Michael Galley

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Michael Galley
Law Research Centre
Southampton Solent University
Southampton
Hampshire
United Kingdom

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To the shipbreakers..

We shall not flag nor fail.
We shall go on to the end.
We shall scrap them on the beaches
We shall scrap them at the ocean's edge,
and on the intertidal zones.
We shall scrap them through fires and
explosions
We shall strip them of PCBs and asbestos,
We shall break them into pieces.
We shall never surrender.

(W.S.C. – almost)

Preface

Although the actual numbers may vary between sources, each year more than 700 ocean-going ships come to the end of their working lives and are scrapped, mainly on the beaches of the Indian sub-continent. Whilst the relative rankings of a dominant breaking state may also vary over time, the factors that many shipbreaking sites today have in common are the labour-intensive, largely unregulated, and highly polluting ways in which the ships are demolished, and the extensive, cumulative damage to both human health and the environment that has arisen from the process. Ships contain a wide range of hazardous materials, either incorporated into their structures or generated as operational wastes during their voyages. Introduced because of their inherent operational properties and also to comply with a range of international regulations, these hazards can remain largely inert until they are disturbed.

Many of the ships now being scrapped were built before the use of some of the hazardous materials employed in their construction was banned. The demolition process opens up and spreads these hazards around the thousands of workers involved in the breaking operation and around the environment in which they live and work. Until recently, most people were largely unaware of the pollution that was taking place. Shipowners (*i.e.* those disposing of vessels that they previously operated commercially) did little or nothing to pre-clean some of the hazards from their surplus ships before sending them to the breakers. As regulations became progressively enforced in one country, the shipbreaking industry would simply migrate to another, where restrictions were more relaxed, hazardous waste tending to follow the lines of least resistance. In recent years, this situation has been successfully brought to international attention and the emphasis has moved from *waste on ships* to *ships as waste*.[1]

The migration of the industry to developing states was characterised by Rousmaniere as one whereby occupational health risks moved from the developed states with mature infrastructures and appropriate capital and regulations to the

[1] Jones (2007).

largely rural areas of developing countries where such provisions are relatively weak. Furthermore, attempts to improve the economic, safety and social provisions of those engaged in shipbreaking are hampered by the fact that similar conditions may operate for most other sectors in these states.[2]

The risks and hazards involved in the demolition of ships are manifold, and include fires and explosions, falling from heights, being crushed by falling objects, etc. The focus here, however, is on the dangers arising from the release and handling of hazardous materials found onboard ships and the damage that they cause to the health of both humans and the environment. The aim of this work, which was originally the subject of a PhD research thesis, is to examine and to apportion liabilities of shipowners and shipbreakers for the safe removal of these hazardous materials from end-of-life ships under any relevant legal instruments. In addressing the subject, it considers a number of objectives, which relate to the various chapters beginning with a review of the history, locations and processes of the shipbreaking industry (Chap. 1). It follows with the role and mechanics of international law, especially with regard to dispute resolution, national sovereignty and the role played by Non-Government Organizations (NGOs) and the International Maritime Organization (IMO) in the formulation of law, and the extent to which existing national and international legislation has to date impacted upon the operation of the major shipbreaking industries (Chap. 2); particular attention is paid to the handling and transboundary movement of hazardous waste, including the contested applicability of the *Basel Convention* to end-of-life ships. Next, the extent applicability and application of existing legal instruments are examined from an international, regional (European) and national viewpoint (Chap. 3). The question of ship registration, particularly with regard to certain 'open' registers, is examined to determine the extent to which these might aid—and in a number of instances, positively encourage—anonymity of ownership and hence of liability (Chap. 4). The role of NGOs and the prompting of judgements from various national courts with regard to the application of international law are examined in a series of case studies where attempts (often successful) have been made by shipowners or shipbreakers to circumvent existing legal provisions (Chap. 5). Finally, it looks at the provisions of the new *Hong Kong Convention*[3] and certain perceived lacunae (Chap. 6), and at a number of other initiatives, both legal and commercial that have arisen to either promote the coming into force of the Convention or to operate independently, but in parallel with its provisions (Chap. 7). The extent to which these issues have been considered is summarised in the various sections of the final chapter (Chap. 8).

Since many legal instruments are based upon the legal definitions contained therein, it is appropriate that such a format be the basis for this book. Consequently, a number of personal definitions of the various aspects of liability, of shipbreaking

[2] Rousmaniere (2007).

[3] *The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships 2009*.

and of shipowners have been employed to express and define the viewpoint employed—not to indicate any specific bias (particularly, for example, in the use of 'shipbreaking'), but to define the rationale behind the terms and to maintain a consistency of approach.

In examining the question of liability for the final disposal of hazardous materials found onboard end-of-life ships, it is therefore important to define what is meant by the term 'liability' within the scope of this work. The question of **liability** is approached not in the more usual legalist manner of public liability and tort, nor in the financial sense of a charge that appears on a balance sheet (although ultimately both may be elements of the mischief occurring on the shipbreaking beaches), but in the somewhat broader realm of wider obligations, of moral or ethical liability, legal liability and practical liability.

In terms of shipbreaking, the **moral liability** of both shipowners and shipbreakers lies in their responsibilities, both singularly and jointly, to minimise the adverse impacts of the hazardous substances contained either within the structure or as operational wastes or cargo residues in the vessels that they consecutively own. In addition, shipbreakers have the obligation to provide a safe working environment for those employed on the actual demolition, and this may be extended back to shipowners (of however long a duration) to work with those yards that do operate in a safe manner and to avoid those with dubious reputations. The impacts of unsatisfactory operations fall upon the workers dismantling ships, especially those working on the beaches, upon the surrounding population, and the surrounding ecology. Medical care at the beaches has usually been basic, and compensation for injured workers minimal.

The timing and method of removal of hazardous material substances have been the subject of ongoing debate, largely initiated and developed by various NGOs. To date, both owners and breakers have generally been of the common opinion that the question of pre-cleaning ships prior to demolition basically be left unaddressed, the owners thereby maximising the financial gains from the sale of their ships, and the breakers similarly benefitting from the degree to which they choose to adopt (or not to adopt) a precautionary manner in their procedures.

Attempts to engage and encourage organizations to face this moral liability have been the focus of the NGOs' campaigning activities, and in this they have had some successes. As well as presenting their arguments at many relevant meetings of the IMO and shipping groups etc., Greenpeace and other members of the NGO Shipbreaking Platform have issued papers and critiques on many of the proposals of these organisations. An early target of the attentions of Greenpeace, the P&O Nedlloyd (subsequently Maersk) organisation subsequently formulated a policy of close association with selected Chinese breakers and supervised the demolition of its ships, and thereby was deemed to be an early model of ethical behaviour. Results within the actual shipbreaking industry have been less positive, the response to adverse publicity of the conditions prevailing being the classification of shipbreaking sites as restricted areas by state authorities. In an attempt to evade the liabilities that their ships represent, owners (and especially those of one-ship companies) have frequently sought to cover their ownership, not only through

frequent changes of names and flags of the ships, but also through their own anonymity offered by various open registers; such actions may be said to aid the proliferation of sub-standard shipping.

Legal liability is addressed in this instance to the degree to which existing laws relating to shipbreaking operations are: firstly, formulated and directed to the industry; secondly, are observed by all parties to the shipbreaking process; and thirdly, are enforced in a manner that observes both the letter and the spirit of the legal instruments. The observance of legal provisions is incumbent upon all parties. Legal liability, in this context, is aimed at addressing the mischiefs existing and as such, often emanates directly from the moral liability towards the subject.

Some efforts have been made to reduce the impact of hazardous materials by banning their use under international laws during ship construction, but ships currently arriving at the breakers may still contain many materials employed before their prohibition came into force, and indeed banned materials are still finding their way aboard ships in the form of spares that may be sourced worldwide.

The question of the applicability of the *Basel Convention*[4] to shipbreaking has not only been one that has until recently been the subject of quite intense polarization of opinion, but has also been one that is still easily circumvented by shipowners, who find little difficulty in selling or reflagging their end-of-life ships just prior to final disposal, although here it is also important to recognise the difficulty in finding states included within the scope of *Basel* that are able to accommodate some of the larger vessels. Legal liability applies also to the processes and procedures as applied by the breakers, who so far have appeared to have paid little concern to the health and safety of the work force or to the environment. Similarly, the observance of legal obligations by national and local state authorities has, at times, been both inconsistent and highly subjective on the question of acceptance of various vessels arriving for demolition, and of observing the decisions of domestic apex courts on national standards defined for shipbreaking. The small but growing number of national courts' judgements are in agreement that pre-cleaning is the responsibility of the owner of the vessel.[5]

The moral and legal liabilities are, however, themselves subject to **practical liabilities**; what might be done, or what should be done, is limited by physical realities of the situation prevailing. A primary example of this, and a problem highlighted by those opposing current practices, is the physical problem of fully pre-cleaning or decontaminating a vessel of its inherent hazards prior to its departure to the breaker's yard. Whilst such an exercise might significantly reduce the hazard levels for those actually undertaking the demolition, it is most likely to leave a ship in a state that is deemed unseaworthy and able to progress to the breakers

[4] *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal* 1989.

[5] See Chap. 5, Case Studies. Where, due to the anonymity provisions of various flag states, the identification of the beneficial owner has been impossible to determine, the exporting state itself has sometimes had to bear the cost of pre-cleaning or demolition, *e.g.* the *Sandrien* and *Sea Beirut*.

under its own power, without resorting to long distance towage—a task that is not only expensive and risky, but also highly problematic in that the required fleet of ocean-going tugs no longer exists. In practice, pre-cleaning may actually be regarded as the initial stage of demolition.

From a shipbreaker's point of view, and especially in the sub-continent, the high cost of money necessary to buy ships results in a pressure to complete the demolition in as fast, yet as cheap a manner as possible, using labour that appears to be easily replaced. Many of these shipbreaking operations are operated not as public companies but as private family businesses; hence shareholder considerations are not of significance, yet the value of money may limit the value placed upon considerations of health and safety. In fact this (subjective) responsibility is answerable—and is being answered—in the form of a reduction in prices received by owners from certain yards that do practise more responsible methods, a penalty that a small but growing number of shipowners appear willing to accept in the name of public image. In addition, other practical considerations, such as the limited number of high tides available for beaching, the imposition of various import and sales taxes and customs duties, demands from local construction industries for the products of shipbreaking, together with monsoons, religious festivals and the intense competition from other operators (both domestic and international), all serve to impose a practical liability upon shipbreakers to perform their activities in the quickest and easiest (and hence cheapest) manner possible.

Added to this, the fluctuations in legal judgements from domestic courts place demands upon shipbreakers that appear to be at times unpredictable, and which can slow, halt or even close shipbreaking yards—a prime example of this concerned the closure of the shipbreaking yards of Bangladesh over a period of 2 years, whilst the shipbreakers, the NGOs, the courts and the government ministries all fought for control of, and revisions to, the industry—see Chap. 3.

At this juncture, it is necessary to consider nomenclature. Traditionally known as '**shipbreaking**', the industry is now referred to by a range of names, which have attracted both political and interpretive associations to their individual use. 'Shipbreaking' remains the term in use with the International Labour Organization (ILO), and with environmental NGOs such as Greenpeace and the Basel Action Network (BAN) and carries with it, perhaps, the image of a basic heavy and traditional industry. The term is also preserved in such titles as the Pakistan Ship-Breakers Association, the Bangladesh Shipbreakers' Association and the Iron Steel Scrap and Shipbreakers Association of India. 'Ship dismantling' has been the preferred—perhaps more neutral—term of the Basel Convention (BC), and by the European Commission (EC), whilst 'scrapping' has currency with shipowners and with the Joint Working Group (JWG) at the International Maritime Organization (IMO), consisting of the IMO, the ILO, and the Basel Convention (BC). 'Demolition' or 'demo' is often used by brokers, whilst 'disposals' often appears in shipping statistics, both words perhaps indicating something that is little more than another commodity in the world of financial trading. 'Ship recycling', however, is the term that has become of more widespread use of late and is the handle now favoured by the IMO, the shipping industry in general and, increasingly, by the shipbreakers

themselves. The term has also been adopted by the EC in its new *Ship Recycling Regulation* (*SRR*). Its use is intended to project, albeit in somewhat anodyne terms, the 'greener' message that ships-for-disposal are transformed into products that have either a direct or indirect further and useful life in other forms or applications, rather than being merely the subject of a highly dangerous and polluting industry that they also are.

As will be elaborated below, not only does the scrap metal form a very valuable resource for the shipbreaking nations involved, but a high proportion of a ship's equipment finds its way back into reuse in shore-based industries and commercial and domestic addresses at a level that is not experienced in the Western nations. This enhanced level of reuse, in a sense, places the activity even higher up the European waste hierarchy than mere recycling.

The overall process may be divided into two distinct phases—the actual scrapping of the ships and the recycling of the resultant scrap. The scrap metal is transported from the breaking sites to rolling mills for recycling, often for conversion into low grade reinforcing rods (rebar) for use by the local construction industries. Here we are not concerned with the latter phase, but purely with the breaking or scrapping operation; for this reason, the term 'shipbreaking' will be used throughout in preference to 'ship recycling'. For that same reason, the new *Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships* 2009 (*HKC*) might also be more appropriately named the *Hong Kong International Convention for the Safe Breaking* (*or Scrapping*) *of Ship*s, since it also is restricted purely to the process of demolition and does not cover the actual recycling process—which takes place beyond the breakers' sites. Neither does the proposed European *SRR*,[6] whose definition of recycling specifically excludes the actual recycling operation. The legalities of definitions aside, however, the term 'recycling' was defended by an IMO staff member as one that promotes '*a constructive and productive activity*'.[7]

The definition of '**shipowner**' is a somewhat more flexible issue, at least in the context here. In the main, it will be used to define the last owner of a ship who employed it for traditional trading purposes and who, therefore, holds all responsibilities for the ship, its contents and its disposal. As a ship may pass through the hands of several owners, including cash buyers, just prior to scrapping, so too should the associated liabilities, although this has often been questioned in terms of those who may exercise ownership for a matter of days or even hours. The new *HKC* and the EU's *SRR* both recognise these short-term owners as owners in the fullest sense.

In terms of national legislation, especially of the shipbreaking states, the definition of ownership may also be taken to mean or include the final buyer who

[6] Proposal for a Council Decision requiring member States to ratify or to accede to the Hong Kong International Convention for the safe and environmentally sound recycling of ships, 2009, in the interests of the European Union European Commission 2012.

[7] Discussions with IMO representative, 1 December 2009.

procures a vessel for demolition, *i.e*. the operator of a shipbreaking yard or plot. The distinction is important, especially when considering the liability for the safe removal of hazardous materials found on board; in all instances, that liability lies with the 'owner,' but whether this is the ultimate owner—the breaker—or any that comes before, appears to be problematic. Traditionally, the responsibility for pre-cleaning (prior to demolition) has been laid at the feet of what might be termed the 'exporter' of the ship not only by the campaigning NGOs, but also by a number of judgements from national courts—see Chap. 5. However, current practices, with the exception of a small but growing number of shipowners, appears to leave all owners (at whatever stage in a ship's disposal) in agreement that it is both practical and economically advantageous for the matter of cleaning prior to disposal to be left with the breaker, thereby obviating costs for the exporter, and lowering the price for the breaker.

Attempts to introduce voluntary standards of operation on the breaking beaches have so far proved to be ineffective, since the voluntary codes devised are rarely accompanied by monitoring, enforcement and penalties. International and regional legal instruments on the transhipment of hazardous waste have been strongly resisted by many groups, including ship owners and the owners of shipbreaking operations, as being inapplicable, and are easily circumvented with regard to their applicability to ships-for-scrap. The *HKC* is an attempt by the IMO to bring order, control and improvements to the breaking industry, but although its measures are mandatory, at least upon those states that ratify it, it too is based upon guidelines that are open to national interpretation, and specific sanctions do not appear to be included.

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1974: International Convention on the safety of life at sea (SOLAS)
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Michael Galley

Abbreviations

ABP	Associated British Ports
ABS	American Bureau of Shipping classification society
ACM	Asbestos-containing material
AERB	Atomic Energy Regulatory Board (India)
ARSIWA	Articles of Responsibility for Internationally Wrongful Acts 2001 (ILC)
ASSBY	Alang and Sosiya Shipbreaking Yard
BAN	Basel Action Network
BARC	Bhabha Atomic Research Center (India)
BC	Basel Convention
BELA	Bangladesh Environmental Lawyers Association
BIMCO	Baltic and International Maritime Council. Trade organization representing ship owners, brokers, agents and others
BSBA	Bangladesh Ship Breakers' Association
CA	Competent Authority
CBR	Central Board of Revenue (Pakistan)
CETP	Combined effluent treatment plant
CFC	Chloroflurocarbons
COP	Conference of Parties
CPA	Chittagong Port Authority (Bangladesh)
DASR	Document of Authorization to conduct Ship Recycling
DEFRA	Department for Environmental and Rural Affairs (UK)
DEMOLISHCON	BIMCO's standard contract for the sale of a vessel for scrapping
DFDS	Det Forenede Dampskibs-Selskab (Danish)—The United Steamship Company
DfT	Department for Transport
DNV	Det Norske Veritas
DWT	Deadweight tonnage—the carrying capacity of a ship when fully loaded. Includes cargo, bunkers, water (boilers, ballast and potable), stores, passengers and crew

EA	Environment Agency (UK)
EC	European Community
ECHR	European Court of Human Rights
ECJ	European Court of Justice
ECOSOC	UN Economic and Social Council
EEZ	Economic Exclusion Zone
EMSA	European Maritime Safety Agency
EPA	US Environmental Protection Agency
FIDH	International Federation of Human Rights
FNV	Federati Nederlandse Vakbeveging - a federation of Netherland Trades Union
GATT	General Agreement on Tariffs and Trade
GEPIL	Gujarat Enviro Protection and Infrastructure Ltd.
GL	Germanischer Lloyd classification society
GMB	Gujarat Maritime Board (India)
GMS	Global Marketing Systems (cash buyer)
GRI	Global Recycling Initiatives
GSL	Global Shipping LLC
GSSDF	Green and safe ship dismantling facility
GT	Gross tonnage. Internal capacity of a ship measured in units of 100 cu. ft.
GPCB	Gujarat Pollution Control Board (India)
HPC	High Power Committee (India)
HSD	Hariyana Ship Demolitions Pvt. (India)
IA	Intervention Application (India)
IBC	International Business Corporation
ICAM	Integrated Coastal Area Management
ICZM	Integrated Coastal Zone Management (EU)
IGO	Intergovernmental Organization
ICIHM	International Certificate on Inventory of Hazardous Materials
IHM	Inventory of Hazardous Materials
ILC	International Law Commission (UN)
ILO	International Labour Organization (UN)
IMF	International Monetary Fund
IMO	International Maritime Organization (UN)
INTERCARGO	International Association of Dry Cargo Ship Owners
INTERTANKO	International Association of Independent Tanker Owners and Operators of Oil and Chemical Tankers
IRIN	Integrated Regional Networks (UN)
IRRC	International Ready for Recycling Certificate
ISRA	International Ship Recycling Association
ITF	International Transport Workers Federation
ITOPF	International Tanker Owners Pollution Federation Ltd.
JWG	Joint Working Group