

Conference Report - Global Asbestos Congress 2004 November 19-21, 2004, Tokyo, Japan

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Introduction

The global campaign to ban asbestos took a giant leap forward with the success of the Global Asbestos Congress 2004 (GAC). The attendance of representatives from 40 countries, the participation of distinguished international speakers, the interest of Japanese, Belgian, Brazilian and South African media teams and the continual discussions in hallways and at social events were physical manifestations of an unquantifiable “buzz” generated by bringing together so many people affected by asbestos. From the comprehensive agenda to the bell ringing protocol to the identifying white jackets worn by the scores of volunteers, the conference had been expertly planned by the GAC Organizing Committee; since 2002, committee members had worked assiduously to generate political backing and raise funds for this landmark event, the first global conference to focus on the repercussions of asbestos use in Asia.

More than 800 delegates attended plenary and workshop sessions during the three-day conference. Presentations from leading asbestos experts addressed a range of medical, legal, epidemiological, biochemical, environmental, social and political issues; the simultaneous translation from English and Japanese, available at all conference sessions, facilitated communication. Representatives of international labor federations and hundreds of Asian trade unionists were in attendance, underlining the growing awareness of the toll being paid by building workers for hazardous asbestos exposures. The presence of Japanese, Indian, Australian, Canadian, American, Welsh, Scottish and Northern Irish asbestos victims and family members personalized a worldwide epidemic which is killing more than 100,000 people every year. Members of the Japan Association of Mesothelioma and Asbestos-Related Disease and their Families extended a warm welcome to all GAC delegates from their booth on the 3rd floor of the conference centre; colorful chains of paper cranes, a symbol of peace, which gaily decorated their stand were presented to visitors in the hope that our mutual wish for an asbestos-free future would become a reality. Japanese asbestos widows, dressed in traditional kimonos, met other women from Europe, North America and Australia who had also experienced the asbestos death of loved ones. Australian Lorraine Kember, author of *Lean on Me: Cancer Through a Carer’s Eyes*,¹ summed up her experience in Tokyo:

“Having lost my husband to mesothelioma in 2001, attending the Global Asbestos Congress 2004, held special significance. To be a part of and to address such a large group of people who had come together in a quest to rid the poison of asbestos from our environment was a remarkable experience. The

¹ *Lean on Me: Cancer through a Carer's Eyes*: website: www.cancerthroughacarerseyes.jkwh.com

empathy, passion and determination of all present was a powerful reminder that race, religion and country of origin need not be a barrier to unity. The evidence brought forth by the representatives of each country, regarding the present and expected toll of asbestos dust inhalation on human lives, was horrifying. Having witnessed first hand the physical devastation and pain wreaked by mesothelioma, my heart ached for the countless victims and their families who are suffering now and for those who will suffer in the future.

A particular highlight for me was meeting with the Japanese widows of mesothelioma victims. We spoke through interpreters, but on a deeper level, our communication with each other was beyond words – our eyes held the story of our pain and the warm hugs we exchanged held understanding of our loss. We know only too well, the tragic result of asbestos dust inhalation and add our voices to the growing number of dedicated campaigners, fighting seemingly insurmountable odds, to eradicate this killer.”

An opening ceremony with contributions from representatives of the Japanese Government, Tokyo Metropolitan Government, the International Labor Organization, Japanese and international trade union groups, the International Ban Asbestos Secretariat and the GAC Organizing Committee kicked off the conference on Friday morning. Welcoming delegates, Dr. Yoshiomi Temmyo, Chairperson of GAC, hoped that participants would enjoy the coming days and make good use of the opportunities to learn about the problems of asbestos in Asia and elsewhere. He explained that the idea for this conference originated in Brazil when four Japanese delegates attended the first Global Asbestos Congress (2000) which focused on asbestos issues in Latin America; their experiences and impressions of that event spurred them to propose that delegates from Asian countries be brought together to discuss national asbestos legacies. The dynamic which began in Osasco, Brazil four years ago, Dr. Temmyo said, was continuing in Tokyo today. He concluded by saying that it is not enough to ask what international agencies and national governments will do to combat the global asbestos tragedy; each delegate must consider how he/she can make a difference.

Plenary Session 1 – Global Health Impact of Asbestos: Urgent Action is Needed

Environmental consultant Dr. Barry Castleman began the first plenary session with a presentation on: *The WTO Trade Dispute's Impact on Global Efforts to Ban Asbestos* in which he summarized the campaign of the asbestos lobby, led by Canada, to prevent action on asbestos being taken by national governments. Attempts by industry to subvert the work of organizations such as the International Program on Chemical Safety, the International Labor Organization, the World Health Organization and the United Nations were discussed. Dr. Castleman explained that during the 1990s the grip of pro-industry lobbyists on the asbestos agenda had loosened; simultaneously, mobilization of anti-asbestos sentiment by social movements had grown. In France, the escalation of protests by asbestos victims, academics and workers had resulted in a ban on asbestos being announced by the Government in 1996. Fearing this ban would lead to a loss of European markets and impact negatively on consumers in developing countries, Canada challenged its validity at The World Trade Organization (WTO).

“Canada’s desperate gamble was intended to set a precedent that asbestos bans were in violation of global trade agreements. But the risk was that WTO would consider all the issues Canada raised and set a precedent of an opposite kind. And that is what happened.”

Although Dr. Castleman believes that the global asbestos industry is in its death throes, it is still a “dangerous adversary and a serious threat to public health.” Whereas multinational corporations which formerly controlled the asbestos industry were amenable to public pressure, national interests now running these companies are impervious to criticism:

“In some cases, they are run by people who have taken over businesses they formerly ran for the multinational firms. In other cases, they are run by people who got in when the multinationals got out. The thinking of these investors was evidently that if they could save enough money on prevention and compensation, they could operate profitably for enough years to make it pay off. This then is the *modus operandi* of the asbestos industry, that as long as the costs of occupational and environmental illness can be laid off on society and the workers especially, asbestos products can be competitively priced and sold widely.”

As long as the use of chrysotile (white asbestos) continues, the health of millions of people will be endangered.

Geography of Mesothelioma: An Overview was the title of the paper by Dr. Claudio Bianchi from the Center for the Study of Environmental Cancer in Italy. Data on the incidence of mesothelioma, an asbestos cancer, is only available for 15% of the world population: “The principal feature in mesothelioma geography is the lack of data.” While countries such as Australia, the UK and Italy have national mesothelioma registries, mesothelioma epidemiology for major asbestos producers such as the Russian Federation, China, Kazakhstan, Zimbabwe and Brazil is virtually unknown. Research has found a clear relationship between national asbestos consumption and the incidence of mesothelioma. Within a country, regional mesothelioma hotspots are invariably those areas in which asbestos use was high: “in Italy, shipyard and port areas as well as asbestos industry areas show the highest mortality rates from pleural cancer.”

The intensity of asbestos exposure experienced by categories of workers is reflected in the number of cases which present. Research in the Netherlands found that 5 in 100 insulators and 1 in 100 shipyard workers contracted mesothelioma; the rate amongst Dutch building workers was lower with 7 per 10,000 contracting the disease. The time lag between exposure and disease (latency period) also varies:

“People severely exposed to asbestos such as insulators show latency periods of about 30 years. At the other extreme, occupational groups with less heavy exposures, such as sailors, show mean latency periods of 55 years.”

The incidence of mesothelioma has risen in the majority of countries over recent years; “in particular, such increase was tremendous in Japan.” The repercussions of global asbestos consumption, which peaked in the 1970s, are yet to be experienced.

Researchers from Waseda University predict that Japanese deaths from malignant mesothelioma “will be 49 times higher” during the next 40 years than in the 1990s. Dr. Takehiko Murayama, from the School of Science and Engineering at Waseda, discussed the *Epidemic of Asbestos-Related Diseases*. Japanese commercial exploitation of asbestos, which increased dramatically in the mid-1940s, peaked at 350,000 tons (t) per year in the early 1970s. Annual use of 250,000-300,000 t continued until 1990 after which there was a sharp decline. In 2002, 43,318 t were used and in 2003, the Government introduced regulations which, as of October, 2004, reduced the consumption of asbestos in Japan by more than 90%.

The sustained and widespread use of asbestos has produced an epidemic of disease: “available statistics since 1995 show a growing number of mesothelioma deaths and have raised considerable concern amongst the public.” Japanese epidemiologists predict that:

- between 2000-2039, there could be 103,000 mesothelioma deaths; although the vast majority will be due to occupational asbestos exposure, up to 10% could be caused by environmental exposures;²
- deaths from pleural mesothelioma will peak in 2030, sixty years after the import of asbestos peaked in Japan.

At the last minute, South African asbestos expert Dr. Sophia Kisting, from the Occupational and Environmental Health Research Unit in Cape Town, was unable to travel to Tokyo; Fred Gona, a trade unionist active on asbestos issues for many years, presented her paper: *The Burden of Asbestos-Related Diseases in South Africa and the Struggle for Reparation*. Years of apartheid created many injustices, the effects of which continue to be experienced today. The mining of three types of asbestos, chrysotile, crocidolite and amosite in South Africa,³ the uncontrolled use of asbestos-containing products throughout the country’s infrastructure and the existence of 560 known asbestos dumps have led to a human and environmental catastrophe. The incidence of asbestos-related disease is high amongst residents in asbestos communities and workers in the following industrial sectors: construction, power stations, railway workshops, ship-building and repairing; boilermakers, steamfitters, electricians, textile workers, roofers, stevedores, waste disposal workers and motor vehicle mechanics are also at risk.

Multinational companies which profited from asbestos operations applied lower health and safety standards in South Africa than they did at home. The continuing disregard for the health of workers and the public in developing countries is illustrated by the global asbestos industry’s marketing which is targeted at industrializing economies. Legal enforcement of “the polluter pays” principle sends out a powerful warning to companies that such behaviour is unacceptable; for this reason litigation is a useful preventative measure. The Asbestos Relief Trust which has been set-up in South Africa as a result of an asbestos class action is another positive outcome of litigation. The Trust pays compensation to thousands who have been injured by

² Air measurements taken in 1995 showed elevated levels of asbestos contamination in areas near asbestos processing factories.

³ Photographs taken in August, 2004 in the mining region of Penge show clusters of asbestos fibers littering the ground.

occupational and environmental asbestos exposure and is assisting with the development of a sustainable program for tackling asbestos contamination. Congratulating the conference organizers on the success of the GAC, Dr. Kisting's presentation stressed the importance of "the collective, informed effort of our people," and urged that we "continue to collaborate, share information, take hands and counter industry."

The growth of labor and civil movements in Korea since the late 1980s and the increasing demand for social democratization has heightened awareness of a spectrum of issues which includes occupational health. In his paper: *Korean Asbestos Strategy*, Dr. Domyung Paek, from the Occupational Health Program at Seoul National University, contextualized the Korean asbestos experience. With the expansion of the construction, shipbuilding and automobile industries in the 1970s, asbestos use rose; in 1992, Korean asbestos per capita consumption was 2.2 kg/person/year. Although, consumption has fallen by 75% since then, asbestos use in Korea "is still higher than (in) most other developing countries." Regulation of occupational asbestos exposure did not begin until the 1990s; increasing administrative control by the government, which set the permissible workplace exposure limit at 0.1 fiber/cc in 2003, coupled with a fall in demand is affecting some industrial sectors more than others. While small businesses continue to manufacture asbestos-containing friction materials, asbestos use in construction is falling.

For over thirty years, the absence of government regulation meant that hazardous exposures were experienced by thousands of workers; in the 1980s, exposure levels of 5-10 fibers/cc were documented in the asbestos textile manufacturing industry. In light of these hazardous conditions, it is not surprising that in 1993 the first case of mesothelioma which was officially recognized as occupational in origin was that of an asbestos textile worker who had been employed by the industry for 19 years. Seventeen more cases due to occupational asbestos exposure have been compensated since then; amongst those who presented with mesothelioma, asbestosis and lung cancer were: asbestos textile workers, plumbers, mechanics, shipbuilding workers, construction workers, a miner, a boiler operator and boilermaker, a welder, maintenance workers, an underground facility keeper and a foundry worker.

A strategy for dealing with the Korean asbestos legacy has been devised which involves:

technical intervention:

- recognition of hazards through surveillance of health effects, establishment of a mesothelioma registry and an occupational disease compensation review board;
- assessment of potential exposures through measurement of fiber levels at workplaces and asbestos audits of public buildings.

managerial intervention:

- design and implementation of safer working practices in cooperation with labor and management; setting up participatory health and safety committees involving all stakeholders;

- use of external safety audits of asbestos-consuming organizations.

socio-economic action:

- empowerment of asbestos victims to participate in government strategies;
- formation of asbestos victims' groups and NGOs to lobby for government action on asbestos.

Although the government has yet to implement most of these proposals, use has been made of official workplace fiber measurements by the regional construction workers' union which is demanding that members receive health check-ups. The involvement of the subway workers' union in the process to measure exposure levels during the renovation of subway stations is also viewed as a positive.

In *Current Environmental Pollution at Asbestos-Cement Roofing Tile Production Factories in Vietnam and its Health Risks to the Workers* by Nguy Ngoc Toan, from the Vietnam National Institute of Labour Protection (NILP), the conflict between economic development and environmental protection was explored. Although Vietnam remains committed to an asbestos ban,⁴ economic pressures have persuaded the Government to allow the continuation of its use, under strict control, for the time being.

From the 1970s, asbestos imported from Russia, Canada and China has been used in Vietnam principally for the manufacture of asbestos-cement (ac) roofing tiles, popular in mountain and coastal areas. Thirty-two of the thirty-five ac roofing tile factories in Vietnam were built between 1995 and 2000. Ten thousand workers are employed by these companies with thousands of others gaining employment by servicing the ac industry. Research in 2000 at the Dong Anh Roofing Tile Joint-Stock Company conducted by NILP staff, who have been studying asbestos issues since 1990, recorded levels of asbestos exposure measuring from 33.7 f/cm³ by the grinding machine to 1.8 f/cm³ by the mixing machine. The fact that levels were reduced to 11.7 f/cm³ and 0.7 f/cm³ within nine months does not disguise the fact that the situation remains far from satisfactory.

Research (2002) following up on the initial survey at 23 ac roofing factories revealed that:

“most of the studied enterprises are polluted by asbestos dust. The reasons are:

- no knowledge and understanding about harmfulness and hazard of the asbestos dust among the workers;
- no dust treatment and exhaust system;
- inadequate attention to OSH (Occupational Safety and Health) from employers.”

From 1996, the adverse effects of occupational asbestos exposure have been studied. Recent medical examinations of more than one thousand asbestos-exposed workers from twelve ac companies revealed that hazardous occupational exposures have

⁴ Since 2001, the construction of new asbestos-cement tile factories has been forbidden.

resulted in a high level of lung disease. The incidence of asbestos-related disease will rise amongst those already exposed, but prompt action could protect others. The NILP is urging the Government to:

- ensure that ac roofing tile companies conduct: air monitoring, medical check-ups and asbestos awareness training of all ac workers;
- regularly inspect ac factories to ensure compliance with health and safety regulations;
- close down ac factories which have not introduced technological measures to reduce hazardous exposures;
- research the availability and effectiveness of asbestos substitutes;
- phase-out the use of asbestos in Vietnam.

In his presentation: *Asbestos Experience in Thailand*, Dr. Somkiat Siriruttanapruk, from Thailand's Ministry of Public Health, called for inter-governmental collaboration and new controls to minimize hazardous exposures to high-risk populations; with the control of asbestos shared by a number of Thai government agencies, including the Ministry of Industry, the Ministry of Labour and the Ministry of Public Health, the conditions in which asbestos is used are far from safe. The import of asbestos, which has been used in Thailand for 30 years, more than doubled from 90,700 t in 1987 to 181,348 t in 2002 with 95% of supplies originating in the Russian Federation, Canada, Brazil, Kazakhstan and Zimbabwe. Although the use of crocidolite was banned in 1992, 451 t were imported in 2002; the remaining imports were 176,412 t of chrysotile (97.3%) and 4,485 t of other asbestos (amosite).

In 2004, sixteen Thai factories with a total of 1,900 workers registered their manufacture of ac roofing or floor tiles, pipes, brakes and clutches with the Ministry of Industry; government monitoring of asbestos facilities over the last few years showed that exposure levels exceeding the recommended level of 2 f/cc are the norm with the most elevated readings being found in small-scale brake and clutch factories. Despite decades of hazardous exposures, not one case of asbestos-related disease has been reported to government surveillance schemes or the Workmen's Compensation Fund. Dr. Siriruttanapruk says:

“Since the trend of using the materials is increasing and the concentrations of asbestos in working environments are high, (the) number of cases will be expected to be high in the near future. Therefore, all relevant organizations should co-operate and establish the national asbestos control program. This includes the improvement of legislation and enforcement, development of occupational health services system for asbestos exposed workers (especially in disease detection and reporting system), and increased awareness of the disease amongst employers, employees and public.”

The subject of the next speaker, Dr. T. K. Joshi, Director of the Centre for Occupational and Environmental Health in New Delhi, was the: *Asbestos Debate in India and South Asia*. The contrast between declining asbestos consumption in developed countries with increasing consumption in South Asia is illustrated by the current situation in India, the world's 9th largest asbestos producer and 6th largest user. Asbestos is mined in and imported to India; asbestos produced by 40 Indian mines includes chrysotile from Andhra Pradesh, tremolite from Rajasthan and anthophyllite

from Karnataka. More than 80% of the 100,000 t of asbestos consumed annually comes from Canada, Russia and Brazil. There are 14 large and 600 small-scale asbestos manufacturers in India; annual sales of the industry are valued at U.S. \$500 million. The 6,000 people working with asbestos and the 100,000 others employed by the asbestos industry experience levels of hazardous exposure outlawed in developed countries.

“The abysmal conditions under which Indian asbestos workers toil... are due to a convergence of factors. They include: the authorities’ failure to enforce existing regulations, a historically fragmented and internally divided trade union movement and the activities of many occupational health physicians whose primary loyalty is to the companies that employ them.”

Although there is no government epidemiology on asbestos disease, research by the National Institute of Occupational Health found evidence of:

- pulmonary function impairment or radiological changes in chest X-rays amongst 20-55% of workers examined at asbestos mines and milling units in Andhra Pradesh;
- reduction in vital capacity in 71% of exposed workers at an asbestos-cement factory in Gujarat.

A situation analysis and health survey of the South Asian Region conducted by the World Health Organization office in New Delhi identified asbestos as a prime workplace hazard. Dr. Joshi deplored the low priority given to occupational health and safety in South Asia and the dumping of hazardous technologies on vulnerable populations; he condemned the General Agreement on Tariff and Trade under which:

“global corporations are free to export dangerous products and technologies to 110 nations, as they shop around for the cheapest labor costs and weakest environmental and public health protections. The globalization of trade has brought new occupational hazards to many regions, for millions of workers the most immediate outcome of globalization is greater risk of illness and injury.”

The application of the precautionary principle “will offer protection to millions at work, and in (our) community.” Despite serious pressure from the asbestos-cement lobby in India, Dr. Joshi remains committed to a global ban: “The fact that Canada exports over 95% of all the chrysotile it mines suggests that while chrysotile is supposedly safe enough for foreigners, it is not safe enough for Canadians. All global free trade and investment ought to come with global responsibility.”

The paper by Noor Jehan, from the University of Peshawar, Pakistan, was entitled: *Asbestos Risks: Occupational and Para-Occupational Health Status in Pakistan*. A series of breath-taking pictures illustrated the ubiquity of and hazardous nature of asbestos exposures in Pakistan. Workers at asbestos mines in Behram Dheri, Northwest Frontier Province (NWFP), asbestos crushing units in Nawe Kili and Anbar Killi, Mohmand Agency, asbestos grinding units at Nawe Killi and asbestos manufacturing units in the cities of Mardan and Peshawar, NWFP lacked any protective clothing, respiratory equipment or ventilation; recently taken slides showed

examples of working with raw asbestos in totally uncontrolled environments.⁵ Thousands of commercial operations in Pakistan disseminate respirable asbestos dust; these include mining, scrapping of old ships, milling, sorting, crushing, grinding, and manufacturing. Despite the known health effects associated with asbestos exposure, asbestos-related diseases are not recognized by the Department of Health and hazardous exposures are not controlled by the Environmental Protection Agency.

There is an epidemic of asbestos-related disease in Pakistan; between 1995-2003, 601 cases of mesothelioma were diagnosed in the NWFP, of which 60% were in male patients (356) and 40% (245) in female patients of whom the majority were housewives. Its 120 cases made Mardan City the Province's worst affected hotspot, Mohmand Agency (90), Peshawar (70) and Malakand (70) were next. Occupations shown to be at high risk were: housewives (200), farmers (100), mineral-based industrial workers (55) and mineworkers (50). While an asbestos ban is a long-term goal, steps which could be taken now to reduce the harmful effects of asbestos in Pakistan include:

- the adoption of engineering measures to control occupational exposures and suppress the liberation of asbestos within and outside factory premises;
- awareness training of high-risk categories of workers and local residents;
- government action to control hazardous exposures.

Plenary Session 2 – *Environmental Exposure, Crisis Preparedness and Risk Communication*

The first speaker in *Session 2* was Dr. Stephen Levin, from the Mount Sinai School of Medicine in New York; his paper was entitled: *Health Effects among World Trade Center Responders*. The presentation began with a series of slides showing the aftermath of the collapse of the World Trade Center (WTC) on September 11.⁶ Airborne dust deposited layers of white/grey powder on the public, emergency workers, streets, cars and building interiors. The main populations at risk were: “those caught in the collapse ‘cloud,’ Ground Zero workers/volunteers in rescue/recovery, service restoration workers at and near Ground Zero, debris removal workers and support services, building clean-up workers, office/commercial space and school reoccupants, community residents.”

Dust created by the collapse of other buildings added to the contamination which was carried in plumes of dust to surrounding areas. Analysis of the dust found that it contained pulverized cement, pulverized glass, asbestos, silica, fibrous glass, heavy metals, soot, volatile organic compounds, acid mists and organic products of combustion. A study published in December, 2001 by the New York City Department of Health and the Agency for Toxic Substances and Disease Registry found that 13% of dust samples from residential sources contained more than 1% asbestos by weight; other samples of surface dust contained up to 4% asbestos.

⁵ As well as local asbestos fiber, Pakistan also imports chrysotile from Canada for use in asbestos cement.

⁶ It was striking that few of the emergency workers shown in the photographs wore respirators.

Physical health effects experienced by WTC responders included: upper airway inflammation, bronchitis, reactive airway disease/asthma and musculoskeletal injuries; a medical screening program set up by the National Institute for Occupational Health provided 12,000 free standardized screening examinations to:

- identify workers/volunteers with WTC-related medical conditions and coordinate follow-ups where required;
- educate those affected about the exposures they experienced and the associated health risks;
- provide advice about available benefits and entitlement programs.

Many of the examinees reported breathing difficulties during WTC efforts; nearly half of those affected said that lower respiratory symptoms had persisted until the medical (on average 8 months after September 11). Sinus, nasal, ear or throat symptoms were also prevalent after WTC efforts; half of these patients said symptoms had persisted. The rapid distribution of appropriate respiratory protection might have reduced these problems said Dr. Levin; the prompt provision of medical advice, availability of accurate risk assessments and a focus on human health as opposed to air monitoring could have better informed the public in the wake of this tragedy.

In the paper *Asbestos Emission Caused by Buildings Demolition in the Great Hanshin-Awaji Earthquake of Japan 1995*, Dr. Atsushi Terazono, of the National Institute for Environmental Studies, Japan, attempted to quantify the fall-out from asbestos material contained in buildings destroyed by one of the worst earthquakes in recent years. Atmospheric monitoring by the Environmental Agency after the earthquake showed an increase in ambient asbestos concentration in the stricken zone; a diffusion model was used to assess how much of this contamination was due to sprayed-on asbestos insulation/fireproofing present in earthquake-damaged buildings at 16 sampling points. The scientists estimated that prior to the earthquake there had been 3,740 tons of sprayed-on asbestos stock in the affected buildings; the quake liberated 26.4 kg of asbestos into the environment. Experiments revealed that demolition without pre-removal of asbestos caused the highest levels of asbestos emissions into the surrounding areas; asbestos removal costs accounted for 68-94% of total demolition costs.

Although the scrapping of Western ships in Asia had been the subject of many newspaper articles, the harsh reality of the industry, as described by the next speaker, was almost inconceivable. In his presentation: *Asbestos in the Ship-Breaking Business in Bangladesh*, Mr. Aminur Rashid Chowdhury, from the Bangladesh Occupational Health, Safety and Environment Foundation, said that there is virtually no legislation or protection for the 80,000 workers employed in Bangladesh's 30 ship-breaking yards. This industry, which generates around US\$ 82 million annually, is free of all national and international restrictions; none of the 12 ILO conventions relevant to safety and health in ship-breaking have been ratified by the Bangladesh Government.

Commercial ship-breaking has been a growth industry in Asia for twenty years; natural beaching, strong high tides, cheap labor, high demand for low cost raw materials, isolation from public and legal "busybodies" have made Shitakunda, Chittagong, Bangladesh a popular ship-breaking venue. Working conditions in the yard are primitive:

“No formal worker–management relationship and no job security and social safety-net schemes for them. 90% of labour in scrapping yards are illiterate, no formal training and 100% are unorganized.”

There has never been a systematic monitoring of occupational health amongst workers in the Bangladesh ship-breaking industry. Asbestos products recovered from the ships are often sold in the local market. Mr. Chowdhury recommended that an Asian coalition be formed to devise and implement a campaign for the rights of ship-breaking workers which would include the introduction of compulsory precautions, raising awareness of asbestos hazards amongst workers and the public, a ban on the re-use of asbestos and the safe disposal of asbestos waste.

The debate on banning asbestos has been on-going in Malaysia for some time according to the report by Dr. Thambyappa Jayabalan, medical adviser to the Consumers Association of Penang (CAP). Speaking on the subject of *Consumers’ Activities on Asbestos Issues in Malaysia*, Dr. Jayabalan said that the CAP had made a ban asbestos submission to the Malaysian Government on May 1, 2001; this was followed by an international asbestos meeting in Penang which was addressed by asbestos experts Dr. Barry Castleman (US) and Dr TK Joshi (India). Discussions with the government proceeded at a meeting called by the Department of Occupational Safety and Health (DOSH) in 2002. Although there was a consensus amongst the 24 representatives of government agencies, trade unions, consumer groups and industry stakeholders who were present that an asbestos ban should be adopted, the Director General of DOSH rejected this option after objections were voiced by a representative of the Federation of Malaysia Manufacturers.

A case study discussed by Dr. Jayabalan is the first known instance of a community protest against environmental asbestos hazards in Asia. Families from the Changkat Salak Estate, a former rubber plantation in the State of Perak, mounted demonstrations against the demolition of asbestos-roofed houses on the estate in February 2003. Demolition commenced and photographs were shown illustrating the lack of any precautions. The residents, some of whom were arrested, secured the intervention of health authorities and social workers and succeeded in stopping the demolition. The CAP made a representation to the DOSH which temporarily prohibited further demolition. The situation remains at a stalemate with weeds collecting and asbestos fibers caught up amongst the undergrowth; the presence of asbestos debris was apparent from the pictures shown.

In a post-script to his conference presentation, Dr. Jayabalan reported that a meeting convened by DOSH on December 2, 2004 considered a paper: *Asbestos in Malaysia: Controlled Use, Outright Ban or Somewhere in Between?* The good news is that the use of asbestos in Malaysia has fallen:

“manufacturing of corrugated asbestos roofs has dwindled probably due to less demand and an officer from Hume Industries predicted that in five years time there would not be manufacturing of these corrugated roofs. At present there is only one line of production in Malex for corrugated roofs. There are no more asbestos ceiling sheets in the market.

A local manufacturer of brake pads stated that they have phased out and stopped using asbestos for its production since two years ago. His company, which was a US and Australian concern, supports a total ban of asbestos...

An officer from the Public Works Department stated that asbestos corrugated roof and ceiling sheets are no longer used for low cost housing projects... asbestos cement pipes are slowly being phased out.”

Although a pro-ban consensus was still in evidence at the December, 2004 meeting, the representative of a Japanese-owned company with Malaysian factories maintained that asbestos fiber was essential for his company’s production of gaskets for the petrochemical industry. The Construction Industry Development Board spokesman pointed out that corrugated asbestos roofs are still popular in rural areas because they are cheap, easy to install and difficult to remove, thereby deterring burglars; it is believed that most of this material is imported from Thailand. The DOSH is considering the matter and will make recommendations to the Government on the safety and health aspects of occupational asbestos use.

“Once asbestos was disturbed by mining, large areas of the Northern Cape were made permanently hazardous,” wrote Dr. Jock McCulloch, an expert on the history of the asbestos industry in South Africa. In the presentation *Living in the Shadow of the Asbestos Hills (The Need for Risk Based Cleanup Strategies for Environmental Asbestos Contamination in South Africa)*, Robert Jones, from Rhodes University in South Africa, explained that “the northwest Cape asbestos belt stretches for over 450 kilometres from south of Prieska to the Botswana border covering an area of approximately 11,250 square kilometres.” The area scarred by the Pietersburg asbestos fields extends “in an 80 kilometre arc from Malipsdrift in the northwest (of the Northern Province) to the confluence of the Olifants and Steelpoort rivers in the southeast.” Government sources estimate that there are in excess of 203 contaminated sites where crocidolite, amosite or chrysotile were mined or dumped. While work has begun on the rehabilitation of some of these sites, nothing has been done about the:

“more ubiquitous secondary sites (which) may number in the thousands as a result of decades of poorly controlled waste disposal practices, including using waste asbestos in local building materials. Studies within certain mining areas have shown that 36% of the homes and 53% of the public buildings contain asbestos. The South African government has estimated that over one million low cost homes in South Africa contain asbestos cement sheet products.”

Arguing that no distinction should be made between contamination found at mining sites and that in adjacent areas which was also caused by uncontrolled fiber release from mining operations or dumping of mining waste, the speaker expressed concern over confusion regarding acceptable levels of soil cleanup in asbestos-contaminated areas saying that the 1% cut-off set in the US:

“may not be protective and that the lack of standards is a hindrance to project evaluation. The need for sampling methodologies, fill material assessment, uniform testing methodologies, a low cost test procedure and soil to air correlations was identified. With no clear guidelines for soil remediation, the South African government is using a ‘default’ threshold (1.8%) that is not based

on any human health risk standards and is therefore not likely to provide adequate health risk standards and is therefore not likely to provide adequate protection.”

Risk Communication - A Case Study: Accidental Exposure to Asbestos at a Nursery School was the title of the paper presented by Dr. Iwao Uchiyama, from Kyoto University. The exposure of infants and young children to sprayed asbestos which took place at Nursery School “S” in Bunkyo, Tokyo in 1999 occurred during renovation work. Three months before work began, parents were told that “asbestos was not used in this nursery school;” unfortunately, this turned out not to be the case and within days of work beginning, they were told that although the presence of sprayed asbestos on the school ceilings had been confirmed, this material had not been touched by the building work. This was also not true. The constant misinformation fed to parents increased their distrust of the authorities and escalated the situation.

The parents requested that air measurements be taken and two weeks after work began the indoor level of asbestos was 0.65 f/l or, as the authorities said, the same level as that along the highway. Throughout this period the authorities continued to deny the need to remove all the asbestos from the school; one month after work began, they admitted that this removal work was necessary. By this time, the administration had lost the trust of the parents. The parents mobilized and a School’s Asbestos Health Committee which included parents, representatives of the local authority, a doctor and a member of a trusted NGO, was set up by the City Government. All the committee meetings were open to the public; an interim report was available and feed-back from the public was incorporated into the final report which proposed that the health of all the exposed children be followed up throughout their lifetimes. Lessons to be learned from this affair include the need to make accurate information available promptly to all concerned and the importance of appointing a specialist risk communicator.

Lessons of Risk Communication Regarding Remaining Sprayed Asbestos in Local Schools by politician Seiji Ikejiri described the asbestos experience of Nerima Ward Assembly, an authority responsible for supervising the education of 60,000 school children at 103 elementary and junior high schools. In 1987, amidst national concern over hazardous materials in public buildings, the authority first realized the potential risk posed by asbestos materials present in its schools; work carried out at that time had, so it was thought, resolved the problem.

In 2003-2004, the presence of more than 50,000 square meters of sprayed asbestos was discovered in 34 schools; degrading sprayed material containing crocidolite (blue asbestos) was in the ceilings and the walls. Not only was this hazardous material present but as there were no government regulations or guidelines for managing it, recent refurbishment work had liberated asbestos into the school environment. Initially, the local authority failed to implement an effective risk communication strategy; this resulted in elevated levels of concern amongst parents, guardians, teachers and children. On several occasions, the authority’s spokesperson gave out conflicting information. In 2003, the authority maintained that the presence of the sprayed asbestos was not a danger to school-users; after a building survey was done, this position was reversed and the authority spent 1 billion yen to remedy the

problem. Mr. Ikejiri said that vital lessons had been learned in Nerima from this experience:

- in the beginning, the local government lacked adequate information and knowledge about asbestos risks; this was partly due to the failure of the central government to take adequate measures on environmental asbestos;
- measures, skills and information to evaluate the risks of environmental asbestos exposure were needed by stakeholders as well as local authorities; the successful resolution of this situation required consultation and cooperation between the authority and a variety of stakeholders including parents, teachers, medical and environmental specialists, NGOs, and interested groups;
- problem solving comes from giving, not hiding, information.

Dr. Yuji Natori, from the Hirano-Kameido Himawari Clinic in Tokyo, spoke about *Malignant Pleural Mesothelioma due to Working at the Stationary Store with Sprayed Asbestos*. In Japan, the cause of the majority of mesothelioma cases is occupational⁷ or domestic exposures; while it is rare for a case of mesothelioma caused by environmental exposure to be reported in Japan, it is unheard of for the source of such contamination, in this case sprayed asbestos in a warehouse, to be identified. In November 2001 a male patient presented with a right pleural effusion; in June, 2002, at the age of 69, he was diagnosed with malignant pleural mesothelioma of an epithelial type. Despite extensive chemotherapy, the patient died in July, 2004.

In Spring, 2003, the patient first visited Dr. Natori in his clinic. Together they visited the stationary store where he was employed from 1969-2001; they discovered the presence of sprayed asbestos, containing crocidolite, in the warehouse area on the second floor. Although the patient had been based on the first floor of the premises, during the course of an 8 hour day, he could go upstairs 30-40 times. Sometimes, he did bookwork there; periodically he participated in clean-ups on the upper floor sweeping up debris. Dr. Natori concluded that the health risks posed by asbestos materials within buildings must not be ignored. In Japan, he said, the potential for hazardous environmental exposure persists in rooms containing sprayed asbestos such as boiler and engine rooms and storage areas which are often used for multiple purposes such as locker rooms, office or canteen space.

Plenary Session 3 – *Empowerment of Victims and Their Families*

The session began with a panel of Japanese asbestos victims, family members and campaigners each of whom spoke briefly.

In his talk *Supporting Action for Asbestos Victims*, physician Yuji Natori described the development of the ban asbestos political movement in Japan and the mobilization of asbestos victims. In 1987 the Ban Asbestos Network Japan (BANJAN) was formed to lobby the Government for a change in asbestos policies. In 2003, the Mesothelioma Pneumoconiosis Asbestos Center was set up to support victims' demands for medical

⁷ Although the patient's exposure did in fact take place at work, he did not work directly with asbestos and for this reason, his exposure is regarded as environmental rather than occupational.

treatment and compensation. This center works closely with a group, started in 2004, called: Japan Association of Mesothelioma and Asbestos-Related Disease Victims and Their Families. This new group is the first of its kind in Japan; in the first year, its asbestos telephone hotline received 325 calls on the following topics: protection from sprayed asbestos and asbestos building materials, medical follow-ups for asbestos-exposed workers, help for asbestosis, mesothelioma and lung cancer patients and their families.

In the presentation *Activities of Japan Association of Mesothelioma and Asbestos-Related Disease Victims and Their Families*, Kazunori Uekusa said:

“The Japan Association of Mesothelioma and Asbestos-Related Disease Victims and Their Families is a nationwide group of patients of asbestos-related diseases such as malignant pleural mesothelioma, malignant peritoneal mesothelioma, malignant pericardial mesothelioma, asbestos-related lung cancer, benign asbestos pleuritis and diffuse pleural thickening and so on, and their families. The association was founded on February 7, 2004. Before then those victims and their families felt lonely, but now they are uniting. As of August 15, 44 members and 31 supporters are registered.”

The experience of the association’s members differs widely; some are ill for years with varying levels of disability and others die within six months of diagnosis. Medical treatment includes: operations, chemotherapy, drugs, the use of folk remedies and palliative care. The average age of victims is getting younger and they are in their 30s and 40s; although most asbestos exposure is occupational, there are cases of non-occupational and environmental exposure.

The telephone hotline has been a useful tool for making contact with victims throughout Japan. Meetings held by the association in Osaka, Tokyo and Nagoya also keep members in touch as does the newsletter. Feedback from members identifies problem areas in the Japanese treatment of victims; the Ministry of Health, Labour and Welfare is being lobbied to improve health check systems, provide prompter diagnosis and treatment of mesothelioma, reimburse victims for expenditure on folk remedies, improve the workers’ compensation scheme for asbestos injuries and take decisive action on asbestos in the environment.

The title of the presentation by Rinzo Uno, Secretary of the Japan Association of Mesothelioma and Asbestos-Related Disease Victims and Their Families, was *My Pain from Asbestosis*. Mr. Uno worked for 37 years building ships in the town of Yokosuka, 50 kilometers south of Tokyo. Throughout much of this time, he was required to remove asbestos by hand; masks were not provided until 1978. He has been involved in activities to raise awareness of pneumoconiosis for twenty years and was a founding member of the new Japanese asbestos victims’ association. Twelve years ago, he was diagnosed with pneumoconiosis; he described the effects it has on his life as follows:

“I usually have 4 coughing fits every night. Since my coughs are very close together, I can’t ingest any medicines. My wife rubs my back and sometimes asks me if we should call an ambulance but I am not able to reply during a fit. During my two-hour fit, she just watches me and I feel more dead than alive.

Actually, it is not only pain but the struggle of my family. When I have a light fit while riding on a train, my neighbors sometimes change their seats. This makes me feel very lonely.”

Mr. Uno deplored the passivity of the Japanese Government and called for an immediate and total ban on asbestos: “Please stop killing people this way. My friends are dying one after the other from mesothelioma and lung cancer. And I cannot forget for an instant that I also carry a time bomb of asbestos in my lungs,” he concluded.

The next scheduled speaker was, Norio Kato, from the Japan Association of Mesothelioma and Asbestos-Related Disease Victims who was planning to speak about *Malignant Pleural Mesothelioma: Fighting Against the Disease*; unfortunately Mr. Kato died of mesothelioma in September, 2004 age 65. Mr. Katsuyasu Iida of the Tokyo Occupational Safety and Health Center read out a letter from Mr. Kato:

“Two years have passed since I started suffering from malignant pleural mesothelioma. As the disease progressed I grew distressed in many ways. At first I was confused, later my mind felt blank when my doctor informed me that there was no treatment. I had many sleepless nights. It was just like being kicked when I was already down.

Around 40 years ago I worked as a welder at a boiler manufacturing company. The reason for my illness was asbestos exposure in those days. I contracted this disease through no fault of my own. I feel very sorry that I have to die of this with no cure in sight. Before I was diagnosed, I had no information about mesothelioma. One day I learned about the existence of an ‘asbestos hot-line’ while watching TV. I called in and learned it was possible to apply for workers’ compensation. A half year later, thanks to the help of the hotline workers, I qualified for the workers’ compensation. The notification letter was quite simple but it gave me a great sense of relief.

Until then I was given anticancer drugs and visited hospital repeatedly. I really feel in my body that my condition is getting worse day by day and would like to take effective medicine as soon as possible. This is a natural desire, as a patient. In the past, we didn’t know about the dangers of asbestos and inhaled it. But, now we know that asbestos is a carcinogen. No more victims like myself. This is another one of my wishes.”

Fumitoshi Saito, Rapporteur of the Japan Association of Mesothelioma and Asbestos-Related Disease Victims, made a presentation entitled: *Asbestos Related Lung Cancer: As One of the Victims*. Now aged 66, Mr. Saito worked as an electrician on houses, shops and factories from the 1970s; he used several types of asbestos boards and was neither warned about the hazards nor given protective equipment. Mr. Saito was diagnosed with lung cancer in 1998 and had an operation to remove part of his right lung; asbestos fibers were found in the removed section. Currently, he has a cough, experiences difficulty in breathing and pain around the scar when the temperature or humidity change. After a home-interview in 2002 by a doctor and nurse, he became aware for the first time that his condition might be due to asbestos exposure. With help from the Tokyo Occupational Safety and Health Center he succeeded in obtaining workers’ compensation. Mr. Saito is proud that the

Association is creating opportunities for victims and their families to share their problems and concerns. "I was ignorant about asbestos," he said "and now I try to inform asbestos victims all over the nation about asbestos, particularly about diagnosis, treatment, care for families and compensation."

In her talk *Malignant Pleural Mesothelioma: After Losing my Husband*, Mrs. Kaeko Omori spoke of the loss of a lifetime of hopes and dreams when her husband died on March 26, 1998. Working in power stations belonging to Tokyo Electric Power Company for eighteen years brought Mr. Omori into contact with a range of asbestos materials. The original diagnosis made of his condition was lung cancer; this was, Mrs. Omori said, bad enough but a second opinion was even worse: malignant mesothelioma. The company which originally denied Mrs. Omori's application for compensation finally relented after the involvement of the Tokyo Occupational Safety and Health Center. Mrs. Omori finds it hard to accept that the company never apologized for exposing Mr. Omori to the asbestos which killed him. She said:

"My husband and I had planned to travel around Japan after his retirement but our dream failed to come true. I don't think my husband died. He was killed by the company and the Government."

Malignant Peritoneal Mesothelioma: My Experience of Nursing my Father by Ms. Mie Saito. When the family of Mr. Saito realized that he would never recover from the illness which had hospitalized him, they brought him home. As his condition worsened, more painkillers were needed to bring the pain under control. When the pain finally subsided, Ms. Saito and her sister asked their parents to tell them how they first met: "Which places did you go on dates? How did you feel when we were born?" Ms. Saito said "My father smiled happily when my sister thanked him for bringing us into this world. We had a blissful time remembering our happy life in the past."

"We will never accept the use of asbestos stole my father from us, and we will continue our activities so that there are no more asbestos victims like my father. My father and my family's struggle for a better society have just started."

Four years after the death of her husband, Mrs. Kazuko Furukawa is increasingly active helping others who are suffering from asbestos-related diseases in Osaka and throughout Japan in her capacity as a member of the Japan Association of Mesothelioma and Asbestos-Related Disease Victims. Mrs. Furukawa said that her husband's illness was due to occupational asbestos exposure by a company which violated his rights and put profits before workers' health; all negligent Japanese companies have a duty to compensate the asbestos-injured. The Japanese Government also has a responsibility to the victims and should do everything possible to help ease the suffering of so many innocent people. Mrs. Furukawa has put her own painful experience to use by helping those whose lives are being destroyed by these terrible diseases. As part of the growing victims' network, she listens to the fears, shares the sadness and helps ease the loneliness and isolation which follow in the wake of these diseases. Although she often feels sad and tired when friends die, she is determined to continue her efforts.

Parental Anti-Asbestos Activity and its Empowerment was the contribution of a parent who withheld her name. The case study discussed related to the asbestos exposure which occurred in 1999 at the “S” Nursery School when renovation work liberated crocidolite from degrading sprayed asbestos. Over a two week period, 100 children, one of whom was the speaker’s daughter, were exposed to high levels of asbestos. The empowerment of the parents came from the joint action they took against the local authority which should have prevented this hazardous situation. Through their participation in this campaign, the parents were able to share their feelings and support each other through this anxious time. As many of the parents had full-time jobs, finding the time for face-to-face meetings was difficult; ways were found around this which included the use of the internet and phone lists. Child-care provisions were arranged when meetings were held. The knowledge, advice and participation of experts was invaluable; on some occasions, the experts negotiated with the city authorities on the parents’ behalf.

At the end of the presentations by the Japanese victims, Dr. Thebaud-Mony, the co-chair of this session, thanked the speakers and expressed the solidarity of the GAC and the international ban asbestos network with the Japanese campaigners.

After a short break, *Session 3* continued with the presentation *Empowerment of Victims and Their Families in France* by Dr. Annie Thebaud-Mony of the French National Institute of Medical Research (INSERM) who explained that in France, until the 1990s, asbestos had been a hidden killer. Whilst the asbestos industry maintained a stranglehold on information about the health risks of asbestos exposure, workers continued to die. The industry, dominated by Saint Gobain and Eternit, was assisted by bought “experts,” including scientists, physicians, and lawyers who gave industry’s arguments a patina of respectability and veracity. The status quo persisted for sixty years and it was the only the formation of a strong social movement which led to a national ban in 1997 and better treatment of asbestos victims by the courts, medical and social security institutions.

Today, the National Association of Defense of the Asbestos Victims (ANDEVA) acts as an umbrella group coordinating the work of more than twenty-five regional groups. The birth of ANDEVA was largely due to the efforts of workers from the Amisol asbestos textile factory in Clermont-Ferrand and academics from Jussieu University in Paris. From 1910 until it closed in 1974, conditions at the Amisol factory were deplorable; although respiratory problems amongst the workers were common, company physicians were unwilling to attribute the symptoms to the dust exposure in the factory. When the factory was shut down without notice in 1974, the workers mounted a sit-in protest demanding that the factory be reopened albeit with improved conditions. In the beginning, the workers were unaware of the true dangers that they had experienced; two years later, however, contact with scientists from Jussieu University informed and strengthened their campaign. The academics had their own problems as their university campus had the dubious distinction of containing the largest concentration of sprayed asbestos material in all Europe. A task group was formed and media coverage of the campaign brought the issue to national prominence. A ban on sprayed asbestos was adopted, mesothelioma was recognized as an occupational disease, and a threshold for occupational asbestos exposure was set.

Summarizing the lessons to be learned from the French experience, Dr. Thebaud-Mony said:

“An essential tool of the fight against asbestos is the alliance between the social movement and the scientists who are independent of industry. The asbestos industry succeeded in imposing a ‘scientific’ representation of asbestos as an essential material and a little poison. However the workers, the victims and their family do not have the tools and the capacity to criticize official science. Scientific criticism is a practice of the scientists between them not of the victims of cancer or other diseases related to asbestos. But the experience of victims about diseases is necessary to independent scientists in order to criticize the postulates of the researchers paid by the industry.”

This alliance supports the right-to-know of workers and the public in all countries so that the propaganda disseminated by the global asbestos profiteers as “science” can be exposed.

The title of the talk by Ms. Fernanda Giannasi, engineer and leader of the Latin American Virtual Citizens’ Campaign for a Global Ban on Asbestos, was *The Situation and Activities of Asbestos Victims in a Developing Country: ABREA in Brazil*. The Brazilian Association of the Asbestos-Exposed (ABREA) was formed in 1995 in Osasco, for many years the center of the Brazilian asbestos-cement industry. ABREA’s aims were to: increase the visibility of asbestos diseases, locate former asbestos workers, arrange medical screenings of asbestos-exposed workers, learn the truth about asbestos hazards, campaign for local and national asbestos bans and achieve the rehabilitation of environmentally damaged areas. Six local ABREA groups are now operational in three States:

- in Osasco, members are mostly former Eternit workers;
- in Sao Paulo, they are ex-workers from the Thermoid autoparts factory;
- in Sao Caetano do Sul, they are former workers from the Saint-Gobain/Brasilite factory;
- in Rio de Janeiro, they are ex-workers from two companies: Johns-Manville/Asberit/Teadit and Eternit;
- one group in Bahia is made up of former Eternit workers;
- the other group in Bahia has former SAMA/Saint-Gobain workers from asbestos mining sites as its members.

Before ABREA existed, there were no reliable data on asbestos-related diseases in Brazil. According to the Government, there were fewer than 100 asbestos-related deaths between 1900-1998. Alternative figures produced by ABREA, reveal that of 960 former workers at Eternit’s asbestos-cement factory in Osasco, 549 were affected by an asbestos-related disease or symptoms. By quantifying the problem, ABREA has given a new visibility to thousands injured by asbestos; furthermore, it has become a recognized voice in the national media. An ABREA project to collect epidemiological data has produced a method of data collection which has been accepted by the Government as the basis for a national register of asbestos victims and workers who were occupationally exposed to asbestos.

The struggle to gain compensation for injured workers has been long and hard; the asbestos industry in Brazil continues to deny its asbestos-related liabilities. In a landmark judgment handed down in August 2004, the Civil Court condemned Eternit as a negligent employer and ordered it to pay compensation to 2,500 victims. It is estimated that this ruling, which will cost Eternit US\$160 million, will be worth ten times more than the company offered to the victims in 1996.

Roch Lanthier of the Asbestos Victims Association of Quebec (AVAQ) spoke about *Environmental Protection in Quebec*. Concern over the environmental legacy of asbestos mining was one of the principal reasons for the formation of AVAQ, a Canadian citizens' group started in 2003. One hundred and twenty-five years of asbestos production has left a region of 200 square kilometers with 3.5 billion tons of asbestos-contaminated waste, much of which is contained in 30 heaps of tailings up to 150 meters high. Homes and schools lie in close proximity to these hazardous sites. Air samples collected by AVAQ show dangerous levels of indoor asbestos contamination in 15 of the 26 houses surveyed; 3 soil samples out of 14 taken near the houses showed a chrysotile content greater than 10%; 3 samples had a chrysotile content exceeding 60%. The effects of these exposures have been reported by the National Institute of Public Health of Quebec:

“Women in the mining region thus had 10.8 times more mesotheliomas than women elsewhere in Quebec. If we added to the 10 women, 7 other women who no longer resided in the mining region at the time they were diagnosed, but who had lived there in the past, the risk then became 20.3 times higher.”

AVAQ is assisting victims to claim compensation for asbestos illnesses and is pressing for a reversal of federal policy which bestows political as well as financial support on the asbestos industry. Accepting that the resolution of Quebec's environmental problems will require long-term planning, AVAQ is considering several options for the decontamination and regeneration of the area.

The Contributions of Asbestos Victims to World Public Health was the title of the talk by Jim Fite, National Secretary of the White Lung Association (U.S.). “It is,” Mr. Fite said “the victims, pain and loss, which moves each of us, and all of society, toward the World Wide Ban of Asbestos:”

“The innocent victims of this toxic tragedy face a powerful industry, made up of asbestos mine owners, transporters, manufacturers, insurance, regulatory, public relations and medical personnel. These legions are mustered to expand and defend the use of this crushed mineral. They compose a vast economic army, organized to protect the industry and therefore to deny the victims compensation or to pay for clean-up of the environment.”

The victims have provided data on the health effects of asbestos exposure for medical and epidemiological studies; by so doing, they have helped to generate the global consensus that exposure to all types of asbestos causes disease and death. Spurred by the injustice which exposed them to avoidable risk, asbestos victims in the U.S., Brazil, South Africa, France, Italy, the Netherlands, France, England, Australia and elsewhere have campaigned for their own rights and those of future generations; their mutual goal remains a global ban on this killer fiber.

Asbestos defendants consistently denied the harmful nature of asbestos and minimized the number of victims. The under-funding of the Manville Personal Injury Trust was based on a vast underestimate of potential claimants. A consequence of this under-investment is that nowadays victims receive a few hundred dollars compensation for fatal diseases from the Trust:

“The cycle of profit/misery/pollution/disease always ends with the bankruptcy of the asbestos industry. The more successful they are in the business of distribution of asbestos, the more unlikely they are going to be able to pay for the people injured and killed by their product. The more sales and success in distribution, the larger the killing ground. This industry, particularly its Canadian variant, moves around the world causing disease in country after country.”

Mrs. Lorraine Kember, author of *“Lean on Me, Cancer through a Carer’s Eyes”* spoke about her husband Brian’s death:

“Mesothelioma strikes without warning; my husband was an incredibly strong and virile man, who had rarely experienced a sick day in his life. When at the age of 52, he suddenly began to experience shortness of breathe, we thought it most likely due to a chest infection and made a doctors appointment expecting that he would be given a course of antibiotics. Instead he was given the death sentence of mesothelioma. Although I was aware that Brian had spent 7 months as a child in the asbestos mining town of Wittenoom, I found it almost impossible to believe that the asbestos dust he inhaled then, had taken 45 years to become lethal. There is nothing that can prepare you for the shock and devastation of a terminal diagnosis. When Brian received his, I felt as if we had both been shot and I saw his prognosis of three to nine months, as a time in which we were expected to drop.”

In danger of being overwhelmed by her grief, Mrs. Kember realized that although she could not prevent Brian’s death, she could help him to live:

“One of the most important things I learned, was that in order to obtain the best possible pain control medication must be taken at regular prescribed times, regardless of whether pain is or isn’t present, effectively keeping in front of the pain. I learned that there are different types of pain and that not all pain responds to the same medication; and how to measure intensity of pain and encouraged Brian to communicate to me the type of pain he was experiencing and its intensity using a pain scale of 0 to 10. Brian soon realized the benefits of this. It was an immense relief for him to know that I understood.”

Managing the pain enabled the family to maintain a sense of control and helped them cope with their grief. Committing herself to the campaign for a global asbestos ban, Mrs. Kember also highlighted the need to reach out to asbestos victims and their family members.

The Plight of Asbestos Victims in India was the title of the presentation by Gopal Krishna of the Ban Asbestos Network of India (BANI) and Toxics Link. In India,

increasing consumption of asbestos is sanctioned and encouraged by a government prepared to back powerful commercial interests at the expense of public health:

“The Indian asbestos cement products industry has 14 major players, with an estimated production of 14.60 lakh [100,000] metric tonnes (mt) and sales of 14.05 lakh mt in 2001-02... About three-fourths of India’s asbestos is imported, mainly from Canada. In 1995, Canada exported 509,575 mt of chrysotile, of which 42,936 mt came to India, making it the fourth biggest consumer of Canadian asbestos. There are some 673 small-scale asbestos factories in India...

Studies by the National Institute of Occupational Health (NIOH), an Ahmedabad-based autonomous government scientific body, have found lung impairment and radiological abnormalities in asbestos milling workers (54.8%) and miners (19.5%). The workplace asbestos fibre concentration in milling facilities was found to be 33 times higher than the Indian standard for chrysotile asbestos of 2 f/cm³. Besides, mesothelioma, a cancer of the thin membrane enclosing the lungs, which is caused by asbestos exposure, has been reported in India.”

In the absence of national epidemiological data on asbestos-related disease, the industry maintains that this fiber, banned in 40 other countries, can be used safely under “controlled conditions.” Legal judgments, which would have afforded a modicum of protection from hazardous occupational asbestos exposures, have not been enforced. Extensive media and political lobbying by Indian asbestos stakeholders has increased demand for asbestos products; a dramatic reduction on import duties on raw asbestos insures that asbestos products maintain a competitive advantage over safer substitutes. The Indian Government’s objection in 2003 and 2004 to a United Nations’ proposal to control the global trade in chrysotile further reinforces its pro-industry bias.

Plenary Session 4 – *Medical Aspects: Surveillance and Treatment of Asbestos-Related Diseases*

The second day of the conference was begun by Professor Yasunosuke Suzuki from the Mount Sinai School of Medicine in New York who spoke on: *Asbestos Fiber Analysis in the Lung and Mesothelial Tissues from 168 Cases of Human Malignant Mesothelioma*. The purpose of this research was to:

“characterize asbestos fibers contributing to the induction of human malignant mesothelioma. To achieve this, the type, number and dimensions of asbestos fibers detected in both the lung and mesothelial tissues taken from human malignant mesothelioma cases were investigated.”

The role of chrysotile in causing mesothelioma was confirmed by the fact that in some mesothelioma patients asbestos fibers found in lung or mesothelial tissue or both were exclusively chrysotile. The scientists also found that:

- asbestos fibers were present in most of the samples of lung tissue and mesothelial tissues taken from mesothelioma patients;

- in the lung samples, a mixture of chrysotile and amphiboles or amphiboles alone were more common than chrysotile alone; in the samples of mesothelial tissue, however, chrysotile predominated followed by a mixture of chrysotile and amphiboles; the disproportion of asbestos between the two tissues was due to the strong capacity of chrysotile fibers to translocate from the lung to the mesothelial tissues;
- the average number of asbestos fibers in the lung (56.4×10^6 fibers/dry gram) as well as in the mesothelial tissues (46.5×10^6 fibers/dry gram) was greater than those in the general population (0.44×10^6 fibers/dry gram in the lung and 0.41×10^6 fibers/dry gram in the mesothelial tissue);
- the majority (89.4%) of asbestos fibers detected in the lung and mesothelial tissues were shorter than and/or equal to 5 μm in length, and the majority (92.7%) were smaller than or equal to 0.25 μm in width.

Mesothelioma in Japan - It's Characteristics of Pathology by Dr. Kohki Inai, from the Japan Asbestos Hazards and Mesothelioma Study Group, Hiroshima University, was the next presentation. Following a steady increase in the incidence of mesothelioma in Japan in the 1990s, a research group was set up to investigate the diagnosis and treatment of mesothelioma. Information on malignant mesothelioma was collected from death certificates as there was no national cancer register in Japan; the incidence of disease reflected Japanese asbestos consumption which rose from 44,000 tons in 1939 to 315,000 tons in 1974, the year of peak usage. Scientists predict that the Japanese mesothelioma epidemic will peak between 2009-2014 with 1,700 deaths a year. Due to this rapid escalation in patient numbers, it is important to identify tools for accurate diagnosis.

Procedures used to identify 854 cases of mesothelioma, which were diagnosed between 1995 and 2002, were: autopsies 211 cases (25.1%), operations 231 (27.5%), needle biopsies 202 (24.0%), VATS biopsies 143 (17.0%), open biopsies (including double answer) 106 (12.6%). The histological classifications of these cases were: 403 (47.9%) epithelioid, 153 (18.2%) sarcomatoid and 180 (21.4%) biphasic. The usefulness of cytokeratin, EMA and calretinin as immunohistochemical stains was compared.

Clinicopathological Study on Malignant Pleural Mesotheliomas (MPM) by Dr. Kenzo Hiroshima, from Chiba University, Japan was the next presentation. Although the prognosis for MPM is poor, Dr. Hiroshima said “there are some cases whose prognoses improve with surgical removal of the tumor.” As early diagnosis provides a better chance for successful surgical intervention, new methods are being researched. Recent findings suggest that immunohistochemical panels, especially calretinin, were an important tool in diagnosing mesothelioma; other substances were also researched:

“We evaluated the results of immunohistochemical staining according to the histological elements. All of epithelial elements (EE) reacted for cytokeratin AE1/AE3, EMA, and HBME1, however, some of EE reacted for vimentin and calretinin. On the other hand, all of sarcomatous elements (SE) were positive for vimentin and calretinin, however, some of SE was positive for cytokeratin AE1/AE3 and none was positive for EMA and HBME1. EE and SE were positive for D2-40 in some cases.”

The next speaker, Dr. Kazuhiko Takabe from Tsuchiura Kyodo Hospital, Japan, spoke on: *PCR/SSCP Analyses of Epidermal Growth Factor Receptor (EGFR) Mutations in Malignant Mesothelioma*. EGFR mutations, identified through the use of PCR and PCR products and analyzed by SSCP, were present in 37.7% of the lung adenocarcinoma samples taken from 53 patients, and no mutation was detected in any malignant mesothelioma samples. “Although the present study could not demonstrate EGFR mutations in the MM samples,” Dr. Takabe said “more MM cases should be examined to obtain definitive conclusions, as there may be differences in the mutational status between the histological subtypes of malignant mesothelioma tumor tissues.”

Dr. Takemi Otsuki from the Department of Hygiene, Kawasaki Medical School, Japan spoke about: *Cellular Characteristics of an Asbestos (Chrysotile-B) Resistant Subline of HTLV-1-Immortalized Human Polyclonal T Cell Line (MT-2)*. He concluded:

“A human polyclonal T cell line, MT-2, was sensitive to asbestos-induced apoptosis, and there was significant involvement of the ROS (reactive oxygen species) system in the appearance of apoptosis, as has been noted in other reports which confirmed the role of ROS in asbestos-induced cell death in alveolar and mesothelial cells. In addition, cellular and molecular biological comparison of MT-20rg and MT-2Rst should provide us with clues to the mechanisms involved in the occurrence of the immune dysregulation found in asbestosis or silicosis patients.”

The next presentation by Dr. Tamako Nishiike of Hyogo Medical College, Japan, was titled: *Exposure of Macrophages to Asbestos or Man-Made Mineral Fibers Causes Oxidative Stress through a Change in the Levels of S-nitrosothiol and Cellular Glutathione*. Specific murine macrophage cells cultured with chrysotile B (CH) asbestos, crocidolite (CR) asbestos or MMMFs comprised of glass wool (GW), rock wool (RW) or ceramic (RF1) showed significant increases of nitric oxide production and S-nitrosothiols formation and decreases in the level of glutathione (GSH) in some cells. Dr. Nishiike concluded:

“These results indicate that macrophages exposed to asbestos or MMMFs are subject to oxidative stress not only through the generation of reactive oxygen species and reactive nitrogen species, but also through decreases in the level of the cellular antioxidant, GSH, by S-nitrosoglutathione formation. The increase of S-nitrosothiols in macrophages exposed to asbestos or MMMFs may deserve more attention as the indicator of continuous oxidative stress on cells and tissues, which causes inflammation and involves the development of asbestos-induced diseases.”

Dr. Yasumitsu Nishimura, from Hyogo Medical College, Japan, addressed the issue of *Functional Alteration of the Alveolar Macrophages Exposed to Asbestos Fiber: the Production of TGF- β 1, Apoptosis and the Generation of Multinucleated Giant Cells*. Alveolar macrophages (AMs) are believed to play a critical role in lung inflammation and fibrogenesis in asbestosis patients. “In particular,” Dr. Nishimura said “the production of TGF- β 1 by AMs is very important for the progress of pneumoconiosis

because of its abilities not only to promote the production of extracellular matrix but also to suppress immune functions.”

This research measured programmed cell death, TGF- β 1 production and multinucleated giant cell generation in rat AMs exposed to Canadian chrysotile B *in vivo* and *in vitro* and found that direct exposure of AMs to low doses of chrysotile can play a critical role in initiating and accelerating lung fibrogenesis; further research into the responses of AMs to low doses of chrysotile and other toxic fibers or particles will contribute to the understanding of the mechanism of lung fibrogenesis.

Clinical Diagnosis of Asbestos-Related Diseases by Dr. Gunnar Hillerdal, from Karolinska University Hospital, Sweden, was the title of the next paper. A concise discussion on each disease was followed by a list of appropriate diagnostic procedures:

- pleural plaques are diagnosed by chest X-ray or CT scan; diagnosis can be difficult and errors are common;
- to make a diagnosis of benign asbestos pleural effusion the following criteria need to be satisfied: a history of asbestos exposure, the exclusion of other causes (especially malignant disease) and a minimum observation of two years;
- a chest roentgenogram and CT scan will usually be adequate in cases of diffuse pleural thickening; fine-needle biopsy can be performed if required;
- a diagnosis of mesothelioma requires a CT scan with confirmation by pleural biopsy;
- high resolution CT scanning can identify asbestosis earlier than ordinary chest X-ray; the early stage of asbestosis can be difficult to see on a chest roentgenogram and diagnostic errors occur. A clinical diagnosis of asbestosis requires: a reliable history of asbestos exposure, an appropriate time latency period, X-ray changes compatible with lung fibrosis, restrictive lung function and inspiratory rales at the lung bases (optional);
- asbestos-related lung cancer should be investigated and treated as any other lung cancer.

Dr. Bruce Robinson, from the University Department of Medicine in Perth, Western Australia, made the presentation: *New Treatments and Early Detection of Mesothelioma Using Blood Tests*. Some progress has been made in the treatment of patients with malignant mesothelioma; gemcitabine-cisplatin and pemetrexed-cisplatin have both shown response rates of over 30%. Using advanced molecular and cellular approaches, researchers are investigating how these therapies can be combined with surgery and immunotherapy to enhance survival. To optimize the effectiveness of treatment, early diagnosis is essential; attempts to develop a blood test for mesothelioma succeeded in identifying soluble mesothelin related protein (SMRP) in the blood of mesothelioma patients. As significant levels of SMRP can be detected several years before the disease manifests itself, a simple blood test can screen at-risk individuals. Funding for the mesothelioma research program in Perth is, however, problematic but a new Australian initiative, called the Blue Sky Project, has been drawn up which aims to raise research dollars from asbestos stakeholders such as the government, insurers and asbestos corporations who, by financing a cure for mesothelioma, could save hundreds of billions of dollars in liability payments.

Irinotecan-Based Chemotherapy for Malignant Pleural Mesothelioma was the title of the paper by Dr. Shigeru Miyata, from Hyogo Medical College, Japan. The median survival rate for mesothelioma patients is 9-14 months with few patients still alive five years after diagnosis. Curative surgical resection is not an option for the majority of mesothelioma patients; chemotherapy, which has so far yielded only modest results, has much to offer. Irinotecan (CPT-11), a semisynthetic derivative of camptothecin, is a promising new agent. In phase II trials evaluating single-agent CPT-11 therapy, significant activity has been shown against nonsmall cell lung cancer and against colorectal cancer. In a preclinical study, CPT-11 also demonstrated cytotoxic activity against mesothelioma using a colony-forming assay. Unfortunately, treatment of 28 malignant mesothelioma patients with the single-agent CPT-11 (125mg/m² given weekly for 4 weeks, every 6 weeks) was disappointing; in the dose given and with the schedule followed, there was no antitumor activity and considerable toxicity. More promising results were reported by researchers who used a combination therapy of CPT-11 and cisplatin (CDDP), or CPT-11, CDDP and mitomycin (MMC), or CPT-11 and gemcitabine (GEM).

The next speaker, Dr. Antti Tossavainen from the Finnish Institute of Occupational Health, discussed the *Helsinki Criteria for Asbestos-Related Disease*. Putting the global epidemic of asbestos-related disease into context, Dr. Tossavainen said:

“Up to 20 000 asbestos-induced lung cancers and 10 000 mesotheliomas occur annually in Western Europe, Scandinavia, North America, Japan and Australia. In the most affected age groups, mesothelioma may account for about 1 % of all deaths. In addition, about 5-7 % of all lung cancers can be attributed to asbestos exposure... About 170 tons of produced and consumed asbestos will cause at least one death from pleural or peritoneal mesothelioma and contribute to several cases of lung cancer, asbestosis and pleural abnormalities. Thousands of asbestos-related diseases will be diagnosed and treated by clinicians across industrialized countries in the next 20 to 30 years and even later in the developing world.”

To establish criteria for the diagnosis and attribution of asbestos-related disease, a meeting was held in Helsinki on January 20-22, 1997; the nineteen experts in attendance at the International Expert Meeting on Asbestos, Asbestosis and Cancer drew up a set of guidelines called: The Helsinki Criteria. According to the Consensus Report published after this meeting:

“In general, reliable work histories provide the most practical and useful measure of occupational asbestos exposure... The clinical diagnosis of asbestos-related diseases is based on a detailed interview of the patient and occupational data on asbestos exposure and appropriate latency, signs and symptoms, radiological and lung physiology findings, and selected cytological, histological and other laboratory studies.”

Trained interviewers can, using structured questionnaires and checklists, identify people with a work history compatible with significant exposure. Exposure criteria required for two types of asbestos-related disease under the Helsinki Criteria are:

Asbestosis

- generally associated with relatively high exposure levels;

- radiological findings of small opacities (ILO grade 1/0) usually regarded as indicative of early stage asbestosis;
- histological diagnosis of asbestosis requires identification of diffuse interstitial fibrosis in well inflated lung tissue plus the presence of asbestos bodies or uncoated fibers.

Mesothelioma

- an occupational history of brief or low-level exposure was sufficient to cause mesothelioma;
- about 80% of mesothelioma patients had some occupational exposure to asbestos;
- an elevated lung fiber count, radiological findings or histopathological evidence also support mesothelioma diagnosis;
- failing other markers, significant occupational, domestic or environmental asbestos exposure will suffice for attribution;
- latency period from 10-40 years;
- smoking has no influence on the risk of mesothelioma.

Diffuse Pleural Thickening Related to Asbestos Exposure was the subject discussed by Dr. Hirotaro Miura, from Yokosuka Kyosai Hospital, Japan. Asbestos exposure is an acknowledged cause of diffuse pleural thickening (DPT). Retired Japanese asbestos workers are required to have annual or biannual medical checkups. Of 93 patients examined from 2001 to 2003, 8 (9%) had bilateral DPT without asbestosis; a quarter of these patients experienced severe pulmonary dysfunction. Dr. Miura concluded that a more careful follow-up of DPT patients is needed.

Dr. Narufumi Sukanuma, from the Fukui School of Medicine, Japan, gave a presentation entitled: *Differentiating between Benign Pleuritis and Mesothelioma by Radiograph using ILO2000*. Within 30 years, a mesothelioma epidemic is expected in many asbestos-using countries. The ILO 2000 classification of radiographs of pneumoconiosis (ILO2000) is a useful tool for diagnosing asbestos-related diseases. In July, 2004, thirty Asian physicians participated in an ILO workshop on the ILO 2000 protocol in Bangkok, Thailand. Mini quiz marks before and after the session showed a significant improvement in doctors' grades. Dr. Sukanuma concluded that:

- the ILO workshop succeeded in communicating knowledge and improving X-ray reading skills on pneumoconiosis;
- for physicians to diagnose mesothelioma, training courses on chest x-ray findings are essential.

Plenary Session 5 – Compensation for Damages Due to Asbestos

The first plenary speaker on Saturday afternoon was Bob Ruers, Solicitor, Former Dutch Senator and founding member of the Dutch Asbestos Committee, who discussed *Compensation for Environmental and Domestic Exposure Cases*. Research in South Africa, England, Germany, Italy, Australia and the U.S from 1960 onwards, established that asbestos-related diseases can be contracted from non-occupational exposures. Living in the vicinity of an asbestos factory/mine, or with a person who

worked with asbestos or in a building containing asbestos can have hazardous consequences. Although obtaining compensation for victims of non-occupational asbestos exposure is difficult, some legal actions have succeeded:

Australia:

In 1994, a claim was won in the Australian courts by 34 year old Mrs. Olsen who had been exposed to asbestos dust between 1959 and 1961 when she lived close to the Wittenoom asbestos mine.

UK:

The 1996 case of Margereson and Hancock v. J.W. Roberts Ltd. related to environmental exposure from an asbestos textile factory belonging to a Turner & Newall subsidiary which caused the two plaintiffs to contract mesothelioma; as children they had played near the factory. The High Court ruled that the circumstances at the Roberts site at the time of the plaintiffs' exposure contravened the 1931 Asbestos Regulations.

The Netherlands:

Grootenhuis v. Eternit: Exposure experienced by Marino Grootenhuis to asbestos dust from the Eternit asbestos-cement factory in Goor which was brought home on his father's work clothes between 1969 and 1970 and between 1976 and 1977, resulted in the claimant contracting mesothelioma at the age of 32.

“The Dutch court awarded Mr. Grootenhuis' claim for damages arising out of personal injury. The Court held that the relation between asbestos exposure and mesothelioma was well known in the 1970s. In this respect the Court mentioned the studies of Wagner (1960), Selikoff (1964), Newhouse & Thompson (1965), Böhlich (1968), Stumphius (1969) and Dalgren (1970). The fact that Eternit was familiar with the risk of mesothelioma put Eternit under a special duty of care not only to its employees, but their family members also. According to the Court, during the 1960s Eternit could and should have been aware of the risk of domestic exposure through working clothes.”

Since the Grootenhuis judgment, Eternit has accepted liability and paid damages to four asbestos-injured family members of former Eternit workers; one was the spouse of an employee and the others were daughters of employees.

Nieborg v. Eternit: Mrs. Nieborg-Horsting contracted mesothelioma from exposure to asbestos-cement panels sold by Eternit Netherlands in 1971; a product liability claim succeeded before the High Court in 2003. The judgment was scathing of Eternit's failure to warn consumers of the health risks of using asbestos-cement panels. According to the Court, issuing a consumer warning was an obvious safety measure; by failing to do so, Eternit had been negligent. The case is now pending before the Dutch Supreme Court.

For most of the 20th century, a handful of asbestos multinationals controlled the global trade in asbestos:

“These multinationals are blind to the harmful consequences of their products and refuse to bear any responsibility whatsoever, especially where the third world is concerned. Therefore, it is of utmost importance that asbestos victims and their organisations support and inform each other worldwide. Only in that way can we make sure that all asbestos victims, wherever they live, can obtain adequate compensation for their damages.”

The next speaker, Sugio Furuya from The Ban Asbestos Network Japan (BANJAN) and Japan Occupational Safety and Health Resource Center (JOSHRC), discussed *A Comparative Study on Workers' Compensation*. Asbestos litigation is rare in Japan; most asbestos compensation claims are submitted by employees to the Workers' Accident Compensation Insurance scheme, which is administered by the Government. Prescribed asbestos-related occupational diseases in Japan are: asbestosis, asbestos-related lung cancer and mesothelioma; benign asbestos pleural effusion and diffuse pleural thickening have recently become compensatable on a case by case basis. Asbestos victims can receive full payment of medical costs and up to 80% of lost wages until cured or dead. After death, dependent survivors become eligible for benefits. Even if a worker has left or retired from the job at which he was exposed to asbestos, he is still eligible for compensation; if the employer had neglected to pay insurance premiums, the injured worker will still be compensated. Despite these guarantees, very few Japanese workers with asbestos injuries receive compensation. The issue of under-compensation is common in many developing countries as is the under-reporting of asbestos-related diseases.

Summary of Asbestos Litigation in Japan was the title of the paper given by Akira Morita, a lawyer, from Kanagawa University. Amongst the first asbestos personal injury cases brought for occupational exposure in Japan were those against the Heiwa Sekimen Co. Ltd. and the Nihon Asubesuto (asbestos) Company; out-of-court settlements were obtained. In 1988, shipyard workers with asbestosis sued their former employer, Yokosuka Sumitomo (Heavy Industries, Ltd.). The Shikoku Electric Power Co. was sued by surviving relatives of a deceased power plant worker. Former employees and relatives of deceased workers from the U.S. Naval Base at Yokosuka sued the Japanese Government for asbestos injuries and in Nagasaki an asbestos class action was started against Mitsubishi Heavy Industries, Ltd. Asbestos litigation, once a rarity in Japan, is gaining ground as asbestos victims mobilize to claim compensation for their injuries.

Ms. Satomi Ushijima, a Japanese lawyer, spoke about the *Japan Nursery School Children's Asbestos Exposure Lawsuit*. According to Ms. Ushijima, the settlement in this case marked an international breakthrough as damages were awarded to uninjured victims; in addition, the settlement is expected to raise awareness of the importance of asbestos management or removal prior to refurbishment or demolition work. The action was brought after high levels of asbestos exposure were experienced by children at a nursery school run by the Bunkyo City Government during renovations carried out in 1999. The case was started in January, 2003 by parents of some of the exposed children. During the trial it was revealed that over a period of twenty days, the children had received exposures equivalent to an ordinary person's lifetime exposure; furthermore, the Court found the lack of precautions to limit disturbance of known asbestos products amounted to “either intentional or gross negligence.” While

the children are not ill, they sustained actual damages as they would have to undergo medical checkups for the rest of their lives:

“The settlement, which was reached in April 2004, is summarized as follows:

- (i) the City Government should apologize to all the children and parents including the plaintiffs;
- (ii) the City Government and contactors should pay settlements to the children and parents who filed the suit (total amount being 3 million yen /US\$28,814) including a solatium of 100 thousand yen/US\$960 per child;
- (iii) in principle, the City Government should also bear checkup expenses as a health care measure and medical expenses in the event of the onset of asbestos-caused disease;
- (iv) the City Government should immediately remove asbestos from all public buildings and proactively educate private sector companies that demolish and/or refurbish buildings as to the existence of asbestos and relevant safety measures.”

Asbestos Litigation in Australia: Past Trends and Future Directions by Australian lawyer Tim Hammond was the next subject. Australia has the highest per capita incidence of mesothelioma in the world, the result of being the highest per capita user of asbestos from the 1950s-1970s. Epidemiologists predict that by 2023, more than 45,000 Australians will have died from asbestos malignancies (mesothelioma and asbestos-related lung cancer). There are two main routes for obtaining compensation for asbestos injuries in Australia:

- claims can be brought in most Australian states under statutory “no fault” schemes which are part of workers’ compensation systems; under these systems, the worker can receive weekly payments of compensation, reimbursement of medical expenses and, in some cases, lump sums for permanent disabilities;
- common law civil claims for negligence are still allowed in most Australian jurisdictions; an asbestos-injured worker must prove that breach of a statutory duty by an employer contributed to the plaintiff’s disease; claims by end users of asbestos products and residents, who experienced negligent exposure such as people from Wittenoom, are also possible.

Legal cases which have set important precedents for Australian asbestos victims include:

- *Pilmer v McPhersons Ltd* – the first successful verdict for common law damages for mesothelioma (September, 1985);
- *CSR v Young* – established the liability of CSR for injuries suffered by the townspeople of Wittenoom;
- *CSR v Culkin* – established liability in relation to lung cancer cases in the absence of asbestosis;
- *Bodsworth v City of Nunawading* – established liability to a broader class of occupationally-exposed office workers;
- *Crimmins v SIFC* – breakthrough case that established that the Stevedoring Industry Finance Committee (SIFC) owed a duty of care to waterside

workers in the casual pool of labor on the waterfront who were exposed to asbestos in the course of their employment;

- *Della Maddelena v CSR* – established liability against CSR in circumstances where a Wittenoom employee suffered a purely psychiatric injury.

Attempts by corporate entities to avoid their asbestos liabilities continue:

“It is ominous that James Hardie’s suggestion to implement a statutory scheme for (Australian) victims of asbestos diseases coincides with the attempt in the United States to implement a no fault statutory scheme in an effort to ‘deal’ with the asbestos litigation ‘problem’.”

Continuing the discussion on asbestos compensation in Australia, Judge John Lawrence O’Meally, President of The Dust Disease Tribunal of New South Wales, Australia spoke about *Asbestos Litigation in New South Wales (NSW)*. In 1989, a special court: The Dust Diseases Tribunal (DDT) was set up in NSW to deal with asbestos litigation “expeditiously”. Since then, procedures have been adopted, initially by regulation, then by rule and legislation, which have streamlined the litigation process; in some instances, the time which has elapsed between the filing of a Statement of Claim and the entry of judgment has been 4 hours. The DDT is a Court of Record and the rules of the Supreme Court of NSW apply unless DDT rules contravene them.

Common sense, speed and cost reduction permeate DDT procedures. To decrease costs and increase speed, documents disclosed in earlier cases can be re-used; issues of a general nature once decided, cannot be relitigated without leave of the Tribunal. Upon the filing of a Statement of Claim, cases are marked urgent, priority or ordinary. Cases of carcinoma or mesothelioma are classed as urgent and asbestosis as priority. Each case is individually managed and an appropriate timetable is set within days of the case being filed. It is common for plaintiffs with cancer or who are in hospital to give their evidence by affidavit:

“The health of many plaintiffs is extremely poor and often renders them immobile. Some who can travel may go into respiratory distress. For that reason a sickroom was constructed adjacent to the Registry where the Tribunal provides a bed and oxygen, as well as a television and videotapes, to accommodate and distract those who may find it difficult to remain in court, or, who being in court, have required a break. In respect of those who have difficulty in travelling to court, applications are made, supported by a medical certificate, that evidence be taken at their home, or at a hospital or hospice.

Something in the order of one third of the Tribunal’s work is conducted at the bedsides of terminally ill plaintiffs. Often by reason of pain control therapy, plaintiffs have limited lucidity at certain times of the day. For these plaintiffs, hearings will be fixed to take place at a time when it is expected they will be at their lucid best. As a consequence, the Tribunal will sit at any hour of the day, on any day of the week, at any place in the Commonwealth of Australia to receive the evidence of a plaintiff who is unable to travel.”

When the carrot fails, the DDT uses the stick to ensure cooperation: “If a party refuses or neglects to make an admission on a matter that is subsequently established by evidence, cost penalties apply.”

Alexander Lacson, Legal Counsel for the Subic Asbestosis Victims’ Association (SAVA), People's Task Force For Bases Clean-Up, the Philippines, discussed the situation in his country in the presentation: *Philippine Case: Asbestosis Victims Left by U.S. Navy at Subic Naval Base*. From 1900-1992, the U.S. Navy occupied the Subic Naval Base in the Philippines; more than 30,000 U.S. marines lived here and 50,000 Filipinos were employed by the U.S. Government at the Ship Repair Facilities (SRFs), Submarine Facilities, Training Facilities and Target Ranges on the base. In the 1990s, one thousand former SRFs workers filed asbestos compensation claims in the California courts. The outcome of the U.S. litigation was unsatisfactory. According to the Filipino victims, who all signed retainer agreements with the same American lawyer, of the 68 asbestos defendants which were sued, fewer than 8 settled. After ten years of litigation, payments received by some of the Filipino plaintiffs ranged from \$500-\$5,000; it is alleged that the U.S. lawyer acting for them did not “account properly for the settlement monies paid by asbestos companies to the victims.” In September 2000, SAVA asked Mr. Lacson’s firm to become involved in an action against their U.S. lawyer. The action is on-going.

Sociologist Linda Waldman, from the University of Sussex, spoke on the subject: *Asbestos and Money: a Local Perspective from South African Asbestos Claimants*. Comparing the experience of residents from Prieska and Griquatown, South African towns which are home to many of the claimants who sued Cape PLC for asbestos injuries, she illustrated how differing cultural interpretations, family ties and socio-economic factors affected the perception of asbestos compensation:

“In the small rural town of Prieska, in the Northern Cape, the settlement was part of a process which had begun in 1996 when a local group of activists started to campaign for improved access to asbestos compensation. The settlement and Cape PLC’s payment is a legal success story...

In Griquatown (an impoverished farming town in the Northern Cape) people saw the Cape PLC court case referred to above as a means of making money. They commented that they had been promised huge sums of money...They had been waiting for this money for years... People in Griquatown experienced this court case as an entrenchment of their oppression, rather than as an example of injured workers successfully holding a corporation accountable for its abusive and exploitative work practices.”

Plenary Session 6 – Identification, Management and Removal of Existing Asbestos

Prevention of Asbestos Risks in the Construction Sector was the title of the presentation by Dr. Anders Englund from Ume University, Sweden; he said that although the use of asbestos was banned in Sweden 30 years ago, asbestos-related disease kills 2-3 times as many workers as fatal accidents. Unfortunately, this experience is not unusual and bodes ill for industrializing countries with increasing

asbestos consumption. The fact that the majority of asbestos is used in the construction industry, which is known for its low priority on health and safety, compounds the problem. Data collected in Sweden illustrate the hazards of occupational asbestos exposure in the construction industry. In a cohort of 370,000 construction workers, 215 cases of pleural mesothelioma were identified between 1971-98. When compared to males in the general population, this was a 1.6 fold excess; however for insulators, plumbers, painters, sheet-metal workers, electricians and floor layers, the construction trades most at-risk of occupational asbestos exposure, the excess rate of pleural mesothelioma was 3.2. Between 1998-2002, another 88 cases of pleural mesotheliomas were identified in this cohort of which half occurred in men under retirement age (65) and 10% were in men under 50.

The popularity of asbestos was due to its relative cheapness; however, when the human suffering and cost to society of handling these products towards the end of their life cycle are factored into the equation, the use of asbestos is revealed to have been very costly. Based on the Swedish experience, and considering the increasing use of asbestos in the Asian construction industry, asbestos disease will claim the lives of many innocent construction workers well into the 21st century.

Heinz Kropiunik, from aetas Ziviltechniker GmbH, Austria, spoke about *The Asbestos Management Plan for the Vienna International Center (VIC)*. The VIC, one of three global headquarters of the United Nations, has 7 buildings with a gross floor area of approximately 340,000 m²; the 1970s complex is owned by the Republic of Austria and leased to the UN for 99 years. During its construction, sprayed asbestos fireproofing, asbestos panels and ropes were used in air ducts, on doors, walls and partitions. Four thousand people work at the VIC complex including personnel from the UN, the International Atomic Energy Agency and the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization.

Research into the presence of asbestos in the VIC was conducted during 1997-98 after which a status report was prepared. On the basis of this report, the Austrian Government commissioned a draft master plan for the decontamination of the VIC; by the beginning of 2001, the final master plan was ready. In 2003, small-scale asbestos removal exercises were carried out. The phased asbestos decontamination and refurbishment of the VIC is scheduled to take 13 years, with completion expected in 2010. Mr. Kropiunik believes that: “the asbestos management plan for the VIC can be seen as a prototype of how to deal with the problem of asbestos containing materials in big, complex and sensitive premises without causing any risks for the users at all.”

Architect Susana Mühlmann spoke about: *A Case Study: Former Caseros Prison, the First Asbestos Removal Project in Argentina*. In 1999, the Government of Buenos Aires City decided to demolish Caseros Jail; this derelict asbestos-contaminated twenty-one story building was located close to several hospitals, one of which, Hospital Garrahan, was the country’s top Children’s Hospital. The army’s plans to demolish the building in 2001 through a controlled implosion were stopped after objections from the Ministry of Health and asbestos experts who were concerned at the levels of environmental pollution which would be caused by the presence of 20 tons of chrysotile in three areas of the basement. Subsequently, the Government of Buenos Aires began an asbestos removal project.

As this was the first asbestos removal project in Argentina, everything was new: a legal framework under which this project could be carried out was needed, full documentation on all aspects of asbestos removal procedures was compiled and training for designated removal staff was given. The training, which included the use of respiratory protective equipment, was provided by the Army, with the technical advice of a private firm and supervision of the City Government. The asbestos removal contractor which carried out the work was the Argentinean Army on agreement with the Government of Buenos Aires City. In the aftermath of this landmark project, representatives of the Ministries of Health, Labour and Defense are cooperating with asbestos specialists and representatives from the private sector to devise Argentinean standards for working with and removing asbestos. In addition, the Government of Buenos Aires City is setting up a commission to manage asbestos in public buildings.

Asbestos disease levels in Scotland, amongst the highest in the UK, prompted West Dunbartonshire Council (WDC) to adopt a proactive approach to a range of asbestos problems. In his presentation: *COSLA (Convention of Scottish Local Authorities) Report*, Andy White, leader of the WDC, discussed the legacy of asbestos use in the Scottish shipyards and engineering works:

“In light of the horrors inflicted by asbestos on the Scottish population, the Council felt it was imperative to address a range of asbestos issues, one of which was the need for safe management of asbestos in buildings. As property owners, all Scottish authorities were faced with the problem of how to make their buildings safe for workers and occupants. It seemed a logical and cost-effective step to develop procedures which could be used by all.”

To insure that a consistent, long-term asbestos strategy was followed by Local Authorities in Scotland, The Short Life Asbestos Working Group (AWG) of the Convention of Scottish Local Authorities was set up in 2001. In June, 2002, the AWG published a 113 page report⁸ which covered asbestos management policies, asbestos emergency procedures and health and safety regulations. Highlighting the need for greater awareness, the Report recommended that asbestos training and guidance:

“should be provided to all Local Authority staff who may be liable to come into contact with asbestos during the course of their employment. This would include Council employees who are also responsible for the day to day management of Council premises (including)... maintenance staff, apprentices and trainees... head teachers, janitors, unit managers, concierges and other appropriate Local Authority personnel.”

Examples of best practice in key areas were cited such as the recommendation that local authorities verify that tendering contractors: hold appropriate licenses for the work being planned, have Employers' Liability and Public Liability Insurance, are members of a trade association, have established procedures for vetting sub-contractors, produce details of HSE prosecutions, prohibition notices or improvement orders and demonstrate the practical skills and financial ability to meet contractual obligations. Surprise site visits to monitor on-going operations were suggested as a

⁸ The AWG Report can be viewed online at www.cosla.gov.uk

means of confirming health and safety performance. Local councils were advised to share information obtained on contractors with other Scottish Local Authorities.

Environmental Consultant Andy Oberta spoke about: *A New Standard for Repair and Maintenance of Installed Asbestos-Cement Materials*. The majority of asbestos used globally has been in the production of asbestos-cement building materials which have been incorporated into national infrastructures. Once in-situ, these products constitute an on-going risk to electricians, plumbers, painters and other construction workers and to building users. The liberation of asbestos fibers from asbestos-cement materials can occur through: breaking, cutting, dismantling, drilling, filing, grinding, sanding, scraping, surface cleaning and weathering. The question of how this asbestos can be managed to minimize health hazards has been considered by ASTM International⁹, the world's largest producer of voluntary consensus standards. *Standard E2394: The ASTM Standard Practice for Maintenance, Renovation and Repair of Installed Asbestos Cement Products* suggests procedures for:

“working with asbestos-cement products – roofing, siding, ducts, pipes and other construction materials – that have already been installed in and between buildings... Control of dust and fiber release using wet methods – soapy water, shaving cream and similar substances – is stressed. Four appendices cover underground pipes, buried ducts, drilling holes and removing panels, and additional appendices will be prepared to cover other operations and materials. Installation of new asbestos-cement products is not encouraged by the standard. Large-scale abatement is not the intended purpose, although some of the procedures may apply to such operations.”

E2394, which is intended for use by supervisors, managers, government agencies and NGOs, is applicable to conditions in developing and developed countries; the need for worker training and hands-on experience with non-asbestos products is indicated as is the hazard of using power tools. The emphasis of the standard is on the protection of those workers most at-risk of exposure to airborne asbestos. No asbestos regulations are cited in the protocol which can therefore be used as a guideline for national asbestos control regulations where needed.

Although woefully underfunded, the Maryland Department of the Environment does what it can to minimize asbestos exposures to workers and building users at schools in the State of Maryland. In her presentation: *Control of Asbestos in Maryland*, Dr. Mardel Knight discussed the interaction of federal and state asbestos regulations and bemoaned the fact that since 1989, when schools in Maryland achieved nearly 100% compliance with the U.S. Asbestos Hazard Emergency Response Act (AHERA), the situation has deteriorated. With only 50-60 staff available to undertake asbestos inspections at 2,300 schools, enforcement of AHERA has been seriously compromised:

“(Under AHERA) schools were required to inspect all of their buildings for asbestos-containing building materials. When the inspection was finished the schools had to develop a plan to manage the asbestos and a schedule for doing this. The plan that was developed was to protect human health and the

⁹ www.astm.org

environment. The schools did not have to remove the asbestos just because they had it in the schools. However, removal was sometimes required depending upon the condition of the material.”

To improve compliance by schools, the Department of the Environment is engaged in a campaign to raise awareness of asbestos regulations; initiatives include: a quarterly newsletter, asbestos workshops, free access for schools to relevant information and informational site visits.

The speaker in the final plenary session on Saturday was Shigeharu Nakachi, from the Toxic Watch Network, Japan. In his presentation *The Status of the Use and Environmental Release of Asbestos Analyzed by Using Pollutant Release and Transfer Register (PRTR) Data in Japan*, Mr. Nakachi calculated that after fifty years of heavy asbestos consumption, there are now 10 million tons of asbestos in Japan. The impact of asbestos on the environment is clearly illustrated by high levels of airborne asbestos in the aftermath of the Great Hanshin-Awaji and Kobe earthquakes. Measurements taken in cities around Japan show elevated levels persist in some locales especially near highways and asbestos landfill sites. The PRTR system was extended to include asbestos emissions in April 2001; factories with more than twenty-one employees and which consume more than 1 ton of asbestos per year were required to submit asbestos emission data, including waste disposal, to the PRTR; the fact that emissions from small-scale enterprises, households and automobiles are not collected results in a significant under-estimate of the environmental asbestos problem.

Plenary Session 7 – A World Free from Asbestos Risks: Future Strategies

Ms. Kazuko Ouchi, from the Japanese Citizens’ Group: Let’s Think About Asbestos, began the session with her paper: *From the Controlled-Use of Asbestos to the Ban of Main Asbestos Products - The Process in JAPAN: June 2002 - Oct. 2004*. In 1997 when Ms. Ouchi started her website: *Let’s Think About Asbestos*, Japan was importing 200,000 tons of chrysotile/year; few people realized how much asbestos was being used and how hazardous it was. Even now, many people are ill-informed about the prohibitions in the amended Enforcement Order of Industrial Safety and Health Law which came into force in Japan on October 1, 2004, thinking that the use of all asbestos is banned. This is incorrect. The regulations only forbid the use of asbestos in 10 categories of products: asbestos-cement (ac) pipes and extruded pipes, decorated ac roofing shingles, ac boards, ac sidings, friction materials, adhesives, sealants, jointing, thermal or electrical insulating sheets, asbestos cloth, thread or rope. Products which contain 1% or less asbestos are not prohibited; asbestos-containing stock made or imported before October 1, 2004 and asbestos fiber is not banned.

The process by which this government-led phase-out of asbestos was implemented was described by Ms. Ouchi as lacking in transparency, objectivity and public participation; throughout the decision-making process, government committees and policy-makers were more concerned by the effects their actions would have on the economy than they were about the health of their countrymen. “Although the asbestos issue concerned the whole nation,” Ms. Ouchi said “the decision on the ban was made in a small enclosed world with only perfunctory participation of the public.” To

achieve a comprehensive Japanese asbestos ban transparent government, open to public consultation, is essential.

The title of the presentation by Laurent Vogel, from the European Trade Union Confederation (ETUC), was *The Situation in the European Union (EU) After the Total Ban on Asbestos*. Even though the EU asbestos ban will come into force on January 1, 2005, 50 years of delays have led to the avoidable deaths of hundreds of thousands of workers; many more will die in the coming thirty years. Although the ban is a positive step, much remains to be done; European trade unions are working to increase protection for at-risk workers and to assist those with asbestos-related diseases by:

- improving EU occupational safety and health rules;
- creating awareness of where hazardous products are located by making asbestos registers mandatory;
- campaigning for the adoption of harmonized EU criteria for the diagnosing of asbestos-related diseases: “Whereas the EU average for asbestosis cases recognised as occupational diseases is 30 per million workers, the figure is 1 per million in Portugal, 28 in the United Kingdom, 30 in France, 59 in Germany and 96 in Belgium;”
- using the legal system to punish negligent employers and defendants;
- exposing EU multinationals that operate “double standards” and export hazardous asbestos technology and waste to the developing world;
- monitoring the effectiveness of personal protective equipment;
- highlighting the lessons to be learned from the European asbestos experience.

“The asbestos tragedy,” Mr. Vogel said “is unfortunately typical insofar as there are numerous other chemical substances which kill a large amount of people every year...The current debate surrounding the European Union Commission's proposals for a new regulatory framework relating to chemical substances (the REACH project) shows that the same mechanisms which contributed to the asbestos disaster are continuing to pose serious threats to workers' health, the population and the environment.”

In his presentation: *The Study of Asbestos Use in China: Challenges and Opportunities*, Dr. Arthur Frank, from Drexel University School of Public Health, USA, discussed research into the health repercussions of occupational asbestos exposures in China. Chinese asbestos mines produce 450,000 t of fiber annually of which 410,000 t are used to manufacture cement, building materials and friction products. Problems including lack of pathologic material and failure to retain medical records have hampered researchers; with fewer biopsies taken, inconsistent X-rays and little access to experienced pathologists, many asbestos cancers are misdiagnosed.

“A last area of great concern deals with the well documented synergism between smoking and excess lung cancer among asbestos exposed populations. In China, greater than 80% of males are smokers, and with the addition of exposure to asbestos an especially large epidemic of lung cancers can be expected among such doubly exposed individuals. Methods to reduce smoking rates in China would have great value for many, but especially for those also exposed to asbestos.”

Notwithstanding the contribution of asbestos to the national economy, Dr. Frank urged the serious consideration of an asbestos ban in China to protect workers: “although there may be an initial cost increase to use safer products,” he said “there can be great savings in the years ahead with the reduction in the development of asbestos-related disease cases, and considerable long-term cost savings.”

The concerted effort made by the Government of Vietnam to phase-out the use of asbestos was described in the presentation: *Possibility of Using Substitutive Materials for Asbestos and Fibro Cement Roofing Tile Non-Asbestos to Reduce Environmental Pollution and Workers Health Protection in Vietnam* by Prof. Dr. Le Van Trinh from the National Institute for Labor Protection, Vietnam. Chrysotile imported from Russia, China and Zimbabwe is used to produce asbestos-cement roofing tiles, insulation and friction materials. Nearly 6,000 workers at 37 facilities in 21 provinces manufacture 60 million m³ of asbestos-cement roofing tiles every year; these relatively cheap tiles are popular amongst poor people in rural, mountain, coastal areas and in the Cuu Long River Delta. Although the US\$38 million generated by the industry and its use of low quality cement (500,000 t/year) make important contributions to the national economy, the Government of Vietnam is committed to replacing asbestos in order to safeguard the health of the population.

Whilst research has been on-going into safer alternatives, regulations were introduced to minimize occupational exposures. Based on the results of their initial investigations, Vietnamese researchers focused on the replacement of chrysotile by para-aramid, polyvinyl alcohol (PVA) or cellulose fibers. Laboratory studies and industrial experiments established that PVA-cement roofing tile production and the transition from asbestos to non-asbestos technology were feasible. Implementation of the new technology will enable the Government to fulfill its intention, first announced on August 1, 2001, by the Prime Minister in Governmental Decision No 115/QD-TTg which declared that there should be an end to "using the asbestos material in the roofing tile production.”

Professor Ken Takahashi, from the University of Occupational and Environmental Health, Japan, proposed *The Asian Initiative to Stop the Spread of Asbestos-related Diseases in the Region* during his session. According to Professor Takahashi:

“Asia is likely to be on the verge of an epidemic of asbestos-related diseases. However, asbestos-exporting corporations are keen to take advantage of the demand created by rapid economic development of the region. Hence a careful, justifiable and concerted effort is needed to stop the spread of asbestos-related diseases in the region... While asbestos-producing countries are mostly non-Asian countries with the notable exception of China, asbestos-consuming countries are concentrated in the Asian region.”

An analysis of data presented at the Asian Asbestos Symposium of 2002, revealed asbestos trends in eastern and south-eastern Asia:

- action to ban chrysotile has only been taken in Singapore and Japan;
- while industrialized countries with higher per capita GDP showed a steady decrease in asbestos consumption, industrializing countries showed an increase;

- occupational exposure limits varied from 0.1 in Malaysia to 5.0 f/ml in Thailand;
- data collection and provision for medical check-ups were more common in the industrialized countries;
- data on mesothelioma were available for Japan, Korea and Singapore, limited for Taiwan, China and Vietnam and non-existent for Indonesia, Malaysia, the Philippines, or Thailand.

As an asbestos ban in one Asian country could result in increased asbestos sales to a neighboring country, unilateral action alone cannot tackle this problem. The proposed action plan would require support by a multidisciplinary network based in Asia to quantify the current situation, raise awareness of the problems, develop countermeasures to industry's propaganda and work with the international ban asbestos movement.

Banning Asbestos in Asia, Campaigns and Strategies by the Asian Network for the Rights of Occupational Accident Victims (ANROAV) was the title of the presentation by Sanjiv Pandita of the Asia Monitor Resource Center and the Asian Network for the Rights of Occupational Accident Victims (ANROAV),¹⁰ Hong Kong. The aggressive marketing strategy of global asbestos producers has many similarities to that pursued by the tobacco industry both of which have suffered from adverse publicity and decreased consumption in developed countries.

“Asia in particular has emerged as one of the largest markets for asbestos, with China, India, Japan, Indonesia and South Korea among the world's top 10 consumers in the year 2000. Asian countries accounted for about 60% of global asbestos consumption in the year 2000. Most of the asbestos (chrysotile) is used in construction products (asbestos cement, pipes etc.)... China and India are clearly the largest consumers of asbestos in Asia; China is also the second largest producer of asbestos in the world. Thailand uses asbestos at the rate of 1.9 kg per capita per year and that is among the highest per capita consumption in the world.”

The fallacy of “controlled use” promulgated by industry lobbyists is a nonsense in the context of Asian countries where “even simple safety regulations are flouted regularly due to lax implementation.” Conditions observed in April, 2004 at a Vietnamese asbestos sheet manufacturing factory were not unusual:

“About 100 workers were doing three shifts in the factory, which has a single very old production line that was covered in asbestos dust. Workers did not use any proper protective equipment; some covered their faces with a cloth. They used knives to open asbestos bags (from Kazakhstan) and beat the asbestos with wooden hammers before putting it in the grinding machine. Their clothes were covered by chrysotile dust. The factory has no proper ventilation system, only fans that blow the dust around.”

Key action points in the ANROAV Asian asbestos campaign are:

¹⁰ ANROAV is a network of victims' groups, labour NGOs, Trade Unions and Labour activists from Hong Kong, Macao, Korea, Japan, Taiwan, Thailand, Indonesia, India, Pakistan, Bangladesh, Nepal, Vietnam and Cambodia.

- identify asbestos victims who, in the majority of Asian countries, remain unacknowledged, uncompensated and untreated;
- create a database of Asian doctors and lawyers willing to join in the campaign for victims' rights;
- launch an asbestos information initiative to counter industry propaganda;
- campaign throughout the region for an asbestos ban; work with trade unions to secure a "just transition" for workers and communities affected by the ban.

Initiatives for securing a global asbestos ban launched by the International Federation of Building and Wood Workers (IFBWW) were described by Fiona Murie, Director of the Global Program on Occupational Safety and Health, in her presentation: *The Trade Union Campaign for a World-Wide Ban*. Representing 11 million workers in 300 trade unions in the building and timber sectors, the IFBWW has been advocating a global asbestos ban since 1989. This position was reaffirmed in 1991 in the Berne Manifesto which began: "Ban Asbestos. Ban the Deadly Fibre." "A global ban is the only way to protect vulnerable workers in developing countries from hazardous exposures," Ms. Murie said.

One hundred and eleven million people are employed in the construction industry worldwide of whom 100,000 are killed every year by accidents. Seventy-five per cent of all building workers are employed in developing countries where informal contractual arrangements and high accident rates are the norm. Working at national levels to improve conditions, the IFBWW has engaged in dialogue with the members of the construction industry, training boards, government departments and Ministries of Labor and Public Works; it has also developed a range of training materials, manuals and videos to raise awareness of occupational asbestos hazards. Asbestos has been a priority item on the agendas of IFBWW meetings in Paraguay, Peru, Guatemala, Argentina, Honduras, the Dominican Republic, Brazil, Colombia and Uruguay. Globally, the IFBWW has been pressing the International Confederation of Free Trade Unions and the International Labor Organization for backing on this issue; it has worked closely with the International Ban Asbestos Secretariat, the Ban Asbestos Network and the organizers of GAC 2000 (Brazil) and GAC 2004 (Japan). The IFBWW is lobbying the World Bank to prohibit asbestos use in construction projects it finances.

Ms. Laurie Kazan-Allen, Coordinator of the International Ban Asbestos Secretariat, was the final plenary speaker of the GAC 2004. Her presentation: *Towards an Asbestos Free World!* summarized recent developments and highlighted the importance of the Citizens' Virtual Network Against Asbestos. Ms. Kazan-Allen recalled the pioneering efforts and dedication of the Brazilian asbestos victims who organized GAC 2000; that conference proved to be a pivotal development which, by bringing together hundreds of individuals and groups from dozens of countries, illustrated the latent power of the network. Since then, the growth of the Ban Asbestos movement has created a climate in which the following developments have occurred:

- control of national asbestos agendas has been wrested from industry by new asbestos victims' groups in Canada and India;
- asbestos events, jointly organized with asbestos victims' groups, trade unions and NGOs in Argentina, India, England, Greece, Canada, Slovenia,

the Netherlands, Poland and Switzerland, have succeeded in raising the profile of national asbestos issues;

- political strategies have been developed through discussions with international labor groups such as the IFBWW and the European Trade Union Confederation;
- lobbying of international agencies such as the International Labor Organization, the International Confederation of Free Trade Unions, the World Health Organization, the World Bank and the United Nations has intensified;
- asbestos workshops at the European Social Forum (2004) and the World Social Forum (2003 - 2005) have firmly placed the issue of asbestos at the heart of these landmark meetings.

Ms. Kazan-Allen expressed her determination to continue the fight for a global asbestos ban and justice for all asbestos victims.

Concurrently with the plenary sessions, workshops were held on the third floor of the conference center; simultaneous translation was available at each of these sessions.

Workshop A – *Asian Network: Scope and Action*

The Asian Workers' Occupational Health, Safety and Environmental Institute, set up in 2000, is an agency for international unions in Asia; through collaboration with its members, the Institute plans to produce asbestos training materials and develop strategies to campaign for a regional asbestos ban.

Dr. MK Pandhe, from the Centre for Indian Trade Unions, stressed the important role that trade unions have to play in the campaign for an asbestos ban. "In India," he said "all trade unions have demanded it (an asbestos ban) but no positive steps have been taken by the Government in the direction of ratification of the ILO convention on asbestos." He emphasized that a policy of "just transition" must be adopted to protect workers and communities affected by the ban.

While Kan Hong Chan, from the Association for the Rights of Industrial Accident Victims in Hong Kong, provided data on the compensation of asbestosis cases in Hong Kong, Kuang Wan Ho, from the Taiwan Association for Victims of Occupational Injuries, spoke about the transfer of hazardous asbestos technology from the U.S. to Taiwan in the 1980s. In the 1990s when asbestos regulations were introduced in Taiwan, most of these factories were moved to Mainland China, Vietnam and Thailand. Asbestos is still being misused in Taiwan with predictable consequences.

During the discussion, national marketing initiatives of asbestos companies were compared. Representatives from India, Egypt and the Philippines agreed about the importance of raising public awareness of asbestos hazards and learning from successful strategies adopted in other countries. There was a consensus on the necessity of action to promote a regional asbestos ban and assist Asian asbestos victims to obtain medical treatment and compensation for their injuries.

Workshop B – Asbestos and Construction

The Tokyo Federation of the National Federation of Construction Workers' Union (Zenkensoren-Tokyo-Toren) has more than 143,000 members including many self-employed workers and sub-contractors from 15 Tokyo-based craft unions representing carpenters, plasterers and other construction trades. Whilst assisting asbestos-injured members with medical treatment and compensation, its Union Members' Participatory Campaign for Construction Site Improvement helps members develop practical strategies for improving occupational conditions; a lobbying campaign of major building contractors presents them with real-life construction site examples and urges direct action to minimize hazardous asbestos exposures. The Union's Construction Health Insurance Societies working with the Himawari Clinic and the Tokyo Occupational Safety and Health Center have launched a program to raise awareness of occupational respiratory diseases, including those which are asbestos-related. At regular workshops, new teaching material and video clips of actual job sites have informed construction workers of asbestos hazards and safer working practices. One result of this training was the use of a local exhaust system when cutting a dry wall which led to a drastic reduction in dust concentration.

Tokyo Construction Health Insurance Society (Token-Kokuho) was set up in 1970 by seven construction trade unions. Since 1994, Token-Kokuho has been working to identify members who have contracted occupational asbestos-related diseases in order to assist them with compensation claims and medical treatment.

Since January, 2002, the Tokyo Construction Workers' General Union (Tokyo Doken) has assisted 32 members to claim compensation for occupational accidents including 3 cases of malignant mesothelioma, 6 of lung cancer and 5 of asbestosis; asbestos-related victims constitute 44% (14) of these claims. As the incidence of asbestos-related diseases is increasing, the Union has a proactive outreach program to encourage at-risk workers to have medical check-ups by specialist doctors.

The risk posed by asbestos building materials contained within Japan's infrastructure was the subject of the talk *OSH Activities Based on Participatory Approach at Construction Worksites* by Mr. Naoki Toyama of the Tokyo Occupational Safety and Health Centre. A committee formed by members of a local branch of a construction trade union devised a basic training course applicable to small construction worksites which, amongst other activities, collected examples of best practice as a starting point for future discussions.

Research by a team at Aichi Medical University, led by Eiji Shibata, was the basis for the report: *A Study on Asbestos Exposure, Health Effects and Causes of Death among Construction Workers*. The rapidly changing nature of the Japanese construction industry, in which the majority of workers are either self-employed or employed by small and medium-sized companies, makes the enforcement of health and safety regulations difficult. The objective of this research was to identify asbestos hazards in this industry; construction worker respondents to the survey confirmed:

- exposure to asbestos-containing slates and boards, roofing materials and sprayed asbestos;

- a dramatic increase in the use of these products in Japan in the 1970s and 1980s;
- the common practice of using power tools on these products.

Jerzy Dycze conveyed the results of research conducted on asbestos-cement roof sheets taken from various sources in Poland:

“It was found that surface corrosion depends on air pollution and is faster on asbestos-cement roof plates in industrial centres and smallest on samples of asbestos-cement plates from roofs from some little towns. Observations suggest that asbestos-cement plate breaking causes serious risk of releasing asbestos fibres and that on the new surface of a broken plate is a number of asbestos fibres sticking out, partly damaged and any mechanical effect may produce respirable fibres.”

Architect Susana Muhlman’s presentation: *Tracing the White Enemy: A Brief Guide to Recognizing Installed Asbestos in Buildings* featured a survey of a hypothetical building. Ms. Muhlman identified products which have traditionally contained asbestos; practical hints for recognizing these products were given including likely uses, textures, colors and shapes. A compact handout was distributed to complement the discussion.

Workshop delegates agreed that levels of hazardous asbestos exposures experienced by construction workers remain high. In recent years, initiatives have been started in Japan to help the asbestos-injured and raise awareness amongst workers and employers of the on-going risks from asbestos in buildings. More effort needs to be put into devising effective and practical solutions to these problems.

Workshop C – Trade Union Initiative

A Yokosuka-based trade union council, which deals with local issues on behalf of a coalition of trade unions, first became active on asbestos in the late 1980s when asbestosis victims filed a lawsuit against Sumitomo Heavy Industries Ltd. Shortly thereafter, asbestos issues were raised with Yokosuka City Hall and the Labour Standards Office and a second case was brought by asbestos victims who had worked at the U.S. Naval Base in Yokosuka. The 1987 program for removing asbestos from public buildings in Yokosuka was a dismal failure. The council, which had accepted the municipality’s assurances that the decontamination program would eliminate the hazards, realized the necessity of conducting its own asbestos audits of the town’s public buildings.

The subject of asbestos was first addressed by the National Federation of Construction Workers’ Unions (Zenkensoren), Japan’s largest industrial union, in the mid-1980s. The Unions’ Asbestos Committee, which was established in 1988, has lobbied national agencies and government bodies, conducted health surveys, trained union members and worked with specialists to develop prevention strategies. For many years the Union advocated a national ban and is disappointed that significant exemptions remain. Speaker Masaaki Sato said that asbestos is still being used in

mortar additives and paints; measures to prevent the release of airborne asbestos fibers in building demolition are insufficient.

The All Japan Shipbuilding and Engineering Union (Zenzosen) first became aware of the lethal repercussions of occupational asbestos exposures in 1982. A task force was set up to conduct health checkups, support asbestos victims and their compensations claims, negotiate out-of-court settlements and demand a national ban on asbestos. Whilst the government and employers share responsibility for shipyard workers' asbestos-related injuries, Speaker Kinya Mizuguchi said, the Union has also to accept that it had failed its members by "assuming safety and health issues were the responsibilities of businesses."

Prevention of Further Asbestos Exposure during Water Pipe Work and Survey on Health Effects of Asbestos Exposure Among Active and Retired Employees was the title of the presentation by Hiroshi Watanabe of the Japan Water Supply Workers' Union (Zensuido). From 1957-67, 980 km of asbestos pipes were installed in Tokyo's 23 wards as well as 2,500 km of asbestos pipes in the Tama area. Although much of this material has been removed, some asbestos pipes remain in the Tama area. Two years ago, the Tokyo Water Supply Workers' Union requested that the Water Bureau conduct studies on the safest methods of asbestos pipe removal; when previous working practices were replicated, high dust concentrations which diffused into the air rapidly occurred. The Union is pressing the Bureau to mount a proactive program for identifying at-risk workers.

Satohiro Konya, the representative of the All Japan Garrison Forces Labour Union (Zentyuro), discussed the efforts to assist asbestos-injured trade union members who had worked at the U.S. Yokosuka Naval Base. The union, working with the Kanagawa Occupational Safety and Health Centre, pressed the local authority, which in 1996 was employing the shipyard workers, to offer 13,353 former workers free health checkups; support was also forthcoming from the union for lawsuits brought by the injured workers.

Yasunari Fujimoto of the Japan Teachers' Union discussed the presence of "Felton R-30," an asbestos felt construction material which constitutes a critical health hazard, in 46 public high schools in Kanagawa Prefecture. The composition of this material is 85% chrysotile and 15% sodium silicate which acts as a binder; with time, the sodium silicate deteriorates and asbestos fibers are liberated. The presence of sprayed vermiculite and perlite materials at 78 educational premises in Kanagawa is also problematic; it is unknown whether they contain asbestos.

Attendance at this workshop exceeded capacity and resulted in many delegates listening to the session from the corridor. Despite the serious attention paid by Japanese trade unions and labor groups to the issue of asbestos in recent years, this workshop was the first opportunity for them to exchange information on their asbestos experiences. The ability of BANJAN to unite many organizations was praised and there was a general feeling that closer cooperation of various groups could benefit Japanese citizens.

Workshop D – *Asbestos Litigation in Japan*

Japanese asbestos litigation includes cases brought by:

- 12 workers or surviving family members against the U.S. Naval Base at Yokosuka City; after an initial landmark victory, three cases were overturned at the Supreme Court due to statute of limitation; 33 more lawsuits are pending;
- 8 former employees against Sumitomo Heavy Industries Ltd. in 1988; a settlement was reached in 1997; another lawsuit was filed by 14 plaintiffs in 2003, case pending;
- 121 workers or surviving family members against Mitsubishi Heavy Machinery in December, 1998; the case settled on June 7, 2002; Nagasaki District Court rejected defendant's attempt to stall proceedings;
- a thermal power plant worker who developed malignant mesothelioma; although he was an employee of the defendant electric company, most of the company's asbestos victims were not part of the "official workforce" due to the common practice in Japan of sub-contracting workers;
- a former employee of the Japan Eternit Pipe Branch Company whose son developed mesothelioma after exposure to his father's asbestos-covered work clothes; the case was started in 2001 and on May, 2004 the Tokyo District Court found for the defendants; the decision is being appealed;
- the family of a hotel boiler maintenance man who died from mesothelioma in April 2002; first and second oral proceedings were heard on August 27, and October 15, 2004 respectively; the case continues.

In all these cases, the employers denied responsibility for negligent asbestos exposures which resulted in plaintiffs' injuries. The victims and their legal representatives faced long struggles to obtain compensation; medical opinion was often found to be biased towards the companies. Compared to other countries, such as the U.S., the amount of asbestos litigation in Japan is very small. Many workers do not know that they can obtain compensation for asbestos injuries; concerted effort by unions, victim support groups and others to raise awareness of victims' rights is needed.

Workshop E – *Epidemiology and Public Health*

Investigations carried out by researcher Noor Jehan in the North West Frontier Province of Pakistan highlighted the harmful repercussions of environmental asbestos exposures. Air measurements were taken in an asbestos sheet cutting unit in Dagi Kili and in the neighboring village Sari Kili: "The results indicate that the airborne asbestos fiber concentration was higher in Sari Kili as compared to the cutting unit." There was an extremely high incidence of lung disease amongst women in the village.

Italy's largest asbestos textile factory was located in Grugliasco and was operational from 1900-86. A cohort of 1,653 asbestos textile plant workers who were exposed to chrysotile was followed up. The results of this study by Dr. Carlo Mamo confirmed that:

"heavy exposure to pure chrysotile asbestos alone, with negligible amphibole contamination, causes lung cancer and malignant mesothelioma in exposed

workers. Moreover, the results suggest, in agreement with previous studies a role of the exposure to asbestos in the etiology of other sites of cancer (particularly larynx and stomach) and of non malignant diseases (ischemic heart diseases and cerebrovascular diseases).”

In 1959 an asbestos-cement factory was opened in the town of Szczucin, south-eastern Poland. According to Dr. Neonila Szeszenia-Dabrowska, from the Nofer Institute of Occupational Medicine, Poland, the plant used 305,000 t of chrysotile and 65,000 t of crocidolite between 1959 and 1996, the plant’s emissions totalled 3.2 t of crocidolite and 14.3 t of chrysotile. Locally, asbestos waste was widely used in roads, farmyards, paving, houses, farm buildings and tool sheds. Not surprisingly the incidence of mesothelioma amongst former workers and local residents is high. In the period 1987-2003, there were 55 cases of pleural mesothelioma in Szczucin: 28 cases among factory workers and 27 among local inhabitants. Between 2000-2003, there were 28 cases of pleural mesothelioma; the incidence of mesothelioma in this community is 125 times that of the general population in Poland. The local death rate from lung and gastric cancers is also high, as is that from non-cancerous respiratory diseases. Over the period 1975-1996, the age at death from lung cancer of Szczucin female inhabitants decreased by ten years. Dr. Neonila Szeszenia-Dabrowska said:

“The health condition of the district inhabitants, which reflects the ecological hazard over the territory, requires immediate complex activities for environmental remediation and prevention of health effects.”

Hitoski Kubota of the National Institute of Health, Japan reported that studies into the health effects of asbestos exposure on ironworkers found a significant increase in the incidence of pleural thickening and lung cancer.

The paper presented by Dr. Yukitoshi Sato from the Department of Pathology of the Japanese Foundation for Cancer Research entitled: *Time Trend of Asbestos Concentration in the Lung of Lung Cancer Patients in the Japanese General Population* analyzed the role played by asbestos exposure in the rising incidence of lung cancer in Japan.

Dr. Zulmiar Yanri, Director of Occupational Health Inspection for Indonesia, said, that 33,929 t and 20,219 t of chrysotile were imported in 2003 and 2004 respectively; the majority is for the production of asbestos roofing materials. More than 7,700 workers are employed by asbestos-processing industries; one case of mesothelioma has been identified. Economic reasons should not, Dr. Yanri said, take precedence over human safety and Indonesia is now seeking research partners to establish the reality of asbestos hazards.

In 2000 and 2001, 125,076¹¹ t and 129,890 t of asbestos were imported to Thailand. A study project of 11 asbestos-processing facilities in Thailand undertaken by Wisanti Laohaudomchok and colleagues at the National Institute for the Improvement of Working Conditions and Environment (NICE) in Bangkok revealed that:

¹¹ These figures include 7,584 t amosite and 117,492 t chrysotile in 2000 and 7,571 t amosite and 122,319 t chrysotile in 2001.

- 36.45% of air samples taken exceeded permissible exposure limits of 5 fibers/cc; 96.26% of samples exceeded ACGIH TLV and NIOSH recommended PEL (0.1 fiber/cc);
- significant numbers of Thai workers in asbestos-processing industries were working in hazardous conditions with inadequate protective equipment; the workers most at-risk were engaged in asbestos-mixing in the brake industry;
- closer government monitoring of these industries was necessary.

Positive developments in Thailand include: the banning of amosite, the voluntary adoption by industry of non-asbestos alternatives, increasing government interest and the recommendation by the NICE scientists that all asbestos use should be banned.

In his discussion *Tackling Asbestos in an Iron Foundry*, Dr. Hioshi Udo from Hiroshima Bunkyo Women's University, illustrated the multitude of uses for asbestos in a particular iron foundry. He detailed attempts to gradually replace asbestos and impose health and safety controls which have been ongoing on this site since the mid-1970s:

- to reduce occupational asbestos exposure, a limit of 0.2 f/cc was set in 1978;
- the use of asbestos was stopped for certain blast furnace processes in 1983;
- results of an asbestos audit conducted in 1988 confirmed widespread asbestos contamination throughout the iron works.

The decontamination of the foundry will begin in 2005; it is expected to cost 2 bn yen. While safer products have been found for the majority of asbestos uses, a non-asbestos alternative for the brake linings on the 300 cranes in operation on this site is still being sought.

The paper: *Current Status in the Use of Asbestos and Health Effects in China* by Dr. Li Tao, which had been scheduled for a plenary session slot, was moved to Workshop E due to unforeseen circumstances. In China 70,000 people are engaged in the mining or processing of asbestos at 120 companies. Traditionally, half of asbestos used in China has been for asbestos-cement products and 20% for friction products; the use of asbestos in automotive friction materials has been banned since October 2003.¹² Although asbestos mining takes place in fifteen provinces, 96.4% of the country's asbestos reserves (10 million t of chrysotile and 45,000 t of crocidolite) are located in four provinces: Qinghai, Sichuan, Xinjiang and Shanxi.

Since 2002, a range of laws has been enacted to improve hazardous working conditions at asbestos mines and plants. The Chinese government is actively pursuing research into safer alternatives; in the meantime, new techniques and processes are being explored to protect workers. The State Council, which investigates the environmental impact of commercial operations, has indicated that a ban on the use of asbestos is likely. A group representing commercial asbestos interests in China: the Chinese Non-metallic Material Industrial Association is pressurizing the Government to continue with a policy of "controlled use," alleging that hazardous exposures can be prevented.

¹² In 1999, Automobile Brake System Structure, Function and Methods of Test (GB12676-1999) came into effect which banned the use of asbestos in car brake lining.

Representatives of developing countries agreed that the import, use and disposal of asbestos created extremely hazardous conditions for workers and the environment in their countries; the scrapping of asbestos-contaminated ships in countries which lack health and safety regulations is reprehensible. Governments, trade unions and citizens need to coordinate action and multinational contacts need to be encouraged to raise global awareness of these problems. More research is needed into the relationship between occupational asbestos exposure and lung cancer.

Workshop F – *Victims and Support Organizations*

John Flanagan, from the Merseyside Asbestos Victims' Support Group (MAVSG), discussed the history and work of asbestos victims' groups in the UK. The MAVSG offers a free and confidential service to sufferers which includes assistance with filling out complicated government application forms for state benefits such as Industrial Injuries Benefit. As well as supplying practical advice, the Group gives moral support to sufferers and their families and liaises with specialist nurses. Lobbying efforts include contact with politicians on the Parliamentary Asbestos Sub-Committee.

The focus of the presentation by Michele Olivia Hax Fite, from the White Lung Association, USA, was the psycho-social effects asbestos diseases have on the victims and families: "asbestos victims are continually both emotionally and physically disenfranchised... Survival coping skills require a team approach, the basis of which is a victims' advocacy organization." To illustrate the daily reality sufferers face, Ms. Fite asked half the delegates in the workshop to pinch their noses shut and breath through a straw in their mouths for three minutes; the rest of the delegates were to act as carers. "Victim" John Flanagan found this experiment extremely effective and said the difficulty in getting enough oxygen gave him a much deeper understanding of the breathing difficulties experienced by asbestos victims.

In 2003 a new group called: Ban Asbestos Canada (BAC) was formed to campaign in Canada for a ban on the production, use and export of asbestos. Recognizing the complex political-economic forces which support the national asbestos industry, BAC is lobbying at local, regional and national levels to combat years of pro-asbestos propaganda. With its website and network of supporters, the group is working to make asbestos a core issue. Kyla Sentes, one of the founding members of BAC says:

"We must continue to put a human face on this tragedy. Thus those who speak from personal experience of loss must ensure that their voices are heard. What profit lies behind mourning the needless death of a loved one? Are those who demand a stop to these deadly practices motivated by anything other than compassion? These are powerful stories, and they must be heard."

Raghunath Kasalji Manavar, from the Occupational Health and Safety Association in Gujarat, India, translated the presentation by Sri Mangabhai Patel, a GAC delegate and former boiler worker in an Ahmedabad power plant, who now suffers from asbestosis. In India, the poor are often faced with a choice of working in hazardous conditions or starving; once ill, there is no diagnosis and no compensation. Rarely, as in Mr. Patel's case, a Court will intervene; the Gujarat High Court ordered that Mr.

Patel be given an interim payment of US \$218 in 1997; final judgment has been pending since 1996.

A \$1.3 million propaganda campaign by Brazilian asbestos stakeholders was the focus of the presentation by Fernanda Giannasi entitled: *Brazilian Asbestos Mafia Counterattacks*. Since a landmark judgment was achieved by Brazilian asbestos victims, which could cost Eternit \$160 million, asbestos stakeholders, in collaboration with the Canadian asbestos industry, have mounted a full-blown whitewash campaign. The following statements are typical of those being made by the industry on TV, in newspapers and magazines:

- “The asbestos industry in Brazil generates 200,000 jobs.”
- “The production and utilisation of asbestos in Brazil respects ILO regulations and conventions.”
- “Chrysotile asbestos is the cheapest solution for Brazilian homes.”
- “Brazilian chrysotile is different from chrysotile used in Europe and the US; in Brazil we know how to use chrysotile safely.”

ABREA, the Association of Brazilian Asbestos Victims, denounced this campaign to the authorities, claiming that it was “misleading propaganda.” A fax received from ABREA’s lawyer that morning informed Ms. Giannasi that ABREA’s complaint had been upheld unanimously by the judges adjudicating the case.

During the 1980s, a support system for pneumoconiosis victims in Yokosuka evolved through the collaborative efforts of trade unions, medical groups and retired workers. In 1985, the Yokosuka Pneumoconiosis (Asbestos) Victims’ Group was set up after the city had been identified as an “asbestos hotspot” due to its shipbuilding history.

In 1983, the Mitsubishi-Nagasaki Pneumoconiosis Patients’ Association was founded; the Association, which works closely with the Mitsubishi Nagasaki Shipyard Branch of All Japan Shipbuilding and Engineering Union, is composed of full-time workers, retired workers and subcontracted workers. This group has been instrumental in helping injured workers sue their employer: Mitsubishi. The Association is campaigning for improved dust control measures at worksites and better diagnostic services for the injured.

The successful exploitation of asbestos by global industries has created millions of asbestos victims. The experience of asbestos victims’ groups in countries like the U.S. and the UK, where asbestos epidemics are well underway, can inform the actions and strategies of campaigners working on behalf of victims in India, Thailand and elsewhere. International solidarity will benefit victims.

Workshop G – *Multinational Enterprises and Overseas Transfer*

Dr. Takehiko Murayama, from Waseda University, Japan, contrasted the decreasing use of asbestos in Japan and Korea with the rapid increase in Thailand, India and China. Data he showed illustrated that China imported 140,000 t/year; when the foreign imports were added to asbestos mined in China, it appears that China is consuming more than 500,000 t/year. If we follow the chain of asbestos-cement sales

in Asia, we see that there have been significant exports of asbestos-cement products from:

- China to Hong Kong, Taiwan, Greece and Japan;
- Malaysia to Singapore, Taiwan and South Korea;
- Thailand to Laos, Cambodia and Taiwan.

Although precise information is difficult to obtain, there is no doubt that some Japanese companies have moved their asbestos interests to other Asian countries where labor is cheap and environmental regulations are lax.

Dr. Barry Castleman, author of *Asbestos: Medical and Legal Aspects*, discussed the hazardous export of asbestos technology in his presentation: *Global Phase-Out of Asbestos Products*. In 1970, when U.S. government agencies were set up to protect workers and the environment and regulations to control occupational asbestos exposure were introduced, U.S. corporations transferred their asbestos textile production facilities across the Mexican border and continued to service U.S. markets; asbestos textiles were also imported from businesses in Venezuela, Taiwan and Brazil, many of which were American-owned. The fact that multinational corporations operate double standards has been well-documented. In 1981, research in India showed that British and American-owned asbestos companies were routinely exposing Indian workers to levels of asbestos fibers which would be illegal at home. In 1998 it was revealed that in Brazil, General Motors was manufacturing cars with asbestos gaskets whilst cars produced in Europe and North America were asbestos-free.

Multinationals such as Dow Chemical, ICI and Unilever (Holland) have adopted global policies not to use asbestos anywhere in their worldwide operations; they also have procedures for minimizing exposures to asbestos products within their industrial facilities. If these companies have been able to implement asbestos-free policies competitively, why can't other corporations follow suit, Dr. Castleman asked.

Although the French multinational Saint-Gobain ceased asbestos production at home in 1997 when a unilateral asbestos ban was adopted, it continued to profit from asbestos investments overseas. Dr. Thebaud-Mony, from Ban Asbestos France, compared the company's behaviour in France, the US and Brazil and highlighted the means by which it manipulated governments, minimized asbestos liabilities and disregarded workers' welfare and rights.

The history of an international asbestos-cement cartel was the subject of the presentation by Bob Ruers, a founding Member of the Dutch Asbestos Victims' Committee. In 1929, Ernst Schmidheiny created an exclusive group of asbestos-cement producing companies; it was named: the International Asbestos Cement AG (SAIAC). Its aims were, as Mr. Ruers said, "impressive:"

- "exchange of technical knowledge, experience, propaganda and patents;
- joint purchase of raw production materials;
- joint research;
- setting up export arrangements;
- establishing new companies in 'neutral' countries;

- arranging markets and market prices.”

The outbreak of the second World War did little to dampen the interest of the Swiss Schmidheiny family in the asbestos-cement business and whilst Eternit Belgium was involved in WWII, Schmiedheiny carried on business as usual.

To illustrate SAIAC’s truly global reach:

“In 1962 a number of SAIAC's members established a joint enterprise called TEAM. The new organisation was based in Luxembourg. TEAM's aim was ‘the world wide coordination of new asbestos cement companies’. The participants of TEAM are Eternit-Belgium, Johns-Manville and T&N. Under TEAM's coordination, asbestos cement companies were set up in Vietnam, Bangladesh, Pakistan, Indonesia, Turkey, Greece and Senegal. In a later stage, companies were set up in Nigeria, Burundi, Kenya, Japan, China, Argentina and Mexico.”

The fact that multinationals have had global asbestos strategies indicates that campaigners and victims need to recognize that asbestos is not a local issue, it is a global problem and needs global solutions. A global network is needed to monitor developments and develop effective strategies for countering industry’s initiatives

Workshop H – *Asbestos and Shipyards*

An overview of the health effects of asbestos use in shipyards was the subject of the presentation by Dr. Claudio Bianchi from the Center for the Study of Environmental Cancer – Italian League against Cancer, Italy.

“All people working in shipyards were involved. The intensity of (asbestos) exposure varied widely. In studies performed in the shipyard area of Monfalcone, Italy, pleural plaques were observed among shipyard workers in 80-90% of the cases. Plaques varied in size with 21.2% being small, 33.1% being moderate, and 32.4% large. Asbestos bodies were visible on routine lung sections in 35% of the cases. Isolation of asbestos bodies after chemical digestion of the lung showed burdens higher than 1,000/gram of dried tissue in 78.6% of the cases, and higher than 10,000/gram in 49.1%. Both chrysotile and amphiboles were detected in lungs, lymph nodes, and pleura from shipyard workers.”

Although hazardous asbestos exposures have been stopped in many Western shipyards, elsewhere, the presence of asbestos on-board ships will ensure that the global epidemic of asbestos-related diseases will continue.

According to Jim Fite of the White Lung Association, USA, the shipbuilding capacity of the U.S. reached its zenith in 1944. From 1930-1978, 4.5 million workers were employed in the shipyards; during that time 25 million tons of asbestos were used to insulate and fireproof ships:

“In the tight confines of the ship, both construction workers and sailors were exposed to asbestos. In almost every case the construction and repair workers

were exposed at a heavier rate as they were cutting, pulverizing, breaking, sanding, scraping and otherwise disturbing the product matrix and releasing fibers. The asbestos containing dust measurements from these operations reached levels that were too high to be measured or seen through. Even today, workers are allowed to breathe 100,000 fibers per hour without any personal or engineering protection.”

The toll taken by these exposures has been a swath of disease and death amongst U.S. shipyard workers. Unfortunately, the shipyard infrastructures, state systems of workers’ compensation and medical benefits and pension funds have proved unable to meet the needs of ailing shipyard workers.

Andy White, Leader of West Dunbartonshire Council, Scotland, addressed the legacy of asbestos use in shipbuilding communities across the globe. For one hundred years, Clydebank, Scotland was famous for its shipyards and engineering works, industries in which the widespread use of asbestos was common. Nowadays, Clydebank is, like other UK shipbuilding towns, a center of asbestos-related illness. Mr. White believes that: “About 90% of deaths due to mesothelioma are due to exposure to asbestos in unmonitored settings in the shipbuilding industry.” Calling for international initiatives on an epidemic that crosses national borders, he says:

“Achievement of best practice in all areas of service delivery including all aspects of medical and health care, social care and access to advice and support services requires intervention and funding at the level of national governments, European Union, World Health Organization and trade union bodies including the International Labor Organization. Successful programmes in shipbuilding communities can provide a blueprint for the finest local models becoming the accepted norm on an international scale. We must move forward from this conference and work together to secure resources which address the problems faced by shipbuilding communities.”

Dr. Naohiko Inase, from Yokosuka Kyosai Hospital, spoke about *Pleural Mesothelioma in Shipyard Workers in the Miura Peninsula*. For more than one century, the city of Yokosuka was an important shipbuilding center. A review of Kyosai Hospital’s medical records found that between 1991-2003 there were:

- 38 patients with pleural mesothelioma (31 men and 7 women; from 30 to 86 years old);
- of these, 34 had received occupational asbestos exposure, 2 females, whose husbands were shipyard workers, had suffered para-occupational exposure and 2 had experienced asbestos exposure of an indeterminate nature;
- of the 34 patients with occupational exposure, 27 (79%) worked in shipyards, 4 (12%) in the building industry and 3 (9%) were mechanics;
- the latency period amongst the 27 shipyard workers was 24-70 (mean was 46) years, which was longer than that for builders (mean was 32 years) and mechanics (mean was 34 years).

The prevalence of asbestos-related disease amongst shipyard workers was confirmed by Meiro Haruta, one of the researchers who studied the health of 519 former shipyard workers in Yokosuka over a 14 year period:

“small granular opacities corresponding to category 1-3 were found in 66 men (12.7%), and small irregular opacities corresponding to category 1-3 were found in 496 men (95.6%) including almost all job categories in the shipyard. Pleural changes due to asbestos exposure were found in 320 men (61.7%)... 21 men (4.0%) died from lung cancer, pleural mesothelioma or respiratory failure.”

Collaborative Actions for the Justice of Victims in Yokosuka Area by Michitaka Hayashi, Secretary General of the Pneumoconiosis and Asbestos Victims' Relief Fund, Japan described the actions taken since 1982 by local trade union, medical and NGO campaigners to mobilize support for asbestos victims in Yokosuka. In 1986, the illegal dumping of asbestos waste removed at the U.S. Navy Yokosuka Base from the aircraft carrier Midway “created great public concern and raised awareness of the asbestos issue among Japanese people.” Two years later, 8 shipyard workers with asbestosis sued their former employer, the Sumitomo Heavy Industries Co. Ltd. In 1997, the case was settled and Sumitomo admitted its responsibility. Building on the success of this case, the coalition of groups which had supported the workers' action established the Pneumoconiosis and Asbestos Victims' Relief Fund; an initiative of this group, the Pneumoconiosis and Asbestos Hazard Hotline, has been an effective tool for locating Japanese pneumoconiosis and asbestos victims. Between 1997-2004, the hotline received 500 calls; during its annual 3 day operation in July, 2004, the hotline received 100 calls.

From the presentations, it was clear that shipbuilding communities all over the globe have similar problems due to their shared history of exposures to asbestos. Advice and information is needed to mobilize local people to take action.

Closing Session

GAC delegates came together for the closing session of the Congress. After a brief report on the workshops by Dr. Sumiko Oshima, there was an opportunity for delegates to make comments from the floor. Andrew Ferguson of the Construction Forestry Mining Energy Union (CFMEU) from Australia asked delegates to support the union's condemnation of James Hardie's attempt to avoid its asbestos liabilities by moving the company's assets to the Netherlands. “The action of James Hardie is,” Mr. Ferguson said “another example of misuse of corporate law to deny compensation to asbestos victims;” from the applause his comments earned, it was clear that the CFMEU's position was supported by GAC delegates. Delegates Fernanda Giannasi (Brazil), Noor Jehan (Pakistan), Roch Lanthier (Canada) noted the remarkable contribution the GAC had made to the global asbestos debate and pledged their commitment to carry the message back to their countries.

Dr. Yoshiomi Temmyo presented *The Tokyo Declaration*; amongst its seven points were a call for a global asbestos ban, the need for protection from hazardous asbestos exposures, the right to prompt medical treatment and equitable compensation. The Declaration concluded:

“International cooperation is essential! Active participation of victims, workers, the public, policy makers, academics, lawyers, trade unions, grassroots organizations, relevant agencies and interested groups is needed. Positive experiences of this cooperation should be exchanged through existing and innovative networks.

Continual and global monitoring of developments in all the categories above is vital for sustaining international action toward asbestos-free environment for all the human family. We can, must and WILL make a change working together for the future.”

The Tokyo Declaration was unanimously adopted by the delegates. Fiona Murie read *The Joint Declaration from the International Building Trade Union Federations* which called on the ILO to:¹³

- Adopt a clear health-based position in favour of the elimination of the use of all forms of asbestos and asbestos containing materials.
- Continue to encourage Member States to ratify and implement the provisions of Convention 162 (1986), Safety in the Use of Asbestos, and to implement the provisions of its accompanying Recommendation 172, as a minimum standard not to be fallen below.
- Make an explicit statement clarifying to all member States that Convention 162 does not provide a justification for, or endorsement of, the continued use of asbestos.
- Resolve to promote the elimination of the use of all forms of asbestos and asbestos-containing materials in all Member States.
- Assist Member States by drawing up national action programmes for the management, control and elimination of asbestos from the working and social environment.

The awards presented at the Congress were the:

- Tajiri Award to Fernanda Giannasi;
- Irving Selikoff Award to Dr. TK Joshi;
- Ray Sentes Award 2004 to the GAC Organizing Committee;
- Sebastião Aparecido Alves da Silva (Chorão) Memorial Award to Sugio Furuya.

At 2 p.m. on Sunday, November 21 Dr. Yoshioma Temmyo brought the GAC to a close. Thanking the hundreds of GAC volunteers and the excellent translators, he summed up the feelings of the conference organizers in three simple words: “We did it!” Reminding delegates that much remained to be done, Dr. Temmyo felt optimistic after the success of the GAC; he said: “the idea of an asbestos-free world is no longer a dream but a realistic goal.” With a sense of hope he uttered the final words: “Working together we can make a difference for the future.”

¹³ The Tokyo Declaration and the Joint Declaration of the International Building Trade Union Federations can be viewed at:

http://park3.wakwak.com/~gac2004/en/index_declaration_e.html

Reflections

At conferences about asbestos-related illness, doctors talk to doctors; at conferences about asbestos litigation, lawyers talk to lawyers. At the GAC 2004, conversations took place which transcended subject disciplines and national borders; Japanese asbestos victims spoke to Polish technical experts, American doctors spoke to Asian trade unionists, European lawyers and civil servants spoke to Japanese shipyard workers. While academic and scientific presentations were made, the human dimension of the asbestos tragedy was center-stage at all times. The asbestos victims' panel which was part of *Plenary Session 3: Empowerment of Victims and Their Families* was an enlightening and emotional event. The courage and openness of the speakers was much-appreciated by GAC delegates who rose to their feet to give the panel a standing ovation. The stunning images in Akira Imai's photographic exhibition: *Asbestos or The Silent Time Bomb: Message from the Victims* left little doubt about the heartbreaking impact asbestos has had in Japan. Entries to the visual message competition displayed on the third floor illustrated the interest of young people in Japan's asbestos epidemic.¹⁴ Poster presentations from Northern Ireland, Wales, Croatia, Australia, Poland, Italy, U.S., Vietnam and Pakistan described the efforts of researchers and activists to quantify and assist the injured in their countries.

The GAC international delegates were overwhelmed by the warmth of the reception they received from their Japanese hosts. At social events and during coffee breaks, every opportunity was seized to make personal contact; GAC volunteer translators were in great demand to assist with communication. Hundreds of group photos were taken as reminders of friendships made and experiences shared at the conference. Whilst meticulously planning the "serious side" of the conference, the organizers did not neglect the social side. The welcome party on Friday night provided guests with the chance of joining Japanese musicians in traditional drumming; many eager drummers and even reluctant ones were drawn into this activity which was, and I speak from personal experience, a lot harder than it looked! The performers in their dramatic red and white costumes who danced at the social event on Saturday night brought a high note of culture to a splendid evening. A renowned Japanese past-time was also in evidence towards the end of the evening when members of the GAC Organizing Committee and international supporters took to the stage for a karaoke performance of John Lennon's Imagine. To the sound of a lone guitar the words: "A brotherhood of man... sharing all the world... You may say I'm a dreamer, but I'm not the only one. I hope someday you'll join us and the world will be as one," had a true resonance.

The use of visual images at the GAC enriched the proceedings by reinforcing the Congress theme: Together for the Future. Haruko Watanabe, the member of the GAC 2004 Organizing Committee in charge of Design Management, and her team made a significant contribution to the success of the Congress with striking designs for the GAC poster, program, tote bags, name plates and signs. The GAC poster by Midori Fukuda portrays two hands releasing a burst of energy which represents, so Ms.

¹⁴ The visual message web gallery and the GAC 2004 web album are at:
http://park3.wakwak.com/~gac2004/en/index_visual_e.html
http://park3.wakwak.com/~gac2004/en/index_album_e.html

Watanabe explained, the determination to work together and the momentum needed to address the global asbestos problem.

Conclusion

This event was not only a meeting of East and West, it was a meeting of Asian colleagues who had been brought together for the very first time by the GAC; there is no doubt that the conversations which flourished during these three days will form the basis of regional and global initiatives. An accurate assessment of the ramifications of GAC 2004 will only be possible in years to come. In the meantime, all we can know for certain is that the informed and diverse presentations made in Tokyo underscored the universality of asbestos problems; the enthusiasm and human interest amongst delegates combined with a solidarity of purpose and commitment to a common cause are positive signs that the global campaign to ban asbestos and achieve justice for all asbestos victims has found a foothold in Asia.

It was appropriate that the first multinational asbestos conference on Asian issues took place in Tokyo. Japan, formerly one of the world's biggest asbestos users, is paying a heavy price for its past. In recognition of the devastation caused at home, the Japanese Government implemented a virtual asbestos ban in October, 2004, becoming the first government in Asia to take such decisive action. This decision, however, did not occur in a vacuum but was the product of years of lobbying by asbestos victims, parents of asbestos-exposed schoolchildren, medical specialists, environmental and public health campaigners who had, over recent years, worked more closely to develop effective ban asbestos strategies. The strength of this network resides in its grass-root support; formerly isolated, asbestos sufferers and their families have come together in small groups throughout the country to support each other and mobilize their communities. Rinzo Uno, Norio Kato, Fumitoshi Saito, Kaeko Omori, Mie Saito, Kazuko Furukawa told GAC delegates of their own personal asbestos tragedies and urged that a global asbestos ban be adopted to protect others from these terrible diseases. GAC participants from Asian countries where there is no effective regulation of hazardous asbestos exposures, no epidemiological data on asbestos diseases and no social security or compensation for occupational illnesses discussed their concerns. From the Bangladeshi and Pakistani ship-breaking beaches, to the Korean asbestos textile factories to the Chinese, Vietnamese and Thai asbestos-cement roofing industries, the Asian asbestos hazard is growing exponentially; after three days of presentations at the GAC, there is no doubt what the repercussions will be. A delegate from the Philippines characterized his experience at the GAC as "opening a window." Let us hope that the light from this window will illuminate our work and make the dream of an asbestos-free world come to pass.