

GREENPEACE

Shipbreaking: A Global Environmental, Health and Labour Challenge

A Greenpeace Report for IMO MEPC 44th Session -

March 2000



SHIPBREAKING: A GLOBAL ENVIRONMENTAL, HEALTH AND LABOUR CHALLENGE

Greenpeace is an international non-governmental organisation dedicated to preserving the natural resources of the globe for future generations. Greenpeace is committed to the fight to achieve a sustainable, toxics free future.

Basel Action Network is an international network of activists dedicated to ending the globalisation of the toxic crisis by ending trade in toxic wastes, toxic products and toxic technologies.

As such we have over a decade of experience in fighting the export of toxic and hazardous wastes from the rich on earth to the poor, from OECD countries to the rest of the world. Once the ban on hazardous waste trade from OECD to non-OECD was established under the Basel Convention, the world became aware of a gaping loophole: the scrapping of old vessels in Asia. This is one of the issues of interest to us in our efforts to address environmental pollution.

A scrapped ship contains a wide range of toxic substances. Most of them are already defined as hazardous waste under the Basel Convention. In Europe, Australia, Canada and U.S., such waste is subject to special monitoring and their disposal is highly regulated and expensive.

SHIPBREAKING - TOXIC TRADE IN DISGUISE

Of the approximate 45,000 ocean-going ships in the world, about 700 are taken out of service every year. At the end of their sailing life ships are sold so that the valuable steel - about 95% of a ships' mass - can be recovered. In the early 1970s shipbreaking was a highly mechanised industrial operation carried out in the shipyards of Great Britain, Taiwan, Mexico, Spain and Brazil. But as the cost of upholding environmental and health and safety standards in developed countries has risen, shipbreaking has increasingly shifted to poorer Asian states. To maximise profits, ship owners send their vessels to the scrapyards of India, China, Pakistan, Bangladesh, the Philippines, and Vietnam where health and safety standards are minimal and workers are desperate for work. It is estimated that over 100,000 workers are employed at shipbreaking yards worldwide. In 1993, half of all ocean going ship were being scrapped in China. By the end of the 90s this had changed, most (70%) were being scrapped in India.

All old ships contain hazardous substances such as asbestos, lead paint, heavy metals and PCBs. When ships are manually dismantled it is unavoidable for workers to come into contact with toxic substances. Most ships being dismantled today were built in the 1970s, prior to the banning of many hazardous substances. Large amounts of asbestos were used such as paints containing cadmium, lead oxide and zinc chromate anti-corrosives, as well as anti-fouling paints containing mercury and arsenic.

Depending on their size and function, scrapped ships have an unladen weight of between 5,000 and 40,000 tonnes (an average of 13,000 t), 95% of which is steel, coated with between 10 and 100 tonnes of paint containing lead, cadmium, organotins, arsenic, zinc and

chromium. Ships also contain a wide range of other hazardous wastes: sealants containing PCBs; up to 7.5 tonnes of various types of asbestos; several thousand litres of oil (engine fuel, bilge oil, hydraulic and lubrication oils and greases). Tankers additionally hold up to 1,000 cubic metres of residual oil. In Europe, these materials are subject to special monitoring and highly regulated disposal. Most of these materials are already defined as hazardous waste under the Basel Convention. In Asia, old ships containing these materials are being cut up by hand, on open beaches under inhumane working conditions.

Greenpeace and a partner coalition of NGOs, including the Basel Action Network (BAN) have been bearing witness and documenting shipbreaking activity in Asia since 1997. The data collected clearly shows that shipbreaking has been one of the most hazardous forms of toxic trade that continues in violation of international and national laws. We have produced several publications, videos, and papers including reports on our various protest actions around the globe that are available to you on our respective websites.

Greenpeace and BAN have carried out a number of fact-finding missions to shipbreaking yards in India, China and Philippines. Our findings indicate a common trend of hazardous waste dumping and poor worker safety. The shipping industry operates in the 21st century however scraps its vessels at a technological level of the 1800's. This cannot continue and must change. As the industry, national governments and UN bodies of IMO, ILO and UNEP address this issue this change will come about.

India – Alang:

In 1998, Greenpeace sent investigators to the world's largest scrapping site for ocean going ships in Alang, India. Here they witnessed appalling worker conditions and mass environmental pollution: workers were routinely having to remove carcinogenic asbestos with their bare hands; toxic materials was being dumped in the sea or on nearby agricultural land; workers were seen torch-cutting ship steel into small pieces and inhaling the toxic fumes of lead paints. Greenpeace laboratory analysis of seawater, sediment and soil samples from around Alang showed that the region is becoming increasingly contaminated. Residual oil inevitably pollutes the sea. Materials and objects containing asbestos are widely distributed around the country both as waste and for reuse.

China – Jiangyin and Panyu:

Greenpeace investigated a shipbreaking yard in Jiangyin, near Shanghai in 1999 and observed dangerous and irresponsible handling procedures for ship parts which included insulation material of asbestos like fibre structures. While the workers extracting the insulation materials were observed wearing protective clothing, their working zones were not separated or marked off against those of other workers – proving that the asbestos problem is not really taken seriously. Asbestos like material was also seen strewn around the yard. In the torch cutting area, workers were without proper breathing apparatus and were obviously being exposed to toxic vapours and falling ash containing heavy metals. Greenpeace tested ash samples from the cutting area and found they contained high levels of arsenic, lead, cadmium and chromium. These are pollutants which can disperse and accumulate in the ship yard as well as in the nearby rice fields and possibly even reach residential areas and the Yangtze River. Small uncontrolled smouldering fires were also observed in the scrapping yard. In the shipbreaking yards located at Panyu City the Greenpeace team witnessed a lack of workers safety equipment (particularly for handling asbestos and torch cutting). There were no proper hazardous waste storage areas and open burning was taking place as well as direct contamination of soil and water. Both yards are located in communities with high-density

populations; at least 50,000 residents live within a 1 kilometre radius of each other. The nearby residents are being exposed to asbestos that has been disposed of without proper treatment.

Philippines-Cebu:

The shipbreaking yard in Cebu in central Philippines caters mostly to Japanese owned and operated ships. Subsidised by the Japanese government, the Cebu shipbreaking operation has been linked to PCB and TBT contamination in the marine environment close to the scrapping yard. Workers in the facility also report handling stripped insulation materials, which could contain asbestos without any, means of protection whatsoever. Open fires and burning of waste oils and scrap materials, including plastic coated cables, are also standard and usual practice inside the yard. The shipbreaking facility also illegally operates a crude incinerator without the benefit of any pollution control. Ashes from these burning operations are reportedly scattered throughout the area.

Bangladesh:

Greenpeace also investigated the ship-breaking yard near Chittagong in Southern Bangladesh. This area is fast emerging as a "paradise" for ship breakers. The country, which is heavily dependent on ship breaking for its domestic requirement of steel, does not enforce any restrictions on the ship breaking industry for environmental and workers' safety. There is no monitoring body equipped to enforce basic environmental safety norms or to ensure protection for about 25,000 workers directly involved in shipbreaking. The yard mainly caters for large single deck oil tankers, which are generally avoided by Indian ship breakers because of the restrictions imposed by Indian authorities.

Greenpeace observed that there was no concept of protective clothing for workers who were involved in extracting insulation materials and paints from ship parts. Though it is difficult to obtain accurate data, the number of accidents and casualties at the Chittagong yard is believed to be the highest in the region. A coastal belt approximately 20 kilometres long, where ships are being dismantled, is highly polluted by numerous oil spills. Most fisher folks of the region have changed their profession and have either migrated or found an alternative occupation in and around the yard.

Greenpeace and BAN are not opposed to the scrapping of vessels. However, we would like to ensure that the export of ships-for-scrap is not used as an excuse to dump hazardous wastes, such as asbestos, PCBs and heavy metals, on shipbreaking nations. We would like to ensure that the ships sent to Asia for scrapping are not contaminated.

TOXIC PATHWAYS

Greenpeace has observed that the migration of shipbreaking follows the same global tracks as the movement of hazardous wastes around the globe - it follows the pathway of least resistance. The poorer a country is, the more waste it will get. Ships from the 1970s containing maximum levels of hazardous substances are now being cut up in the inter-tidal zones of Asian beaches without any safety or environmental precautions. All ship-owners from rich OECD countries have a hand in this business, and exporting ocean-going ships that have ended their useful lives, to Asia. In doing so, they are breaking the Basel Convention ban on exporting "contaminated metal scrap". This ban has been legally binding in EU countries since 1998. As the shipbreaking practices often violate national law in the importing states, they are illegal on several counts. Shipowners, authorities, brokers and the

governments of importing states are ignoring the rules of environmental practice which are to reduce, reuse, recycle and dispose of harmful and hazardous materials in an environmentally responsible and safe manner. The long-term objective is to avoid the use of toxic materials in the building of ships from the beginning. For existing ships, shipowners have the responsibility to decontaminate them and properly dispose of the hazardous materials before they are sold for scrapping.

Though we have expressed our concerns and stated our position in various international fora during the past three years, there has been a need for a constant dialogue among all concerned parties to find out cleaner ways to deal with the retiring ships.

Through public campaigns we have targeted the shipowners and operators such as P&O Nedlloyd, Hamburg Sud, Hapag Loyd, Costamare, Andrew Weir Shipping and others that have targeted Asia to scrap their vessels. We have carried fact-finding missions in shipbreaking yards in India, China and Philippines to register the levels of contamination, impact on the environment and health of workers. We have taken direct action to prevent toxic dumping. In December 1999 the Greenpeace flagship Rainbow Warrior sailed into the Gulf of Cambay to draw world attention to environmentally hazardous shipbreaking practices and the abysmal working condition in both the Alang-Sosya and Mumbai shipbreaking yards. (See Appendix 1).

THE VICTIMS

Our fact-finding missions to shipbreaking yards in India, China and Philippines and exploratory visit to Bangladesh indicate a common trend of hazardous waste dumping and poor working condition for workers.

In India for example, we documented the tens of thousands of young men who endure hard physical labour in permanent danger for a mere 1 or 2 dollars a day. These men are largely migrant workers, not registered by name, they are difficult to identify. They work in shifts, in highly cramped conditions and mostly without adequate safety equipment. An extremely high casualty rate is annually reported from Alang alone, the world's biggest ship graveyard. The causes of death are explosions, fire, suffocation and injuries from falling steel beams and plates. We have seen people picking asbestos-containing insulation materials from ships with their bare hands. We have seen dozens of workers torch-cutting ship steel into small pieces, inhaling the toxic fumes of lead paints with no protection at all. We have seen women carrying asbestos waste on their heads to dump directly into the sea. Throughout the shipyards we visited the workers were given no information regarding the hazardous materials they are handling or the safety measures working in such an environment requires. Unprotected handling of the identified toxic substances has long been known to cause a wide range of complaints. For example:

- **Asbestos** dust causes formation of scar-like tissue resulting in permanent breathing difficulties (asbestosis). In the longer term, cancer of the lungs and of the thin membrane surrounding these organs (mesothelioma) may result.
- **Lead** accumulates in the blood and bones after inhalation or ingestion. It can cause anaemia and is toxic to the nervous system and to the kidneys.

- **Arsenic** exposure can result in lung, skin, intestinal, kidney, liver and bladder cancers. It can also cause damage to blood vessels. Inflammation of nervous tissue caused by arsenic can result in loss of feeling or paralysis. Disfiguring growths may also appear on the skin of exposed humans.
- **Chromium** contained in some chrome-based chemicals (chromates) can cause eczema and respiratory disease in people exposed to dusts and fumes, including cancer of the lung.
- **Organotins** (TBT, TBTO and TBTCL) are nerve toxins that accumulate in the blood, liver, kidneys and brain. TBTO is acutely poisonous, and is also genotoxic. In shellfish, organotins affect the endocrine (hormone-producing) system causing damage to reproduction.
- **PAHs** (polycyclic-aromatic hydrocarbon compounds) can cause various cancers including cancer of the lung and of the scrotum. Some PAHs can combine with genetic material (DNA) causing cell damage and mutations. Exposure can also suppress the immune system.
- **Dioxins** are potent carcinogens and suppressers of the immune system and are accumulated in body fat tissue. In addition they are suspected of prenatal and postnatal effects on the nervous system of children. In animal studies they have been shown to reduce sperm production.

In the light of the scientific data available, there should be no doubt that ships from the 1970s contain maximum levels of hazardous substances. These ships are now being cut up in the inter-tidal zones of Asian beaches without any safety or environmental precautions. All ship-owners and operators have a hand in this fatal business. Some admit that conditions in India are “unacceptable“ and are now looking to China for the scrapping of ships.

However, the conditions are similar in shipbreaking yards throughout Asia. People work without protection handling the same toxic and hazardous substances. The main difference seems to be that in China and the Philippines more cranes and machinery are being used than in India or Bangladesh. Nevertheless, in China and the Philippines we have found asbestos being stored in the open, dumping on site and open burning of hazardous wastes, just as we found in Alang. We believe the situation in the Chittagong yard, Bangladesh and the Karachi yard in Pakistan are no different.

LEGAL FRAMEWORK

Ships destined for shipbreaking operations are classed as “hazardous wastes” under the Basel Convention. Ships destined for shipbreaking are subject to the Convention and in most cases are prohibited (unless they do not possess hazardous constituents, which is rare). The Basel Ban prohibits export of hazardous waste from Annex VII countries (OECD countries and Liechtenstein) to non-Annex VII countries. The convention also prohibits the export of hazardous waste to Parties that have prohibited the import of hazardous wastes. The Convention also prohibits hazardous waste exports from a Party “if it has reason to believe that the wastes in question will not be managed in an environmentally sound manner ..”. Each Party is required to prohibit the import of hazardous wastes “if it has reason to believe that the wastes in question will not be managed in an environmentally sound manner”.

All known shipbreaking operations in non-OECD countries do not constitute environmentally sound management as required by the Convention. Ships destined for shipbreaking contain significant quantities of asbestos, PCBs, hydraulic fluids, paints containing lead and/or other heavy metals, tributyltin or TBT antifouling coatings, contaminated holding tanks, and other substances rendering them hazardous waste and extremely dangerous to human health and the environment when scrapped in the existing shipbreaking yards. Most of the shipbreaking is taking place in Asia, where the conditions are documented to be exceptionally dangerous and damaging to the health of the workers, surrounding community, and the environment.

Consequently, transboundary movements of ships destined for shipbreaking are prohibited under the Convention as not constituting environmentally sound management, in addition to the other prohibition provisions such as national import bans. India, China, Bangladesh and Philippines have national import bans for hazardous waste.

In December 1999 the Belgium government arrested the UK bulk carrier "MV Forthbank" bound for scrapping in Asia. The Belgium Government ruled that a European ship bound for scrapping in Asia is a hazardous waste export and subject to the EU hazardous waste exports ban in place since 1998. The vessel was only released after the owners pledged the vessel was not bound for scrapping. For further information please refer to the Greenpeace MV Forthbank Report.

The import of ships containing hazardous substances is also a clear violation under Indian law. It may be noted here that following a Greenpeace action at high sea near Alang in December 1999, the Supreme Court of India intervened and ordered an investigation into the possible violation of its 1997 order that banned import of hazardous wastes. In May of 1997, the Supreme Court of India had ruled that the import of hazardous wastes as defined by the Basel Convention into India was prohibited.

Further, the Central Pollution Control Board in its "Environmental Guidelines for Shipbreaking Industries" has declared that "old vessels containing or contaminated with any of the above substances [lead, cadmium, PCB, asbestos] are accordingly [as per the Basel Convention] classified as hazardous. The customs authority and/or the concerned State Maritime Board should ensure this and issue a certificate to this effect that the vessel is free from the prohibited materials."

Clearly, there are a number of legal loopholes that can be used to evade the national and international laws in place. Some governments, industry associations and representatives of the civil society see the need for taking action and support change.

POSSIBLE SOLUTIONS

The debate on how best to solve the problem of shipbreaking is merely beginning and already it is clear to the international community that we cannot keep "business as usual". We need a solution driven approach. Therefore, even while addressing the inventory waste (old ships), we should be working on Eco-friendly designs for new ships. The main question now is not if, but how, and how fast we begin to clean up.

We believe regulations can be drawn up by the IMO (International Maritime Organisation), ILO (International Labour Organisation), and the United Nations Environment Programme

(UNEP) – Basel Convention, all under, the United Nations’ umbrella and supported by classification bodies and technical universities.

National governments must enforce their laws to protect their people and the environment against the effects of toxic wastes, as well as their workforce against occupational hazards from accidents, disease and toxic substances.

The main players – shipowners/operators and ship exporting countries – must take immediate action to protect people’s health and environment. Shipbreakers have the responsibility to carry out their business without jeopardising the state of the environment or the health of workers.

The Greenpeace and BAN demands to shipowners, operators and shipbreakers are as follows:

- **present a complete inventory of all the hazardous materials and constituents on board of the vessel, making a register of the pollutants and analysis of the risks of from the ships;**
- **remove hazardous materials from the ship prior to sending it for scrapping;**

Upon the fulfilment of these demands, shipowners, operators and shipbreakers should:

- **disclose the selected shipbreaking facility and the assessment done to ascertain the good working conditions and environmental record on site;**
- **ensure extensive consultations on the shipbreaking plan with the breakers; and carry out expert monitoring;**
- **ensure public access to the facility scrapping the vessel and contact with the monitoring team following the scrapping process;**

Greenpeace and BAN are not against the shipping industry or shipbreaking industry.

We understand the sourcing of recycled steel from shipbreaking in those countries where it is currently occurring, and the associated economies it encourages. However, shipbreaking can be carried out safely both from environmental as well as human aspects. But the industry has a responsibility to act as citizens of this planet.

We want to bear witness to the process of change that this industry will undergo. We want to help you move forward and ensure to the public that the shipping industry and particularly shipbuilding and shipbreaking can be part of the solution and not add to the environmental problems we are already suffering from.

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ANNEX 1

Greenpeace Activities Since 1999 Targeting the Shipping Industry, Governments and Shipbreakers to Expose and Seek Commitment for Improvement to the Ship Scrapping Practices

BHAVNAGAR, INDIA 19 February 2000: INDIAN SHIPBREAKERS COMMIT TO ENVIRONMENTAL, HEALTH AND WORKERS SAFETY – The outcome of a workshop on “Challenge to Ship Recycling Industry: Environment and Safety” was celebrated by industry, environmentalists and government. The Shipbreakers Association of India agreed to engage a drastic transformation of their yards to incorporate good working practices and proper environmental management. The Shipbreakers also supported the platform of decontamination of ships prior to dismantling. Maritime Authorities agreed to a Greenpeace/Ban (and other NGOs) team to run a fact-finding mission in the Indian yards.

BELGIUM, 21 December 1999: BELGIUM GOVERNMENT ARREST UK “TOXIC” SHIP BOUND TO INDIA FOR SCRAPPING - The Belgium Government has arrested the bulk carrier MV FORTHBANK currently docked in Antwerp after receiving an unclear response from its UK owners on their intention to scrap the vessel in Alang, the largest shipbreaking yard in India. The Belgium Government understand that an European ship bound for scrapping in Asia is a hazardous waste export and subject to the EU hazardous waste export ban in place since 1998.

NEW DELHI, 10 December 1999 GREENPEACE PREVENTS TOXIC DUMPING IN INDIA - Having chained themselves to an anchor line overnight, Greenpeace activists successfully delayed the beaching of cargo vessel 'Clare' destined for breaking at Alang - the world's largest shipbreaking yard in India. The export of hazardous ships-for-scrap to Asian shipbreaking yards, such as the highly polluted and unsafe facility in Alang, is effectively toxic waste dumping.

NEW DELHI, 8 December 1999: WEST CONTINUES TO SEND "TOXIC" SHIPS TO INDIA - Greenpeace today highlighted the continuing dangerous practice of sending Western-owned or operated "toxic" ships to developing countries such as India for dismantling. Workers in developing countries are being exposed to asbestos and other poisons from ships broken up in unsound labour and environmental condition yards in India, Bangladesh, China, Philippines and Pakistan. This morning, at Alang in western India - the world's largest shipbreaking yard - activists from the Greenpeace flagship the Rainbow Warrior painted warning signs on the hull of the Global Sao Paulo, a Greek operated vessel waiting to be dismantled. Another six vessels were in the area ready to be scrapped. Greenpeace displayed a banner in an inflatable boat in front of the yard to highlight the danger to workers caused by scrapping of toxic ships.

ROTTERDAM, 9 November 1999: GREENPEACE PROTESTS THE DUMPING OF TOXIC SHIPS TO ASIA – Greenpeace activists today protested plans to scrap the ocean carrier Tokio Express in China and demanded that its owner, Costamare Shipping and its operator Hapag-Lloyd ensure that hazardous materials are removed from the ship prior the scrapping. Activists painted warning messages in Chinese and Hindi on the hull of the ship while it docked at the port of Rotterdam.

MUMBAI, INDIA 21 September 1999: TRADE UNIONS AND ENVIRONMENTALISTS JOIN HANDS TO CHALLENGE DIRTY SHIPBREAKING IN ASIA - The International Transport Workers Federation (ITF) has today joined hands with Greenpeace, Basel Action Network and Indian trade unions to highlight the occupational health and environmental hazards caused by ships contaminated with toxins exported to Asia for salvage and disposal – an operation known as shipbreaking.

BIELEFELD/HAMBURG, 10 May 1999: GREENPEACE PROTEST GERMAN FOOD CO'S EXPORT OF ASBESTOS TO INDIA - The German food company, Dr.Oetker, plans to scrap two asbestos-contaminated ships in Asia, disregarding the fact that this endangers workers there. Greenpeace exposed the plan today in a direct action at the Dr.Oetker office on the Jahnplatz in Bielefeld. This morning, Greenpeace activists placed a 20 x 12 ft 'blow-up' photo under the company logo depicting Indian workers breaking up ships with the caption reading, 'Dr.Oetker exporting cancer'. Below the company was accused of producing 'pudding powder for Germans - asbestos dust for Indians'.

HONG KONG, 12 April 1999: P&O NEDLLOYD: STOP TOXIC TRADE - Greenpeace activists today symbolically returned highly carcinogenic asbestos, contained in a sealed drum to its rightful owner, shipping company P&O Nedlloyd, in Hong Kong and urged the company to stop dumping toxic waste ships in China. The action coincides with negotiations of a technical working group on the Basel Convention in Geneva, Switzerland, seeking to address issues of waste dumping from rich industrialised countries into less industrialised countries.

NEW DELHI 18 February 1999 SHIPBREAKING IS DANGEROUSLY POLLUTING - GREENPEACE REPORT FINDS - Greenpeace today released the first ever technical and environmental data on the toxic contamination caused by shipbreaking in India through its investigative report "Ships for Scrap: Steel and Toxic Wastes for Asia." The report which was presented at a press conference in New Delhi confirms allegations by trade unions and non-governmental organisations (NGOs) about the widespread contamination and occupational hazards at the Alang and Mumbai shipbreaking yards in India. However its implications reach far beyond India because similar conditions are known to exist in other shipbreaking states, particularly Pakistan, Bangladesh, the Philippines, China and Vietnam.

SINGAPORE 11 January 1999 ENVIRONMENTALISTS PROTEST TOXIC SHIP EXPORT TO ASIA - Greenpeace and Basel Action Network (BAN) activists escorted the toxic-contaminated ship Encounter Bay as it arrived in Singapore harbor this morning, to protest against the export of toxic waste to Asia. In a daring waterborne protest the environmental activists flew banners reading "P&O Nedlloyd Stop Toxic Trade" as the vessel approached the harbor. After it docked, they attached another giant banner to the side of the ship. Singapore is the fifth city where Greenpeace and BAN have protested against the ship as it makes its final journey before being scrapped.
