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The Other Deadly White Dust: Russia, China, India and the Campaign to Ban Asbestos　もう一つの白粉末——ロシア、中国、インドとアスベスト禁止運動

Melody Kemp

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Seoul University's Dr Domyung Paek addresses ANRO, Phnom Penh 2009

In parts of Asia, carrying 500 grams of one white powder can draw a death sentence, but importing 1,000 tons of another lethal white dust is both legal and profitable.

Asbestos, a known carcinogen banned in much of the world, is a common and dangerous building block in much of Asia's development and construction boom. This other white powder causes 100,000 occupational deaths per year, according to Medical News Today.

While images of kids with heroin-loaded needles stuck in their arms spark public outrage, clouds of asbestos fibers in factories and on construction sites often draw official shrugs and denials. Illicit drug use does not rank among the top ten causes of death in young adults, according to a 2009 global study of adolescent health by the Murdoch Children's Research Center in Melbourne in 2009. But in some Asian nations including China, asbestos is in the top ten causes of occupational disease in laborers, some of whom were exposed as working children. The numbers are generally thought to be higher since much of Asia's data rely on a highly mobile workforce with a high turnover rate.

Like a sleeping bear, asbestos can be deadly when disturbed, and all along the mining, manufacturing, installation, cutting, and deconstruction processes, the mineral is turned into air-borne fibers that lodge in the lungs and cause fatal respiratory diseases, including mesothelioma.

Across much of Asia, white asbestos, also known as chrysotile, is widely used to make asbestos-cement construction material such as roofing tiles, wall panels, and expansion joints, as fire proofing, lagging, foundry gloves and overalls and in brake linings and gaskets in buses and trucks. As modernization and economic development take hold, people trade their insect-filled, flammable grass roofs and woven bamboo walls for asbestos cement materials.

A few years ago at a state-owned roof tile factory in Vietnam, young male workers clad only in shorts carried bags labeled "Asbestos-Kazakhstan." The air was thick with white dust huffing up like steam from lava. Visiting occupational health and safety experts held their breath as long as they could; some smothered their faces in dust masks. The workers did not have that luxury. Their only protection was handkerchiefs tied bandit-style over their mouths and noses as they climbed the sides of the hoppers.

"I know it's dangerous," said the manager spreading his hands and shrugging, "but it's also cheap, and people only want to buy cheap tiles."

Drugs or Dust

"It's just a PR campaign when they say that asbestos can kill," Uralasbest's Viktor Ivanov told AFP in 2007, when he headed the Chrysotile Association, an industry group based in the Russian town of Asbest. The website for Uralasbest, the Ural Asbestos Mining & Ore Dressing Company, calls the company the world's "oldest and largest manufacturer and supplier of chrysotile." In 2005 the Russian firm produced about a quarter of the world's chrysotile asbestos and exported it to 35 countries (pdf): 53 percent outside the Commonwealth of Independent States (to China, Egypt, Indonesia, Pakistan, Thailand, etc.), and 13 percent within the CIS nations that had been part of the former Soviet Union (Armenia, Kazakhstan, Uzbekistan, Ukraine, etc.). Its website vigorously contests critical claims about the dangers of asbestos and calls for eliminating its use (link).

Vietnam cannot agree with Uralasbest's contentions. A rising tide of workers ill with asbestos lung disease arising from situations like the one described above, has led the government to collaborate with the Australian trade union aid agency APHEDA, to develop a coordinated approach to dealing with asbestos.

Very little asbestos ends up in the West. More than 60 countries have partially or completely banned asbestos, including the United States,

Uralasbest's factory

Australia, Japan and South Korea. The EU nations and others have completely banned both brown amphibole and white chrysotile asbestos, and the International Agency for Research on Cancer has classified all types as a human carcinogen. Although some studies have found that chrysotile's small fiber size makes it less virulent than brown amphibole, the WHO is unequivocal: "no threshold has been established for the carcinogenic risk of chrysotile."(pdf)

But asbestos merchants, disputing World Health Organization (WHO) data and overwhelming scientific evidence, claim that chrysotile is safe. Uralasbest's website decries "the wave of anti-asbestos psychose [sic] [that] was spread over Western Europe." "Today's asbestos industry is totally harmless," Tatiana Kochetova of the Asbest-based Institute for Asbestos Projects told the *Russian Journal*. "There hasn't been one case of asbestos-caused disease here for many years. Locally produced asbestos does not cause any harm."

Researchers Jock McCulloch and Geoffrey Tweedale documented rates of malignancies dropping in Asbest only after the introduction of dust control technologies (and the dispersal of ill workers). Those same safety measures that, in any case, mitigate rather than eliminate risk are largely lacking in the countries to which Russian asbestos is exported. (McCulloch J and Tweedale G 2008 Defending the Indefensible: The Global Asbestos Industry and its Fight for Survival. OUP.)

Russia's Exports

Asbest is a classic monogorod, or single-industry town in Bazhenouskoye in north of Kazakhstan, along the eastern slope of the Ural ridge. The open-pit mine covers 90 sq. km. and stretches 11.5 km long, 1.8 km wide and almost 300 meters deep. There, some 10,000 workers turn out more than 500,000 tons of chrysotile asbestos annually.

In 2009, Uralasbest was forecasting production of 450,000 tons, "a significant portion of the world market," and its FY 2006 revenues were $192 million, according to Rye, Man & Gor Securities (pdf). Russia produced 925,000 tons of asbestos in 2008, according to the US Geological Survey, almost half the estimated world production of about 2 million tons a year, and worth $900 million.

Once state-ownd, Uralasbest is now privatized. More than half of Uralasbest share capital is owned through a Russian regional bank (Urals Bank for Reconstruction and Development). Stroyexport, another Russian company, owns 14 percent, and two South Africa-registered companies -- Petrov & Co and Mavrol Management -- own 21 percent. The top managers control about 30 percent of the company (pdf). In 2007 Uralasbest entered into a joint venture with Swiss Minmet Financing Company to recover magnesium from its asbestos mine tailings. This move was meant as a hedge against the global decline in construction.

Perhaps more threatening to Uralasbest's economic future than recession is the growing awareness that asbestos is toxic, and alternatives are available. In 2000, citing Canada's high level support for its industry as a model, Russian asbestos industry officials sought Vladimir Putin's assistance in countering "asbestphobia."

Russian corporations also looked to Canada's -- and Kazakh's -- marketing efforts in newly rich Asian nations. That strategy has produced rich results according to the World Asbestos Reports, and the WHO confirms that some countries have reduced restrictions and increased production and use of chrysotile.

China

In the grainy black and white Chinese government film[1], a man walked unsteadily toward the cameras, his chest skewed to one side. He looked to be in great pain. An unidentified person in clinical clothing turned the man around indicating a tumour the size of a small backpack pushing it's way though the skin over the man's shoulder blades. He died shortly after, and the film unswervingly follows the post mortem, the man only a few minutes ago painfully alive, now dead on the gurney with an open chest. The cause of death the voice over intoned was mesothelioma from inhaling crocidolite fibres. The man was a farmer in Sichuan province. The film shot in 1984 recorded hillsides where friable crocidolite, (commonly known as blue asbestos), had been exposed after erosion and landslips. The huge areas of virgin forests in Sichuan and Yunnan provinces provided timber and land for agricultural use but exposed substantial reserves of crocidolite below. The villagers used it to make bricks and stoves, mixing it with clay. A local tradition had new brides given a basin with asbestos to whitewash the walls of the kitchen for the newlyweds.

The area is dry and windy. The crocidolite, so dense the film's researchers noted that the soil looked blue, was blown into the faces of farmers and road builders who had mortality rates of thirty plus percent. The narrator added that the asbestos was vital to China's defence industries. Submarines, tanks, battle ships all used large amounts of asbestos. Doubtless the Department of Defence in China is little different from its cohorts around the world and close mouthed about asbestos mortality and morbidity.

The research reported in the film won several awards for science and technology research in 1990 . And yet in 2010 China remains the world's second largest producer of asbestos and the world's largest user (link).

Traded along the Silk Road to China, it was relatively unknown as an industrial product until 60 years ago and the Great Leap Forward, which accelerated China's industrialization before famine sent the economy into reverse. In 2006 ChinaMining.org reported that "China now has more than 160 asbestos mines and asbestos-manufactured products enterprises, most of which are small. Asbestos mines in western China have been developing rapidly and now become (sic) the main base of asbestos production in China. China's asbestos production is chiefly concentrated in Xinjiang, Qinghai, Gansu and Sichuan. These provinces (regions) contribute about 2/3 of China's total asbestos production."

In 1995, Chinese dissident Harry Wu surreptitiously visited and photographed China's largest asbestos mine, in a prison camp in mountainous Sichuan province. "I told the prisoners that they have been given the death sentence," Wu told USA Today at the time.

China reportedly has abandoned forced labour asbestos mining, but production is unceasing. In 1997 China's total asbestos production was 437,000 tons, ranking third in the world. Gansu, Xinjiang and Qinghai are amongst the three most important producers of asbestos, yielding 56.45% of China's total. Sichuan Jilin, Guangdong, Qinghai and Shijiazhuang are also notable suppliers. The extent of the current supply of Chinese asbestos is to be seen at Alibaba.com. Over two thousand products are available from 15 major suppliers some of which boast ISO

9000 and 1400 certification (link).

China has open cut and underground asbestos mines. Unlike the infamous coal mines, accidents are less well reported. But it is the daily inhalation of fibres at work and in the surrounding environment that causes the painful life shortening diseases.

One such open cut mine is the Shimiankuang 石绵矿 Asbestos Mine found at a giddying 3,200 meters on the border of Qinghai Province and the Xinjiang Uyghur Autonomous Region in Western China. (See location)

One visitor wrote, "though the asbestos is certainly deadly for most of the workers, many of whom seem not to be wearing masks of any kind, it may not be dangerous for the visitor to just drive through. However, if the idea concerns you, you may want to avoid this route. Asbestos is ....also the chemical basis of the nephrite jade in the Kunlun Mountains, the source of most of the jade in China for 3,000 years." (wikimapia.com).

There is no doubt that China is conducting detailed and collaborative research on asbestos diseases. Journals such as Industrial Health (Cai Zhang et al 2001) and the Annals of occupational hygiene (Li et al 2002) are littered with studies. But the pragmatic and developmentalist Chinese government considers worker deaths as secondary to economic and export development and shows no signs of diminishing production. They are, however, reported to be doing intensive investigation on substitutes, and do at least attempt to record morbidity and mortality, something that India is less diligent in doing.

India Imports

In 2008 India – along with Pakistan, Canada and Russia – rejected the banning of chrysotile asbestos mandated under the Rotterdam Convention on Prior Informed Consent (PIC). PIC lists chemicals that require exchange of information on health hazards prior to trade.

India, which imported 360,000 tons of asbestos in 2006, claimed that evidence of chrysotile's lethality was not conclusive, and that it was awaiting the results of a major health study before joining the convention, according to Madhumitta Dutta of the Corporate Accountability Desk, which is a member of Ban Asbestos Network of India (BANI).

However, "India failed to inform the international community ... that the [health] study was funded in part by the asbestos industry," charged Dutta. "Still worse, the study was kept under wraps, and is not accessible to public health specialists or labor groups."

Gopal Krishna, a consultant on clean industry and convenor of BANI, condemned his country's rejection of PIC. "There is a political consensus in India to promote asbestos at any human cost," he wrote in India Together in 2006.

Underlying that consensus are the close links between the asbestos industry and some prominent Indian politicians. "With asbestos firms being owned by politicians or the state itself, the government seems to be following a classic ostrich policy," Krishna wrote. "The reality is that the country's most powerful parliamentarians bless the asbestos industry."

They include Buddhadev Bhattacharya, the chief minister of Bengal's Communist government, who gave Utkal Asbestos Ltd. an Environment Excellence Award which it used in its advertising. Rebranding itself in 2006, the company dropped the word asbestos from its name. Now called UAL Industries Ltd., it is a major producer of fiber cement corrugated sheets and accessories under the brand Konark, and its website boasts that it "has left no stone unturned to achieve its motive of becoming the leading player in Eastern India."

UAL factory

Visaka Industries' chairman, G. Vivekanand, is the son of G. Venkataswamy, a member of Parliament, deputy leader of the Indian Congress Parliamentary Party, and a former Union Textile Minister. Vivekanand put out a fact sheet claiming that chrysotile is safe, and blamed Western media coverage of past events for generating unfounded fear.

Indian media reported that Congress Party chief Sonia Gandhi encouraged Visaka industries to set up in her constituency Rae Bareli, and saw the plants as a way to boost employment and electability. The plans were fast tracked, breaking records for passage through the Departments of Environment and Forests. Visaka annually produces 600,000 tons of asbestos sheets, mostly used in roofing. One of its main marketing targets is India's rural population, 80 to 85 percent of which now live under thatched roofs, the company website notes.

In October 2009 Visaka Industries announced it is setting up a 100,000-ton capacity asbestos cement sheet plant at Sambalpur in Orissa at an estimated cost of $8.6 million "to meet the rural demand." It is also ramping up the capacity of its Pune plant from 65,000 to 100,000 tons per annum, according Vivekanand.

In 2007 an Indian news channel showed workers hand-mixing asbestos into rice, while a voice-over intoned that chrysotile is safe enough to use as a husking agent. The rice was later sold as premium basmati.

Dying to Work

"I have seen young men suffering from the cancers caused by this material [asbestos]," says a guard at an asbestos cement sheet factory in Guangdong, China. "The bosses don't care, and the government intimidates us [who are] working for safety. They say we are sabotaging China's development. Sometimes I get very frightened and cannot sleep thinking I will be arrested. I may get the disease, as the air is full of dust. I hope that someone would help me if that happened. I can't quit. Where would I go? I have no skills and jobs are hard to find."

The participants at the Phom Penh meeting had no suggestions.

This worker's story is echoed throughout Asia. In China alone, the official incidence of industrial lung diseases is around 100,000 per year. Experts familiar with Beijing's official statistics would multiply that figure by three or four to get close to the real toll. The irony perhaps enigma of China is that it has done more research and medical trials than any other country in Asia. It knows more about the effects on it own people than any other using nation. And yet it continues to mine, export and use it domestically.

Harvard University and the World Health Organization report that occupational injuries and disease already surpass infectious disease as the major causes of death in the developing world and threaten to undermine any economic or moral imperatives gained by trade. More people die per day of workplace illness throughout the world than are killed by global terrorist attacks, wars, drugs, or by the various pandemics (such as avian and swine flu) that attract huge institutional funding, according to Sanjiv Pandita, director of the Hong Kong based Asia Monitor Resource Center. If you consider that 100,000 per year die of asbestos alone, it is not hard to believe Pandita's assertion. Meanwhile, the systematic erosion of trade union power and labor standards by globalization has exacerbated the problem and undermined opposition/occupational justice.

Working for Safety

Workers and activists around Asia are not convinced by industry reassurances and are getting organized. At a September 2009 meeting in Phnom Penh of the Asian Network for the Rights of Accident Victims (ANROAV), 120 activists and Asian-based academics from 16 countries heard stories of frustration and harassment. Delegates charged that globalization has led to "state sponsored pimping"-- governments selling workers' bodies and lives in return for investment.

The importance of the issue, and frustration from waiting for governments and employers to act are evidenced by steadily increasing attendance at ANROAV's annual meetings over its ten years' existence. "While lots of money is made by CSR [corporate social responsibility] consultants, we see little change in the death rates" said Hong Chee, a Hong Kong delegate.

Mandy Hawes, an American occupational health and safety advocate, reminded delegates that occupational standards may be legal but not safe. "We should bring environmental and occupational standards into line," she said.

Opposition to asbestos is growing and is fueled around the world by a flood of compensation demands. Claimants, dragging desperately on oxygen, have pleaded before TV cameras for compensation and an end to asbestos use. A regional coordinating group was set up earlier in 2009 at a meeting in Bangkok. A-Ban is seeking an Asia-wide asbestos ban. It has its work cut out. As the anti-asbestos activists know all too well, bans on international trade in asbestos have been barely disturbed the industry. Like Uralasbest, companies have merely shifted their marketing focus to developing countries where environmental and workplace standards are more lax. China now absorbs 54 percent of global production, says Ye-Yong Choi of BANKO, the Korean movement that recently achieved a ban on asbestos.

A-ban calls for an Asia-wide ban on asbestos

Ye Yong Choi and Professor Paek explained how the ban on asbestos in the Republic of Korea resulted from a confluence of factors.

A serried legislative ladder beginning with instituting exposure limits as far back as 1988 and later updated to a safer limit of 0.1fiber/cc in 2003 was one of the necessary steps to achieve a ban. This represented tacit recognition by the government of the carcinogenicity of the mineral. Upon that was built regulations requiring health checks and compensation for asbestos related illness. In 1997 brown (amosite) and blue (crocidolite) asbestos were banned. Further incremental steps might have prevented a commercial shock reaction that could result from an immediate blanket ban. So in 2005 a compulsory reporting system of asbestos containing buildings was instituted so that measures could be taken to secure safe demolition; then in 2007 came a ban of asbestos containing friction parts such as gaskets and brake linings and construction cement. In 2008 a ban was instituted on insulation and textiles containing asbestos. Finally in 2009 a total ban was declared with a few exemptions such as nuclear reactors being able to continue usage but under strictly controlled conditions.

Businesses, unable to use asbestos at home, either changed production means or went off shore as local media and social movements amplified opposition to asbestos use. The economic recession accelerated the decline of the asbestos industry as investment sharply declined, while the media reported on subway exposures and high profile cases such as those that came from Busan adding to negative public opinion. In 2008 a group of casualties formed BANKO to maintain pressure for policy and legislative action.

While BANKO would like to think that social pressures led to the ban, Choi admitted that the stronger drivers were the recession which drove the industries off shore coupled with the corrosive effects of legislation.

The Korean Parliament passed an asbestos victims' relief law on February 26, 2010 after a sustained campaign by asbestos victims groups and labor federations. From January 1, 2011, the legislation will provide compensation for sufferers of mesothelioma, asbestosis and lung cancer who were environmentally exposed to asbestos.

There are some flaws in the legislation such as very low levels of compensation, which are about 10-20% of those awarded by the occupational insurance system for the same asbestos-related diseases. Campaigners from Ban Asbestos Korea (BANKO) promise to lobby for improvements.

Choi recommends a global campaign in which activists "move much more strategically and collectively. …I have felt we are too gentle in some way whilst our enemy, the asbestos industry, moves very collectively and aggressively."

Anatomy of Asbestos

Despite industry and government denials, evidence of chrysotile's harm was clear in lung X-rays showing unmistakable white patches indicating the inevitably deadly progression of mesothelioma--a cancer directly linked to asbestos exposure. Etched into the medical data on the corner of each film was the word "chrysotile," the supposedly safe form of the mineral.

The X-rays belonged to Prof. Paek Domyung, chest disease specialist and epidemiologist from Seoul National University and a founding member of BANKO. His collection of medical transparencies showed that work-and environment-related chest disease leaves a distinctive radiological calling card that is easy to differentiate from tuberculosis and other lung diseases.

All the victims in Paek's X-rays were Asian workers, belying the myth propagated by some Asian labor officials that asbestosis and mesothelioma are "Western" diseases. Paek predicted that Asian nations would see tsunamis of asbestos-related diseases, marked by the gasping deaths of the pale, drawn - and often young - victims. His view is supported by Japanese researcher Takahashi Ken, who on reviewing historical and global trends, found that marked rises in incidence and prevalence inevitably preceded national bans.

Studies cited by McCulloch and Tweedale have found asbestos disease in young Russian and Kazakh workers with less than three years exposure (see above reference). Victims usually die a year after diagnosis. Expensive drugs such as Alimpta and Platinol can lengthen a patient's life by up to six months, but are well beyond the capacity of Asian workers. Palliative care, a tall order in most poor countries, is the best they can hope for.

The pain of mesothelioma and other asbestos-related diseases can be agonizing and requires the other white powder -- morphine -- to provide relief. Ironically many of the countries where asbestos disease is rife, such as India, have a shortfall in the supply of legally scheduled opiates.

Around Asia

But there is no shortfall in asbestos. In addition to the raw mineral imported from Russia and other countries, Europeans keep sending old ships to India and Bangladesh to be broken up. Bangladesh needs the steel, but along with it comes tons of old friable asbestos including the more dangerous brown variety.

China, in addition to its role as major importer, also exports asbestos. The sourcing website Alibaba.com lists at least ten Chinese companies, some with ISO 9001 certification, that sell asbestos products. Kawakami Tsuyoshi of the U.N.'s International Labor Organization's Bangkok office found Chinese asbestos in Lao cement factories on the outskirts of Vientiane. The Lao government, currently enjoying a resources boom, is thinking of exploiting its lodes of asbestos, according to a Lao NGO worker.

There are some bright spots. Thailand, until recently one of the region's major users (brake linings, gaskets, and roofing tiles), has reduced both importation and production of asbestos-containing goods.

Other Asian countries are beginning to rethink asbestos use. Joint research done by BANKO and Indonesia's own fledgling anti-asbestos organization IBAN in 2009, documented asbestos on the windowsills of schools and homes surrounding two asbestos cement works in Cibinong (West Java).

Cambodia, too, is starting to recognize that its burgeoning construction industry may bring the hazardous materials along for the ride. Dr. Leng Tong, director of Occupational Health and Safety in Cambodia's Ministry for Labor and Vocational Training told the ANROAV delegates that "Cambodia strongly commits … to eliminate asbestos from the workplaces in the region."

"If he is serious," Choi of BANKO commented, "it would not only gain Cambodia a huge amount of prestige in the world, but also provide a wonderful example to neighboring countries."

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Notes

[1] A copy of the film was given to the reporter in Hong Kong by a Chinese labour activist.

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