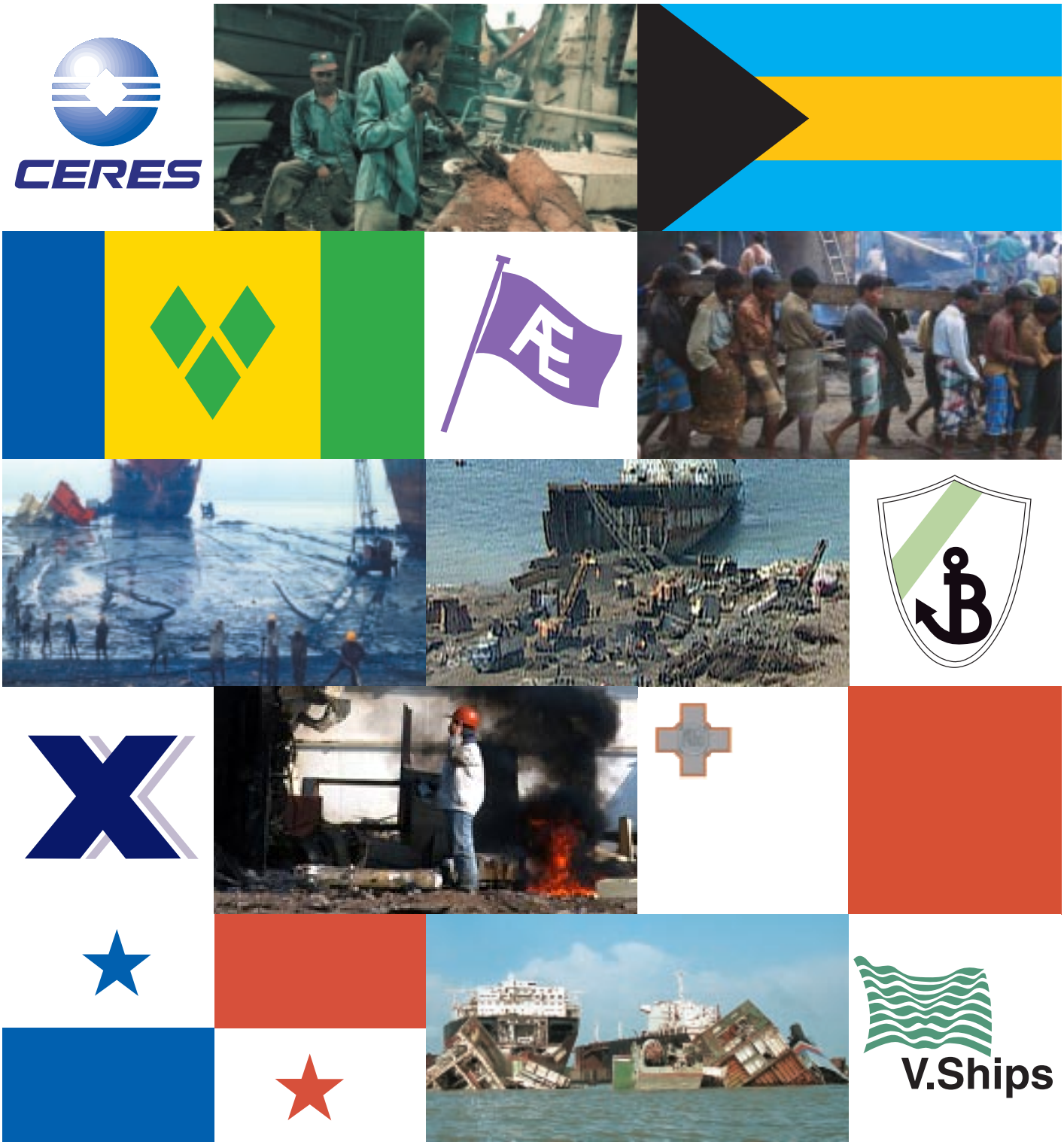
PLAYING HIDE AND SEEK



How the shipping industry, protected by Flags Of Convenience, dumps toxic waste on shipbreaking beaches

GREENPEACE

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TABLE OF CONTENTS

Introduction

The recycling or breaking of end-of-life ships containing toxic substances is a polluting and highly dangerous industry. Five years ago this was news, today it is shameful. It is a shame on those responsible for this ongoing pollution; the shipping industry. It is a shame on the international community that has so far refused to take any real measures to prevent the pollution and dangers.

A huge but unknown quantity of toxic substances has been exported to Asia over the past five years in end-of-life ships. Six hundred such ships are broken annually with none ever being cleaned by the owner prior to export, and only very few being cleaned by their owner prior to breaking. More than 3,000 ships, and the toxic waste in the ships, have been exported over the last five years to Asian shipbreaking yards. Although the steel was recycled, the toxic substances such as polychlorinated biphenyls or PCBs, asbestos, lead, waste oil and tributyltin (or TBT - used in antifouling paints) went into the environment and into the bodies of the workers.

End-of-life ships are waste. This was confirmed recently at a meeting of the Basel Convention which regulates the transboundary movements of hazardous wastes (the Open Ended Working Group, October 2003).
This report illustrates that the current standard practice in the international shipping industry results in the destruction of the environment, livelihoods and indeed lives. A practice that brings shame on the industry and the governments that are failing to protect people and the environment.

Chapter 1 illustrates that the ongoing export of pollution is the responsibility of individual companies that determine the fate of their (ageing) fleet. If containing hazardous waste the export of end-of life ships is illegal under the Basel Convention. Ship-owners and their federations should support real solutions that prevent the export of toxic waste in end-of-life-ships.

Chapter 2 argues that the ongoing export of pollution is happening with the implicit permission of some States. The use of so-called Flags of Convenience during the ship's final voyage by shipping companies leads to confusion among the state exporting the ship, the state owning the ship and the Port State. The export states should accept the responsibility for enforcing the Basel Convention.

Chapter 3 exposes the profits made from exporting end-of-life-ships. These are directly related to the market in steel and the prices paid for steel. However, the cost for pre-cleaning ships prior to export and before scrapping and the safe, environmentally friendly dismantling of end-of-life-ships is never included in the price paid. In fact the polluter profits from the current practice. So while the shipbreaking countries import the much needed steel, the toxic waste are dumped free of charge. A different approach towards the shipbreaking industry is needed. The industry is in fact a service that should not be associated with the liabilities linked to the handling and disposal of toxic waste.

Chapter 4 details some unilateral or bilateral attempts to prevent the ongoing pollution and dangers associated with shipbreaking. These have been successful in setting standards for individual ships or countries. But, they are doomed to fail due to the international and logistical characteristics of and competition in the shipping and shipbreaking market. Only a global mandatory regime will prevent pollution as well as distortions in the market that arise from unilateral or bilateral attempts.

This report does not address in depth the impacts of the toxic substances in ships on the environment in shipbreaking countries. Governments, national supreme courts and international organisations such as IMO, ILO and the Basel Convention have all recognised these impacts.[1]

[1] Reports can be downloaded from www.greenpeaceweb.org/shipbreak

Conclusion: Only concerted action from shipping companies and governments on a global scale will stop this pollution. But over the last five years, ship-owners have exported over 3,000 end-of-life-ships containing huge amounts of toxic waste. Ship-owners seem oblivious to the environmental damage caused and workers' health impacted in the current practices of ship breaking. Instead they continue to regard this as an additional source of profit. In absence of goodwill from the large majority of shipowners nothing will change and particularly in the absence of a legally binding regime the pollution and lethal accidents in Asia will continue. The International Maritime Organisation (IMO) is the UN agency charged with protecting the environment and people from the worst aspects of shipping. It is, therefore, the responsibility of the IMO to establish such a mandatory regime - failure to do so is a failure to carry out their mandate. A mandatory regime should oblige shipowners to take responsibility for the toxic waste onboard end-of- life ships, for its safe removal prior to export and for the safe dismantling of the ships.

Chapter 1. Top twenty polluters

Every year around 600-700 ships are taken out of service. Old ships contain a wide range of toxic materials and oily waste. During the breaking of a ship these substances pollute the environment and have damaging health impacts on the workers and the communities surrounding ship breaking yards. (See box for information on the damaging impacts of substances found onboard end-of-life ships.)

Ships are sent for breaking once it has been decided that the ship is no longer in commercial use. The decision can be made directly by the owner or following advice of a manager/operator of the ship. Most ships are sold through ship-brokers and cash buyers to the shipbreakers. In many cases ships are renamed and reflagged during, or prior to, the final voyage. Many end-of-life ships finally finish up on beaches in Asia and Turkey, severely polluting the environment, and threatening the health of workers and surrounding communities. The decision by shipping companies to discard the ship lies at the heart of the standard practice that has evolved in the shipping industry when the export of end-of-life-ships is concerned. This decision by shipping companies to discard the ship is also the momentum that, from a legal point of view (see article 2 of Basel Convention), the ship also becomes 'waste' with all consequences.[2]

Between Jan. 2001 and Nov. 2003 around 210 ships have been sent for breaking to several shipbreaking yards in India, Bangladesh, China, Pakistan and Turkey by a number of individual shipowners. Table 1.2 presents an overview of the twenty largest polluters based on the number of ships, dead weight tonnage and an estimated profit.

Although not mentioned in Table 1.2, there are a number of individual shipping companies that have played, and continue to play, a substantial role in the shipbreaking industry. For instance the Greek company Chandris and the Switzerland based company MSC, have exported a number of ships for breaking without taking the precautionary measures needed to ensure safe dismantling of their ships such as removing hazardous waste or as a very minimum labelling such waste on board.

During the same period Greenpeace addressed individual shipowners on their crucial role in this industry but without any positive reaction. When meeting directly with Greenpeace, individual shipowners told Greenpeace that there was no need for individual shipowners to change the current practice in the absence of international mandatory rules. Shipping companies see no room for changes in the current practice due to competition in the shipping industry. The dominant argument given for sticking to the current standard practice is related to the absence of international mandatory rules obliging shipowners to take responsibility for cleaning and safe dismantling of end-of-life ships which would provide a level playing field.

[2] Meeting of the Open Ended Working Group of the Basel Convention; OEWG-II/4, Legal aspects of the full and partial dismantling of ships, October 2003.

In 2001, the shipping industry represented by its federations (such as the International Chamber of Shipping - ICS, Intertanko, Intercargo and Bimco) agreed to a voluntary 'Industry code of Practice on Ship Recycling'. However it is unclear how this contributes to the real solution. In November 2003 the Greenpeace ship Rainbow Warrior on a Toxic Patrol tour in Alang found 73 end-of-life-ships on the beach of Alang. None of the shipping companies that exported these end-of-life ships had implemented this industry code of practice. None of the ships carried the agreed inventory of potentially hazardous materials on board, none of the ships delivered to the recycling yard were delivered in a gas-free condition, with all tanks cleaned and certified as such. The Port Officer of Alang, India who receives all documents from a ship and the Superintendent of Alang Customs have declared to Greenpeace that in fact none of the ship arriving in Alang carry the voluntary inventory. This also confirms research of Greenpeace in Bangladesh and Turkey: shipowners never pass the inventory of hazardous materials to the shipbreakers as promoted by the voluntary Industry Code. (see appendix III)

Table 1.2
Largest polluting shipping companies over 2001-2003

Company	No. of ships	DWT	Estimated money earned (M$)
1. Dynacom (Greece)	19	2247678	58,45
2. Tanker Pacific (Singapore)	9	2477318	56,01
3. Papachristidis (UK)	5	1926480	51,84
4. Ceres (Greece)	6	2773531	51,01
5. European Navigation (Greece)	7	1564239	47,37
6. Aeolos (Greece)	16	1821620	39,37
7. Bergesen (Norway)	18	2892781	37,28
8. V. Ships (Switzerland, Cyprus, Norway, UK, Monaco)	17	763064	30.56
9. Hin Leong (Singapore)	11	1191568	30,13
10. Polembros (Greece)	11	851972	23,23
11. Unided Arab shipping (United Arab Emirates)	17	402828	22,54
12. National Iranian Tankers (Iran)	6	910991	22,52
13. Chevron (USA)	5	1336726	22,12
14. Thenamaris (Greece)	7	941712	19,43
15. Naftomar (Greece)	10	252708	16,71
16. Goldenport(Greece)	11	244921	16,41
17. Sabine Transportation (USA)	7	360676	12,84
18. Glory Ship Management (Singapore)	11	245245	10,97
19. Islamic Republic (Iran)	10	199822	10,56
20. Gemarfin (Switzerland)	6	209745	8,29

Source of figures: Ship Sales Data, Fairplay International Shipping Weekly and Lloyds Seasearcher Jan.2001-Nov.2003
See appendix I listing al the details of the ships exported by the above mentioned shipping companies.

Information on substances

Mineral oil
Oils and fuel exhibit toxic characteristics. Main exposure routes are inhalation and consumption of contaminated fish and water. Oil spills impact birds, mammals and other aquatic wildlife.

Heavy metals
Toxic heavy metals associated with shipbreaking include lead, mercury and cadmium. Metals can be found in many products onboard a vessel in varying quantities. Paints and coatings contain metals such as zinc, lead and copper. Both zinc (typically in topcoats) and copper are still present in considerable amounts in modern paints.
Heavy metals compounds are also present in anodes, insulation, batteries and electrical compounds.Heavy metals can cause harm to human health and environmental systems. Mercury for example is a toxic heavy metal and a persistent, bioaccumulative pollutant that affects the nervous system. The affects of lead upon human health have been known for a long time. Young children are most vulnerable and long-term exposure to even low levels can cause irreversible learning difficulties, mental retardation and delayed neurological and physical develoment.

PAHs
Approximately 250 different polycyclic aromatic hydrocarbons (PAHs) are known. Some 30 PAH compounds and several hundreds of derivatives are classed as carcinogenic. The health hazard from PAHs comes from directly inhaling fumes, which are released primarily during torchcutting, after torchcutting when paints continue to smoulder, or when wastes are deliberately burned. PAHs accumulate in dust and sediment, and tissues of lifeforms. As a result they are available for uptake either through inhalation, skin contact or via the foodchain. PAHs cause malignant tumours by interfering with enzymatic breakdown, affecting the lungs, stomach, intestines and skin. The potential of substance mixtures containing high PAHs levels to cause skin cancer is known since 1775.

PCBs
Polychlorinated biphenyl (PCBs) organic compounds are found in solid (waxy) and liquid (oily) forms in equipment and materials on ships being scrapped. The equiment and materials which may contain PCBs in concentrations of at least 50 parts per million (ppm) include cable insulation, transformers, capacitors and electronic equipment, oil-based paint, anchor windlasses, in electrical systems in equipment for cargo handling (such as crane and pump arrangements), in sealing materials and glues used in windows in vessels built up to mid 1980's, in electrical components in powering systems and in electric lighting including fittings and heat exposed electrical components (condensators). Since it was phased out as a compound in ship paintings in the mid 70's, it is unlikely that most of the exposed paint structure contains PCBs. However, some paint surfaces such as in engine-, pump and boiler rooms and also ground coatings in accommodation areas are most likely of original specifications. PCBs are highly toxic and persistent pollutants and they bioaccumulate in the environment. Exposure to PCBs has been associated with a variety of adverse health problems. PCBs have been linked to cancer, liver damage, reproductive impairments, immune system damage and behavioural and neurological damage.

Organotins
Tributyltin (TBT) is an aggressive biocode (kills living organisms) that has been used in anti-fouling paints since the 1970s. TBT is considered as one of the most toxic compounds in the aquatic ecosystems; its impact on marine organisms range from the subtle to the lethal. TBT is responsible for the disruption of the endocrine system of marine shellfish leading to the development of male characteristics in female marine snails. TBT also impairs the immune system of organisms. Shellfish are reported to have developed shell malformation after exposure to extremely low levels of TBT in the seawater. As organotin compounds can damage human health even in small doses, in industrialised nations, legal regulations are in place to protect workers from exposure to antifouling paints containing TBT. Skin, eye and lung protection are mandatory for any contact work with TBT-containing paints.

Asbestos
Asbestos was used a lot in ships because of the non-burning quality, insulation power and it is chemically neutral. It was used, for example, to isolate the engine room or staff cabin, insulation of piping and in electrical cables. Asbestos is also used in the construction industry. There are two types of asbestos: the loose and solid type. The loose type is normally more dangerous than the solid type. During breaking of ships all kinds of asbestos will be released. Even low concentration of asbestos dust causes formation of scar like tissues resulting in permanent breathing difficulties (asbestosis). In the longer term, cancer of the lungs and of the thin membrane surrounding the organs (mesothelioma) may result.

References: DNV1999, Greenpeace reports 1999 and 2001, ILO 2001 and US-EPA 2000

Chapter 2. Flags Of Convenience - A Cover for Ongoing Pollution

Ships arriving at one of the many shipbreaking yards in Asia arrive under a certain flag. Research has found that there are fifteen flags that are most often used in the final voyage by an end-of-life-ship to the shipbreaking yards. It seems general practice that the specific flag for the end-of-life-ship has no connection (no"genuine link") with the shipping companies who made the decision to scrap the ship.
Table 2.1 lists the fifteen flags most commonly used for the final voyage to shipbreaking yards in India, Bangladesh, China and Turkey in Jan-Nov. 2003.

Table 2.1
Flags often used for the final voyage by end-of-life-ships in 2003 (Jan-Nov)

Country	Flagstate Number of ships exported 2003	Country of effective ownership Number of ships exported 2003
Panama (FOC)	78	5
Malta (FOC)	34	1
St. Vincent & Grenadines (FOC)	34	1
Cyprus (FOC)	23	8
Singapore	17	29
Greece	16	110
Mongolia (FOC)	16	
Liberia (FOC)	15	2
Bahamas (FOC)	13	2
North Korea	13	2
Cambodia (FOC)	12	4
Honduras (FOC)	11	1
Tonga (FOC)	11	
Comoros (FOC)	10	
Italy	10	16

Source of figures: Lloyds Seasearcher Jan 2003-Nov.2003

Eleven of the fifteen flags under which most end-of-life-ships have been exported in 2003 are so called Flags of Convenience (FOCs) as classified by the International Transport Workers' Federation (ITF).[3] This essentially means that there is no link to the country of effective ownership. The four largest registers used for the final voyage of end-of-life-ships are Flags of Convenience (FOC). Looking at exports in the period Jan-Nov 2003 of end-of -life ships to several ship-breaking yards in India, Bangladesh, China and Turkey, 63% (283 ships out of 448 ships in total) sailed under a Flag of Convenience for their final voyage. For more details see appendix 2.

3 "The Flag of Convenience system is a system that allows shipowners to register vessels in countries other than the country in which they reside in order to avoid binding national regulations or national obligations under international treaties. This includes the avoidance of controls on the implementation of such regulations. The International Transport Workers' Federation (ITF) has promoted for many years compliance with the existing requirement for a "genuine link" in the UN Convention on the Law of the Sea. Tonnage registered to flags of convenience states continues to rise. Nearly 50% of the shipping industry is now registered under flags of convenience (by gross tonnage), which allow shipowners to evade international maritime rules and standards at will." (Transport International, 3.2003 "Shipping at a crossroads") For more information on Flags Of Convenience please visit www.itf.org.uk/seafarers/foc/foc/htm.

Table 2.2
Top 10 OECD countries that have exported end-of-life-ships in 2003

Country	Ownership country	Flagstate
Greece	110	16
United States	19	2
Italy	16	10
United Kingdom	14	5
Turkey	13	8
Norway	12	6
Switzerland	12	0
Germany	6	0
South Korea	6	7
Spain (incl Canary Islands)	5	1

Source of figures: Lloyds Seasearcher Jan 2003-Nov.2003

The real exporting countries are often not the flag states, but rather the countries where the shipping company or the beneficial owner of the ships resides. OECD countries make up a large segment of these. Table 2.2 shows in the first column, the number of ships scrapped under the ownership countries.
OECD countries have adopted a system of controls for transboundary movement of hazardous wastes destined for recycling between members of the OECD. This decision, recognised under the Basel Convention, applies to transboundary movements of ships for scrapping between an OECD member country and a non-member. Among other things, this decision has the requirement for adequate disposal facilities for ship in the state of import. Exports of wastes from OECD countries are also subject to the Basel Convention (1989) and the Basel Ban Amendment[4] (1994) that bans the export of all hazardous wastes from non-OECD countries to non-OECD countries including for recycling purposes as of 1998.

This does not mean however that non-OECD countries do not export end-of-life-ships. Like those in the OECD these countries have to comply with the existing obligations under the Basel Convention.
By registering ships under Flags of Convenience many shipping companies avoid the measures adopted by OECD countries. This adds to the ease with which shipping companies can still export end-of-life-ships containing hazardous substances, even though the identical export of ships would be strictly regulated had the ship been registered in the OECD country concerned. An end to the lucrative system of Flags of Convenience (FOCs) will increase the transparency in the shipping industry. Such increased transparency would expose the polluting shipping companies to the body of law of their countries of effective ownership. In addition, countries of effective ownership as well as port-states need urgently to reclaim their responsibility over the implementation of existing rules and regulations on shipping companies as they apply to any other citizen or entity within its territory. These states need to take their responsibility in enforcing the Basel Convention as well as other international treaties for the export of toxic waste on end-of life ships, in order to prevent the ongoing pollution and dangers associated with shipbreaking at the Asian beaches.

[4] The Basel Ban was justified by the Basel Parties on the basis "that transboundary movement of hazardous wastes from OECD to non-OECD countries have a high risk of non constituting an environmentally sound management of hazardous waste as required by the Basel Convention." This determination was not only due to the obvious lack of technical capacity (downstream Environmentally Sound Management) in developing countries, but more importantly for the reason that export of pollution to avoid higher costs always works at cross purposes to the primary (upstream ESM) goals of the Basel Convention: These are:

a) the minimisation of hazardous waste generation;
b) national self-sufficiency in hazardous waste management; and
c) the minimisation of the transboundary movements of hazardous waste

Chapter 3. Breakdown of profits and environmental and health costs related to shipbreaking

Shipowners receive more than 1 billion US dollars annually by exporting old ships to India, Bangladesh, Pakistan and China for scrapping (May 2001- May 2002). Prices paid per ldt (light displacement tonnage) fluctuate and were reported between 48 US dollars in Turkey up to 208 US dollars in India per ldt in this period.[5]
In 2003 prices were much higher, and it was not unusual that shipping companies selling the ships to shipbreakers gained more than 240 US dollar per ldt.[6]
This gives a rough indication of the gains made by shipowners exporting their end-of-life-ships. There are, however, also costs associated with the pollution caused by the hazardous substances. Just as there are costs associated with the exposure by workers to these hazardous substances.

The extent of damage caused by the breaking of ships to the environment, to the livelihoods of the fisher folk and peasants that share the environment, and to the lives and health of the workers in India, Bangladesh, China, Pakistan and Turkey is not exactly known to this day. Absence of data however does not mean the absence of a problem. It just means that neither these communities, nor the workers, nor the environment are serious enough priorities to feature in the economic scheme of things. We can give a description of the environmental and health costs associated with the breaking of ships.
They include:
* costs for the loss of livelihood
* clean-up costs for polluted sediments
* costs for asbestos liabilities
* medical and compensation costs for losing the ability to work
* medical and compensation costs for deaths and diseases caused by exposure to toxic substances

For more information see the Greenpeace report "The continuous evasion of the polluter pays principle", September 2002.[7]

However, asbestos is somewhat an exception as it is one of the hazardous substances in many end-of-life-ships that is well known for its potentially lethal effects on people. Courts in several countries have ruled on compensation arrangements for workers exposed to asbestos.

Millions of workers worldwide have been exposed to asbestos dust since the early 1920's. Among shipyard workers, asbestos miners and millers, asbestos product manufacturer's and demolition workers, asbestos related ailments are not just routine, but increasingly acknowledged as an occupational disease warranting compensation. It is generally accepted that the risk to workers increases with heavier and long-term exposure. However, investigators have also found asbestos-related diseases in some shipyard workers exposed to high levels of asbestos fibres for only brief periods (as short as 1 or 2 months). Even workers who may not have worked directly with asbestos but whose jobs were located near contaminated areas are known to have developed asbestosis, mesothelioma, and other asbestos-related cancers.

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5 Based on Fairplay weekly sales data. Fairplay reports that 469 ships have been sold for scrap from 1st of May 2001 till 1st of May 2002. They have been sold for a total amount of 936 million dollars. Shipping companies received an average price of 2 million dollars for each ship sold for scrap. The lowest price paid for a ship-for-scrap reported by Fairplay in this period is 0.15 million dollars, the highest price 10.99 million dollars.

Fairplay does not cover all scrap deals. Sales to Turkey are hardly reported. Besides the 80 vessels that were sold to Bangladesh (according to Fairplay) another 49 vessels have found their way to the beaches of Bangladesh (according to data from the Bangladesh Shipbreakers Association.) Therefore it can be assumed that the actual figure is probably much higher than 936 million dollars and is far above 1 billion dollars.

6 Examples are Hesperus from the Norwegian company Bergesen 246 dolar per ldt, New Jane from the Greek company Dynacom Tankers Management for 258 dollar per ldt and Hereford from the British company V. Ships Commercial for 258 dolar per ldt.

7 Report can be downloaded from www.greenpeaceweb.org/shipbreak.

The financial liabilities associated with asbestos-related compensation and phase-out are mindboggling. A 1999 Greenpeace study on asbestos-related liabilities put the figure at approximately 30 billion US dollars for the Netherlands only. Of this, approximately 3 billion US dollars is expected to serve as compensation for victims and families. Although these figures are an estimate of land-based asbestos liabilities, it is indicative of the magnitude of the problem.

Asbestos related illnesses pose a serious and constantly increasing risk to the health of workers and people frequenting the shipbreaking yards. Several studies have found asbestos strewn casually around, in the shipbreaking yards and open dumps or being recycled by people unaware of the health risks. This poses a serious health risk not only to the fitters, but also the ship and yard cutters, loaders, roadside vendors and transport workers, not to mention neighbouring communities and peasants.

Shipping companies exporting end-of-life-ships containing hazardous substances, profit from the export of these ships to breaking yards. The environment and the people working at these yards are left with the polluting and the damaging, potentially lethal affects of these hazardous substances. This situation must change.

Chapter 4 The need for a mandatory regime on shipbreaking

A few shipping companies have, of their own volition, changed their polluting practice. In the absence of real changes from individual shipping companies, initiatives to prevent environmental pollution and to protect workers have come from others. States, courts and other stakeholders were forced to correct illegal export of hazardous substances in end-of-life-ships due to the absence of real action by the shipping industry.

In Bangladesh court decisions and politicians are increasingly demanding that end-of-life-ships should be decontaminated prior to export.[8] In India two ships were detained in 2003 on the ground that they might contain hazardous substances. These detentions reflect a ruling by India's Supreme Court in October 2003 that ships can only arrive at the shipbreaking yards of Alang with proper consent from the concerned authority that the ship does not contain hazardous waste. In 1997, the Indian Supreme Court had already ordered that no imports of hazardous wastes should be allowed into India.[9]
Unfortunately, for Asia, orders such as those of the Indian Supreme Court run the risk of becoming meaningless because they are unilateral and the shipping industry is global. Enforcement of such rules would only mean the death of an industry that supplies much-valued steel, and employs several thousands. Even worse, such rules only mean that end-of-life ships will be driven to less-regulated countries. The Indian Shipbreakers Association addressing stakeholders in the shipbreaking industry called for a mandatory regime to regulate the export of end-of-life-ships.[10]

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[8] On April 19, 2003 the Supreme Court of Bangladesh ruled that the Bangladesh government should ensure that the import of ships for breaking purposes is regulated in line with the requirements of the Basel Convention, 1989.

[9] The Central Pollution Control Board of India, and a High Power Committee appointed by India's highest court have declared so in unequivocal terms: "Before a ship arrives at port, it should have proper consent from the concerned authority or the State Maritime Board, stating that it does not contain any hazardous wastes or radioactive substances." The Pollution Control Board even specifically spells out asbestos dust and fibres and PCBs as hazardous wastes that require to be removed from the ships-for-scrap before they are permitted for import into India.

[10] The Iron Steel Scrap and Shipbreakers Association of India have made a strong appeal to the IMO parties for a mandatory regime on shipbreaking. (Nov 12, 2003): "It has become absolutely necessary that the proposed Assembly Resolution & Guidelines must make it mandatory for ship owners to comply with the said Code. At least 'gas-free for hot work' must be made a must before delivery of a ship to the ship recycling yard. This should not pause any problem as the Code has been finalized by the owner's own associations and various regulatory organizations have been relying on this Code. This will bring uniformity and level playing field amongst all ship recycling countries."

In Turkey the authorities have refused entry to end-of-life-ships into its territorial waters on grounds that they contained hazardous substances.[11] The UK government has stated that a proposal to dismantle end-of-life navy ships in the UK is inconsistent with international regulations.[12] In Europe there is growing pressure to start an enforcement programme on end-of-life-ships. The EU Commissioner for Environment, Courts in The Netherlands and the Belgium Government have ruled that end-of-life-ships need to be considered as waste and as a consequence need to be decontaminated prior to export. [13]

These rulings show that some states, courts and shipbreakers recognise that the key to preventing the environmental and social problems associated with shipbreaking is in the hands of the shipping industry, the exporting countries and the international community.

These efforts by some states are welcome and do provide some protection for people and the environment. However, ultimately, in the absence of a global mandatory regime, individual efforts cannot provide the protection needed. A mandatory regime is needed which makes the shipping industry responsible for the toxic waste on board end-of-life-ships and the safe dismantling of ships. Without the level playing field which a mandatory regime would create, a ship-breaking country cannot afford to improve conditions or raise import standards which will cause them to lose business which will move to other, less regulated, countries.

Shipping companies, in many cases protected by flags of convenience states continue and will continue to dump toxics in Asia and Turkey as proven over the last years as long there is no mandatory regime. The voluntary measures have not and will not work.

Conclusions

The export of end-of-life-ships containing hazardous substances to Asian shipbreaking-yards is a deliberate choice made by shipping companies. The decision by shipping companies to discard the ship lies at the heart of the standard practice that has evolved in the shipping industry. Thus the shipping companies are the first logical and responsible actors to change the practice. To this end exporting countries have to ensure that toxics on board of end-of-life-ships will not end up in the environment of shipbreaking countries. Without a global mandatory regime, shipowners will not make the changes needed to prevent pollution and accidents in Asia.

Shipowners who dump end-of-life-ships containing hazardous substances often reside in OECD countries, but the ships they own are registered elsewhere - not the effective ownership countries. In this way shipowners escape the existing body of law in the "home country" of the shipowner making it possible to circumvent international treaties such as the Basel Convention.

Some individual countries have already adopted measures that seek to guide the export of end-of-life-ships. Some of these are on a unilateral basis, others are part of bilateral arrangement between an OECD country and a shipbreaking country. These unilateral or bilateral initiatives add to the pressure on the responsible international organisation IMO to adopt mandatory measures that will prevent the export of hazardous substances. Such mandatory measures have the added benefit that they will provide a global level playing field for the international shipping and shipbreaking industry.

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[11] Turkish authorities refused entry of the following toxic end-of-life-ships in its territorial waters: Olna and Olwen from the UK (2001), Sea Beirut (2002), Novocherkassk (2003), Clemenceau (2003).

[12] Source: BBC article: http://news.bbc.co.uk/1/hi/england/tees/3247847.stm

[13] IMO MEPC 49/3/- Submission by Greenpeace International to IMO MEPC 49.

The way forward:

- The lucrative system of Flags of Convenience (FOCs) needs to come to an end. This will increase the transparency in the shipping industry. This increased transparency would expose the polluting shipowner to the law of their countries of effective ownership. Equally, it will mean that the countries of effective ownership, as well as port-states, can carry out their responsibility on the implementation of existing rules and regulations on shipowners as they apply to any other citizen or entity within its territory.

- Countries of effective ownership as well as port-states need urgently to reclaim their responsibility over the implementation of existing rules and regulations on shipping companies as they apply to any other citizen or entity within its territory. These states need to take their responsibility in enforcing the Basel Convention as well as other international treaties for the export of toxic waste on end-of life ships, in order to prevent the ongoing pollution and dangers associated with shipbreaking at the Asian beaches.

- The shipping industry receives more than 1 billion US dollars by exporting old ships to India, Bangladesh, Pakistan and China for scrapping in one year's time. This means that the shipping industry actually receives money for being allowed to release hazardous waste into the environment and the workers bodies and to pollute the coastal zone of Asia with waste oils. This does not reflect a "polluter pays principle" but a "polluter profits principle" and is unacceptable. The shipbreaking industry should no longer be seen as a lucrative market where shipowners and shipbrokers profit from externalizing toxic pollution costs but as a service carried out by the shipbreaking countries. A service the world needs and which should not be associated with the liabilities linked with the handling and disposal of the toxic and hazardous waste. These are burdens to be borne by the "purchasers" of the service: the shipping companies.

- Voluntary rules for shipping companies on end-of- life vessels have proven and will prove totally inadequate for addressing the major problems associated shipbreaking. They do not create legal obligations and they do not establish a "best practise" requirement as a matter of law. It is not a contract but merely a code of conduct, which might be revoked at will. First and foremost the IMO needs to set up mandatory rules for end-of-life ships, in strict compliance with the Basel Convention, and steps taken by the International Labour Organisation, and individual countries such as the Supreme Court ruling in India.

Appendix I
Details of end-of-life ships exported by twenty shipping companies in 2001-2003

Name	DWT	Date	Old contact	Country	Price (in M $)	Price per LDT (in $)	New owner	Final destination
Crete	237183	10-01-02	Aeolos	Greece	4,54	135,00	Bangladeshi breakers	Chittagong
Kythira	140512	06-12-01	Aeolos	Greece	3,19	138,00	Bangladeshi breakers	Chittagong
Ikaria	267808	25-04-02	Aeolos	Greece	5,91	150,00	Bangladeshi breakers	Chittagong
Skopelos	274949	22-05-03	Aeolos	Greece	8,11	201,00	Bangladeshi breakers	Chittagong
Kalamos	128256	29-11-01	Aeolos	Greece	2,58	143,00	Indian breakers	Alang
Skiathos	34837	04-04-02	Aeolos	Greece	1,12	147,00	Indian breakers	Alang
Zante	274513	21-03-02	Aeolos	Greece	5,13	135,00	Bangladeshi breakers	Chittagong
Skyros	323100	28-02-02	Aeolos	Greece	5,67	137,00	Bangladeshi breakers	Chittagong
Kerkyra	140462	10-01-02	Aeolos	Greece	3,12	142,00	Indian breakers	Alang
Berge Odel	278807	18-06-02	Bergesen DY ASA	Norway		150,00	Chinese breakers	Xinhui
Berge Boss	315700	15-05-03	Bergesen DY ASA	Norway		197,00	Chinese breakers	Xinhui
Hesperus	40615	14-08-03	Bergesen DY ASA	Norway	4,05	246,00	Indian breakers	Alang
Hesiod	23719	20-02-03	Bergesen DY ASA	Norway	1,94	184,00	Chinese breakers	Jiangyin
Havjarl	23896	02-05-02	Bergesen DY ASA	Norway	1,57	146,00	Bangladeshi breakers	Chittagong
Havvind	9550	13-06-02	Bergesen DY ASA	Norway	0,79	136,50	Indian breakers	Alang
Berge Odel	278807	29-08-02	Bergesen DY ASA	Norway		150,00	Chinese breakers	Jiangmen
Havsol	9521	29-05-03	Bergesen DY ASA	Norway	1,25	215,00	Chinese breakers	Jiangyin
Hermes	38705	19-09-02	Bergesen DY ASA	Norway	2,06	144,00	Chinese breakers	Jiangyin
Havlys	9550	13-06-02	Bergesen DY ASA	Norway	0,79	136,50	Indian breakers	
Berge Septimus	284514	02-08-02	Bergesen DY ASA	Norway			Chinese breakers	Xinhui
Havlur	9521	23-08-02	Bergesen DY ASA	Norway	0,89	155,00	Chinese breakers	Nansha
Big	289980	02-08-02	Bergesen DY ASA	Norway			Indian breakers	Alang
Berge Bonde	283399	02-08-02	Bergesen DY ASA	Norway			Chinese breakers	Xinhui
Havgast	38930	02-08-02	Bergesen DY ASA	Norway			Indian breakers	Alang
Prince	284522	22-02-01	Bergesen DY ASA	Norway			Indian breakers	Alang
Inger	357345	07-03-02	Bergesen DY ASA	Norway	5,30		Bangladeshi breakers	Chittagong
Berge Borg	315700	15-05-03	Bergesen DY ASA	Norway		197,00	Chinese breakers	Xinhui
Kapetan Hiotis	413117	10-10-02	Ceres Hellenic Shipping Enterpr. Ltd	Greece	8,80	155,00	Bangladeshi breakers	Chittagong
Kapetan Hatzis	412614	23-05-02	Ceres Hellenic Shipping Enterpr. Ltd	Greece	8,59	150,00	Chinese breakers	Huangpu
Kapetan Giorgis	457154	14-02-02	Ceres Hellenic Shipping Enterpr. Ltd	Greece			Pakistani breakers	Gadani Beach
Kapetan Michalis	516423	19-09-02	Ceres Hellenic Shipping Enterpr. Ltd	Greece		147,00	Pakistani breakers	Gadani Beach
Kapetan Giannis	516895	19-09-02	Ceres Hellenic Shipping Enterpr. Ltd	Greece		143,00	Bangladeshi breakers	Chittagong
Kapetan Panagiotis	457328	14-03-02	Ceres Hellenic Shipping Enterpr. Ltd	Greece	8,12	130,50	Pakistani breakers	Gadani Beach
Amina	71200	06-02-03	Chandris (Hellas) Inc	Greece	2,66	192,00	Indian breakers	Alang

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Mariprima	59543	16-05-02	Chandris (Hellas) Inc	Greece	2,86	148,10	Bangladeshi breakers	Alang
Amerikanis	2866	12-04-01	Chandris (Hellas) Inc	Greece	2,00	148,00	Indian breakers	Alang
Kenneth E. Hill	99060	23-05-02	Chevron	USA	2,30	155,00	Chinese breakers	Jiangyin
Polaris Voyager	419777	12-12-02	Chevron	USA			Chinese breakers	Zhuhai
Charles Pigott	268374	10-05-01	Chevron	USA	6,25	175,00	Chinese breakers	China
Chevron Perth	281272	12-12-02	Chevron	USA			Chinese breakers	Jiangyin
Enif Voyager	268243	21-02-02	Chevron	USA	4,51	126,00	Chinese breakers	Xinhui
Oak	138973	24-01-02	Dynacom Tankers Management Ltd	Greece	3,33	146,00	Bangladeshi breakers	Chittagong
Cello	83983	05-06-03	Dynacom Tankers Management Ltd	Greece	3,29	208,50	Chinese breakers	China
Jade	173847	13-12-01	Dynacom Tankers Management Ltd	Greece	3,49	134,00	Pakistani breakers	Gadani Beach
Smart	13688	07-03-02	Dynacom Tankers Management Ltd	Greece	1,00	133,00	Indian breakers	Alang
Arrow	96531	01-02-02	Dynacom Tankers Management Ltd	Greece	2,47	147,00	Indian breakers	Alang
Daring	87366	13-12-01	Dynacom Tankers Management Ltd	Greece	2,34	138,00	Pakistani breakers	Gadani Beach
Eliki	152398	06-12-01	Dynacom Tankers Management Ltd	Greece	3,25	136,00	Bangladeshi breakers	Chittagong
Epic(2)	89479	29-11-01	Dynacom Tankers Management Ltd	Greece	2,21	139,00	Pakistani breakers	Gadani Beach
New Jane	141754	04-09-03	Dynacom Tankers Management Ltd	Greece	5,52	258,00	Indian breakers	
Cloud	89965	16-05-02	Dynacom Tankers Management Ltd	Greece	2,64	158,00	Bangladeshi breakers	Chittagong
Posidon	106677	02-05-02	Dynacom Tankers Management Ltd	Greece	3,09	156,00	Indian breakers	Alang
Palm	134970	21-03-02	Dynacom Tankers Management Ltd	Greece	3,30	146,00	Bangladeshi breakers	Chittagong
Star Dio	156313	25-07-02	Dynacom Tankers Management Ltd	Greece	3,76	147,00	Chinese breakers	China
Riza	134473	22-11-01	Dynacom Tankers Management Ltd	Greece			Bangladeshi breakers	Chittagong
Carlotta	141586	22-08-02	Dynacom Tankers Management Ltd	Greece	3,35	157,00	Indian breakers	Alang
Amber	87346	22-11-01	Dynacom Tankers Management Ltd	Greece	2,27	134,00	Pakistani breakers	Gadani Beach
Tom	89467	08-11-01	Dynacom Tankers Management Ltd	Greece	2,24	140,50	Bangladeshi breakers	Chittagong
Challenge	96539	09-05-02	Dynacom Tankers Management Ltd	Greece	2,62	156,00	Indian breakers	Chittagong

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Violet	232323	09-05-02	Dynacom Tankers	Greece	5,20	152,00	Bangladeshi breakers	Chittagong
Essex	314950	16-05-02	European Navigation Inc.	Greece	6,74	157,50	Chinese breakers	Xinhui
Norfolk	94999	01-05-03	European Navigation Inc.	Greece	4,64	223,00	Chinese breakers	Jiangyin
Sea Victory	132285	24-04-03	European Navigation Inc.	Greece	4,72	215,00	Bangladeshi breakers	Chittagong
Dorset	269895	24-08-03	European Navigation Inc.	Greece	9,86	246,50	Chinese breakers	
Swansea	271967	31-07-03	European Navigation Inc.	Greece	8,28	251,00	Bangladeshi breakers	Chittagong
Golden Cape	123043	31-01-02	European Navigation Inc.	Greece	2,68	133,00	Indian breakers	Alang
Eaton	357100	24-08-03	European Navigation Inc.	Greece	10,45	245,00	Chinese breakers	China
Astypalea	29990	29-08-02	Gemarfin SA	Switzerland	1,08	155,00	Indian breakers	Alang
Corelli	38720	14-08-03	Gemarfin SA	Switzerland	2,25	242,00	Indian breakers	Alang
Kithira	31275	18-06-02	Gemarfin SA	Switzerland	1,07	153,50	Chinese breakers	Xinhui
Aralda	31543	10-10-02	Gemarfin SA	Switzerland	1,14	164,00	Indian breakers	Alang
Pioneer I	47889	19-08-02	Gemarfin SA	Switzerland			Chinese breakers	
Paros	30328	06-03-03	Gemarfin SA	Switzerland	1,37	198,00	Indian breakers	Alang
Asean Pioneer	21842	03-05-01	Glory Ship Management	Singapore	1,20	175,00	Indian breakers	Alang
Asean Ranger	17630	04-07-02	Glory Ship Management	Singapore	0,62	137,00	Indian breakers	Bedi
Mutiara	15705	15-05-03	Glory Ship Management	Singapore	0,75	195,00	Indian breakers	Alang
Gem	29634	28-03-02	Glory Ship Management	Singapore	0,98	129,00	Indian breakers	Alang
Karimun	19974	22-05-03	Glory Ship Management	Singapore	1,09	196,00	Indian breakers	Alang
Concord	28965	09-05-02	Glory Ship Management	Singapore	1,00	133,00	Chinese breakers	Xingang
Fujihoshi	14660	21-08-03	Glory Ship Management	Singapore	1,13	265,00	Indian breakers	Alang
Sentosa	32071	22-05-03	Glory Ship Management	Singapore	1,43	189,00	Indian breakers	Alang
Asean Joy	17528	22-08-02	Glory Ship Management	Singapore	0,70	150,00	Indian breakers	Sachana
Asean Success	26916	10-05-01	Glory Ship Management	Singapore	1,22	180,00	Indian breakers	Alang
Providence	20320	02-05-02	Glory Ship Management	Singapore	0,85	140,00	Bangladeshi breakers	Chittagong
Velos (1)	21230	17-05-01	Goldenport	Greece	1,35	176,00	Indian breakers	Alang
Thiseas	26881	25-04-02	Goldenport	Greece	2,20	154,00	Indian breakers	Alang
Trias	24738	30-01-03	Goldenport	Greece	1,02	190,00	Indian breakers	Alang
Lena D.	21648	19-09-02	Goldenport	Greece	1,56	155,00	Indian breakers	India
Mina	16600	05-07-01	Goldenport	Greece		182,00	Indian breakers	Alang
Lyki	16997	17-05-01	Goldenport	Greece	1,33	182,00	Indian breakers	Alang
Express D	47995	21-03-02	Goldenport	Greece	3,48	147,50	Indian breakers	Alang
Heung-A Star	17057	07-11-02	Goldenport	Greece	1,87	170,00	Indian breakers	Alang
Delos I	22059	12-07-01	Goldenport	Greece	0,85	175,00	Indian breakers	Alang
Rover	14883	06-12-01	Goldenport	Greece	0,57	120,00	Chinese breakers	Xinhui
Rea	14833	24-01-02	Goldenport	Greece	0,69	144,00	Chinese breakers	China
Ocean Topaz	32230	06-03-03	Hin Leong Marine Intern. (Private) Ltd	Singapore	1,31	191,00	Indian breakers	Alang
Osaka Maru	123507	05-12-02	Hin Leong Marine Intern. (Private) Ltd	Singapore	3,51	175,00	Bangladeshi breakers	Chittagong
Ocean Trader	26908	15-05-03	Hin Leong Marine Intern. (Private) Ltd	Singapore	1,34	207,00	Bangladeshi breakers	Chittagong

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Tai San	234110	02-05-02	Hin Leong Marine Intern. (Private) Ltd	Singapore		150,00	Chinese breakers	Xinhui
Tai Hung San	233759	02-05-02	Hin Leong Marine Intern. (Private) Ltd	Singapore	5,14	150,00	Bangladeshi breakers	Chittagong
Ipoh	21090	06-03-03	Hin Leong Marine Intern. (Private) Ltd	Singapore	1,37	197,00	Bangladeshi breakers	Chittagong
Ocean Premier	63975	30-01-03	Hin Leong Marine Intern. (Private) Ltd	Singapore	2,09	205,00	Indian breakers	Chittagong
Ocean Hope	123507	17-01-02	Hin Leong Marine Intern. (Private) Ltd	Singapore	2,76	140,00	Bangladeshi breakers	Chittagong
Ryujin Maru	37842	17-01-02	Hin Leong Marine Intern. (Private) Ltd	Singapore	1,12	140,00	Bangladeshi breakers	Chittagong
Jiu Hua San	267732	22-05-03	Hin Leong Marine Intern. (Private) Ltd	Singapore	7,53	201,00	Chinese breakers	Jiangyin
Ocean Coral	26908	23-01-03	Hin Leong Marine Intern. (Private) Ltd	Singapore	1,22	188,00	Indian breakers	Alang
Iran Shojaat	19762	05-09-02	Islamic Republic of Iran Shipping Lines	Iran	0,78	144,00	Indian breakers	Alang
Iran Jahad	16630	02-08-01	Islamic Republic of Iran Shipping Lines	Iran	1,02	166,00	Indian breakers	Alang
Iran Salam	12140	03-07-03	Islamic Republic of Iran Shipping Lines	Iran	1,16	224,00	Indian breakers	Mumbai
Iran Pasdar	7923	16-01-03	Islamic Republic of Iran Shipping Lines	Iran			Pakistani breakers	Gadani
Iran Abad	16630	11-10-01	Islamic Republic of Iran Shipping Lines	Iran	0,94	152,00	Indian breakers	Alang
Iran Eslami	35578	02-08-01	Islamic Republic of Iran Shipping Lines	Iran	1,32	166,00	Indian breakers	Alang
Iran Motahari	35110	29-05-03	Islamic Republic of Iran Shipping Lines	Iran	1,53	198,00	Indian breakers	Alang
Iran Fallahi	34196	11-10-01	Islamic Republic of Iran Shipping Lines	Iran	1,19	152,00	Indian breakers	Alang
Iran Hormuz 1	5273	25-10-01	Islamic Republic of Iran Shipping Lines	Iran	0,29	150,00	Indian breakers	Alang
Iran Meead	16580	08-05-03	Islamic Republic of Iran Shipping Lines	Iran	1,27	205,00	Indian breakers	Alang
MSC Elena	15853	13-09-01	MSC - Mediterranean Shipping Co SA	Switzerland	0,93	158,00	Indian breakers	Alang
MSC Viviana	35331	31-01-02	MSC - Mediterranean Shipping Co SA	Switzerland	3,06	131,50	Indian breakers	Alang
MSC Lucy	32628	16-01-03	MSC - Mediterranean Shipping Co SA				Indian breakers	Alang

Name	DWT	Date	Old contact	Country	Price (in M $)	Price per LDT (in $)	New owner	Final destination
Classica	81796	04-11-01	MSC - Mediterranean Shipping Co SA	Switzerland			Indian breakers	Alang
MSC Pamela	35774	03-04-03	MSC - Mediterranean Shipping Co SA	Switzerland			Indian breakers	Alang
Pioneer Louise	52224	31-10-02	Naftomar	Greece	2,68	150,00	Chinese breakers	Xinhui
Gaz Supplier	29528	28-11-02	Naftomar	Greece	2,08	180,00	Indian breakers	Alang
Gaz Hudson	15530	11-04-02	Naftomar	Greece	1,13	155,00	Indian breakers	Alang
Gaz Baltic	11630	16-10-03	Naftomar	Greece	1,27	234,00	Chinese breakers	
Gaz Poem	49092	16-01-03	Naftomar	Greece		141,00	Chinese breakers	Yiantian
Gaz Lion	11835	29-05-03	Naftomar	Greece	1,11	206,00	Indian breakers	Alang
Gaz Kandla	21380	15-11-01	Naftomar	Greece	1,42	150,00	Indian breakers	Alang
Gaz Sun	3402	15-05-03	Naftomar	Greece	0,40	218,00	Indian breakers	Alang
Tamara Z.	8205	06-03-03	Naftomar	Greece	0,94	205,00	Indian breakers	Alang
Gaz Marmara	49882	27-03-03	Naftomar	Greece	4,01	200,00	Chinese breakers	Xinhui
Iran Touba	317824	03-10-02	National Iranian Tanker Co	Iran	6,50	159,00	Bangladeshi breakers	Chittagong
Koohrang	284632	27-09-01	National Iranian Tanker Co	Iran	6,29	160,00	Pakistani breakers	Gadani Beach
Minab 3	25651	14-03-02	National Iranian Tanker Co	Iran	0,96	150,00	Indian breakers	Alang
Minab 4	25641	20-02-03	National Iranian Tanker Co	Iran	1,23	193,00	Indian breakers	
Minab 2	25531	14-03-02	National Iranian Tanker Co	Iran	0,97	150,00	Indian breakers	Alang
Khark	231712	17-05-01	National Iranian Tanker Co	Iran	6,57	203,50	Bangladeshi breakers	Chittagong
Hellespont Paramount	388042	16-05-02	Papachristidis Ltd	UK		143,00	Bangladeshi breakers	Chittagong
Hellespont Capitol	388042	16-05-02	Papachristidis Ltd	UK		143,00	Bangladeshi breakers	Chittagong
Hellespont Grand	421681	11-09-03	Papachristidis Ltd	UK	13,92	238,00	Indian breakers	Alang
Hellespont Embassy	413015	22-05-03	Papachristidis Ltd	UK	11,76	201,00	Bangladeshi breakers	Chittagong
Kapadokya	315700	09-09-03	Hellespont S.S. (Papachristidis)	Greece	9,56		Indian breakers	Alang
Agapi	29688	23-08-01	Polembros Shipping Ltd	Greece	1,19	159,00	Indian breakers	Alang
African Addax	83466	09-05-02	Polembros Shipping Ltd	Greece	2,20	146,00	Bangladeshi breakers	Chittagong
Artemis II	135900	31-01-02	Polembros Shipping Ltd	Greece				Chittagong
Aspilos II	117248	23-10-03	Polembros Shipping Ltd	Greece			Bangladeshi breakers	Chittagong
Leon	108480	27-03-03	Polembros Shipping Ltd	Greece	4,60	195,00	Bangladeshi breakers	Chittagong
Atlas	78925	02-08-02	Polembros Shipping Ltd	Greece	2,50	154,00	Indian breakers	Alang
Navigation	64900	23-10-03	Polembros Shipping Ltd	Greece			Bangladeshi breakers	Chittagong
Venture	82212	25-07-02	Polembros Shipping Ltd	Greece	2,33	154,00	Indian breakers	Alang
Transcord	19784	01-08-02	Polembros Shipping Ltd	Greece	1,17	130,00	Indian breakers	Alang
Lassia	124424	07-06-01	Polembros Shipping Ltd	Greece	0,79	192,00	Bangladeshi breakers	Chittagong
Ranger	6945	25-07-02	Polembros Shipping Ltd	Greece		155,00	Indian breakers	Alang

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Sag River	70215	06-03-03	Sabine Transportation Co	USA	2,92	195,00	Indian breakers	Alang
Sabine Philadelphia	75650	06-12-01	Sabine Transportation Co	USA	2,06	145,00	Indian breakers	Alang
Leader	38414	18-06-02	Sabine Transportation Co	USA	1,61	189,00	Indian breakers	Alang
Guadalupe	30856	13-06-01	Sabine Transportation Co	USA	1,02	146,50	Indian breakers	Alang
Sabine Baton Rouge	76813	26-07-01	Sabine Transportation Co	USA	2,81	190,00	Indian breakers	Alang
Trinity	38359	15-11-01	Sabine Transportation Co	USA	1,40	168,00	Indian breakers	Alang
Guadelupe	30369	21-11-01	Sabine Transportation Co	USA	1,02		Indian breakers	Alang
Sea Jewel	92033	07-08-03	Tanker Pacific	Singapore	3,97	235,00	Indian breakers	Alang
Crown Jewel I	256737	09-05-02	Tanker Pacific	Singapore	5,88	150,00	Bangladeshi breakers	Chittagong
Alaskan Jewel	266590	09-05-02	Tanker Pacific	Singapore	6,52	152,00	Bangladeshi breakers	Chittagong
Millennia Jewel	267911	13-12-01	Tanker Pacific	Singapore	5,06	136,00	Bangladeshi breakers	Chittagong
Ocean Jewel	273711	25-10-01	Tanker Pacific	Singapore	5,51	150,00	Pakistani breakers	Gadani Beach
Arctic Blue	484276	15-05-03	Tanker Pacific	Singapore	13,32	197,00	Bangladeshi breakers	Chittagong
Tasman Sea	84218	23-01-03	Tanker Pacific	Singapore	2,83	194,00	Indian breakers	Alang
Atlantic Blue	338000	10-01-02	Tanker Pacific	Singapore	5,73	134,00	Indian breakers	Alang
Pacific Blue	413842	21-02-02	Tanker Pacific	Singapore	7,19	130,00	Indian breakers	Alang
Concordia I	337700	31-05-01	Thenamaris Inc	Greece	8,26	195,00	Bangladeshi breakers	Chittagong
Searider	50250	06-12-01	Thenamaris Inc	Greece	1,43	127,50	Indian breakers	Alang
Seadancer	130529	06-12-01	Thenamaris Inc	Greece	2,91	136,00	Chinese breakers	China
Seamaster	234925	22-07-03	Thenamaris Inc	Greece			Bangladeshi breakers	Chittagong
Seascout	87801	08-11-01	Thenamaris Inc	Greece	2,48	152,00	Pakistani breakers	Gadani Beach
Grigoroussa 1	37518	06-03-03	Thenamaris Inc	Greece	1,77	192,50	Indian breakers	Alang
Seagrace II	62989	19-07-01	Thenamaris Inc	Greece	2,58	160,00	Chinese breakers	
Ibn Khallikan	23617	06-12-01	United Arab Shipping Co. (S.A.G.)	United Arab Emirates	1,02	135,50	Indian breakers	Alang
Al Fujairah	23618	22-08-02	United Arab Shipping Co. (S.A.G.)	United Arab Emirates	1,19	157,75	Indian breakers	Alang
Bar'zan	24303	22-08-02	United Arab Shipping Co. (S.A.G.)	United Arab Emirates	1,36	161,00	Indian breakers	Alang
Ibn Qutaibah	23618	14-06-01	United Arab Shipping Co. (S.A.G.)	United Arab Emirates	1,32	175,00	Indian breakers	Alang
Tabuk	23618	24-04-03	United Arab Shipping Co. (S.A.G.)	United Arab Emirates	1,69	221,50	Indian breakers	Alang
Ibn Al Nafees	23618	05-07-01	United Arab Shipping Co. (S.A.G.)	United Arab Emirates	1,40	183,00	Indian breakers	Alang
IBN Asakir	23618	02-08-01	United Arab Shipping Co. (S.A.G.)	United Arab Emirates	1,29	171,00	Indian breakers	Alang
Arafat	23740	16-01-03	United Arab Shipping Co. (S.A.G.)	United Arab Emirates	1,46	195,00	Indian breakers	Alang
IBN Malik	23618	16-01-03	United Arab Shipping Co. (S.A.G.)	United Arab Emirates	1,47	192,50	Indian breakers	Alang
IBN Al Haitham	23890	25-09-03	United Arab Shipping Co. (S.A.G.)	United Arab Emirates	1,74	238,00	Indian breakers	Alang

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IBN Al-Atheer	23618	13-02-03	United Arab Shipping Co. (S.A.G.)	United Arab Emirates	1,41	184,00	Indian breakers	Alang
Hijaz	23740	03-04-03	United Arab Shipping Co. (S.A.G.)	United Arab Emirates	1,69	225,00	Indian breakers	Alang
IBN Shuhaid	23618	01-11-01	United Arab Shipping Co. (S.A.G.)	United Arab Emirates	1,13	150,00	Indian breakers	Mumbai
Ahmad Al-Fateh	23618	13-06-02	United Arab Shipping Co. (S.A.G.)	United Arab Emirates	1,09	144,50	Indian breakers	Alang
Fathulkhair	23618	27-06-02	United Arab Shipping Co. (S.A.G.)	United Arab Emirates	1,10	143,00	Indian breakers	Alang
Ibn Al Roomi	23618	15-11-01	United Arab Shipping Co. (S.A.G.)	United Arab Emirates	1,07	142,25	Indian breakers	Alang
Al Rayyan	23740	18-07-02	United Arab Shipping Co. (S.A.G.)	United Arab Emirates	1,11	150,00	Indian breakers	Alang
Hereford	17730	04-09-03	V. Ships Commercial	UK	3,00	258,00	Indian breakers	Alang
Genova Bridge	17665	01-11-03	V. Ships Commercial	UK			Indian breakers	Alang
Hopewell	16932	15-11-01	V. Ships Cyprus Ltd	Cyprus	0,87	130,00	Indian breakers	Alang
Illapel	20747	28-02-02	V. Ships Cyprus Ltd	Cyprus	1,43	152,50	Indian breakers	Alang
LMZ Vasiliki	139962	23-01-03	V. Ships Cyprus Ltd	Cyprus	4,10	191,00	Indian breakers	Alang
Clement	59650	20-03-03	V. Ships Marine Ltd LLC, American	USA	2,44	205,00	Indian breakers	Alang
Gill	16318	21-08-02	V. Ships Switzerland S.A.	Switzerland			Bangladeshi breakers	Chittagong
Raya	105016	02-08-02	V. Ships Switzerland S.A.	Switzerland			Bangladeshi breakers	Chittagong
Puppy F.	30236	24-01-02	V. Ships Switzerland S.A.	Switzerland	0,97	138,00	Bangladeshi breakers	Chittagong
Boga I	105016	13-09-01	V. Ships Switzerland S.A.	Switzerland	3,48	150,00	Bangladeshi breakers	Chittagong
Tulip	31501	24-07-02	V. Ships Switzerland S.A.	Switzerland	0,77		Indian breakers	Alang
Puppy P.	29998	05-12-02	V. Ships Switzerland S.A.	Switzerland	1,24	178,00	Indian breakers	Alang
Tulip	31501	20-03-03	V. Ships Switzerland S.A.	Switzerland			Indian breakers	Alang
Grizzly	36474	17-04-03	V. Ships UK Ltd,	UK	1,97	227,00	Indian breakers	Alang
Cheetah	27536	17-01-02	V. Ships UK Ltd,	UK	0,82	141,25	Indian breakers	Alang
Marine Star	76782	21-08-02	V. Ships UK Ltd,	UK			Bangladeshi breakers	Chittagong

Appendix II
Overview of ownership and flag state countries linked to exports of end-of-life ships in 2003

Note that:

- figures are ordered by countries alphabetically. Countries that have exported ships to several shipbreaking yards in India, Bangladesh, China and Turkey in Jan-Nov 2003.

- figures do not need to be completely accurate. It was many times difficult to determine the exact ownership (and nationality of shipowner) of an end-of life ship due to changes in ownership prior and during the final voyage.

Country	Ownership country	Flagstate
Greece	110	16
Algeria	3	
Antigua & Barbuda (FOC)		1
Argentina	2	
Austria	1	
Bahamas (FOC)	2	13
Bahrain		1
Bangladesh	1	1
Belize (FOC)	2	9
Bermuda (FOC)	1	3
Bolivia (FOC)		2
Brazil	8	4
Bulgaria	4	4
Cambodia (FOC)	4	12
Canary Islands	1	1
Cayman Islands (FOC)	1	1
Chile	2	1
China	1	
Comoros (FOC)		10
Cuba	4	
Cyprus (FOC)	8	23
Denmark	1	
Egypt	6	4
Estonia	1	
French Southern Terr.		1
Georgia	1	7
Germany	6	
Ghana		1
Greece	110	16
Honduras (FOC)	1	11
Hong Kong	4	2
India	10	5
Indonesia	8	7

Country	Ownership country	Flagstate
Iran	3	3
Italy	16	10
Israel	2	
Japan	1	
Jordan	3	1
Kuwait	10	1
Latvia	4	
Lebanon (FOC)	2	2
Liberia (FOC)	2	15
Madagascar	3	
Madeira		2
Malaysia	1	1
Malta (FOC)	1	34
Marshall Islands (FOC)		4
Mexico	1	
Monaco	3	
Mongolia (FOC)		16
Netherlands	3	1
Nigeria	1	
North Korea	2	13
Norway	12	6
Pakistan	4	1
Panama (FOC)	5	78
Peru	1	
Poland		1
Portugal	1	
Qatar		1
Romania	5	4
Russia	7	5
Sao Tome & Principe (FOC)		2
Saudi Arabia	2	6
Singapore	29	17
South Korea	6	7
Spain	4	
St. Vincent & Grenadines (FOC)	1	34
Sudan	1	1
Sweden	1	
Switzerland	12	
Syria	4	3
Taiwan	2	
Thailand	3	2
Tonga (FOC)		11
Turkey	13	8

Country	Ownership country	Flagstate
Ukraine	6	5
United Arab Emirates	29	4
United Kingdom	14	5
United States	19	2
Vanuatu (FOC)	1	2
Yemen	1	

Appendix III
Investigation on the dumping of toxic waste and compliance to voluntary Industry Code of Practise on Shiprecycling

The SV (Sailing Vessel) Rainbow Warrior of Greenpeace has been in Indian Waters and surroundings from 7 November 2003 until the beginning of December. Shipbreaking was one of the core issues. Although it has been difficult to work, a lot of information was gathered on the actual practise of the arrival and arrived end-of-life ships in India as well as in Bangladesh. The report describes the situation on 14th November 2003. While Rainbow Warrior was present in India, a Greenpeace delegation visited Bangladesh.

Ships arriving at Asian shipbreaking yards contain toxic waste, such as asbestos, PCBs and heavy metals in the paints. The export of the toxic substances is the main cause for the huge environmental pollution and health impacts associated with shipbreaking. The export of hazardous waste from OECD to non-OECD countries is illegal under the Basel Convention and the Basel Ban Amendment.

Two years ago (august 2001) the shipping industry agreed to a voluntary Code of Practise on Shiprecycling seeking to minimise the environmental pollution. Main element of this Industry Code is the Inventory of Potentially Hazardous Materials onboard end-of life ships and delivery of it to the shipbreakers.

This appendix reflects the research done by Greenpeace compiled during the India shipbreaking Rainbow Warrior tour 2003. None of the 145 end-of-life ships found on the beaches of Alang, Mumbai and Chittagong carried this so called "Inventory of potentially hazardous materials on board" when entering Indian Territorial Waters. In the attached list of end-of-life ships beached and not yet completely scrapped all the information about the ship, the ship owner, the flag state and the ship owning country can be found. The list is made based on information from Customs, Harbour Authorities, the Ministry of Environment and shipbreakers in India as well in Bangladesh.

The research shows that voluntary measures agreed upon more than two years ago by the shipping industry did not succeed at all in preventing pollution associated with the breaking of end-of-life-ships. Voluntary measures ignore the notion of the existence of a competive shipping and shipbreaking market. They presuppose voluntary implementation by shipowners. The results confirm the complete lack of implementation by shipowners. Therefore, there is clear need for immediate decision by national and international authorities to set up mandatory measures to prevent the illegal export of hazardous substances in end-of-life-ships.

TOXICS PATROL REPORT RAINBOW WARRIOR INDIA - ALANG, MUMBAI & CHITTAGONG 14 NOVEMBER 2003. End of Life ships beached and not yet completely scrapped The following is based on information from Customs, Harbour Authorities, Ministry of Environment, Shipbreakers during Rainbow Warrior Toxics Patrol November 2003.

ALANG SHIPBREAKING

Vessel	IMO	Flag State	Dwt	Lwt	Arriv.	Plot	Type	Built	Inventory	ship owner company	owner state
ANCRU ex Pancrude	7912886	BLZ	65.586	11.443	20-nov	Alang?	TCR	1980	NO	Kyoei Tanker Co Ltd (89) --> Stealth Maritime Corp GRC (00) --> Eckhardt Marine GER (03)	Greece & Germany
ROGALIN (92) ex Celtic Pride (91)	7114941	BHS (98)	1.133		Nov	Alang?	PRR	1972	NO	Polish Baltic SS.Co.POL (78) --> Polska Zegluga Baltycka, POL (95)	Poland
SEA WAVE ex Karpaty (98)	7730082	UKR	8.540		Nov	Alang?	GGC	1977	NO	Black Sea Shpg Co UKR (77) --> Sudoservice UKR (98)	Ukraïne
TARGET (98) ex Targa (96)	7531230	BHS (90)	18.628		Nov	Alang?	UCC	1977	NO	Diana Shipping Services GR (96) --> Unit Maritime Inc, GR (98)	Greece & Germany
COPIAPO (97) ex Bora Universal (79)	7809807	BMU (91)	9.175		Aug	Alang?	GRF	1979	NO	London Ship Managers UK (93)	UK
CURICO (97) ex Scirocco Universal (79)	7809819	BMU (91)	9.193		Jul	Alang?	GRF	1979	NO	London Ship Managers UK (93)	UK
SARA STAR (01) ex Jaya Star (00)	7619111	VCT (01)			Jun	Alang	GGC	1977	NO	Jaya Holdings Ltd, SGP (96) -->Sany Shipping Private Ltd SGP (01)	Singapore
ASSEDO(01) ex Shota Rustaveli (00)	6707753	VCT (01) UKR (02)	5.696		27-nov	Alang?	MPR	1968	NO	Passenger Fleet UKR (98) --> Kaalbye Shipping Int Ltd UKR(01)	Ukraïne
ATHENIAN VICTORY (81)	7917616	CYP (81)	29.940	8.884	Jul	Alang4	TPD	1981	NO	Athenian Sea Cariers GRC (81) -->Intesta GRC (91)	Greece
MELODY 1 (03) ex Sea Lady (02)	7369792	PAN (97)	17.066	6.600	27-sep	Alang4	TAC	1975	NO	Chemoil Int Ltd SW8 (96) -->Petro-Mar, PORT (99)	Switzerland & Portugal
GANTIADI (77)	6905018	UKR (94)		3.434	13-sep	Alang7	FFF	1969	NO	Kerchrybprom Fishing Industry & Production Union, UKR (94)	Ukraïne
LEGEND – I (01) ex Levent (96)	7223132	CAM (96)	8.276	8.276	27-sep	Alang7	PRR	1972	NO	S.A. Shipping Co.Ltd, CYP (96) -->Bulcom, CYP (01)	Cyprus
SHINKAI (03) ex Shinkai Maru (02)	7411894	CYP (96) KHM (02) MHL (03)	14.930	3.970	9-sep	Alang7	GGC	1980	NO	Rota Shipping GRC (96) -->Congo Development MHL (02) -->Pelican Marine IND (03)	Greece & Mongolia
RAY (01) ex Sun Ray (98)	7379072	ITA (01) MLT (98)	38.626	9.309	31-jul	Alang8	TPD	1975	NO	Navimar SWI (01) -->Gestioni Armatoriali S.r.l. Napels ITA (01)	Switzerland & Italia
CARIBBEAN SPRITE (99) ex Mamaia (90)	9018701	VCT (99)	15.895	6.468	4-jul	Alang9	GGC	1990	NO	I.M. Marine Services Ltd UK (98) -->Atlantic United Marine GRC (99)	UK & Greece
GENOVA BRIDGE ex Gloucestershire (97)	7637826	VCT (96)	17.665		8-nov	Alang9	URR	1980	NO	Ukline UKR (96) -->V Ships Commercial UK (97) -->Silver Line UK (97)	UK
GULF SERENDIP (00) ex Vered (80)	7365100	MLT	9.436	4.114	11-aug	Alang9	UCC	1978	NO	Zim ISR (78) -->Therica Shipping Corp Hong Kong (00)	Israel & Hong Kong

Vessel	IMO	Flag State	Dwt	Lwt	Arriv.	Plot	Type	Built	Inventory	ship owner company	owner state
PANAGIOTIS D. (97) ex Sea Mawson (96)	7119032	GRC (99)	24.489	7.138		Alang10	TPD	1972	NO	Maltinia Shipping GRC (97)	Greece
CITRUS DO BRASIL ex Navelinacore	7018525	LBR	9.881	5.400	2-aug	Alang11	TPD	1970	NO	Maritime Services Aleuropa GmbH, GER (81)	Germany
GOSALIA PROSPECT ex San Pedro Maru	5310412	IND	16.272		?Jun	Alang12	Tank Ore	1950	NO	Salgaocar IND (78)	India
LADY JUANA	7218319	MLT	8.867	4.300	18-okt	Alang12	GGC	1972	NO	International Maritime & Marine, UK (95)	UK
UNITED RELIANCE ex Dondo	7913892	MHL	97.115	18.565	27-sep	Alang13	TCR	1980	NO	Soponata PORT -->Marine Management GRC (01)	Portugal & Greece
AGIOS MINAS ex Apiliotis	7358482	GRC	64.040	12.210	13-sep	Alang14	PRR	1975	NO	Andros Maritime AGS UK (86) -->Aeolos GRC (91)	UK & Greece
EAGLE ex Avar	7359606	MLT	152.395		2-sep	Alang14	TCR	1978	NO	Andros Maritime AGS UK (86) -->Dynacom GRC (99)	UK & Greece
TASMAN SEA ex Glory Summit	7924982	MLT	84.218	148.334	21-jan	Alang14	TCR	1980	NO	Navix Line JAP (92) -->Tanker Pacific SGP (97)	Japan & Singapore
KAPA DOKYA	7359034	TUR	315.700	41.700	10-sep	Alang15	TCR	1975	NO	Papachristidis Holdings UK (89) -->Fenner Deniz Tasimaciligi, TUR (01)	UK & Turkey
TILE – MACHOS	7383425	BHS	59.650	12.019	4-jul	Alang15	TPD	1978	NO	V Ships Florida LC USA (91) -->Barclay Shipping Ltd, GRC (01)	USA & Greece
LINCE ex Alice	8030893	VCT	17.703	11.332	25-aug	Alang16	URR	1982	NO	Grimaldi Group ITA (98)	Italia
MILOS ex Navigator	7219040	PAN	30.633	7.650	16-aug	Alang16	TPD	1972	NO	Trader Navig. Agencies Ltd GRC (97) -->Gemarfin SWI (00)	Greece & Switzerland
SATURN II ex Sally Stove	8000549	PAN	64.535		7-sep	Alang16	PRR	1981	NO	Masters Ship Management Co GRC (95)	Greece
SEA ARENDAL	7521508	CYP		6.655	29-aug	Alang18	GGC	1980	NO	Pacific & Atlantic Corporation, GRC (97)	Greece
DANAIS P.	7526209	GRC		5.677	11-okt	Alang19	GGC	1978	NO	Common Progress Cia Nav SA, GRC (97)	Greece
LLOYD BAHIA	7432941	BRA	14.166	6.015	4-jul	Alang19	GGC	1982	NO	Companhia de Navegacao Lloyd Brasileiro BRA (82)	Brazilia
QESHM ISLAND ex Ocean Trader	7401497	PAN	31.565	7.340	23-okt	Alang22	TPD	1975	NO	Golden Crown Shipping Co. L.L.C, UAE (98)	UAE
ISOLA SCARLATTA ex Sinora	7921966	MLT	36.829	8.423	16-jul	Alang23	TPD	1980	NO	Navimar SWI (96) -->Finaval S.p.A. di Navigazione IT (02)	Switzerland & Italia
CANDIA M.	7913907	MLT		18.911	11-sep	Alang25	TCR	1981	NO	Gaetano D'Alesio S.A.S. ITA (91) -->Styga Cia Nav SA, GRC (01)	Italia & Greece
ST.NICOLAS ex Blumenau Reefer	6917126	COM	6.625		29-jun	Alang26	REE	1969	NO	Comninos Enterprises SA GRC (91) -->Ost-West-Handel GER (99)	Greece & Germany
WISDOM ex Anangel Wisdom	7378901	MLT	22.353	5.677	24-okt	Alang26	PRR	1974	NO	Cosmoship Management Sa GRC (97)	Greece
MINOIC REEFER ex Aeolic Reefer	7411363	BHS	9.592	4.540	30-okt	Alang32	REE	1978	NO	International Reefer Services S.A., GRC (97) -->Millenium Enterprises Inc GRC (02)	Greece
ZEN	7509718	MLT		4.341	3-sep	Alang33	PRR	1976	NO	Hellas Shipping Co. Ltd, GRC (99)	Greece
ARA ex Aracaju	7358042	BRA			16-okt	Alang34	TCR	1975	NO	Transpetro-Petrobras Tnspte, BRA (75)	Brazilia
RIAMAR II	7525554	NK		6.319	14-okt	Alang37	PRR	1977	NO	Soc. Nat.Transp.Marit.& Comp. Nat. Algerienne de Nav. ALG (77) -->Riamar Shipping Co Ltd, SYR (03)	Algeria & Syria

Vessel	IMO	Flag State	Dwt	Lwt	Arriv.	Plot	Type	Built	Inventory	ship owner company	owner state
SEATRAIL	7328736	VTC		6.364	1-okt	Alang38	URR	1973	NO	Hellas Flying Dolphins SA, GRC (99)	Greece
OPAL STONE ex Sea Tune	7523116	COM		12.425	30-jul	Alang39	TPD	1978	NO	American V Ships Marine USA -->Tomini Sh. Mngemnt PAK (01)	USA & Pakistan
GEBZE ex Globosa	7356458	TUR		8.285	28-aug	Alang41	TCR	1975	NO	Ganship Intern Ltd UK (85) -->Dunya Denizcilik ve Ticaret AS TUR (98)	UK & Turkey
RIAMAR I ex Ksar Ettir	7525542	NK	19.782	6.319	12-okt	Alang41	BBU	1977	NO	Soc. Nat.Transp.Marit.& Comp. Nat. Algerienne de Nav. ALG (77) ->Riamar Shipping Co Ltd, SYR (03)	Algeria & Syria
SEA JEWEL ex Yamatama Maru	7914107	BHS		17.177	29-jul	Alang45	TCR	1980	NO	Tanker Pacific Management Private Ltd SGP(94) -->Labdhi Shipping (Ag) Private Ltd Bhavnagar IND (03)	Singapore
LIPETSK	7636808	RUS		7.124	10-aug	Alang47	TPD	1978	NO	Novoship Novorossiysk, RUS (80)	Russia
EFXINOS Mare Princess	7393339	MLT	57.372	11.464	29-aug	Alang48	TPD	1978	NO	Efxinos Shipping Co. Ltd, GRC (00) -->Aegean GRC (00)	Greece
OGRAJDEN	6702478	BGR		2.525	30-sep	Alang50	GGC	1969	NO	Navigation Maritime Bulgare Ltd (NAVIBULGAR), BGR (67)	Bulgaria
DEEPWATER – I ex Vitus Bering	8624383	NK		9.700	11-aug	Alang51	URR	1986	NO	FESCO Russia (98)	Russia
NITA	6917920	MHL	13.562	13.777	29-okt	Alang51	PRR	1969	NO	Trans-Global Solutions Inc, USA (98)	USA
PROJECT FEMCO ex Project Orient	8012346	NED	12.800	5.031	13-aug	Alang52	GGC	1981	NO	Eastern Car Liner Ltd JAP (97) -->Workships Contractors BV. NL	Japan & Netherlands
PATRIOT Thita Triton	7377749	PAN		7.490	15-jul	Alang54	TPD	1975	NO	Ionia Management S.A., GRC (93)	Greece
PATTY ANN ex Sealift Pacific	7366752	PAN	27.648		4-jul	Alang54	TPD	1974	NO	Ionian Shipping & Tr. Corp, GRC (95) -->Orb Shipping Corp. Ltd, GRC (98)	Greece
HESPERUS ex Baleares	7235965	NOR		16.785	11-okt	Alang55	LPG	1973	?	Bergesen d.y. ASA, NOR (95)	Norway
EMERALD P.	6912683	VCT	3.615	1.509	12-okt	Alang59	GGC	1969	NO	Bugazzi Servizi Navali ITA (98) -->Convoy TUR (99)	Italia & Turkey
MSC MAEVA ex Choyang Frontier	7400637	PAN		15.216	2-mrt	Alang59	UCC	1976	NO	Mediterranean Shipping Co. S.A., SW (95)	Switzerland
ROTOMA	7359711	BMU		13.474	12-okt	Alang59	URR	1976	NO	Canada Maritime Serv. Ltd, UK (99)	UK
T-BREEAD-III ex UB Polaris		PAN	9.269	4.750	26-sep	Alang60	REE	1978	NO	UB Shipping Ltd UK --> Saudi Coldstorage SAR	UK & SAR
COMMENCEMENT	7402130	CYP		5.677	15-okt	Alang61	PRR	1976	NO	Primera Marit. (Hellas) Ltd, GRC (93)	Greece
MSC PAMELA	7125392	PAN		23.368	19-mrt	Alang62	UCC	1972	NO	Medit. Shipping Co. S.A., SW (98)	Switzerland
MEGALUCK	7716361	MLT		6.692	15-okt	Alang63	GGC	1979	NO	Team Fuel Corporation, GRC (99)	Greece
SIRIUS I	7346518	VCT		9.600	5-jun	Alang63	PRR	1974	NO	Oceanica e Amazonica, Frota, BRA (74)	Brazilia
PIONEER	7720908	PAN	17.703	6.610	29-aug	Alang68	GGC	1979	NO	Roussos Mngt Stavros GRC (95) -->Glory Ship Management Private Ltd, SNG (03)	Greece & Singapore
RIA				1.055	25-okt	Alang71	GGC	1974	NO	Euroshippin Agenc Co Ltd GRC (99) -->Lucky Marit. Enterpr. SA, GRC (00)	Greece
ARCHANG ELOS SEA	7518290	CYP		11.209	1-okt	Alang73	PRR	1977	NO	Ilios Shipping Co Sa, GRC (97)	Greece
BULKSEA	7521845	PAN	40.300	9.100	10-jul	Alang73	TOR	1978	NO	RoRo Marit. Serv. SA, SWZ (98)	Switzerland
TINA M.	7706017	LBR	36.071	8.873	14-aug	Alang74	PRR		NO	Levant Marit. Intern. S.A., GRC (98) --> V Ships Ltd, SWI (01)	Switzerland

Vessel	IMO	Flag State	Dwt	Lwt	Arriv.	Plot	Type	Built	Inventory	ship owner company	owner state
MSC ORNELLA	6820684	PAN		5.957	15-jan	Alang75	GGC		NO	Mediter. Shipping Co. S.A., SW (94)	Switzerland
MSC RITA	7334450	PAN		23.686	4-mrt	Alang75	UCC	1974	NO	Chin. Marit. Transport Ltd, TWN (92) -->Mediterranean Shipping Co. S.A., SWI (94)	Taiwan & Switzerland
IBN AL HAITHAM	7362263	BHS		7.470	2-okt	Alang77	GGC	1976	NO	United Arab Shipping Co, KWT (77)	Kuwait
HEREFORD	7500839	BHS		11.187	2-okt	Alang78	URR	1978	NO	Silver Line Ltd UK (96) -->V Ships Commercial Ltd, UK (01)	UK
SEA STONE -->Seasafe SA CHL (01)	7044158 Chile	VCT	49.487	15.710	5-jun	Alang78	LPG	1971	NO	Stone Inv. & Trad. SA CHL (01)	
AN-NOORU	7375325	PAN		7.637	14-aug	Alang82	PRR	1975	NO	Silver Carriers SA GRC (92) -->Holbud Shipman. Ltd UK (95)	Greece & UK
MARINER - A	7377878	MLT	37.243	7.238	14-aug	Alang83	TCR	1975	NO	Ancora Investment Trust GRC	Greece
ALIANZA G1	7377878	PAN		11.056	25-sep	Alang84	PRR	1980	NO	Oceanmarine SA ARG (97)	Argentina
BALAKLAvA	6828545	CMB		2.791	25-okt	Alang84	FFF	1969	NO	Riga Trawling & Refrigeration, LAT (95) -->Lemingsway Trad. Co BHS (00)	Lativia & Bahamas
MIGHTY	7523063	PAN	80.055		?Okt	Alang86	PRR	1977	NO	Cardiff Marine Inc, GRC (96) -->SNP Shipping Serv., IND (00)	Greece & India
HERMES – V.	6705080	PAN	1.183	3.978	26-okt	Alang87	MPR	1966	NO	European Seaways Inc., GRC (94) -->Access Ferries SA GRC (99)	Greece
FENERBAHCE – I	7392426	TUR		7.385	14-jul	Alang88	TCR	1976	NO	Cardiff Marine Inc, GRC (96) -->Besiktas Denozcilik TUR (99)	Turkey
EXPRESS ERME	6813320	VTC	592	3.357	10-okt	Alang91	PRR	1968	NO	Agapitos Express Ferries, GRC (98) -->Hellas Flying Dolphins S.A., GRC (00)	Greece
EKTOR-I	7356460	CYP		8.293	15-okt	Alang93	TPD	1975	NO	Esso S.A.P.A., ARG (86) -->Ionia Manag. SA, GRC (95)	Argentina & Greece
EGYPT GAS	6810794	PAN	23.300		?	Alang94	LPG	1968	NO	Camaro Shipping SA, UAE (97) -->Galaxy Marit. Enterpr. SA, GRC (98) -->Benelux Overseas Inc., GRC (03)	Greece
VALY		CYP		5.308	16-aug	Alang103	GGC	1978	NO	Marreina, GRC (93) ->AK Shipping & Trading GRC (97)	Greece
THE BIG RED BOAT II	6502024	BHS	7.680	24.889	13-jul	Alang105	MPR	1961	NO	Premier Cruise Lines, USA (97) -->Intern. Shipping Partn. Inc USA (00) -->DLJ Capital Corp USA (01)	USA
KARAM ALLAH	6513762	SYR		1.195	1-okt	Alang108	GGC	1965	NO	Mohamed Ali Bisso Shipping Company S.A., SYR (96)	Syria
MANSOURA-I	7223510	EGY		1.590	24-okt	Alang111	GGC	1972	NO	Kawar Red Sea Nav. Co., EGY (86) -->Red Sea Navigation Co, EGY (97)	Egypt
POLYXENI I	7126970	GRC	25.228	6.500	27-aug	Alang111	TCR	1972	NO	Navitankers Mgmt Inc, GRC (93) -->Aegean Shipping SA GRC (95)	Greece
ZOE	7377995	PAN		8.205	19-jul	Alang114	TAC	1975	NO	Golden Carriers Shipping S.A., GRC (00) -->Azure Service Inc GRC (02)	Greece
GALLANT – II	7610256	PAN	18.972	5.980	27-sep	Alang120	GGC	1976	NO	Good Faith Shipping GRC (84)	Greece
REA – II	7944229	NKR	14.930	6.114	4-jul	Alang123	GGC	1978	NO	Poseidon, Naviera Shipping, CUB (00) -->Siglo XXI, Naviera, ESP (02)	Cuba & ESP
HERO	7347172	EGY	8.230	3.600	26-sep	Alang124	GGC	1977	NO	National Marine Svcs Egypt, (95)	Egypt
FIGHTER	7370832	HND		19.640	24-apr	Alang127	TCR	1974	NO	Universe Maritime Ltd, GRC (88)	Greece
ONIDA	7921485	HND		16.047	19-jun	Alang128	TCR	1980	NO	Tsakos Shipping & Trad. SA, GRC (00)	Greece
TRUST	7517155	CYP		6.958	1-sep	Alang133	PRR	1976	NO	Agency Trust Ltd, GRC (89)	Greece

Vessel	IMO	Flag State	Dwt	Lwt	Arriv.	Plot	Type	Built	Inventory	ship owner company	owner state
MICAELA DELLA GATTA	8217922	ITA		11.268	12-sep	Alang136	TPD	1984	NO	Premuda Soc.Di Nav., ITA (96) -->Deiulemar, ITA (99) -->Iuliano & Lembo Della Gatta, ITA (99)	Italia
WS CHALLANGER	7390571		35.662	9.195	13-sep	Alang138	TNA	1976	NO	Cardiff Marine Inc, GRC (96) -->Warm Seas Developm. UAE (98)	Greece & UAE
LOREN	7615153	PAN		6.725	20-aug	Alang140	PRR	1977	NO	Kollintzas Marine Co SA, GRC (94)	Greece
LEGASPI	7913983	GRC		15.211	2-sep	Alang154	TCR	1980	NO	Teekay Shipping Ltd, BHS (89) -->Tsakos Shipping & Trad. GRC (97)	Bahamas & Greece
AMERICA	7389687	USA		7.468	9-aug	Alang158	TPD	1976	NO	Chronos Shipping Co GRC (91)	Greece
ISDEMIR	7522411	TUR		9.595	4-jun	Alang158	PRR	1976	NO	DB Turkish Cargo Lines, TUR -->Deniz Nakliyati TAS, TUR (98)	Turkey
MARA	7505310	SKR	133.752	25.990	5-jul	Alng V 1	TCR	1981	NO	Petroleo Brasileiro S.A. - PETROBRAS & DETRAN, BRA (81)	Brazilia
EAGLE	5106902	USA NKR	51.052	14.309	6-mei	Alng V 2	TCR	1960	NO	Exxon Shpg.Co., USA (89) --> El Paso Marine Co USA (01)	USA
HELLESPONT GRAND	7373432	MHL		59.448	12-sep	Alng V 4	TCR	1976	NO	Papachristidis Ltd UK (90) --> Hellespont Steamship GRC (96)	UK & Greece
CORELLI	7379101	MLT		7.124	10-aug	Alng V 5	TPD	1975	NO	Exxon Company Intern., USA (85) --> Gemarfin SA SWI (95)	USA & Switzerland
LIN	8011536	LIB		12.538	12-sep	Alng V 7	TCR	1981	NO	Arrow Co Ltd, GRC (01) -> Sea Oil Shipping Ltd, USA (03) -> C.H. Sorensen Manag.AS, NOR (03)	Greece & USA & Norway

MUMBAI SHIPBREAKING (India)

Vessel	IMO	Flag State	Dwt	Lwt	Arriv.	Plot	Type	Built	Inventory	ship owner company	owner state
RASE		CRT	5.973	2.281	26-sep	Mumb1			NO	Losinjska, CRT	Croatia
SOFIA I		--	--	1.487	6-nov	Mumb2			NO	--	--
NALFIATRADER		--	--	1.900	9-nov	Mumb4			NO	--	--
EKTOR		VCT	1.979	1.223	7-nov	Mumb6			NO	Lucky Maritime Enterprises, GRC	Greece
GOA		VCT	16.910	5.218	13-sep	Mumb7			NO	Marwan Shipping & Trading, UAE	UAE
ZNAMYA TRUDA		UKR	2.100	3.332	18-aug	Mumb8			NO	Kerchrybprom, UKR	Ukraïne
ST. ANGELO		MLT	4.960	5.376	28-aug	Mumb9			NO	Valiant Shipping, GRC	Greece
OUSTO	7326269	PAN	39.973	7.568	18-jul	Mumb10	TCR	1973	NO	Keystone Shipping, USA	USA
SEA AUCKLAND	7521510	CYP	17.346	6.655	4-sep	MumbPw1	GGC	1980	NO	Pacific & Atlantic Corp., GRC	Greece
CAPTAIN AHMED		CMB	3.950	4.991	10-okt	MumbPw2			NO	Al Furat Shipping, CMB	Cambodia
IRAN SALAM		IRN	12.152	5.253	28-jun	MumbPw3			NO	Islamic Republic of Iran, IRN	Iran
GULF IX		MHL	6.446	2.689	16-okt	MumbPw4			NO	Five Seas, UAE	UAE
OBS SUDHIN		--	--	2.930	4-nov	MumbPw5			NO	--	--
ANDRIO		GRG	7.439	2.951	27-sep	MumbPw6			NO	Athenian Bulkers S.A., GRC	Greece
GULF V		MHL	3.270	1.674	7-aug	MumbPw7			NO	Remzani Sea Transport, QTR	Quatar

CHITTAGONG SHIPBREAKING (Bangladesh)

Vessel	IMO	Flag State	Dwt	Lwt	Arriv.	Plot	Type	Built	Inventory	ship owner company	owner state
PRIMAVERA		PAN	20.327		11-nov	Bangl	GGC	1977	NO	Franser Shipping, GRC	Greece
BLUE SEA		PRK	25.471		11-nov	Bangl	BBU	1977	NO	Mehmet Kaptanoglu Shipping	Turkey
ATARAXIA		SKR	21.289		11-nov	Bangl	BBU	1982	NO	Samsun Corporation, SKR	South Korea
OCEAN BREEZE		VCT	7.005		8-nov	Bangl	MPR	1955	NO	Jupiter Shipmanagement, IND	India
PRINCESS PIA		PAN	55.275		3-nov	Bangl	TCR	1979	NO	Ravenscroft Shipping, USA	USA
MACLER		LBR	31.275		3-nov	Bangl	TPD	1974	NO	Delfi S.A., GRC -->B+H Equimar, SGP	Greece & Singapore
HELLESPONT EMB.		MHL	413.015		26-okt	Bangl	TCR	1976	NO	Papachristidis, UK	UK
ASPILOS II		MLT	117.248		16-okt	Bangl	TCR	1976	NO	Polembros Shipping,GRC	Greece
PAVLO NERUDA		CYP	40.030		15-okt	Bangl	TPD	1975	NO	Latvian Shipping, Latvia	Latvia
OLYMPIC CHAMP		VCT	6.211		13-okt	Bangl	TPD	1977	NO	Olympic Shipping, UAE	UAE
GERANI		MLT	87.435		13-okt	Bangl	TCR	1980	NO	Avin International, GRC	Greece
NAVIGATOR		LBR	64.900		11-okt	Bangl	TPD	1978	NO	Polembros Shipping, GRC	Greece
BARONESS		SGP	81.957		11-okt	Bangl	TCR	1980	NO	WT Ships, SGP	Singapore
MATE ZALKA		LBR	40.030		10-okt	Bangl	TPD	1976	NO	Latvian Shipping, Latvia	Latvia
OCEAN LEO		SGP	89.836		28-sep	Bangl	TCR	1976	NO	Hin Leong Marine Intern., SGP	Singapore
OCEAN AMBER		SGP	32.230		28-sep	Bangl	TPD	1975	NO	Hin Leong Marine Intern., SGP	Singapore
TUAPSE		RUS	23.876		25-sep	Bangl	TPD	1979	NO	Novorossiysk Shipping Co., RUS	Russia
SWANSEA		LBR	271.967		13-sep	Bangl	TCR	1981	NO	European Navigation, GRC	Greece
TIAN SAN		SGP	357.128		4-sep	Bangl	TCR	1976	NO	Hin Leong Marine Intern., SGP	Singapore
FOUNDER M.		MHL	273.856		4-sep	Bangl	TCR	1976	NO	Barclay Shipping, GRC	Greece
SANTA YNEZ		VUT	52.254		20-aug	Bangl	OSS	1963	NO	--	
MILTIADIS I		MHL	155.250		6-aug	Bangl	TCR	1976	NO	Barclay Shipping, GRC	Greece
WIND II			57.733		1-aug	Bangl	TCR	1980	NO	Avin International, GRC	Greece

ANALYSIS OF THE DATA:

1. Amount of ships	In Alang	in Mumbai	In Chittagong
° Ships on the beach	73	15	23
° Remnants of ships	34	?	?
TOTAL/location	107	15	23
		TOTAL	145

More information:

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Greenpeace has put 50 ships under the spotlight. Vessels that are likely to be scrapped in the next five years. Shipspotters and people working in the shipping industry can help to spot these ships and identify other ships that are in danger of sailing towards the beaches of Asia without being decontaminated first. Visit the special website:

www.greenpeaceweb.org/shipbreak