



# OFF THE BEACH !

SAFE AND GREEN SHIP DISMANTLING



**The NGO Platform on Shipbreaking is a global coalition of environmental, human and labour rights organisations working together to reverse the environmental and human rights abuses of current shipbreaking practices and to ensure the safe and environmentally sound dismantling of end-of-life vessels world-wide.**

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## Last Port of Call

Ships on the open ocean can be a pleasure to the eye and represent a rich and centuries-old tradition in transport. Yet for most ships, the final port of call is a scene of death, injury and pollution as toxic end-of-life cruise liners, cargo ships and tankers are broken in uncontrolled and hazardous dismantling operations on the beaches of developing countries. There, on the soft sands of tidal flats, some of the world's most vulnerable workers suffer loss of life and deteriorating health due to accidents and occupational diseases while coastal ecosystems and the communities that depend on them are devastated from pollution. Responsible leadership is needed by the entire global community to set an industry standard that will get dangerous shipbreaking activity off the beach and support a safe and pollution-free working environment.

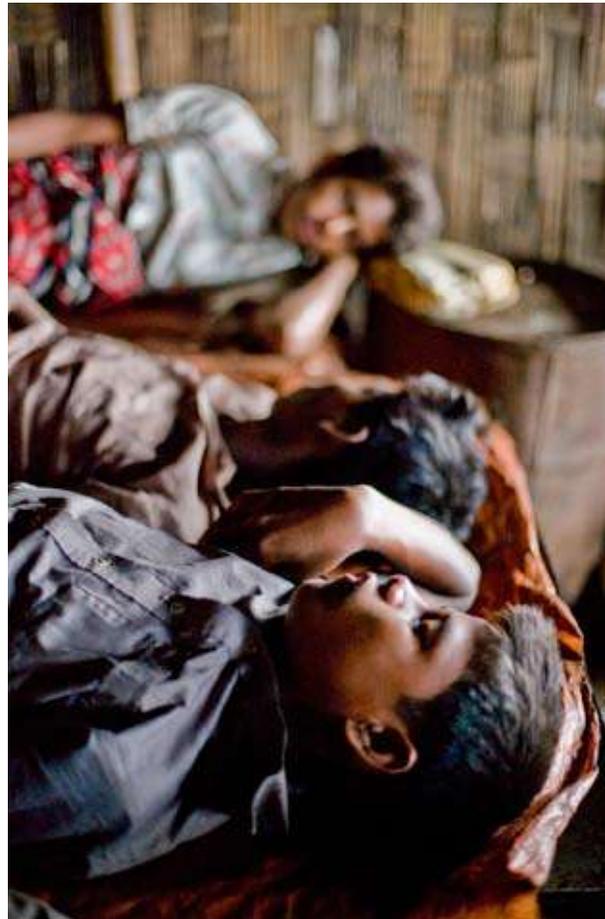


## Race to the Bottom

Every year an average of 600 ships reach the end of their operational life and are sent for dismantling on the beaches of South Asia. This number is expected to rise sharply over the next few years as single hulled oil tankers are phased out and a backlog of old and even younger ships are taken out of service due to the economic downturn.

While ships can be dismantled in a safe and environmentally sound way that aids in global recycling efforts and provides good employment opportunities, the majority of ship owners choose to maximise their profits by selling their ships to shipbreaking yards in countries where environmental law and workers' rights are poorly enforced, lax or non-existent. Paying workers as little as a dollar a day and making little or no investment in equipment and infrastructure to make their yards safe and clean, ship breakers on the beaches of South Asia pay ship owners up to ten times as much per ton of steel as a ship recycler based in a developed country.

In the search for maximum profits, the vast majority of the world's fleet is unscrupulously sold and dismantled on the beaches of the world's poorest countries. Today, approximately 80 percent of end-of-life



ships are sent to the beaches of Chittagong in Bangladesh, Alang in India and Gadani in Pakistan. In Bangladesh, the country which currently accepts the greatest number of end-of-life ships, migrant workers from poor northern villages, desperate for any income after losing their land to flooding, dismantle mammoth carcasses of old ships by hand. Without training, access to labour unions or protective gear these workers labour under

dangerous conditions which few other countries would ever accept. The absence of reliable statistics makes any assessment of the number of accidental deaths linked to shipbreaking on the beaches difficult, but there are strong indications, when adding also deaths due to toxic waste-related illnesses, that the number exceeds one hundred every year. Even more workers get seriously injured. In addition, an investigation by the International Federation for Human Rights found that at least 20 percent of the workers in the shipbreaking yards of Chittagong are less than 15 years old<sup>1</sup>.

**The International Labour Organisation has described the work on breaking beaches as amongst the most dangerous jobs in the world<sup>2</sup>. Accidents occur on a daily basis, leaving many workers severely injured and permanently disabled. Death, too, can come suddenly, from the crush of a falling steel plate or from explosions of residual fuel set off by cutting torches. There are also long-term dangers from exposure to extremely dangerous substances like asbestos, heavy metals and toxic fumes.**

## Toxic Ships

Ships contain many types of hazardous wastes, as defined by international law, in large quantities. The greatest quantities are in ships built before the mid-1980s, a group which represents most of the ships currently being scrapped. These ships are one of the major sources of hazardous waste being traded from industrialised to developing countries. The European Commission estimates that an average of 400,000 to 1.3 million tonnes of toxic materials on board end-of-life vessels, including up to 3,000 tonnes of asbestos and 6,000 to 20,000 tonnes of harmful paints, is exported each year to developing countries from the EU<sup>3</sup>.

**Ship owners sell their end-of-life ships, often via brokers or cash buyers, to “ship breakers” who recover and then re-sell the steel, which comprises up to 90 percent of a ship’s structure. However, the frames of the ships also contain large amounts of hazardous materials such as asbestos, PCB contaminated materials, toxic paints and oily residues and sludge.**

Handling these materials in the primitive and uncontrollable beach operations of South Asia inevitably leads to occupational diseases and serious pollution. Chronic health effects result from workers’ exposure to asbestos, lead and other heavy metals, organotins, such as the extremely toxic organic tin compound tributyltin (TBT) used in anti-fouling paints, and oily wastes containing toxic and persistent organic compounds such as polychlorinated biphenyls (PCBs). The exact numbers of affected workers are unknown due to a lack of medical facilities,

diagnostic equipment or doctors. However, a medical study reported in the Indian Supreme Court in 2006 indicated that 16 percent of the workers in Alang manifested asbestosis, a disease caused by asbestos exposure that precedes the onset of cancer.

1 FIDH/YPSA: *Childbreaking Yards - Child Labour in the Ship Recycling Industry in Bangladesh*, 2008

2 ILO: *Safety and Health in Shipbreaking: Guidelines for Asian countries and Turkey*, Geneva 2004

3 European Commission: *Impact Assessment for an EU Strategy for better Ship Dismantling*, SEC(2008)2846





Toxic wastes also cause devastating pollution. Using the beaching method, ships are broken on sandy sediments without containment. Holes are drilled into the hulls to wash out the oil. Sludge and other non-biodegradable contaminants are dumped into unsealed pits in the ground where they easily seep away. Open burning of cables creates even worse pollutants such as dioxins and furans which are known to be carcinogens. The few studies that have been done of these beach environments have

shown high levels of contamination<sup>4</sup> causing the pollution of essential groundwater reserves as well as the tragic loss of local fisheries and associated jobs<sup>5</sup>.

<sup>4</sup> DNV: *Technical report on shipbreaking standards in Chittagong*, 2000 / Greenpeace: *Ships for scrap - steel and toxic waste for Asia*, 1999, 2001, 2002

<sup>5</sup> YPSA: *Ship Breaking Activities and its Impact on the Coastal Zone of Chittagong*, Bangladesh - *Towards Sustainable Management*, 2006

**While little work has been done to assess the environmental impact of beach shipbreaking, there has been considerable work in relation to ship building and repair in shipyards and its environmental impact on coastal zones. Early studies on the environmental impacts of shipyards in Europe and the United States show that pollution levels of contaminated sediments are typically high at such sites. Since then numerous expensive clean-up operations have been undertaken where polluted sediments are recovered by dredging, before being isolated and disposed of safely at great cost. It can be expected that shipbreaking on the beaches of developing countries, involving a far less rigorous infrastructure and legal framework, dealing with substances that have in some cases already been banned, with little incentive to recover or control them, will be far more damaging to the environment than ship building or ship repair.**

# The fatal flaws of beach breaking

Breaking ships directly on beaches represents the lowest "standard" of a largely unregulated industrial activity and is a practice that can never be accomplished in a manner which is environmentally sound or protective of human health. This is due to the following fatal characteristics:

- 1. No access to emergency response. On a beach it is impossible to rapidly bring in emergency response equipment, including fire-fighting equipment and vehicles, ambulances and cranes to remove persons hurt inside the hull and alongside the vessel in a shifting and soft tidal surface;**
- 2. No heavy lifting equipment. The sand on a beach makes it impossible to set up cranes alongside the hulls to lift heavy cut sections of a ship and prevent heavy objects from falling on workers or directly into the marine environment;**
- 3. No pollution containment. It is impossible to contain pollution on a beach. When hulls of ships are breached or cut, they release persistent organic pollutants, heavy metals and oils which permeate the sand and contaminate surface and ground water without the possibility of remediation;**
- 4. Coastal destruction. Hazardous waste management is inappropriate in the ecologically delicate and vital coastal zone of a tidal beach. Coastal zones not only provide little opportunity for containment from surface and groundwater, but fisheries, wildfowl, and the marine environment are especially sensitive to damage from hazardous substances.**

The beaching method does not and cannot meet the existing international definition of safe and environmentally sound management - *taking all practicable steps to ensure that hazardous wastes or other wastes are managed in a manner which will protect human health and the environment* (Basel Convention Art. 2.8). No amount of investment or improvement can ever overcome the inherent flaws of breaking toxic ships directly on a tidal beach.

## Setting a Standard

In consultation with leaders in the ship recycling industry the NGO Platform on Shipbreaking has drafted a Green Standard for Ship Recycling. A truly Green Standard must be consistent with existing international law and mandate technological methods of recycling ships that prevent pollution and protect workers. Most importantly, it must move shipbreaking operations off the beach.

**Alternatives to beaching that can prevent releases of toxic pollutants and provide far safer working conditions are already in use in ship recycling yards in Europe and the United States. These methods involve either the use of dry, or “graving”, docks in which a ship is moved onto a dock and then supported while the water is drained which leaves a fully contained and controllable impermeable floored area. There is also a floating method that occurs alongside docks or in accessible slipways, as found in China or the United States.**



The desire to live up to new standards of corporate social accountability has already led some ship owners to reject the beach-

breaking of ships. These owners are willing to accept a lower price for their old ships in order to prevent the horrors on the beach.

## Legal Shipwreck

The beaching method would never be allowed in developed countries. End-of-life ships containing hazardous materials are further considered hazardous waste under international law and the export of these ships to developing countries is prohibited.

Yet large shipping nations such as Norway, Greece and Japan perpetuate a “double standard” by failing to stop the export and unsafe dismantling of their ships. Doing far more to protect their shipping industries’ profits than to protect workers or coastal environments of South Asia, these countries have instead pushed for a new International Maritime Organisation convention which actually will weaken existing international hazardous waste law.

With no real incentive to change the practice of lowest cost scrapping, the breaking of ships on beaches will remain the first choice for the majority of ship owners. Due to the increasing number of ships expected to be scrapped soon, the unacceptable conditions in South Asia could deteriorate and spread even further to countries in Africa.



**170 countries have already supported the recommendation to phase out the beaching method under guidelines of international hazardous waste export law (Basel Convention). The European Parliament has also called for improved implementation of existing legislation to prevent European owned ships from being broken on the beaches of developing countries.**

## Setting a New Course: Solutions

New initiatives from governments and industry are required to set a standard for safe and environmentally sound ship recycling. The first and most obvious step is to move ship recycling off the beach.

To achieve this goal international agencies, the European Union and national Governments must act now to:

- 1. Ban shipbreaking on beaches and require facilities where workers are adequately protected and trained and pollution contained.**
- 2. Respect existing international and national laws which restrict and prohibit exports of hazardous waste.**
- 3. Assist South Asian countries in transferring their breaking operations off the beach and onto safe and contained facilities. All investments, bilateral trade agreements, aid programmes, technical assistance and cooperation (whether at national, EU or World Bank level) must promote the basic underlying requirement to move operations off the beach.**
- 4. Set up a certification and third-party auditing system to verify that shipyards world-wide follow guidelines for safe and environmentally sound ship recycling.**
- 5. Internalise costs in line with the 'polluter pays' and 'producer responsibility' principles and establish a fund based on mandatory contributions by the shipping industry. Contributions can be linked to IMO registration or the operation of ships over their lifetime, either through port fees or mandatory insurance schemes. The shipping industry must take responsibility for costs currently borne by the environment and the health of vulnerable communities in developing countries to ensure the design of toxic free ships and a sustainable solution for end-of-life ships - off the beach.**



## Beaches are no place for the dismantling of obsolete toxic ships !

This practice is heavily polluting and a death trap for workers as they are unable to safely lift and manoeuvre heavy objects with cranes, quickly access injured workers or quell fires with modern emergency equipment. Any investment in "improving conditions" on the beach is the equivalent of throwing good money and intentions towards the untimely death of South Asian labourers and a steady decline of the marine environment. Rather, all future investments and efforts must go towards a rapid transition to sustainable and ethical recycling by moving ship recycling – *off the beach* .

The NGO Platform on Shipbreaking is calling on all Governments and the shipping industry to take responsibility and provide the leadership necessary to put an end to this sad and unacceptable chapter in the history of global shipping, and to begin a new era, of safe and pollution-free ship recycling.

**Join us** in the NGO Platform on Shipbreaking's global **OFF THE BEACH !** campaign.  
For more information visit: [www.shipbreakingplatform.org](http://www.shipbreakingplatform.org)

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