electronics workers, making semiconductor chips, disk drives and circuit boards for the high-tech revolution. Little did they know that they were guinea pigs in a terrible toxic tragedy.

Alida Hernandez was one of the many fruit processing workers who were ‘re-invented’ as a ‘clean room’ worker and didn’t realise that she was sacrificing her health in a pattern that would soon be replicated around the world. No one ever told her that her exposure to electronics solvents at IBM’s disk drive factory in San Jose, CA, would lead to her cancer. She is just one of many who have suffered dreadful diseases without realising what they had signed up for.

Likewise, Ying would never have agreed to work in electronics if she had known that her exposure to toxic chemicals would cause her child to be born blind and with structural brain damage.

Their stories and those of so many others need to be heard around our global village before it is too late.

Workers in India and throughout the developing world — where the high-tech revolution is still presenting itself as the ‘clean industry’ that is the 21st century solution to the world’s problems — must be warned while there is still time.

As the toxic troubles emerged in parts of the US and then throughout the world, other casualties were discovered — the ‘collateral damage’ of the high-tech revolution:

- Helen Clark, a semiconductor worker in Scotland who blew the whistle on National Semiconductor and got the Scottish government to conduct a health study, died of cancer in 2004.
- Wen-Shen Liu, the child of a mother who was exposed to toxic chemicals while working in an RCA factory in Taiwan, died of hepatoblastoma at the age of three. Her mother later died of breast cancer, one of hundreds of victims of toxic exposure.
- Naomi died of scleroderma after years of toxic exposure in ‘clean rooms’.
- Jim died of non-Hodgkin’s lymphoma before turning 60.

- Ron and Ed both died young of brain cancer, after years as hands-on 'technical' workers in the 'clean rooms'.

Unfortunately, these are all true stories (some names have been changed) and they are only the tip of the iceberg. While the electronics industry has vigorously resisted comprehensive health studies of its workers, data continues to emerge connecting work in electronics factories to serious health problems for workers and their children. This is especially crucial since all around the world most electronics production workers are women of childbearing age. Here are some examples:

- Three epidemiological studies done in the US in the 1980s all found high rates of miscarriages among semiconductor workers.
- IBM maintained a "corporate mortality file" which documented that, over a 30-year period, IBM workers with exposure to chemicals died younger and more frequently from toxic-related cancers than the national average.
- The Scottish Health and Safety Agency conducted a health study of workers at National Semiconductor in Scotland and found disproportionately high rates of cancer among them.
- After years of resistance, the Semiconductor Industry Association has contracted with Vanderbilt University to conduct a chip industry worker health study to assess the cancer risk to semiconductor workers. The results are expected in 2009.
- In their groundbreaking article 'Cancer and Reproductive Risks in the Semiconductor Industry', Joseph Ladou, MD, and John C Bailar III, PhD, have documented the serious health concerns of semiconductor workers.

As workers and communities began to discover this 'dark side of the chip', they began to come together to confront its 'clean' image.

Starting in Silicon Valley in the 1970s, electronics workers and their allies began documenting the occupational health impacts and then organising to advocate for improvements. The Santa Clara Centre for Occupational Safety and Health was the pioneer in this effort, and later spun off the Silicon Valley Toxics Coalition to address the related community health issues — initially groundwater contamination, later air pollution, and then the mounting piles of hazardous electronic waste. The movement has gone from grassroots to global as similar groups emerged in other countries — PHASE II in Scotland, Asia Monitor Resource Centre in Hong Kong, TAVOI in Taiwan, CEREAL in Mexico, etc. Many of these groups are now working together internationally to develop worker training on occupational health and safety, to press the electronics industry to phase out use of the most toxic chemicals, and to advocate for a safer, healthier and more just workplace for production workers.

It has become increasingly clear that the accelerated pace of corporate-led globalisation requires a robust grassroots global response. That is why many of these groups came

Toxic waste dumping

We've learned over the years that the harm done to electronics workers is another example of "canaries in the coal mine" serving as a warning to the rest of us — that the same chemicals that cause harm in the manufacture of products have escaped into the surrounding communities and into the environment causing widespread groundwater contamination and air pollution. And, since the lifecycle of electronic products is so short, hundreds of millions of "obsolete" computers, cell phones, televisions, iPods, etc, are presenting enormous health problems as they are being discarded in massive numbers, usually dumped on the poorest communities in Asia and Africa. While most consumers remain blissfully ignorant about the health and safety problems of these workers, and of the inhuman working conditions, increasingly the "end of life" concerns are attracting public attention since the impacts are now so visible and create such a sense of horror among the people who have come to depend on these 21st century gadgets.

This cyber-age nightmare was first reported in 2002 in 'Exporting Harm' by the Basel Action Network and Silicon Valley Toxics Coalition and has since been confirmed by many other media and government sources. Activists in the US working with the Electronics TakeBack Coalition continue to focus attention on e-waste exports to Asia and Africa and the terrible environmental and health consequences it is causing. A recent report by the US Government Accounting Office — 'EPA Needs to Better Control Harmful US Exports through Stronger Enforcement and More Comprehensive Regulation' — documented the ongoing "sham recycling", where millions of pounds of electronic waste continue to be dumped onto the developing world. And *60 Minutes* — the premier US television investigative reporting show — just produced a blockbuster piece *Following the Trail of Toxic E-waste* which brought these issues to millions of people who had previously been uninformed.

The scandal highlights the fact that the US is the only industrial nation in the world that has not ratified the Basel Convention which prohibits the export of hazardous waste from wealthy countries to developing countries. In the absence of strong and effective laws, toxic waste from the US will continue to flow downhill in the global economy. With the recent US elections promising "change" there will be a concerted effort to confront this injustice head-on, starting in 2009; activists are optimistic that they will finally be able to bring an end to toxic waste dumping.

together with the International Campaign for Responsible Technology to convene the first Global Symposium on Strategies for a Sustainable High-Tech Industry, in 2002, in San Jose, California. Participants came together to address several related issues, like:

- Rising community and workers' health problems.
- Deteriorating workers' rights.

- Increasing water and air pollution.
- Growing crisis of electronic waste.
- Escalating corporate influence on global institutions and agreements such as the WTO.

An action plan was developed that included a commitment by participants to pool their experiences into a new book, which became *Challenging the Chip: Labour Rights and Environmental Justice in the Global Electronics Industry*, published in 2006. Contributors to this pioneering volume include many of the world's most articulate, passionate and progressive visionaries, scholars and advocates. Here they not only document the unsustainable and often devastating practices of the global electronics industry but also chronicle creative ways in which activists, government agencies and others have attempted to reform the industry — through resistance, persuasion, and regulation.

One book reviewer captured the importance of the effort:

Challenging the Chip is certainly the most comprehensive review of the social, health and environmental consequences of the electronics industry to date and provides a critical platform for developing new theoretical and empirical research on the political economy and ecology of the industry. The plethora of topics explored also highlights the multiplicity of disciplines that can contribute to debates

It's been a long time since the Valley of Heart's Delight began to disappear in its transformation to Silicon Valley. Hopefully it's still not too late to learn the lessons of this experience, to protect emerging 'Silicon Valleys' in India and throughout Asia. The growing grassroots global movement is increasingly putting a human face on the dark side of globalisation, and providing a vision for a new sustainable electronics industry

about the chip industry, including the social sciences, public health, and environmental sciences. A most impressive feature of the book is the way in which it developed out of a collaborative partnership of intellectuals and activists with a shared vision of sustainability and justice. — Electronic Green Journal

Since the book's publication there have been many additional efforts by NGOs to move ahead with a "labour rights and environmental justice" agenda for electronics workers and communities. ANROAV — the Asian Network for the Rights of Occupational Accident Victims — has increased its focus on electronics workers' health and safety and has included panels and workshops at its last two annual meetings. The European Work Hazards Network has also included electronics health and safety workshops at its conferences, as has the national Committees on Occupational Safety and Health Network (COSH) in the United States.

There is also growing interest in India and China, countries with the most rapid high-tech growth and consequently with the most at stake in terms of workers' rights, worker and community health, and electronic waste impacts. Following the publication of *Challenging the Chip* there were forums held in Bangalore and Kerala, organised by Asia Monitor Resource Centre, Waste Not Asia, and other labour and grassroots groups. Likewise, a book tour was arranged in China by Greenpeace which energised large groups of students and others at several campuses in south China and in Beijing. Media attention is growing throughout Asia and throughout the world — a recent presentation at an eco-waste forum in Manila was featured in an article in the *Manila Times*. And the emergence this past year of the dazzling Internet video *The Story of Stuff* has informed and excited millions of activists around the globe.

It's been a long time since the Valley of Heart's Delight began to disappear in its transformation to Silicon Valley. Hopefully it's still not too late to learn the lessons of this experience, to protect emerging 'Silicon Valleys' in India and throughout Asia. The growing grassroots global movement is increasingly speaking truth to power, putting a human face on the dark side of globalisation, and providing a vision for a new sustainable electronics industry. It's about time we learned from the lessons of the past, since the future continues to be built before our very eyes, and, as we know, it is being built on even more powerful and less understood technologies such as nano technology. Our challenges are only just beginning.

Amanda Hawes is the founder of the Santa Clara Centre for Occupational Safety and Health and a partner in the law firm Alexander & Hawes in San Jose, California, where she represents electronics workers and their families who have been harmed by exposure to toxic chemicals. Ted Smith is founder of the Silicon Valley Toxics Coalition and the International Campaign for Responsible Technology and is Chair of the Electronics TakeBack Coalition. He is co-editor and co-author of Challenging the Chip: Labour Rights and Environmental Justice in the Global Electronics Industry, published by Temple University Press

Sewer rats

There is no data on the occupational health and safety of sanitation workers, most of whom are dalits employed on contract. Official records of Chennai Metrowater confirm 17 worker deaths since 2003. The all-India number of deaths of sewerage workers would run into the thousands. Workers who manage to survive plunging bare-bodied into clogged sewers suffer several ailments including tuberculosis

VIDYA VENKAT

IMAGINE A MAN plunging into a 20-foot-deep sewer through its narrow mouth, holding his breath for over 30 seconds, scooping the filth inside with his bare hands or a shovel, and emerging from it covered in muck. The only precaution he takes is to light a match over the hole sometimes, to detect the presence of toxic gases such as hydrogen sulphide or methane. Often he has simply no clue as to what lies deep inside the hole.

I have seen sanitation workers belonging to civic agencies in Chennai clean clogged sewers bare-bodied, with just a strip of cloth covering their loins. Their only lifeline is a belt, secured around the waist and attached to a rope held by

someone outside the hole. Quite often the rope comes in handy to pull out the dead body, in case the diver dies of asphyxiation.

Official records of the Chennai Metropolitan Water Supply and Sewerage Board (Chennai Metrowater) confirm 17 worker deaths since 2003. But if the statistics of earlier years are taken into account, as also the number of sanitation workers from private agencies who have died, the figure would be much higher. And it would run into several thousands if you consider the country as a whole.

Workers who manage to stay alive aren't in a much better position. They are vulnerable to respiratory ailments and skin

Sudhanak Olwe



infections. Contract sewer cleaner Munusamy draws attention to the raw open wounds on his limbs. He often finds broken pieces of glass and used syringes floating about in the sewer he cleans. He says they sometimes have to pick at used sanitary napkins and condoms with their bare hands. This exposes them to a range of diseases, hepatitis being just one.

Social activist A Narayanan, in a petition filed in the Madras High Court in 2008, sought a ban on manual sewer cleaning. He argued that it was akin to manual scavenging which was banned through legislation in 1993. In November 2008, the Madras High Court gave a landmark judgment instructing civic authorities not to let humans enter sewer holes.

Despite the court ruling, however, in January 2009, Ettaiyappan, a sanitation worker at Chennai Metrowater, died whilst cleaning a sewer. The 50-year-old worker did not use any safety equipment and died of asphyxiation. According to eyewitnesses, fire and rescue service personnel had a difficult time retrieving his body as the manhole was “very deep”.

Ettaiyappan’s death exposed the negligent attitude of the civic agency towards worker safety. As a punitive measure, Chennai Metrowater suspended the assistant engineer who was supposed to have supervised the cleaning operation.

S Purushothaman, a trade unionist organising sanitation workers, says field staff at Metrowater continue to justify the use of humans to clean sewers as machines cannot clear blocks properly. “After the court ruling, the civic engineers started making sewer cleaners work clandestinely in the evenings so that no one would notice them.” Indeed, Ettaiyappan died after sundown.

All sanitation workers who do this kind of work are dalits. Scheduled caste/scheduled tribe workers account for most, if not all, jobs involving contact with human refuse — sewer cleaning, clearing of municipal solid waste, and scavenging. In his affidavit, Narayanan mentions how these workers often drink alcohol before entering a manhole in order to cope with the stench of human waste.

Narayanan cited the Adi Dravidar and tribal welfare department as one of the respondents in his affidavit. “But the court neither summoned the department for a response, nor issued any specific orders to them calling for rehabilitation of sewerage workers,” he says.

Occupational health and safety is afforded the least priority by both civic authorities and workers, say lawyers N John Selvaraj and Beulah Selvaraj who regularly fight cases on behalf of sanitation workers and also head the Conservancy Workers Union. They say many of the city corporation’s scavengers suffer from leptospirosis (rat fever) because garbage bins are infested with rodents and they do not wear gloves.

According to them, civic agencies began contracting out sanitation and sewerage work after they were forced to cut administrative costs in order to repay the World Bank for

Occupational health and safety is afforded the least priority by both civic authorities and workers. Many scavengers suffer from leptospirosis because garbage bins are infested with rodents and they do not wear gloves

infrastructure projects funded by it since 1996. “Once the civic agencies gave away work on contract, they did not bother to look into the working conditions,” John Selvaraj says. The death of a female worker due to poor safety arrangements, at the site of the Pallavaram sewerage scheme implemented by Chennai Metrowater, is well documented. The scheme was part of the World Bank-funded Tamil Nadu Urban Development Project.

Occupational health and safety has rarely been the subject of litigation concerning sanitation workers. Most deal with appointments, reinstatement of expelled workers, etc.

Lawyers say dalit workers are largely unaware of their rights in this regard, and being poor they readily agree to take up any job they are offered regardless of the risks involved.

Under the Workmen’s Compensation Act, there is a provision that allows workers to claim compensation for occupational hazards. But, according to advocate D Nagasaila of the People’s Union for Civil Liberties (PUCL), the onus of proof in this case is on the worker. “Do the poor dalit workers have medical records to prove that their disease is due to the nature of their occupation? No. So they stand to get nothing in compensation,” she says.

Civic agencies anywhere in the state do not conduct regular medical camps or health check-ups for their workers. Sources at the Chennai Corporation say they conduct regular eye check-ups for some employees. Recently, the corporation introduced a health insurance scheme for its employees, but even this money can be used only for surgeries at major hospitals, a corporation employee said. Also, as contract workers they are not entitled to any of the medical benefits that permanent workers enjoy.

Chennai Metrowater, for its part, has introduced an accident insurance scheme for its contract workers. This, after two workers died of asphyxiation at the Kodungaiyur sewage pumping station in Chennai, in 2007. Several clauses relating to worker safety and provision of equipment are mentioned in the contract but these remain largely on paper, lawyers say.

Occupational health and safety has mostly been in the realm of industry and the organised workforce in India. This perhaps explains why there is no data available on the occupational health and safety of sanitation workers, most of whom are in the informal sector and employed on contract.

Earlier Supreme Court judgments have laid down that the right to health and medical assistance to protect workers whilst in service or after their retirement is a fundamental right, under Article 21. This, when read with Articles 39 (e), 41, 43, 48A and related articles are intended to make the life of the workman meaningful and purposeful.

A tale of two towns

“When labour is available cheap, there is little value attached to the worker’s life,” Selvaraj notes wryly. But, he adds, this discrimination must be viewed in the context of history.

During British rule, erstwhile Madras attracted a lot of dalit labourers. The city was divided into a distinct ‘white town’ and ‘black town’. ‘White town’ was developed to cater to the needs of the British and their Indian servants. Civic agencies were set up to create amenities for them, and the Brahmins and other educated classes, being upwardly mobile, took up white-collar jobs in the British regime.

‘Black town’ consisted of labourers, mainly dalits and indigenous people who set up amenities for the wealthy people. For the residents of ‘black town’, the jobs provided by the British brought in some income security. They saw these jobs as empowering rather than as a caste scourge.

Even today a large number of people belonging to the Adi-Andhra community (a scheduled caste) can be found employed in the Chennai Corporation. Their ancestors migrated to Chennai to work under the British.

Thus, the practice of dalits and tribals seeking employment in civic agencies in the city became the norm. It fell in line with the already existing caste system which reserved ‘dirty’ jobs for dalits.

Mechanisation as liberation

Today, the civic authorities have taken up mechanisation of sanitation work. But the process will take time, as dredging machines and other cleaning equipment are expensive and workers have to be trained to operate them. As previous Metrowater Managing Director Sunil Paliwal points out, the entire work culture of the agency will have to change. Supervisors, engineers and civic contractors will not alter their attitude in just a couple of days, he says.

Civil society intervention

Janodayam, a non-governmental organisation started in 1983 by G Israel, is one example of a successful civil society intervention to ensure the wellbeing of dalit workers. Hailing from a family of Adi-Andhra scavengers, Israel realised at a young age that sanitation workers had “appointments but no retirement”. This was because most of them died well before the age of retirement. He is now campaigning to

dissuade members of his community from taking up sanitation work. “Today, many Adi-Andhra people are studying and doing teaching or clerical jobs. I have also managed to lobby for 50 seats for Adi-Andhra students in Loyola College where I studied,” he says.

Israel organised the scavenger community to fight for their employment rights. He was also instrumental in securing a 3% sub-quota, within the existing quota for scheduled castes, for the Arunthathiyars — the group name for less dominant dalit communities such as Chakkiliyar, Madhari, Thoti, Pagadai, Arunthathiyar and Adi-Andhra.

Challenges remain

For those who continue to do scavenging work, Israel says, the health challenges remain as very few sanitation workers use protective equipment such as face masks, gloves and gumboots while they work. He says even when workers are provided these things they tend not to use them as they are used to working with their bare hands. It is evident that there has been no effort at all to sensitise workers about safeguarding their health and wellbeing.

The challenges in rural areas are bigger as municipalities and panchayats are ill-equipped to improve infrastructure or invest in cleaning equipment, as in cities. Also, here the caste system is even more rigid and the progress of dalits suppressed by other caste Hindus.

Revathy, a member of the Arunthathiyars Human Rights Forum, conducted a health camp last year for sanitation workers in Sathyamangalam. She found that most manual scavengers suffered diseases like tuberculosis, and many women had gynaecological problems. Respiratory diseases were also common as was alcoholism both amongst men and women. Health camps are not enough to address these issues; work conditions must improve, she says.

Revathy says banning manual scavenging work only threatens the livelihood of workers. That is why workers are afraid to speak up against the unhealthy practice. “I have seen women sweepers who would like to change to a more dignified profession but hold on to their jobs as they often have no other source of income,” she says.

Political parties that claim to represent the cause of oppressed dalits have a long way to go. D Ravikumar, MLA of Viduthalai Chiruthaigal Katchi, says candidly: “Parties like mine are not in a position to mobilise dalits on rights-based issues like health. It is easier to mobilise people on atrocities, for instance, but areas like health or education need a lot of ground work. Unfortunately, nobody, not even we, have the necessary data. The dalits who are taking up ‘dirty’ jobs today are completely marginalised.”

Vidya Venkat is a Chennai-based journalist with The Hindu. Her series of stories on the plight of manual sewer cleaners in the city was admitted as evidence in the Madras High Court, among others, when a PIL sought a ban on men entering sewer holes. Taking cognisance of human rights violations, the court banned manual sewer cleaning in November 2008

Cyber-coolies

BPO workers, considered a pampered lot by some, actually spend long hours at the computer and telephone, with almost no breaks. Their work is repetitive and intensive, with unrealistically high targets and constant surveillance, say labour lawyers Vinod Shetty and Ketaki Rege in this interview. Eighty per cent work overtime thrice a week, and 24% report work-related health problems

A WORKFORCE OF 700,000. Average age: 24 years. BPO workers are considered a pampered lot by some, and glorified but exploited cyber-coolies by others. But all agree that intense working hours, lifestyle, and posture are taking a toll on the health of young IT and IT-enabled industry professionals. Agenda interviewed Mumbai-based labour lawyers Vinod Shetty and Ketaki Rege to find out more about what it's like to work in a BPO. Shetty and Rege are also associated with the Young Professionals Collective (YPC), a forum for BPO employees.

How would you describe working conditions in the IT or IT-enabled industry?

Certain comments can be made about the business process outsourcing (BPO) sector which is part of the IT-enabled industry. In the BPO sector, the most stressful job is in call centres where employees service customers in the US, UK and Australia, where their waking hours are our sleeping hours.

Work in a call centre is intensive, requiring high levels of concentration. It is repetitive, as the employee performs one type of activity throughout the day. And it's in a physically constrained environment — employees must stare at the computer screen all day. They are expected to be at the desk at all times during their shift except for designated toilet and meal breaks. They are literally tied to the workstation because they have a headset on all the time. They must pick up the telephone within seconds of it ringing (this is monitored). They must complete the call satisfactorily, as quickly as possible and move on to the next call. And, they must meet an unrealistically high target number of calls every day. (Call centre workers in India are expected to complete an average of 180 calls per day, compared to 75 in the US.) This is emotionally exhausting.

Call centre employees are under constant surveillance. Closed circuit cameras are placed in every part of the office. In addition, the “group leader” in each department tracks the workers' performance minute by minute to ensure that work never slows down and peak efficiency is maintained — even though these offices are always short-staffed. When a person wants to take a toilet break s/he must raise a hand and the group leader will give permission after making sure that someone else takes over that desk. There are even reports of employees being followed to the toilet to make

sure they are not actually taking a cigarette break!

Workers have to meet daily targets, as incentives are a large component of the salary package which is linked to performance.

The Young Professionals Collective helped conduct a US-India bi-national study in 2006 (1) where we surveyed employees from three BPO companies in India. Eighty per cent of the employees surveyed worked overtime up to three days a week, and 10% worked overtime up to six days a week, averaging 54 hours for the week (instead of the 48-hour week standard in India). They are required to do night shifts.

Workers are trained to forget who they are: to speak with an American accent and use American slang, and to think of themselves as American. “You're not the person who came to this office; from now on you're somebody else and you're somewhere else. You're actually in Boise, Idaho, not Bangalore. You're Roger, not Ramesh, and that's who the person on the other end of the line is shouting at.”

But that's not true. Once customers know the call is being taken in India, they start abusing the person. They're not shouting at Roger, they're shouting at Ramesh who must tolerate racist abuse and take it home with him.

Yes, BPO employees work in airconditioned offices and they have recreation rooms and nice canteens. But their overall working conditions are no better than those in other offices in the private sector. They are under constant physical and mental stress.

Because of this, there is a high burn-out rate. In the survey I'm talking about, we found that the industry has a 40% attrition rate. People rarely stay for more than a year in any one office, and in about three years they've left the industry for other jobs.

What are the occupational safety and health (OSH) issues in these sectors?

Health-related absences are common in call centre work. In the study I mentioned, 24% of respondents said they experienced work-related health problems — a significant number considering that the average age is just 24 years. Twenty-one per cent said they had taken leave on health grounds, even though they lose



incentives for every day missed.

The single most important problem is stress which, in turn, has an impact on other health problems and on their personal lives.

There are a number of related long-term health problems. Of those who reported health problems, 13% reported back pain from sitting for hours at a stretch. Then there are sleep disorders as workers must always be prepared to work on any shift. In our study, 13% reported insomnia and 7% reported fatigue. Six months after giving up a call centre job, workers still have difficulty sleeping at normal times. Women have gynaecological problems because of irregular sleep cycles. Some 13% reported visual problems such as eye fatigue; 3% reported headaches; 23% had indigestion and constipation. They suffer repetitive stress injuries from long hours at the computer and "repetitive voice injury" from speaking on the telephone for hours continuously.

The work culture at call centres also leads to excessive use of tobacco and alcohol to relieve stress. We met many young male and female call centre employees who were addicted to smoking and even *gutka*. Companies promote the use of alcohol at parties and visits to bars to "revive" and "energise" employees. They offer discount coupons for special "happy hours" at these bars which are open at all

hours for BPO employees.

Another concern is the danger to women travelling at night. Many attacks have occurred in Bangalore, Pune and Mumbai. Call centre employers have refused to follow YPC's and the police's suggestions for providing security.

How aware are IT workers about these hazards or problems, and how aware are the employers?

We don't have information on employer awareness, but the findings mentioned above are reported by employees.

Given that the workforce is predominantly young, are the hazards all the more significant? The effects of radiation or the outcome of exposure to carcinogenic material usually takes 10-15 years to manifest. So it is less an issue of concern for older workers, and more of a concern to young workers. Similarly, exposure to work practices that affect pregnancy outcomes is more of a concern to women of child-bearing age.

Exactly. Most BPO employees are in their early-20s. They are in the sector for three-four years. But the long-term effects of stress, irregular sleep cycles, sedentary work, repetitive work, etc, will be felt 10-20 years down the line.

What steps have been taken by workers to address these issues? If no steps have been taken, why not?

We have not found any employees filing cases regarding occupational hazards. For that there need to be scientific studies on health issues, taking off from our surveys, to produce data that will stand up in a court of law. Some workers have filed individual cases (of sexual harassment, denial of promotion, wrongful termination, etc) against the management. But generally, whether it is about occupational hazards or other disputes, workers prefer to shift to another company rather than get involved in a confrontation with the employer, or prolonged litigation.

What steps have been taken by employers to address these issues? If no steps have been taken, why not? If steps have been taken, have they been adequate?

Most BPO centres are aware of the high level of attrition in the industry. Human resource managers are always on the lookout for new strategies to retain staff, but every company is bidding for contracts, and for this they expect employees to work non-stop and meet targets.

The IT sector pays very well. Can it not be argued that every job has its risks, and that as long as workers know of the risks and are paid adequately there is nothing unfair?

Our report found that 81% of employees are between the ages of 20 and 25, with a mean age of 24 years. And 88% are unmarried. This group is quite vulnerable to accepting such risks for a (relatively) high pay.

Most BPOs in India do not follow the best practices of their international clients. They suppress information about their employees' working hours from their foreign clients. For their part, the clients are not interested in investigating reports about violations.

Have there been efforts to organise IT workers? How successful (or not) has that been, and why?

None of the call centres covered by the survey were unionised, though two-thirds of those surveyed were in favour of having a union. Call centre managements discourage any kind of formal organisation by employees. The pay structure of individual employees is based on the management's discretion and employees are encouraged to compete with each other, which keeps them separated from each other and discourages unionising. Also, in order to deny them labour rights, management describes them as 'IT professionals', not 'workmen'.

Workers who oppose management policies are subjected to harassment, isolated from their colleagues, kept away from work, and eventually forced to quit. Employees are hired on contracts that allow the employer to terminate employment without prior notice, and it is an offence to discuss employment-related matters with colleagues.

Union activism can also put the employee on an industry blacklist. This has discouraged trade unions from aggressively organising in this industry.

Another reason attempts to unionise have not been

successful in the classical sense is that it is hard to set up a union in an industry with such a high employee turnover. You won't get people willing to pay their dues regularly. However, there is scope to work as a welfare organisation and act as a pressure group to get the BPO industry to regulate itself.

Are there any regulations governing the working conditions at IT shops?

All existing labour laws such as the Shops and Establishments Act, the Industrial Disputes Act, 1947, the Maharashtra Recognition of Trade Unions and Prevention of Unfair Labour Practices Act, 1971, and the Workmen's Compensation Act apply to the IT industry.

However, the government is in the process of exempting this sector from some provisions of the labour laws. For example, provisions under the Shops and Establishments Act in various states have been relaxed as regards working hours, work shifts and employment of women in night shifts, to permit IT and IT-enabled units to work 24 hours a day, 365 days a year. In Maharashtra, the government has assured employers of relaxations under the Industrial Disputes Act and Contract Labour Act for IT and ITES units in Special Economic Zones (SEZs) in the state (2).

Are there any studies on the rate of occupationally-induced illness, etc, in software, BPO and ITES industries?

There are. 'Bi-national Perspective on Offshore Outsourcing: A Collaboration Between Indian and US Labour'. Centre for Education and Communication, Communication Workers of America, Jobs with Justice, New Trade Union Initiative and Young Professionals Collective; October 2006. Available on http://www.jwj.org/campaigns/global/tools/outsourcing/us_india_report_2006.pdf.

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Endnotes

1 'Bi-national Perspective on Offshore Outsourcing: A Collaboration Between Indian and US Labour'. Centre for Education and Communication, Communication Workers of America, Jobs with Justice, New Trade Union Initiative and Young Professionals Collective; October 2006. Available on http://www.jwj.org/campaigns/global/tools/outsourcing/us_india_report_2006.pdf

2 Source: <http://www.maharashtra.gov.in/pdf/itesPolicy2003.pdf>

ESI roadblocks

ESIS is a contributory health insurance scheme that is supposed to cater to 80 lakh workers and their families. But bureaucratic hurdles ensure that workers find it virtually impossible to access these resources. As a result, the ESIC has built up reserves of US\$1.63 billion, even while workers and their families struggle to get medical services

SUHASINI SINGH
R SUKANYA

THE EMPLOYEES STATE INSURANCE SCHEME (ESIS), a contributory health insurance scheme headed by the ESI Corporation (ESIC), is supposed to cater to 80 lakh workers and their families. However, workers find it virtually impossible to access these resources due to various bureaucratic hurdles and the insensitivity of officials. As a result, the ESIC has built up reserves of US\$1.63 billion, even while workers and their families go a-begging for medical services. Case studies from around the country demonstrate that ESI has largely been a mechanism to siphon funds from workers.

Inaccessible healthcare

"I was unwell and feeling tired for a long time," said Bangalore-based Yamuna, a single parent and garment worker diagnosed with TB. "The doctors in the dispensary would not touch me or examine me. They are so indifferent to us. Finally I was sent to the Employees State Insurance (ESI) hospital in Rajaji Nagar, where the doctors found these swellings on my neck. I had to be operated. I was started on TB medicine. It was difficult to go every alternate day to the hospital. The medicines were given for a week. I could not take the medicines regularly as they were very strong. I couldn't go to the hospital to ask the doctor; I have to take leave to go there."

The Employees State Insurance Scheme is the only public sector social security scheme covering a vast proportion of the working masses. It offers medical care of reasonable quality through ESI dispensaries and hospitals. But that's if and when a worker can access it. Most workers find it difficult to get a timely diagnosis from the ESIS. It is even more difficult for them to get permission or leave from their factory/workplace to go to the ESI dispensary or hospital for treatment. The apathy of the primary care service and the inaccessibility of the secondary care facility causes delays in diagnosis and treatment of workers, especially those with tuberculosis.

For the 400,000 garment workers (and all the other workers in Bangalore) there is only one super-specialty ESI hospital.

ESI dispensaries are required to be open until 7 pm. But some dispensaries do not function at all, and at others there are no doctors in the evening. The facilities provided at ESI hospitals/dispensaries are not listed anywhere, and

workers are not aware of the benefits they can avail of under the scheme. Like Rupa, who works at Texport Creations, and had a miscarriage. She was denied leave by the management and was not aware that she could avail of four weeks leave as maternity benefits ensured by the ESIS.

Workers are allotted ESI dispensaries on the basis of their residential address. But for every administrative procedure associated with the ESIS — getting an ESI photo identity card, change of address, or getting a sickness certificate — workers have to apply for leave and visit the local ESI office. Sheela, who works in Gokuldas Exports in Peenya, used to live in Sungarakatte. She was allotted a dispensary nearest her house. She later moved to Mysore Road and had to run from pillar-to-post to change her ESI dispensary. It took her six months to get her address changed from Sungarakatte to Mysore Road; during this period she was unable to avail of any medical benefits at the Mysore Road dispensary.

The ESI system doesn't take *suo moto* action even in known cases of workplace-related illness. During a recent outbreak of waterborne disease at a factory, all the workers were admitted to the ESI referral hospital for almost a week. But although they had hospital discharge summaries they had to first go individually to their local ESI dispensary medical officer for a sickness certificate and then to the ESI administrative office to avail of the sickness benefit. Most workers did not apply for the benefit as the paperwork was too confusing and intimidating.

The maze of ESI rules deters workers from using its services. If a worker does not go to the ESI dispensary for over two months, she will be told to get Form No 37 filled in by the management to say that she is employed and that her contribution is being paid regularly. Most ESI forms are in English and Hindi; as a result, workers find it difficult to understand and fill them in.

An employee's contribution towards ESI is deducted from her wages by the employer. If the employer does not pay his contribution towards ESI, the worker cannot avail of any treatment facilities at the ESI dispensary. "They make us wait for so long when we are ill. The doctor doesn't examine us. We know we are paying for the ESI service from our salary. Still we are shouted at!" says Yamuna.

It's a long road to compensation

This is the story of Pepiben Dhanaji Marwadi's long and tedious journey to get compensation after an accident at her workplace. She finally died of her injuries before the Employees State Insurance Corporation was ordered by the courts to pay up

Born in 1961, in a small village in Rajasthan, Pepiben Dhanaji Marwadi came to Ahmedabad when she was barely 18 years old. Married to Dhanajibhai, a truck driver in the city, Pepiben started working as a contract worker in the Ahmedabad Electricity Company (AEC) in 1996. M/s Geeta Constructions, a contract labour company, hired her to work as a headloader in AEC.

The job required her to haul 40-45 kg of coal on to a truck several times a day, over a precariously balanced wooden plank. Every time she negotiated the climb, she risked a fall. One morning, on November 10, 2000, she slipped and fell off the plank.

An unconscious Pepiben was taken to the D1 Employees State Insurance (ESI) dispensary, where doctors advised that she be shifted to the Ahmedabad Civil Hospital. Pepiben had sustained severe internal brain injuries.

AEC blamed the fall on high blood pressure, an ailment Pepiben did not have. This is a common tactic employed by employers to avoid reporting accidents under the Factories Act.

While she was in hospital, the contractor paid Rs 1,500 for an MRI. After 14 days in hospital, Pepiben was discharged, on November 24, 2000. For a year, she could not go to work and had to regularly undergo treatment at the hospital. While at home, ESI gave her a sickness benefit allowance of Rs 4,000. Although entitled to disability benefit, which is 70% of her wages, Pepiben was given only 50% of her wages, according to the sickness benefit allowance. Since AEC had not filled out Form 16 or an accident form under the Factories Act, ESI did not have any record of Pepiben's accident.

The safety committee of AEC, which had worker representatives, wrote to the ESI and factory inspector telling them about the accident immediately after the incident. Neither the ESI nor the factory inspector considered the safety committee's report.

Finally, on May 5, 2001, the factory inspector called a meeting between the company management and representatives from the safety committee. At the meeting, the management was advised by the inspector to submit Form 16. On May 24, 2001, AEC sent Form 16 to the ESI and factory inspector, accepting that Pepiben had indeed been involved in an accident. Ironically, the ESI refused to accept the form as the form had come six months after the date of the incident. It sought a clarification from the company. AEC

did not submit any clarification, and eventually the file relating to Pepiben's compensation was closed by the ESI.

But members of the safety committee did not let the matter rest. They sent Pepiben's case for examination to the ESI medical board. On July 3, 2007, seven years after the accident, a local ESI medical board examined Pepiben's case. By this time, Pepiben had almost lost her voice and could not walk. She was physically carried, in the heavy rain, for an examination by the ESI medical board. After examining Pepiben, the board too did not give a clear report, attributing her fall to 'hypertension'. Informal inquiries by a member of the safety committee revealed that board members had given the report following pressure from AEC.

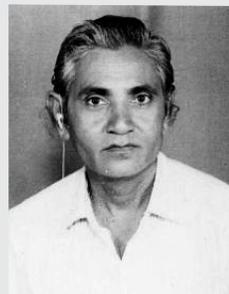
Simultaneously, a complaint had been filed in the labour court, in 2002, for payment of disability compensation to Pepiben. The labour court considered the incident an accident and passed an order on June 14, 2005, telling the ESI to pay Pepiben temporary disability benefit and also legal expenses for the case. This worked out to Rs 18,000. But the ESI challenged the labour court's decision and appealed against it in the Gujarat High Court. The high court passed an order, on August 28, 2008, upholding the labour court's decision and ordered the ESI to compensate Pepiben by November 10, 2008, or face action. The ESI has not yet complied with the order.

Meanwhile, Pepiben died in a hospital due to her injuries on September 15, 2007, seven years after her fall at the factory. — **Raghunath Manwar**

Raghunath Manwar is an Ashoka Fellow and a former worker at the Ahmedabad Electricity Company. After being thrown out of his job for raising the issue of unsafe work practices, he set up a voluntary group — Occupational Health and Safety Association — to identify victims of occupational disease and fight for compensation

The ESI run-around

Govind Devji worked for 30 years in the weaving department of a composite textile mill, Kanti Cotton Mill, in a small town called Surendranagar in Gujarat. In 1989, at a public meeting organised by his union, he heard that high levels of noise at work could lead to hearing impairment and that one could claim compensation for this from the Employees State Insurance Corporation (ESIC). A few days after the lecture, Govind approached his union seeking help in claiming compensation for his hearing loss. The union contacted the activist who had delivered the lecture. They were advised to conduct a medical examination and study the report.



The activist told them that if they filed a claim they would be the first to do so in the whole of India.

Govind then visited the ESI clinic and was referred to an ESI ENT specialist in Ahmedabad. The expert examined him and advised him to take some medicines for two weeks and come back. Govind saw the expert several times within the next six months. He requested the doctor to issue him a certificate stating that his deafness was noise-induced. The doctor asked him to come to his private clinic. Govind went to the private clinic where he had to pay a high fee. Later, the doctor issued him the required certificate.

Once he got the certificate, Govind contacted the union for further advice. He was told to get the management to fill up Form 16-A. The management asked him to pick up a blank form from the ESIC office. He went to the local office of the ESIC, located in a neighbouring town. The manager of the office told him that he had been working there for the past 21 years but had never heard of any Form 16-A. Instead, he offered Govind Form 16. Govind explained the purpose of the form he was after. The manager told him there was no provision for compensation for hearing impairment under the ESI Act.

Disappointed, Govind returned to the union office. Both the union and Govind expressed anger at the activist who had told them that noise-induced hearing loss was a compensable disease under the ESI Act. They contacted the activist and complained that he had wasted a lot of their time and energy. The activist assured them that the information was correct and told them to visit the manager again, this time referring to the section number in the Act. The union got interested. A representative accompanied Govind to the local office of the ESIC where they cited the relevant section number. The manager realised that the matter had become serious. He told them to pick up a blank form from the head office.

Office-bearers of the union went to the head office of the ESIC in Ahmedabad where they visited the director. The director told them to get a copy of the form from the store department. When they went to the store they were told that the form was not available. After a while, the manager at the local office informed them that he had managed to get a copy of the form.

The form was duly filled in by management at the mill, and submitted to the local office. After around six months, in 1992, Govind was told to present himself before the special medical board of the ESIC in Ahmedabad. Just as the session was about to commence an officer went up to Govind and told him to follow him into an adjoining room. The officer asked him a few questions and then informed him that he could hear properly and that he should withdraw the claim. Govind was aware that he was the first worker in India to claim compensation for noise-induced hearing loss (NIHL) under the ESI Act. He was determined not to budge under pressure. He tried to convince the officer of his genuineness, but to no avail.

The board resumed its meeting and Govind was asked to attend. When he went into the room he saw the same

officer sitting among the assessors. He was asked a few questions; his documents were scrutinised and he was asked to leave. After a month or so he was informed that his claim had been turned down by the board. No reasons were given.

What now?

The activist, after studying his papers, advised them to make an application with the medical appeals tribunal in Rajkot. A lawyer was identified to help Govind file the appeal. Appeal No 2/93 was filed in 1993. The tribunal asked Govind to visit several hospitals in Jamnagar and Ahmedabad during the course of the hearing. By this time — 1993 — even the mill had closed down. Govind was now unemployed. It was difficult for him to visit Rajkot from Surendranagar on every hearing date. Still, his hopes and trust in the legal system remained intact.

After seven years, on November 22, 2000, the tribunal passed an order in favour of Govind. Govind was pleased with the verdict, but not the ESIC. The corporation challenged the order in the ESI court. The court heard both parties and passed an order in favour of Govind, on March 12, 2004. The ESIC was still not satisfied. It went to the Gujarat High Court, and Govind had to hire a high court lawyer to defend him. The high court dismissed the ESIC petition.

Govind ultimately won his claim, but after 13 long years. Although he was the first claimant in this particular category, workers in Mumbai who had filed their claims later were the first to win their cases! — *Jagdish Patel*

ESI vital statistics

- Number of insured persons in 2007 (workers): 1,01,57,573
- Number of women workers insured in 2007: 17,97,657
- Total beneficiaries (workers+families) in 2007: 3,94,11,343
- Total number of employers in 2007: 3,31,744
- Total income in 2007 (which includes contributions, interest, fines): Rs 3,108 crore
- Total contribution (from employers and employees) in 2006-2007: Rs 2,453.48 crore
- Total expenditure in 2007: Rs 1,350 crore
- Total medical and cash benefits in 2006: Rs 1,053.72 crore

Source: ESI Annual Report, 2007

Mercury rising

Text by NITYANAND JAYARAMAN. Photographs by SUDHANSHU MALHOTRA

KODAIKANAL, IN SOUTHERN INDIA, is considered a picture-perfect tourist destination. The silent hills covered with eucalyptus and pine trees... the sun setting behind them... calm lakes... misty mornings...

But amidst these beautiful surrounds and calm waters, the Department of Atomic Energy (DAE) has found levels of mercury (1.32 ug per cubic metre) higher than normal.

In 1983, HLL (Hindustan Lever Limited) started operations in Kodaikanal, Tamil Nadu, to meet the growing demand for mercury thermometers, a product banned in most parts of the western world. Through the course of the plant's operation — less than 20 years — more than 1,000 permanent and casual workers are estimated to have worked in the factory.

While some jobs and certain sections of the assembly line had great potential for exposure to mercury, given the volatile nature of the substance and its ability to move through the air, occupational safety experts agree that no area within the factory could have been considered mercury-free.

Indeed, high levels of mercury, including in its deadly form (methyl mercury), were found in the waters and fish of lakes several kilometres away from the factory site, and well removed from human habitation. Mercury has a way of travelling long distances, settling in waterbodies, and building up to dangerous levels in aquatic fauna. Fish caught in Kodaikanal lake were found to contain dangerous levels of mercury, although not all the mercury in the lake can be attributed to HLL alone.

In 2001, the Tamil Nadu Pollution Control Board ordered the thermometer factory to shut after local people, environmental groups and ex-workers exposed the company's shoddy waste management practices. HLL was caught dumping tonnes of mercury-tainted toxic waste in sensitive watershed forests behind the factory and in a scrapyards in a crowded part of the city.

Thanks to a sensitive and intelligent chairperson at the Tamil Nadu Pollution Control Board, the company was forced to export 289 tonnes of mercury waste to the US for final disposal. Several thousand tonnes of waste still remain at the site.

For a multinational company that claims to behave responsibly, HLL appears to have kept both the community and its workers in the dark about the hazards of mercury. The fact that the factory was set up in a residential area, abutting a protected forest, is proof that due disclosure of the dangers of mercury was inadequate. Also, the scrap merchant from whose yard HLL's waste was recovered claims he was given the toxic waste in the guise of glass scrap. Workers too say that, until the scandal was exposed, they had no idea that mercury was toxic.



The beautiful hill station town of Kodaikanal, Tamil Nadu, is famous for its holiday resorts and weekend getaways.

Ignorant of its dangers, and with no advice regarding safe practices, workers say they routinely handled mercury without fear or worry.

Ignorance, in this case, led to anything but bliss. Many workers say they suffer from kidney, heart or brain damage, nervous disorders, bleeding gums, memory loss, chronic headaches, giddiness, shivering, and skin disorders. Children born to mercury-exposed parents are reportedly unhealthy; a few suffer birth defects. All these, locals say, are a result of exposure to mercury.

According to workers' estimates, around 18 workers, averaging about 32 years, have died from illnesses they suspect were caused by workplace exposure to mercury; eight children too have succumbed to what are suspected to be mercury-induced diseases.

Mercury is a potent neurotoxin that can affect the central nervous system. Certain forms like methyl mercury can be lethal in very small doses. Exposure to mercury during sensitive phases in life — during pregnancy or one's early years — can have lasting effects.

Nityanand Jayaraman is an independent journalist and researcher focusing on investigating corporate abuses of the environment and human rights. He is based in Chennai and is associated with the International Campaign for Justice in Bhopal. Sudhanshu Malhotra is a New Delhi-based photojournalist. This article was researched under the fellowship programme of the National Foundation of India



1 The famous Kodaikanal lake. According to a study done by the Department of Atomic Energy, levels of mercury in the lake are higher than normal.

2 Fish is still consumed from the lake even though it has been proved that it contains high levels of mercury.

3 Hindustan Lever Limited's mercury plant in Kodaikanal.

4 Ruby Martine (78) walks to the graveyard every Wednesday to put flowers on the grave of her son Christopher who worked at the HLL plant from 1985 to 1991. He wrote a letter to management asking that his department be changed as he was experiencing a number of health problems. But the company did not comply with his request and Christopher was forced to leave his job. He died in February 1997 due to kidney failure.



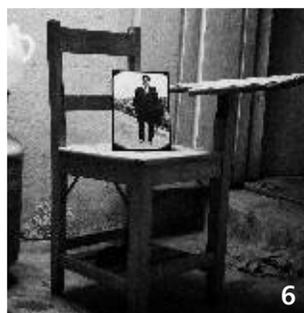
5

5 J Sudhakar, 30, worked at the mercury plant for eight years. He was in a temporary position and worked as a machine operator for mercury distillation. Sudhakar suffers recurring headaches, bodyache, giddiness, ulcers; he also vomits blood. His three-year-old son Vijay has a hole in his heart. Doctors recommend surgery but Sudhakar doesn't have any money. Vijay lives with his grandparents as he has problems breathing at higher altitudes.

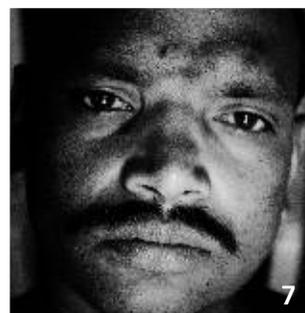
6 Paneer Selvaram died of kidney failure at the young age of 26. His urine mercury levels were 320mg/dl, as against a normal level of 15-40mg/dl. Paneer used to work as a gardener in the mercury thermometer factory.

7 S Sivaganam, 45, worked at the HLL mercury plant for around 18 years (1984-2001). He has a brain tumour and has been undergoing treatment for over 13 years. He spends about Rs 4,000 per month on treatment. At times he can be seen walking the streets talking to himself.

8 Vishal, 10, complains of continuous headaches. Doctors suggested an MRI scan but the family doesn't have the money. His sister Sindujo, 14, also has headaches and vomiting. Their father, Ramachandran, worked at Hindustan Lever Limited for 15 years.



6



7



8



9

9 Sahayam Nathan, 41, has been an ambulance driver for 10 years and has carried many people to the emergency ward at the government hospital in Madurai. Sahayam worked at the factory for a week before he quit due to family pressure. His father had heard about the Minamata disaster in Japan in the 1950s, where both humans and animals exhibited symptoms of heavy metal poisoning after consuming fish contaminated with mercury from an acetaldehyde manufacturing unit that was discharging waste mercury into Minamata bay.



10

10 A Lourduyesurajan, 51, worked at the HLL factory for 17 years, in a hazardous area. He now has heart problems along with various neurological complications.



11

11 Nitish's (9) mother Margaret, 32, worked at the mercury plant in the packing area and digital section from 1996 to 1998. She complains of constant headaches, failing eyesight, shivering, and giddiness. Nitish was born mentally challenged and attends a special school. The family lives in Prakasha Puram, around 7 km from Kodaikanal.

Survival over safety, livelihood over health

The issue of occupational safety and health is not high on the priorities of trade unions in India, say four senior representatives of India's leading trade unions. How can it be otherwise, they ask, in a country where 133 million of the employed labour force continue to be below the poverty line? Occupational safety must come second to the struggle for fair wages and the battle against exploitation

SHALINI SHARMA



H Mahadevan, Deputy General Secretary, All-India Trade Union Congress (AITUC)

How many people are covered by AITUC via its affiliate members?

According to our records, the total membership is 40 lakhs. According to the government notification it is 35 lakhs.

What kinds of industries or occupations are covered by AITUC?

We are present in almost every industry — steel, coal, textiles, manufacturing industries, chemical industries, power, forests, agricultural industries, oil, PWDs (public works departments), municipal workers, even the unorganised sector.

Do you have a person dedicated to working on issues of occupational health?

Yes, I am assigned this task at AITUC. Besides, I have been vice-chairman of the National Safety Council of India and am presently a board member of the same.

What, if any, is your organisation's stated policy on occupational safety and health?

We consider occupational safety and health a matter of grave concern. This is evident from the fact that I have been dedicated to taking up this subject at various fora, be it as vice-chairman of the National Safety Council or as a member of AITUC. I have presented several papers on the subject and have also drafted a paper on national policy.

As an organisation we believe that three key postulates serve as fundamentals to OSH (occupational safety and health):

- A worker should return home in exactly the same condition in which he left for work.
- Industrial development should be pollution-free and occupational hazard- and disease-free.
- Safety and health are the fundamental rights of workers.

How important do you think occupational safety and health is in the overall scheme of things for a worker? Please rate, on a scale of 1 to 10 (1 being 'most important' and 10 being 'least important'), the priority

that ought to be accorded to occupational safety and health by a labour organisation. Please explain the reasons for your assessment.

It is certainly very important. But considering the present practical challenges, it doesn't get the attention it deserves.

What, on a scale of 1 to 10, is the priority accorded by your trade union to OSH, and why?

It is an important issue but not the most important. This is mainly because of practical considerations. Survival and ensuring one's daily bread-and-butter are more important concerns for us. And it becomes all the more important in light of the ongoing recession, closure of industries, and job losses.

What are some of the notable actions taken by your organisation to improve occupational safety and health of workers?

- We conduct classes on the subject. Safety and health is a specific subject in our curriculum.
- We publish literature on the matter.
- We conduct industry surveys to assess safety and health standards.
- We organise agitations to highlight our concerns and demands regarding the issue.

What are the key stumbling blocks unions face in addressing OSH issues?

The key challenges are:

- Indifferent attitude of employers. They are not bothered about safety and health issues. Profit is their topmost concern.
- Status of staff/officials at the labour department, etc. They are neither adequate nor competent to handle the state of affairs. Corruption is very evident.
- Poor response from workers. Their most important concern is survival; OSH takes a back seat most of the time.

How would you rate the state of occupational safety and health in India, on a scale of 1 to 10, with 1 being 'very good' and 10 being 'very poor'?

I would say it is highly unsatisfactory. The government is not doing its job, and workers are not conscious enough.

Do you think there is adequate focus on OSH issues?

In my view, there isn't enough focus. OSH is not a priority issue for anyone — government, employers, industries, workers — and hence doesn't receive the attention it deserves. For some of us individually, it certainly is a matter of priority, but not for everyone.

R A Mittal, Secretary, Hind Mazdoor Sabha

How many people are covered by your trade union via its affiliate members?

According to the government notification our membership is over 33 lakhs. According to our own records we number nearly 55 lakhs.

What kinds of industries or occupations are covered by the trade union?

We are present in all industries, except for the financial sector, and including the unorganised sector. We are in the leading position in railways, air transport, ports and docks, coal and cement industries. Orissa, Karnataka and Chandigarh are states where we lead in membership.

Do you have a person dedicated to working on issues of occupational health?

Not exclusively. We are short on manpower so we can't really afford to have one dedicated person, despite our best intentions.

What, if any, is your organisation's stated policy on occupational safety and health?

We have no declared policy as such, though we do focus on the Factories Act and are also members of the National Safety Council of India.

How important do you think occupational safety and health is in the overall scheme of things for a worker? Please rate on a scale of 1 to 10 (1 being 'most important' and 10 being 'least important'), the priority that ought to be accorded to occupational safety and health by a labour organisation. Please explain the reasons for your assessment.

I would put it at 5. In a country facing unemployment, underemployment and poverty, where the government agrees that 26% of our people live below the poverty line, and 133 million out of the total employed population continue to live below the poverty line, how much importance can a worker actually give to OSH? Survival and livelihood issues are the priority, and will remain so.

What, on a scale of 1 to 10, is the priority accorded by your trade union to OSH, and why?

I will again put it at 5. According to a joint memorandum submitted by trade unions, OSH has lowest priority. Of course, we acknowledge the difference between the organised and unorganised sectors. The organised sector can afford to focus on OSH because of a secure livelihood and protected healthcare and childcare concerns.

What are some of the notable actions taken by your organisation to improve occupational safety and health?

We can't claim to have taken much action except that we emphasise universal health standards, social security and adherence to the Factories Act.

What are the key stumbling blocks faced by unions in addressing OSH issues?

Underemployment, unemployment, poverty and the attitude of industry are some of the key challenges.

How would you rate the state of occupational safety and health in India on a scale of 1 to 10, with 1 being 'very good' and 10 being 'very poor'?

I would say 'very poor' and rate it at 8.

Do you think there is adequate focus on OSH issues?

Again, there is not enough focus because of poverty, unemployment, the current economic recession and a primary focus on survival and livelihood issues.

Sanjay Singhvi, General Secretary, Trade Union Centre of India

How many people are covered by your trade union via its affiliate members?

Over 100,000.

What kinds of industries or occupations are covered by the Trade Union Centre?

We cover a wide range of industries but concentrate on the unorganised sector. We are trying to organise widely in the construction sector. Otherwise, we work in almost all sectors.

Do you have a person dedicated to working on issues of occupational health?

Not yet. But Ravindra Mohite from our union is concentrating on asbestos-related health problems and also looks at other issues of occupational health and safety.

What, if any, is your organisation's stated policy on occupational safety and health?

We do not have a stated policy on occupational health and safety. Our policy is reflected in our programmes.

How important do you think occupational safety and health is in the overall scheme of things for a worker? Please rate on a scale of 1 to 10 (1 being 'most important' and 10 being 'least important'), the priority that ought to be accorded to occupational safety and health by a labour organisation. Please explain the reasons for your assessment.

It is difficult to rate the importance. The question is one of relative importance. For example, is OSH more important than getting a minimum wage? Is it more important than abolishing contract labour? Are these questions not connected? What can definitely be said is that, in these

times when imperialist globalisation is exploiting human and natural resources with scant regard for environmental degradation, OSH takes on greater importance.

What, on a scale of 1 to 10, is the priority accorded by your trade union to OSH, and why?

We try to attach importance commensurate with the current situation, and in accordance with our resources.

What are some of the notable actions taken by your organisation to improve occupational safety and health?

We have undertaken to fight for the workers of Hindustan Composites Limited, in Mumbai, who are affected by asbestosis, a disease caused by asbestos fibres. We have filed cases for them in the labour court and want to try other forums as well. We have also helped organise meetings on asbestosis and related issues.

We have fought for the right of construction workers to protective equipment in Karnataka and in Madhya Pradesh. We have fought against the pollution problems of fish workers as well.

What are the key stumbling blocks faced by unions in addressing OSH issues?

The biggest stumbling block is resources. The scant resources of unions, in terms of manpower, money, etc, are spent on protecting workers' jobs and their minimum wages. To spare resources for other work is very difficult.

How would you rate the state of occupational safety and health in India on a scale of 1 to 10, with 1 being 'very good' and 10 being 'very poor'?

It is obviously somewhere near 10 by any objective reckoning.

Do you think there is adequate focus on OSH issues?

Obviously there isn't, for the reasons mentioned above.



Ardhendu Dakshi, Centre of Indian Trade Unions (CITU), Member, National Safety Council

How many people are covered by the trade union via its affiliate members?

Around 4.5 million.

What kinds of industries or occupations are covered by the trade union?

We are in every industrial field excluding agriculture. CITU is different from other trade unions in this regard. We have a separate All-India Agricultural Workers Union. Similarly, organisations dealing with banking, insurance and other financial issues are friendly but not directly affiliated to us.

Do you have a person dedicated to working on issues of occupational health?

Yes. I have been nominated by CITU to work on this subject. I am a member of the governing body of the National

Safety Council, Mumbai.

What, if any, is your organisation's stated policy on occupational safety and health?

We have highlighted the following concerns repeatedly:

- Need for separate legislation on OSH. In the absence of separate legislation, the matter gets covered by other existing laws like the Factories Act. We have been demanding implementation of this legislation and have also been stressing the need to compile all the separate guidelines and stipulations, for better awareness.
- Right to information. Complete and easy access to information for workers dealing with chemicals, radioactive and other hazardous material, etc.
- Need for comprehensive legislation regarding hazardous materials, for instance shipbreaking, toxic waste, nuclear material. In fact, it needs to cover all aspects of safety, the environment, and OSH matters.
- Being a member of the prime minister's working group, I suggested forming a national advisory/supervisory group on safety matters, with considerable executive and punitive powers as regards implementation of the group's recommendations.
- Need for a comprehensive system of data collection. Though there are the National Safety Council and others, the relationship between work environment and illness is often ignored. No institute investigates this adequately.

How important do you think occupational safety and health is in the overall scheme of things for a worker? Please rate on a scale of 1 to 10 (1 being 'most important' and 10 being 'least important'), the priority that ought to be accorded to occupational safety and health by a labour organisation. Please explain the reasons for your assessment.

Safety and health are certainly important. This is evident from the fact that when you enter any public sector industry, the first thing you see is the safety sign. In meetings at the NSC and labour ministry, I always emphasise the need to look at safety matters in a more comprehensive manner, taking a holistic approach. Since family and work structures are changing, it is important that safety is ensured at all levels.

Today, 95% of workers do not have any safety gear. Even BBC showed people working in hazardous industries with no footwear on. If you take the case of big industries, the most inefficient officers are made responsible for safety matters. This reflects the government's policies and legislations as well. So, while there is a lot of talk of OSH, the action part remains to be seen.

What, on a scale of 1 to 10, is the priority accorded by your trade union to OSH, and why?

The top priorities are always livelihood, survival and matters dealing with wages. Although OSH does occasionally make it to top priority, in general giving it priority would be difficult.

What are some of the notable actions taken by your

organisation to improve occupational safety and health?

I was working with the steel industry in particular. We have a Joint Committee on Safety in the steel industry which has been working for nearly 30 years now. M K Pandhey is vice-chairman of the committee. The focus is to get more inclusive participation on safety matters. We have members on the Coal Mines Safety Board, though I must admit its record is far from satisfactory. We are organising different international and national seminars/workshops on safety issues and hazardous material. For instance, Dr T K Joshi has been working actively with us on the asbestos issue, in Delhi. We also organise/participate in specific classes and lectures to propagate safety matters. I have been nominated by CITU and have a role here.

What are the key stumbling blocks faced by unions in addressing OSH issues?

There are many roadblocks. To name a few:

- OSH is not a priority for companies/industries.
- OSH is an important and specialised matter. It can't be dealt with casually; it needs intense research. The approach so far has been very casual both in research as well as in implementation. Also, there is no dedicated institute to work on this issue.
- Funding remains another challenge to us.
- Lack of a policy framework and legislation (and punitive action). Out of several thousand companies registered under the Companies Act many do not even send their annual returns to the government. Also, it is noticeable that in the National Safety Council most industries belong to the public sector. Private players are mostly missing. Only visible accidents are acknowledged and reported. Life would appear to be very cheap in India.

How would you rate the state of occupational safety and health in India on a scale of 1 to 10, with 1 being 'very good' and 10 being 'very poor'?

I would say 'very poor'; in fact non-existent. Giving lectures is easy, but implementation, via institutes, is very difficult.

Do you think there is adequate focus on OSH issues?

The focus on OSH is far from adequate, as you must have already gathered through my responses and observations. I think we lack a culture of appreciating health and safety the way they are appreciated and acknowledged in the West. For instance, in many developed nations, smoking in public is not allowed while in India we still do not take this kind of action. How we care for our own health and how we care about others' health and safety demands specific attention and training. The training should take place right from childhood to adulthood. I would say safety and health training must be incorporated and cultivated as a matter of culture.

Shalini Sharma has been actively engaged in student activism and is currently working as a student coordinator for International Campaign for Bhopal

The neutrality of science

If science were objective and neutral, why would there be such a paucity of research on occupational safety and health?

**RAKHAL
GAITONDE**

THAT SCIENCE IS OBJECTIVE and 'neutral' is the basis on which it is respected and trusted. However, having trained as a scientist and having worked for several years with people 'outside' the mainstream, like rural daily wage labourers, unorganised sector workers, pollution-impacted communities, etc, I am beginning to question this assumption of neutrality.

While the quest for evidence, for rigour, the question of peer review, irreverence for authority, and 'expert opinion', as witnessed in evidence-based medicine, are all extremely progressive aspects of the scientific endeavour, most of us focus only on the 'methods' part of the scientific quest and showcase rigorous methods as the hallmark of 'good and neutral' science.

There are numerous decisions that need to be taken before and after choosing an 'appropriate method'; in fact, the 'method' is just one in a series of decisions a scientist must make. These decisions include:

- Choice of subject for research.
- Choice of specific methods/tools for the research.
- The way one disseminates and presents one's findings.

It is the sum of all these decisions that defines the usefulness of science to problems relevant to the people.

The question of neutrality arises when the choices an individual or group of scientists makes regarding each of the above aspects of research consistently neglect a particular section of people — like the labouring masses, particularly in the unorganised sector — especially when this section is at the receiving end of similar decisions in all fields; when this section wields neither economic, social nor political power. Science loses its neutrality the moment it loses its capacity to introspect and be honest about what it sees, rather than what it is pressurised to see.

Doing research

Choice of subject for research

It is well known that some subjects as well as some ways of seeing subjects are more privileged as areas of research than others. The reasons for these could range from availability of funding, funding agency pressure, corporate pressure, editorial policies of 'big' journals, lack of support from the general scientific community, and sometimes the

simple fact of not having the theoretical models or tools to understand an issue adequately.

The fact of skewing research towards those in society with more money, power and social standing is well recognised by the existence and documentation of the '10/90 gap'. This is a recognition of the fact that about 10% of the world's population's problems commands 90% of the research funds; thus 90% of the world's population gets only 10% of all funding for its problems.

The important point is that there seems to be a consistency of the type of subjects thus neglected, and it is this consistent neglect in researching/addressing issues affecting a larger section of society — mostly the poor and the marginalised — that erodes the very basis of the assumption of neutrality in the scientific endeavour.

Similarly, whether one chooses to disaggregate one's data on the basis of caste, gender, socio-economic status, etc, all invariably reflect the overall awareness and perspective of the individual researcher and her/his group, and the development of methods, not necessarily the lack of plausibility of the association.

The methods chosen

It is well recognised that research tools have been developed to pick up or measure only particular types of 'truth'. Thus, quantitative instruments work best with numbers, qualitative work best with feelings and relationships and so on. The choice of one with the exclusion of others gives only a partial picture. While this in itself is not problematic, it is the honouring of one set of methods as more 'scientific' and more real than others, and privileging one over the other that is problematic. And this has happened consistently with the privileging of quantitative methods over all others, including qualitative methods such as anthropological, sociological, etc, in the field of health research.

How does one disseminate?

Does the researcher see her/his responsibility ending with publication of the report in an esoteric journal, on an open source website on the Net, or actually creating lay literature adaptations and presenting the findings to people, communities, unions, etc? It is important to assess what the commitment of the researcher is to the people who have contributed to the research. It is important to realise that the stance of so-called 'neutrality' in terms of dissemination of one's work only favours those in power and with money. There are very few poor victims who can access the esoteric literature to find out if there are any studies talking about her/his state of affairs. And if one is

indeed doing research to improve the health or wellbeing of the people, then such a commitment of dissemination seems automatic. The fact that it is not is yet another indicator of the non-neutrality of science.

How does one respond when asked to give an opinion?

What is the commitment to people who approach one to give her/his opinion regarding an issue, especially when it is part of a dispute? It must be clearly understood that notwithstanding the rationale that giving an opinion in legal or other disputes is time-consuming and brings one in contact with unnecessary red-tape, etc, sometimes sensationalising the issue only works in favour of the powerful and moneyed. It must be realised that people are merely asking for an honest opinion and are quite willing to accept it if the opinion goes in a manner that they did not expect. It is also a fact that shying away from this responsibility only leaves the field wide open for less quality and corporate-contracted research.

The rise and rise of corporate epidemiology

There are an increasing number of articles in mainstream scientific literature reporting the suppression of information, delays in the release of information, blocking the setting of guidelines, etc, by corporate-sponsored 'scientific studies' or pressure. In a detailed discussion on the subject in the *International Journal of Epidemiology*, the author notes: "Many prominent epidemiologists regularly accept funding from industry either to conduct research, or more commonly to criticise research conducted by their colleagues. In some cases, this has gone so far as to assist industry attempts to block the publication of important findings." The author goes on to note that, "there is plenty of evidence that the source of funding strongly influences the conclusions that are reached". In a metaphor of the issue, the author says: "Thus, for every epidemiologist trying to change a light bulb, there are now several critics hired by industry to argue that they are doing it the wrong way, or that it is not broken and does not need changing at all, or that they have changed it the wrong way and should do it again..."

In conclusion I would like to quote Professor Nancy Krieger of Harvard: Ask always whose experience is represented in whatever public health tasks you take on, and if there are gaps, if there are silences, listen and invite the missing voices, so that it is not the disenfranchised who once again bear the burden of uncertainty and injustice.

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