

## Asbestos in Ship-Breaking Business in Bangladesh

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### **Abstract**

*Bangladesh is one of the countries in Asia that has been actively involved in commercial ship-breaking for more than two decades. The ship graveyard at Shitakunda, Chittagong is the only 'iron mine' in Bangladesh.*

*Bangladesh purchases on average 180-250 old ships each year for scrapping. At present, the number of active ship-breaking yards is 30 with around 30,000 workers directly and another 50,000 workers indirectly employed in the trade.*

*The work in the ship-breaking yards is mostly labour intensive and 100% contract based. No formal worker-management relationship or job security and social safety-net schemes exist for the workers. 98% of the labour in scrapping yards are illiterate, with no former training and 100% are unorganised. Occupational accidents, injury and deaths are very frequent and normal events there.*

*There are no available data or reports on workers health in ship-breaking industries in the region, more specifically in Bangladesh. This indicates that there is not nor ever has been any systematic monitoring of the health of workers in ship-breaking yards in our region.*

*Asbestos removed from a ship is still not necessarily regulated as hazardous waste in Bangladesh and elsewhere. In fact, in Bangladesh and some other countries asbestos is recovered by manual crushing and then reprocessed for re-use.*

*The potential health impacts associated with the use of asbestos are of such a severe nature that compulsory minimum precautions are necessary. This includes workers education/capacity building training, awareness in the ship-breaking yards of the negative effects of asbestos, protection of workers when extracting asbestos from vessels, banning the re-use of asbestos, securing safe disposal of asbestos and measures preventing asbestos from re-entering the market from scrapyards.*

*In this regard, building a strong action-oriented national and international campaign network or coalition in Asia is essential*

Bangladesh is one of the countries in Asia that has been actively involved in commercial ship-breaking for more than two decades. The ship graveyard at Shitakunda, Chittagong is the only 'iron mine' in Bangladesh.

The ship-breaking industry is based in the offshore area at Shitakunda Upozilla in the Chittagong district. The industry is highly centralized in one particular area of the country, but in reality its direct and indirect business connections are nationwide.

The ship-breaking work first took place in the Chittagong area in 1960 when a strong cyclone wind pushed a big merchant vessel to the offshore area and there was no option other than pushing it back out to sea than breaking it into pieces.

As a result of military operations and bombing during the Bangladesh liberation war in 1971, numbers of sea-going ships sank in the Karnaphully-Shitakunda channel in the Bay of Bengal. After independence the Chittagong port authority cleared the channel by scrapping those sunken ships.

At the beginning of the 1980s the industry started to expand with full commercial force, due to many factors. In the 1970s ship-breaking was a highly mechanized industrial operation carried out in shipyard berths, mainly in Great Britain, Scandinavian countries, Taiwan, South Korea, Mexico and Brazil. Since the early 1980s, the ship-breaking industry shifted to China and South Asian countries such as India and Bangladesh.

Key reasons for establishment of the ship-breaking industry in the Shitakunda area are as follows:

- natural beaching facility;
- advantage of strong high tide;
- little financial investment in human resource and machinery required for operating the business;
- high demand for low cost raw materials for re-rolling mills;
- cheap labour;
- low enforcement of legislation related to the business;
- isolated from public view;
- weak monitoring infrastructure of government agencies etc.

Most of the ships are sold from Singapore market for breaking. In some cases, the old ships are directly purchased from their owners; the present market price for an old ship is USD 110- USD 150 per ton.

Bangladesh purchases on average 180-250 old ships each year for scrapping. At present, the number of active ship-breaking yards is 30 with around 30,000 workers directly and another 50,000 workers indirectly employed in the trade.

There is no particular law in the country especially applicable to the ship-breaking industry. Various different rules and regulations are followed for operating the ship scrapping business. Most of the companies involved in ship-breaking are registered under the Company law of Bangladesh. The relevant laws controlling the industry are backdated, weak and in some cases not directly applicable to certain aspects of the ship-breaking industry. The capacity of the concerned local enforcement agencies is extremely poor due to many reasons, i.e. local political pressure, interference from the top of the administration, strong influence of the owners etc.

The ILO standards relevant to safety and health in ship-breaking work are:

- Convention No. 13 White lead
- Convention No. 115 Radiation Protection
- Convention No. 119 Guarding of Machinery
- Convention No. 127 Maximum Weight
- Convention No. 136 Benzene
- Convention No. 139 Occupational Cancer
- Convention No. 148 Working Environment (Air pollution, noise and vibration)
- Convention No. 155 Occupational Safety and Health
- Convention No. 161 Occupational Health and Services
- Convention No. 162 Asbestos**
- Convention No. 170 Chemicals
- Convention No. 174 Prevention of major industrial accident.

So far, none of above ILO conventions were ratified by the Bangladesh government and in reality, the ship-breaking yards at Shitakunda operate by self-made rules of yard/company owners.

Study found that the ship-breaking industry annually generates around Tk. 5,000 million in the form of revenue for the Bangladesh government and the revenue is gradually increasing over the years.

The work in the ship-breaking yards is mostly labour intensive and 100% contract based. The workers in the yards work in different groups with complex work conditions. The yards generally operate under different systems such as being operated directly by the company or operating through labour contractors.

No formal worker–management relationship or job security and social safety-net schemes exist for the workers. 98% of the labour in scrapping yards are illiterate, with no former training and 100% are unorganised. Occupational accidents, injury and deaths are very frequent and normal events there.

Occupational accidents, injury and death are common scenes in the yards. Due to geographical isolation from main cities, very few reports or news of accidents reaches the press or the public eye.

There are no available data or reports on workers health in ship-breaking industries in the region, more specifically in Bangladesh.

This indicates that there is not nor ever has been any systematic monitoring of the health of workers in ship-breaking yards in our region.

Workers receive potential negative health impacts from adopted traditional working procedures in the scrapping yards such as:

- torch cutting without protection (eye and skin injuries);
- heavy lifting (wear and tear, back injuries);
- noise (hearing defects);

and from exposure to hazardous substances such as:

- **asbestos;**
- chemicals (PCS, PCV, PAH, organo-tin compounds, oils);
- heavy metals;
- fumes (dust, fume/gas components; dioxins, isocyanates, sulphur etc.).

Asbestos-containing materials (ACMs) may be found in the thermal system insulation and in surfacing materials. When ACMs deteriorate or are disturbed, asbestos breaks up into very fine fibers that can be suspended in the air for long periods and possibly inhaled by workers and operators at the facility or people living near the scrapping yards. The most dangerous asbestos fibers are too small to be visible. Once they are inhaled, the fibers can remain and accumulate in the lung. Breathing high levels of asbestos fibers can lead to an increased risk of lung cancer, mesothelioma (a cancer of the chest and abdominal linings), and asbestosis (irreversible lung scarring that can be fatal). The risk of lung cancer and mesothelioma increases with level of exposure. Symptoms of these diseases do not show up until many years after exposure. Most people with asbestos-related diseases have been exposed to elevated concentrations in connection with their work.

Asbestos removed from a ship is still not necessarily regulated as hazardous waste in Bangladesh and elsewhere. In fact, in Bangladesh and some other countries asbestos is recovered by manual crushing and then reprocessed for re-use.

In Bangladesh the old asbestos sheets are openly sold in the local market. The workers, sellers and buyers are not aware of the dangers of its use. Urgent action is required to change the situation regarding trading of recovered asbestos by the ship-breaking industry.

The potential health impacts associated with the use of asbestos are of such a severe nature that compulsory minimum precautions are necessary. This includes workers education/capacity building training, awareness in the ship-breaking yards of the negative effects of asbestos, protection of workers when extracting asbestos from vessels, banning the re-use of asbestos, securing safe disposal of asbestos and measures preventing asbestos from re-entering the market from scrapyards.

In this regard, building a strong action-oriented national and international campaign network or coalition in Asia is essential.