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**PROMOTION AND PROTECTION OF ALL HUMAN RIGHTS, CIVIL,
POLITICAL, ECONOMIC, SOCIAL AND CULTURAL RIGHTS,
INCLUDING THE RIGHT TO DEVELOPMENT**

**Report of the Special Rapporteur on the adverse effects of the movement
and dumping of toxic and dangerous products and wastes on the
enjoyment of human rights, Okechukwu Ibeanu***

* Late submission.

Summary

Shipbreaking is an important industry for developing countries, especially in South Asia. It represents an important source of raw material supply and provides jobs to tens of thousands of persons. The practice is inherently sustainable, given that over 95 per cent of a ship can be recycled: steel is rerolled and used in construction; machinery and equipment are reused; and oils and fuels are reused or recycled. While in principle the recycling of end-of-life vessels constitutes the best option for ships that have reached the end of their operating life, the extremely poor working practices and environmental conditions prevailing in most shipbreaking yards continue to be the source of widespread concern in the international community.

Every year, about 600 end-of-life ships containing large amounts of toxic and hazardous substances and materials, including asbestos, polychlorinated biphenyls, heavy metals, oils and fuels, are sent to the beaches of South Asia, where they are dismantled without concrete covering or any containment other than the hull of the ship itself. This method of ship dismantling, commonly referred to as “beaching”, generates high levels of pollution of coastal soil, air, sea and groundwater resources, and adversely affects local communities, which often rely on agriculture and fishing for their subsistence.

Working in shipbreaking yards is a dirty and dangerous job. Every year, a great number of workers die or are seriously injured because of work-related accidents or occupational diseases related to long-term exposure to hazardous materials present on end-of-life ships. Workers do not usually receive any information or safety training. They live in makeshift facilities which often lack basic minimum requirements such as sanitation, electricity and even drinking water. There is a general lack of medical facilities and social protection, and injured workers or their relatives hardly receive any compensation for work-related accidents resulting in fatal injuries or permanent disabilities.

In the last decade or so, several organizations and mechanisms have contributed to developing an international regulatory framework aimed at addressing these serious concerns. These efforts have culminated in the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, adopted on 15 May 2009 under the auspices of the International Maritime Organization (IMO).

The Special Rapporteur welcomes the adoption of this new Convention, which represents a positive step towards creating an enforceable regulatory regime aimed at ensuring that end-of-life ships do not pose unnecessary risks to human health or the environment when scrapped. Nevertheless, he considers that the new Convention alone is not sufficient to bring about significant improvements in the working practices prevailing in shipbreaking yards or in the elimination of the serious environmental pollution that shipbreaking yards generate. Therefore, the Special Rapporteur calls on all relevant stakeholders, including shipbreaking States, flag States, the shipbreaking industry and international organizations, to consider adopting and implementing additional measures to address negative impacts of shipbreaking that are not covered by the new Convention.

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I. INTRODUCTION

1. The present report is submitted in accordance with Human Rights Council resolution 9/1, in which the Council extended the mandate of the Special Rapporteur for a further period of three years, and strengthened it so as to cover all kinds of movement and dumping of toxic and dangerous products and wastes. On the basis of resolution 9/1, the Special Rapporteur now has the task to investigate the adverse effects that both transboundary and national movements and the dumping of hazardous products and wastes have on the enjoyment of human rights. Furthermore, the resolution requests the Rapporteur to study the potential adverse effects of all hazardous products and wastes, whether illicit or not.

2. The present report consists of two substantive parts: the first part (sect. II) contains an update on the activities recently undertaken by the Special Rapporteur, while the second part focuses on the adverse effects of shipbreaking on the enjoyment of human rights by the countless individuals who work in the shipbreaking yards or live in their close proximity.¹ This is not the first time the mandate deals with this issue: the previous Special Rapporteur, Ms. Fatma-Zohra Ouachi-Vesely, had the opportunity to visit ship-dismantling facilities in Aliaga, Turkey, and made several recommendations on how to carry out activities in a way that is respectful of human rights and the environment (see E/CN.4/2005/44).

3. In choosing this topic, the Special Rapporteur has considered a number of factors, in accordance with the methodology outlined in his first report to the Commission on Human Rights (E/CN.4/2005/45, paras. 18-21). These factors include: the scale and seriousness of the phenomenon; the lack of an adequate regulatory framework; and the need to consider the phenomenon from a human rights perspective.

4. The second substantive part of the present report (sect. III) consists of four subsections. Subsection A provides an overview of the ship dismantling process and describes the main hazards associated with the current way of dismantling ships. Subsection B analyses the adverse effects that shipbreaking activities have on the human rights of individuals who work in the yards or live in their close proximity. Subsection C considers the existing regulatory framework that has been developed to address the growing concerns about the poor working practices and adverse environmental impact of the shipbreaking industry. It focuses in particular on the newly adopted international Convention on ship recycling, with a view to assessing the extent to which it can contribute to the solution of the main problems associated with the current methods of ship dismantling. Finally, subsection D contains conclusions and recommendations focusing on the additional measures that relevant stakeholders should consider adopting and implementing to bring about real and tangible improvements in the working practices prevailing in the shipbreaking industry and in the environmentally sound management of the waste this industry generates.

¹ Paragraph 5 of resolution 9/1 invites the Special Rapporteur to include in his report to the Council comprehensive information on “the human rights implications of waste-recycling programmes ... and their new trends, including ... the dismantling of ships”, and to address “any gaps in the effectiveness of the international regulatory mechanisms” that allow the movement and dumping of toxic and dangerous products and wastes.

5. The Special Rapporteur would like to thank the International Labour Organization, the International Maritime Organization, the Secretariat of the Basel Convention and the NGO Platform on Shipbreaking for the information and assistance they provided on the issue of ship dismantling.

II. UPDATE ON THE ACTIVITIES OF THE SPECIAL RAPPORTEUR

A. Country missions

6. The Special Rapporteur carried out country visits to Côte d'Ivoire (4-8 August 2008) and to the Netherlands (26-28 November 2008) at the invitation of the respective Governments. The objective of the two missions was to assess the human rights impact of the *Probo Koala* incident, in which the *Probo Koala*, a ship flying the Panamanian flag chartered by a Dutch transnational corporation, Trafigura, allegedly disposed of 500 tonnes of toxic wastes in Abidjan. According to official estimates, 15 persons died, 69 persons were hospitalized and more than 108,000 sought medical consultations following exposure to such wastes.

7. Due to unforeseen circumstances, the Special Rapporteur was forced to postpone his visits to India and Kyrgyzstan, scheduled for September 2008 and March 2009, respectively. He is looking forward to visiting these countries before the end of the next reporting period. Pursuant to paragraph 6 of resolution 9/1, the Special Rapporteur would like to reiterate his call on Governments which have not yet responded positively to his request for country missions to extend him an invitation.

B. Statements and interventions

8. The Special Rapporteur conveyed a statement to the Second Session of the International Conference on Chemicals Management (ICCM2), held in Geneva from 11 to 15 May 2009. In his statement, he recalled his previous involvement in the process that led to the development of a Strategic Approach to International Chemicals Management (SAICM). The Special Rapporteur noted with satisfaction that the outcome documents outlining the SAICM, and in particular the Dubai Declaration on International Chemicals Management and the Overarching Policy Strategy, expressly recognized the important contribution of sound management of chemicals to the promotion and protection of human rights, and called for a rights-based approach to international chemicals management. A human rights-based approach should expressly recognize the responsibilities of all actors involved in chemicals management to protect and promote human rights, and ensure the participation of all stakeholders in the design, implementation and monitoring of chemicals management strategies and policies affecting them.

III. ADVERSE EFFECTS OF SHIPBREAKING ON THE ENJOYMENT OF HUMAN RIGHTS

A. The shipbreaking industry

9. Shipbreaking, also referred to as ship dismantling or ship recycling, is a type of ship disposal involving the dismantling of an obsolete vessel's structure for scrapping or disposal. Conducted at a pier, a dry dock, a dismantling slip or a beach, it includes a wide range of activities, from removing all gears and equipment to cutting down the ship's infrastructure.

10. If carried out in an environmentally sound and a safe manner, shipbreaking represents the best method of disposing of end-of-life vessels. The practice is inherently sustainable, given that 95 per cent of a ship can be recycled: steel is rerolled and used in construction; machinery and equipment are reused; and oils and fuels are reused or recycled. Shipbreaking also provides employment opportunities to tens of thousands of persons. It is estimated that shipbreaking yards employ directly approximately 30,000 workers worldwide, whereas between 100,000 and 200,000 persons are engaged in different businesses related to shipbreaking activities.

11. Nevertheless, there is growing concern over the conditions in which shipbreaking takes place. In spite of an increased international awareness on the issue in past years, shipbreaking continues to be one of the most hazardous occupations in the world due to the extremely poor working practices and environmental conditions prevailing in many shipbreaking yards.

1. The ship-dismantling process: an overview

12. Worldwide, around 600 end-of-life ships of 500 gross tonnage (GT) and above are broken up and recycled every year. The current economic downturn has created a notable increase in the shipbreaking business. It is foreseen that the shipbreaking industry will increase even further, given the impending phase-out of single-hulled oil tankers, which will result in thousands of ships being dismantled over the next 10 years.

13. There are three major types of ship-dismantling processes:

(a) A highly mechanized process with light manpower, which only exists in industrialized countries, with capabilities of around 1,000 tonnes/man/year;

(b) A non-mechanized process with very heavy manpower, used in South Asia, with a productivity of a few dozen tonnes/man/year;

(c) An intermediate process with limited equipment but also significant manpower, which is used in Turkey, China and in some yards in Latin America, with a productivity of a few hundred tonnes/man/year.

14. The economics of ship dismantling are primarily driven by market factors. The choice of the dismantling location is influenced in particular by the metal price a facility can offer to the shipowner or to the intermediary “cash buyer” company. This price in turn depends on the demand for recycled steel in the area concerned and on the costs of the recycling operations.

15. In the 1970s, ships were taken apart where they were built: in the dry docks of industrialized countries. From early 1980s, the high costs associated with the hazardous nature of this activity coupled with the development of stricter environmental regulations drove shipowners to look elsewhere for disposing of their vessels. Due to the availability of cheap manpower and the presence of a market for second-hand equipment and components, most end-of-life vessels are nowadays dismantled in India, Bangladesh, China and Pakistan.

According to recent figures, 96 per cent of GT ships were dismantled in these four countries in the course of 2008: 202 in India, 165 in Bangladesh, 29 in China and 16 in Pakistan.²

16. Shipbreaking in South Asia takes place on sandy beaches, a method commonly referred to as “beaching”. Thanks to the large intertidal zone areas existing on its coasts, at high tide ships are driven, usually under their own steam, onto sandy beaches and dismantled without concrete covering or any other containment other than the hull of the ship itself. Since 2004, more than 80 per cent of end-of-life vessels of 500 GT and above have been scrapped on tidal beaches in South Asia.³

17. Alang, a coastal town in the Indian state of Gujarat, is the world’s largest scrapping site for ocean-going vessels. On average, 300 ships per year are beached for dismantling at its yards. Other major shipbreaking yards are located in Kolkata, Visakhapatnam, Kochi, Goa and Mumbai. In Bangladesh, where shipbreaking started on an industrial scale in recent years, shipbreaking activities take place on the seashore from Khulna to Fauzderhat in Chittagong and near Mongla port in Khulna. In Pakistan, the shipbreaking industry is concentrated along the coasts of Gadani, west of the port city of Karachi.

18. The current situation of the ship-recycling market is characterized by fierce competition between Bangladesh, India and (to a lesser extent) Pakistan, while other competitors with greater technical capacity, such as facilities in China, Turkey and the European Union, are only able to occupy market niches for special types of ships, small vessels, or the fleet of particularly committed shipowners.

2. Toxic and dangerous substances on end-of-life ships

19. When sent for dismantling, end-of-life vessels represent one of the major streams of hazardous waste transferred from industrialized countries to the developing world. Ships, in particular those built before 1980, contain large amounts of toxic and hazardous substances and materials which may cause death or illness to human beings and produce long-term adverse effects on the natural environment. Although many of the hazardous materials used to build a ship are restricted or banned today, a ship built 20-30 years ago still contains these materials. The list of toxic and hazardous substances and materials that may be present on ships sent to recycling normally includes the following:⁴

(a) **Asbestos.** Asbestos is a highly toxic substance that has been banned or severely restricted for health or environmental reasons by several States, and is included in the list of

² EA Gibson Shipbrokers Ltd., 2008.

³ Lloyd’s Register - Fairplay, 2008.

⁴ A comprehensive list of hazardous wastes and substances that may be on board or inherent in the structure of end-of-life vessels sent for scrapping is included in appendix B to the Technical Guidelines for the Environmentally Sound Management of the Full and Partial Dismantling of Ships. See *infra*, para. 44.

hazardous industrial chemicals contained in the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (Rotterdam Convention). It was commonly used until the mid-1980s in ship construction because of its insulating and fire resistant properties. In shipbreaking yards in South Asia, workers often remove insulating materials containing asbestos with their bare hands. Prolonged exposure to asbestos dusts and fibres may lead to slow-progressing but fatal diseases, which include asbestosis, lung cancer and mesothelioma. These diseases may not become apparent until many years after exposure to asbestos;

(b) **Polychlorinated biphenyls (PCBs)**. These are persistent organic pollutants that were widely used in the ship industry for their insulating properties. They persist in the environment for long periods, gradually accumulate in the fatty tissue of living organisms, and can cause cancer, birth defects and reproductive and neurological damage. When heated, PCBs release dioxin and furan, two toxic chemicals which are unintentional by-products of most forms of combustion and are known to be carcinogens. Due to their toxicity, the production and use of PCBs is banned or severely restricted under the Stockholm Convention on Persistent Organic Pollutants, and their transboundary movement is subject to the prior informed consent procedure of the Rotterdam Convention;

(c) **Polyvinyl chloride (PVC)**. Lots of equipment and materials on ships are made of PVC. It is commonly found in cables, floor coverings and plastic devices of different types. PVC products pose serious threats to human health and the environment at every stage of their existence. PVC waste introduces hazardous chemicals into groundwater when buried, and releases dioxin emissions and carbon monoxide into the air when burned. PVC has been known to cause several serious diseases, including cancer and kidney damage, and may interfere with the reproductive and neurological systems;

(d) **Heavy metals**. Lead, mercury, arsenic or cadmium may be found in paints, coatings and electrical equipments of end-of-life vessels. These parts are often dumped or burnt on the beaches where ships are dismantled, adversely affecting both human health and the environment. Heavy metals build up inside living organisms, and exposure to large amounts of these metals may lead to severe long-term effects, including cancer and damage to the nervous, digestive, reproductive and respiratory systems. Lead has been long associated with permanent reduction of the cognitive capacity of children, even at extremely low levels of exposure;

(e) **Polycyclic aromatic hydrocarbons (PAHs)**. These are chemical compounds that are released primarily during torch cutting, after torch cutting when paints continue to smoulder, or when wastes are deliberately burned. The health hazard from PAHs comes from directly inhaling fumes during torch cutting, smouldering of paints and burning of wastes. Long-term exposure to PAHs may cause malignant tumours;

(f) **Organotins**. Organotins are nerve toxins that accumulate in the blood, liver, kidneys and brain. The most widely-used organotin, Tributyltin (TBT), has been used in anti-fouling paints since the 1970s, and is considered as one of the most toxic compounds for aquatic ecosystems. Organotin compounds can damage human health even in small doses. In South Asian shipbreaking yards, workers usually remove TBT-containing paints with no skin, eye or lung protection, which are mandatory in several countries in order to protect workers from exposure to organotin compounds;

(g) **Oil and sludge.** Ships' pipes and tanks generally contain some quantities of oil, fuel, sludge and associated residues. As a result of shipbreaking, oil residues and sludge are spilled and mixed with soil and water on the beach, poisoning marine organisms and other forms of life (birds, fish, plants, etc.). The primary danger to workers handling oil and fuel on ships is that of fire and explosions. Other exposure routes for the hazardous components in oils and fuels are inhalation and consumption of contaminated fish and water, which also threatens communities living in proximity of the yards;

(h) **Bilge water.** This is stagnant water mixed with potentially polluting liquids, which has drained to the lowest inner part of a ship's hull (called the bilge). It is often referred to as oily waste, as it is usually heavily contaminated with oil and cargo residues, in addition to other pollutants (such as inorganic salts and heavy metals). During dismantling activities, bilge water is often released to the environment directly or by lack of containment during transfer operations. When released into the environment, it may cause widespread pollution of water and coastal areas, and adversely affect human beings through the consumption of contaminated water or fish;

(i) **Ballast water.** Ballast water is fresh, brackish or marine water that has intentionally been brought on board to adjust the ship's stability. It may contain pollutants, such as residual fuel, cargo hold residues, oil and grease, hydrocarbons and heavy metals. In addition to the pollution of water and coastal areas caused by the contaminants contained in it, the discharge of ballast water may cause the introduction of alien species which threaten the ecological balance of the surrounding sea and thereby represent a direct threat to biodiversity. Ballast water can also carry viruses and bacteria that may cause epidemics.

B. The impact of shipbreaking activities

1. Human rights impact

20. By any standards, the demolition of ships is a dirty and dangerous occupation.⁵ The conditions prevailing at many shipbreaking yards in the world, and in particular in South Asian countries where ships are dismantled directly on tidal beaches, risk adversely affecting the enjoyment of several human rights, including the right to life, the right to the highest attainable standard of physical and mental health, and the right to safe and healthy working conditions.⁶

⁵ P. Bailey, *Is there a decent way to break up ships?*, ILO Discussion Paper, 2000.

⁶ There is a vast literature on the issue of working conditions existing in yards of the major shipbreaking countries. See, for example, A. Rahman and T. Ullah, *Shipbreaking: A Background Paper*, ILO, 1999; P. Bailey, *ibid.*; M. Hossain and M. Islam, *Shipbreaking Activities and its Impact on the Coastal Zone of Chittagong, Bangladesh: Towards Sustainable Management*, 2006; International Metalworkers' Federation, *Status of Shipbreaking Workers in India - A Survey*, 2004-2007; Greenpeace/FIDH (International Federation of Human Rights), *End of Life Ships - The Human Cost of Breaking Ships*, 2005; European Commission, *Impact Assessment for an EU strategy for better ship dismantling*, SEC(2008) 2847, 2008; FIDH/YPSA (Young Power in Social Action), *Child-breaking Yards - Child Labour in the Ship Recycling Industry in Bangladesh*, 2008.

Right to life/right to health

21. Shipbreaking activities expose workers to a wide range of workplace activities or conditions which may cause death, permanent or temporary disabilities, injuries, ill-health and occupational diseases. While some kinds of accidents, like falls from elevated surfaces or injuries occurring during metal cutting and disposal, lie outside the scope of his mandate, other hazardous work-related activities are closely linked to the unsafe management or handling of hazardous substances. These include entry into confined, enclosed or other dangerous atmospheres, paint removal, bilge and ballast water removal, oil/fuel removal and tank cleaning. Many accidents are reportedly due to explosions caused by flammable gases not previously freed from the ship tank. The Special Rapporteur notes that most of the medical facilities established on or just outside the shipbreaking yards only provide first aid, but are not equipped to deal with serious accidents.

22. Long-term exposure to hazardous substances and wastes protection may also lead to serious or irreversible work-related diseases, including lung diseases, several forms of cancer and asbestos-related illnesses. Most workers are illiterate, very poor and are not aware of the health and safety risks associated with long-term exposure to these substances. Persons living in residential areas close to the yards also risk developing diseases related to the exposure to toxic and dangerous substances produced during shipbreaking activities.

Right to safe and healthy working conditions

23. Health and safety legislation is often not applicable to shipbreaking activities, due to the fact that it is not recognized as an industry in some countries, and this leaves workers in shipbreaking yards in a particularly vulnerable situation. Furthermore, when national labour standards are applicable, they are rarely enforced due to corruption of law enforcement officials and the lack of effective inspection mechanisms.

24. In many shipbreaking yards, workers are not provided with personal protective equipment (PPE), such as skin, eye or lung protection, aimed at ensuring the safe handling of hazardous materials or preventing the inhalation of toxic substances. Appropriate PPE for working in specialized areas, such as respiratory protective equipment for work in conditions where there is a risk of oxygen deficiency, is also generally not available. There is usually no equipment for machine safety, fire safety, chemical safety and water safety, and when such equipment exists, it is poorly maintained. With a few exceptions, the vast majority of workers do not receive any information on the hazards or risks to health and safety, nor do they receive any training on how to minimize risks to health and safety at work.

Right to social protection and compensation for work-related accidents or occupational diseases

25. Due to the informal nature of working arrangements, workers are not covered by social protection schemes, and do not receive any benefit in case of injury, sickness, temporary or permanent disability in the case of occupational accidents or diseases. Injured workers or relatives of deceased workers receive hardly any compensation for work-related accidents resulting in fatal injuries or permanent disabilities. When compensation is paid, the amount received is generally much lower than the amount stipulated by the law. In case of accidents,

employers usually pay for first treatment and immediate medical expenses, but not for long-term medical treatment or for expenses linked to chronic work-related diseases. If a worker is affected by an occupational disease, he is often unable to retain or find further employment opportunities in any of the yards.

Trade union rights

26. There is no written contract of employment for semi-skilled and unskilled workers. They can be fired at any time with no prior notice, and without the need to indicate any reasonable ground. The absence of job security, due to the lack of formal work contracts, and the climate of intimidation prevailing in the yards de facto prevent workers in shipbreaking yards from exercising their right to form trade unions for the promotion and protection of their economic and social interests and their right to collective bargaining.

Right to an adequate standard of living

27. Semi-skilled and unskilled workers usually live in makeshift facilities built by yard owners on, or just outside, the yards. The shacks are often congested, and lack basic sanitation facilities, electricity and even drinking water. Workers are too often not provided with proper cooking or eating facilities in the yards, and are compelled to go to nearby shops and tea stalls for their food. Due to their proximity to the yard, workers continue to be exposed to toxic and dangerous substances like asbestos and hazardous fumes at their sleeping quarters.

Lack of official statistical data on work-related accidents and occupational diseases

28. There are no comprehensive statistical data on persons who died or became disabled as a result of occupational accidents in the shipbreaking industry. The authorities rarely keep records on accidents occurring at shipbreaking facilities. In Bangladesh, for example, neither the yard owners nor public authorities appear to collect statistical data about deaths and disabilities caused by accidents at shipbreaking yards. According to media reports, more than 400 workers were killed and 6,000 seriously injured between 1985 and 2005 in Bangladesh,⁷ but NGOs estimate that at least 1,000 people have died in Chittagong due to accidents over the last decades.⁸ When official figures exist, they appear to be largely underestimated. According to official figures, for example, there were 434 incidents at the Alang yards between 1996 and 2003, killing 209 workers;⁹ however, NGOs fear that the number of workers who died or became disabled as a result of work accidents may be much higher.¹⁰

⁷ European Commission, op. cit.

⁸ Greenpeace/ FIDH, op. cit.

⁹ European Commission, op. cit.

¹⁰ Greenpeace/FIDH, op. cit.

29. Through the adoption of various unfair practices, employers often conceal information about work-related accidents.¹¹ Many major cases are not reported and settlements are reached with the workers secretly. In case of fatal accidents, families of the victims are usually not informed, as contractors do not use proper names or addresses of the workers and there is no monitoring or inspection of the yards.

30. Official and estimated figures do not include workers who died of occupational diseases related to long-term exposure to toxic and hazardous wastes and materials: the “hidden” deaths. It is virtually impossible to get any data about the number of affected workers, since the symptoms of many of these occupational diseases only appear several years after exposure, but it is estimated that a significant number of individuals died, and many others will die in the future, because of occupational diseases related to shipbreaking activities. For example, a medical study submitted to the Indian Supreme Court in September 2006 concluded that 16 per cent of the workforce handling asbestos in Alang showed symptoms of asbestosis, and was therefore at serious risk of developing mesothelioma in the future.

2. Environmental impact

31. The methods of ship dismantling currently followed in South Asian shipbreaking yards often fail to comply with generally accepted norms and standards aimed at ensuring the protection of the environment from the adverse effects caused by the discharge of hazardous wastes and products that may be present on end-of-life vessels.

32. The principle of environmentally sound management of ship dismantling requires that hazardous wastes and materials are managed and disposed of in a manner that ensures the protection of human health and the environment against the adverse effects which may result from such wastes. If the dismantling facility does not have the technical capacity to handle the hazardous wastes and materials present on the ship in an environmentally sound manner, the vessel should be pre-cleaned prior to its last voyage.

33. Nevertheless, the reality in the yards of South Asian countries is different. End-of-life ships are rarely pre-cleaned before their arrival on the shores of South Asia, and most of the shipbreaking yards do not have any containment to prevent pollution of soil, air, and marine and freshwater resources, nor the technology needed to ensure the environmentally safe management and disposal of hazardous wastes and materials. In addition to causing a long-term adverse effect on the environment, the current methods of ship dismantling also adversely affect local communities surrounding the shipbreaking facilities, which often rely on agriculture and fishing for their subsistence.

34. One of the traditional “cleaning” methods is the drilling of holes into the beached ship, through which seawater can wash out oil-contaminated tanks at high tide. In this way, hydrocarbons, heavy metals, PCBs, biocides (e.g. TBT) and cargo residues are released directly into the environment, contaminating the soil, seawater and groundwater resources. The discharge of bilge and ballast water pollutes the sea and coastal areas, and may cause the introduction of

¹¹ Rahman and Ullah, *op. cit.*

alien species into the ecosystem. Sludge and other non-biodegradable contaminants are dumped into unsealed holes in the ground, from which they can easily seep away. They permeate the sand and contaminate the soil and groundwater resources, causing acute and long-term pollution. Improper storage and disposal of scrap metal and wastes also contaminate the soil and groundwater resources.

35. The paint coat can contaminate air, soil and water when torched or scrapped. Cables and electrical and other control systems contain hazardous material and emit hazardous gases if burned. In addition, the release of ozone-depleting gases from cooling systems contributes to worldwide climate problems. The air in the shipbreaking yards and in the residential areas close to the yards is often contaminated with volatile organic compounds (VOCs), particulates, metals (as particulates and gases), asbestos dusts and fibres, PCBs and dioxins.

36. Little work has been carried out to assess the environmental impact of shipbreaking. A study commissioned by the Gujarat Maritime Board in 2005 only found “low” to “moderate” levels of hazardous substances in soil and sediment samples.¹² However, other studies carried out at various shipbreaking yards found high levels of contamination of coastal soil, seawater and drinking water sources, negatively affecting the marine ecosystem and the livelihood of local communities.¹³ A recent report published by the United Nations Environment Programme included shipbreaking industries in India, Bangladesh and Pakistan among the major land-based sources of marine pollution in the South Asian Seas region.¹⁴

C. The current normative framework

37. The Special Rapporteur notes with satisfaction that an international regulatory framework is being developed to address the growing concerns about the poor working practices and adverse environmental impact of the shipbreaking industry. Several organizations and mechanisms are contributing to the creation of this rapidly evolving body of norms and guidelines, including the Conference of the Parties to the Basel Convention, the International Maritime Organization (IMO) and the International Labour Organization (ILO). The efforts undertaken by the international community to address the problems arising from the current ways of ship dismantling have recently led to the adoption, on 15 May 2009, of the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships.

38. In addition to this evolving body of norms, the Special Rapporteur wishes to stress again that the poor working practices existing in most shipbreaking yards and the adverse environmental impact of the shipbreaking industry also negatively affect the enjoyment of human rights by individuals working in the yards or living in their close proximity. These rights, which have been considered in some detail in the part concerning the human rights impact of

¹² See http://www.gmbports.org/env_issues.htm.

¹³ See, for example, Hossain and Islam, *op. cit.* and Greenpeace, *Ships for Scrap - Steel and Toxic Wastes for Asia*, Studies No. I, III and VI, 1999, 2001 and 2002, respectively.

¹⁴ UNEP, *Marine Litter: A Global Challenge*, 2009.

shipbreaking, are set out in the 1948 Universal Declaration of Human Rights and in other international human rights treaties, most of which have been ratified, or acceded to, by the major shipbreaking countries.

1. Basel Convention

39. The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal represents the main legal framework for the protection of human health and the environment against the adverse effects resulting from the generation, management, transboundary movements and disposal of hazardous and other wastes. The Convention, which was adopted in 1989 and entered into force in 1992, has been ratified by 172 States, including the main shipbreaking countries.

40. The Convention rests on two main pillars:

(a) First, it establishes a “prior informed consent” (PIC) procedure for the transboundary movements of wastes between parties (arts. 4.1 and 6), according to which the transboundary movement of hazardous wastes or other wastes can take place only upon prior written notification to the competent authorities of the States of export, import and transit, and upon consent of these authorities to the movement of the wastes in question. The notification procedure is meant to ensure that the States concerned can make an informed decision on whether to authorize a transboundary movement. Shipments to and from non-parties are illegal unless there is a special agreement (arts. 4.5 and 11.1);

(b) Secondly, the Convention lays down the principle of “environmentally sound management” (ESM), which requires the adoption of all practicable steps to ensure that hazardous wastes or other wastes are managed in a manner which will protect human health and the environment against the adverse effects which may result from such wastes (art. 2.8). To this end, parties are expected to prevent or minimize the generation of wastes at source, to treat and dispose of wastes as close as possible to their place of generation and to minimize the quantities that are moved across borders (art. 4.2). Strong controls have to be applied from the moment of generation of a hazardous waste to its storage, transport, treatment, reuse, recycling, recovery and final disposal.

41. The ship-dismantling issue has appeared on the agenda of the Basel Convention since the late 1990s, when cases concerning the dismantling of ships in some developing countries were brought to the attention of the Secretariat. It was generally recognized at the time that since the Basel Convention had not been created with the ship-dismantling issue in mind, there were some practical and legal uncertainties with regard to its application to ships moved for recycling. These uncertainties persist today. The first consists in the identification of the competent authority of export (the flag State or the port State?), and how the competent authorities’ responsibilities might be undertaken within the system of flag or port State control. Another difficulty concerns whether a ship can be classified as a waste, and at which time it can be defined as waste. In this regard, the seventh Conference of the Parties to the Basel Convention noted that “a ship may become a waste as defined in article 2 of the Basel Convention and that at

the same time it may be defined as a ship under other international rules”.¹⁵ This means that a ship containing asbestos, PCBs or other hazardous wastes may be considered as hazardous waste when destined for recycling or disposal. Nevertheless, the simultaneous application of different legal instruments may create loopholes that could be exploited by shipowners to circumvent the application of the Basel Convention. Furthermore, the decision to recycle is often taken while the ship is on the high seas, making it more difficult to identify the competent authority and to enforce the Convention. There is also the situation where ships may reflag prior to their dismantling, potentially avoiding controls enforced by the Convention.

42. In 1995, the PIC procedure was strengthened by a decision of the Conference of the Parties to the Basel Convention to prohibit all transboundary movements of hazardous and other wastes from countries of the Organization for Economic Cooperation and Development (OECD) to non-OECD countries.¹⁶ The “Ban Amendment” has not yet received a sufficient number of ratifications for its entry into force, but has already been given effect within the European Union, even in cases where the exported wastes are destined for recycling.¹⁷ Were the Ban Amendment to enter into force, it would, in principle, prohibit the movement of ships for scrapping between those developed and developing countries which have ratified it. However, the same issues of application and enforcement discussed in the previous paragraph would still apply.

43. Recognizing the difficulties in applying the Basel Convention to ships destined for dismantling, Basel Convention parties and the Secretariat participated in the negotiations that led to the adoption of a legally binding instrument on ship recycling under the auspices of IMO (see paragraphs 53-60 below). Parties wish to ensure that the new Convention establishes an equivalent level of control as that established under the Basel Convention.¹⁸ A preliminary assessment of equivalency will be made at the seventh session of the Open-ended Working Group of the Basel Convention, to be held in May 2010. These results will be transmitted to the tenth meeting of the Conference of the Parties, scheduled to be held in October 2011, at which time it is anticipated that a final assessment of equivalency will be undertaken and action taken as appropriate. Should the parties determine that equivalency has been met, they would consider options for excluding ships covered by the new international regime from the scope of the Basel Convention.

44. The sixth Conference of the Parties to the Basel Convention adopted, in December 2002, the Technical Guidelines for the Environmentally Sound Management of the Full and Partial

¹⁵ Decision VII/26 of the Conference of the Parties to the Basel Convention. See UNEP/CHW.7/33, annex I.

¹⁶ Decision III/1 of the Conference of the Parties to the Basel Convention. See UNEP/CHW.3/35.

¹⁷ Regulation (EC) No. 1013/2006 on shipments of waste.

¹⁸ See Decisions VII/26, VIII/11 and IX/30 of the Conference of the Parties to the Basel Convention. See UNEP/CHW.7/33, annex I; UNEP/CHW.8/16, annex I and UNEP/CHW.8/16/Corr.1; and UNEP/CHW.9/39, annex I, respectively.

Dismantling of Ships.¹⁹ Their primary objective is to provide guidance to countries that have or wish to establish shipbreaking facilities by providing information and recommendations on procedures, processes, and practices that should be implemented to attain ESM at such facilities. The Guidelines also provide advice on monitoring and verification of environmental performance.

45. The Guidelines, which are of a recommendatory nature, provide examples of good practices in environmental control procedures, which consist in the preparation of an inventory list of hazardous wastes and products on board (“Green Passport”) and their removal prior to the voyage for dismantling or, if this is not possible, prior to cutting. They also recommend the establishment of an Environmental Management Plan for shipbreaking facilities, which encompasses the assessment of the potential environmental impact of the facility, the formulation of potential preventive measures and the elaboration of an environmental management system which includes a waste management plan, a contingency preparedness plan and a monitoring plan.

2. International Maritime Organization

46. Since its establishment, the International Maritime Organization (IMO) has supported the adoption of a comprehensive body of international conventions and recommendations governing every facet of shipping, including a number of treaties relating to oil pollution, pollution from ships, civil liability and compensation for oil pollution damage, and emergency preparedness. Two IMO conventions, while not dealing directly with the issue of shipbreaking, contain principles that are applicable in case of marine pollution caused by the disposal of wastes at sea: the 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (usually referred to as the “London Convention”) and its 1996 Protocol, and the 1973 International Convention for the Prevention of Pollution from Ships, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78).

47. The primary function of the London Convention is to prevent the pollution of the sea by the dumping of waste and other matter that is liable, inter alia, to create hazards to human health or to harm living resources and marine life (art. I). The Convention prohibits the dumping of certain hazardous materials listed in annex I, requires a prior special permit for the dumping of a number of other identified materials listed in annex II and a prior general permit for the dumping of all other wastes or matter (art. IV.1). The 1996 London Protocol, which entered into force in 2006, is intended to modernize the Convention and, eventually, replace it. The Protocol follows a more restrictive approach than the Convention, since it prohibits the dumping of any wastes or other matter with the exception of those listed in annex I (art. 4). Theoretically, these legal instruments would prohibit the deliberate disposal of hazardous wastes present on end-of-life ships into the marine environment, but their applicability to wastes from decommissioned ships is debated.

¹⁹ Decision VI/24 of the Conference of the Parties to the Basel Convention. See UNEP/CHW.9/40, annex.

48. MARPOL 73/78 is the main international Convention covering prevention of pollution of the marine environment by ships from operational or accidental causes. It is a combination of two treaties adopted in 1973 and 1978 respectively and updated by amendments through the years. The Convention seeks to eliminate intentional pollution of the marine environment by oil and other harmful substances and minimize accidental discharges. The detailed rules on pollution from ships are set out in six annexes to the Convention. The main shipbreaking countries are all parties to MARPOL 73/78. As is the case for the London Convention, it is not clear whether MARPOL is applicable to discharges from end-of-life vessels. Theoretically, it would apply to ship dismantling which takes place within the territorial waters of the shipbreaking country, and therefore any discharge of oil or oily mixtures would be prohibited. Such oily wastes should be retained on board or discharged to reception facilities in port. States would in turn be obliged to ensure the provision of the necessary reception facilities for these oily discharges.

49. In December 2003, the IMO Assembly adopted the IMO Guidelines on Ship Recycling.²⁰ The Guidelines have been developed to provide guidance to all stakeholders in the recycling process, including flag, port and recycling States, shipowners, shipbuilders, marine equipment suppliers and recycling facilities, on best practices, which take into account the ship-recycling process throughout the life cycle of the ship. The Guidelines suggest practical measures for all stages of the ship-recycling process, including: (a) new ship and equipment design, in particular to minimize the use of hazardous substances and waste generation and to facilitate recycling and the removal of hazardous materials; (b) preparation of a “Green Passport” for new and existing ships; (c) selection of a recycling facility and preparation of a ship for recycling, including a Ship-Recycling Plan; and (d) roles for primary stakeholders including flag, port and recycling States, the Basel Convention, ILO and the shipping industry.

50. The Guidelines seek to encourage recycling as the best means of ship disposal. In general, they take the view that the obligation for environmental and worker protection in ship-recycling facilities rests with the recycling facility itself and with the regulatory authorities of the country in which the recycling facility operates. Nevertheless, it is noted that shipowners and other stakeholders have a responsibility to address the issues involved.

3. International Labour Organization

51. Although not drafted with shipbreaking in mind, a considerable number of ILO Conventions dealing with occupational safety and health hazards and worker protection issues could be applied to shipbreaking activities. They include:

- The Convention concerning Freedom of Association and Protection of the Right to Organize (Convention No. 87)
- The Convention concerning the Application of the Principles of the Right to Organize and to Bargain Collectively (Convention No. 98)

²⁰ Resolution A.962 (23).

- The Convention concerning the Maximum Permissible Weight to Be Carried by One Worker (Convention No. 127)
- The Convention concerning Prevention and Control of Occupational Hazards caused by Carcinogenic Substances and Agents (Convention No. 139)
- The Convention concerning the Protection of Workers against Occupational Hazards in the Working Environment Due to Air Pollution, Noise and Vibration (Convention No. 148)
- The Convention concerning Occupational Safety and Health and the Working Environment (Convention No. 155)
- The Convention concerning Safety in the Use of Asbestos (Convention No. 162)
- The Convention concerning Safety in the use of Chemicals at Work (Convention No. 170)

52. In 2003, ILO also issued a set of guidelines as a complement to the work undertaken by IMO and under the Basel Convention on shipbreaking.²¹ The Guidelines, which are not legally binding, are the most comprehensive guide covering all aspects of occupational health and safety related to ship dismantling. They are designed to assist those having responsibilities for health and safety in shipbreaking operations, including yard owners and competent authorities, to implement the relevant provisions of ILO standards, codes of practice and other guidelines on occupational safety and health and working conditions. Their main objectives are to: (a) contribute to the protection of shipbreaking workers from workplace hazards and to the elimination and control of work-related injuries and diseases, ill-health and incidents; and (b) to assist and facilitate the improved management of occupational safety and health issues in or about the workplace.

4. IMO convention on ship recycling

53. In December 2005, the IMO Assembly requested the Marine Environment Protection Committee to develop a new legally binding instrument on ship recycling, which would regulate: (a) the design, construction, operation and preparation of ships so as to facilitate safe and environmentally sound recycling; (b) the operation of ship-recycling facilities in a safe and environmentally sound manner; and (c) the establishment of an appropriate enforcement mechanism for ship recycling, incorporating certification and reporting requirements.²² After four years of negotiations, the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships was adopted at the International Conference on the Safe and Environmentally Sound Recycling of Ships, held in Hong Kong, China, from 11 to 15 May 2009.

²¹ Safety and health in shipbreaking: Guidelines for Asian countries and Turkey, 2004.

²² Resolution A.981 (24).

54. The Ship Recycling Convention seeks to prevent, reduce, minimize and, to the extent practicable, eliminate accidents, injuries and other adverse effects on human health and the environment caused by ship recycling, and enhance ship safety, protection of human health and the environment throughout a ship's operating life (art. 1.1). Regulations for safe and environmentally sound recycling of ships are annexed to the Convention, and form an integral part of it.
55. The Convention sets out specific requirements with regard to the operation of ships in consideration of their end-of-life recycling. Parties to the Convention have an obligation to prohibit and/or restrict the installation or use of hazardous materials listed in appendix 1 (asbestos, ozone-depleting substances, PCBs and anti-fouling compounds and systems) on ships entitled to fly their flags or operating under their authority (regulation 4.1). All ships (both new and existing) are required to have on board an inventory of hazardous materials, to be updated throughout the ship's life. The inventory must be specific to each ship and identify, in Part I, hazardous materials contained in the ship's structure or equipment, and clarify that the ship complies with regulation 4 (regulations 5.1 and 5.2). Part I of the inventory must be properly maintained and updated throughout the ship's operational life. Prior to recycling, Part II on operationally generated wastes and Part III on stores have to be incorporated in the inventory (regulation 5.4).
56. Recycling States have an obligation to ensure that ship-recycling facilities operating under their jurisdiction are authorized in accordance with the regulations annexed to the Convention (art. 6). Ships can only be recycled at ship-recycling facilities that are: (a) authorized in accordance with the Convention; and (b) fully authorized to undertake all the recycling activities specified in the ship-recycling plan (see paragraph 58 below). A ship going for recycling shall be certified as ready for recycling by the competent authority of the flag State prior to any recycling activity taking place (regulation 8.6).
57. Authorized ship-recycling facilities are required to prepare a ship-recycling facility plan (regulation 18), and adopt and implement appropriate procedures and plans for: the prevention of hazardous conditions like explosions and fire, or accidents, spills, and emissions which may cause harm to human health and/or the environment (regulation 19). The regulations also cover the safe and environmentally sound management of hazardous materials (regulation 20); emergency preparedness and response (regulation 21); worker safety and training (regulation 22); and reporting on incidents, accidents, occupational diseases and chronic effects resulting from ship-recycling activities (regulation 23).
58. Prior to any recycling, ship-recycling facilities have to develop a ship-specific ship-recycling plan (regulation 9.1), which should include information on, inter alia, the establishment of safe-for-entry and safe-for-hot-work conditions, the type and amount of materials identified in the inventory of hazardous materials that the facility can handle in an environmentally sound manner, and how the recycling will be undertaken.
59. IMO is currently developing a set of voluntary guidelines in order to ensure the effective implementation of the Convention. These guidelines will cover aspects such as the development of the inventory of hazardous materials, authorization of ship-recycling facilities, development of the ship-recycling plan, and safe and environmentally sound ship recycling.

60. The Convention will enter into force 24 months after the date on which 15 States, representing 40 per cent of world merchant shipping by gross tonnage, have either signed it without reservation as to ratification, acceptance or approval, or have deposited instruments of ratification, acceptance, approval or accession with the Secretary-General. The combined maximum annual ship-recycling volume of those States must, during the preceding 10 years, constitute not less than 3 per cent of their combined merchant shipping tonnage (art. 17). Due to these stringent requirements, current estimates suggest that 2013 is the earliest that the Convention can enter into force.

5. The new IMO Convention: a step in the right direction?

61. The Special Rapporteur welcomes the adoption of the Ship Recycling Convention. The Convention represents a positive step towards creating an enforceable regulatory regime to ensure that end-of-life ships do not pose unnecessary risks to human health and safety and to the environment when being scrapped. The Special Rapporteur shares the assessment made by the IMO Secretary-General that this new treaty is “a good outcome in the circumstances”,²³ since it achieved the establishment of legally binding rules that seek to strike a fair balance between the responsibilities of shipowners, ship-recycling facilities, and flag and recycling countries, and are thus likely to be accepted, and thus implemented, by a significant number of countries.

62. The Special Rapporteur is aware of the fact that a different text imposing much stricter requirements for ship recycling would have probably failed to attract enough ratifications to enter into force within a reasonable period of time, or would not have been supported by the main shipping countries or shipbreaking countries. Nevertheless, the Special Rapporteur cannot but observe that the forum chosen for the development of the Convention and the approach followed by IMO to reach an agreement over the final text have in some cases determined the predominance of economic interests over the overarching objective of protecting human health and the environment against the major hazards posed by the current ways of dismantling ships. In this regard, the Special Rapporteur would like to make the following observations:

(a) The Convention fails to regulate in detail many important aspects of shipbreaking activities, such as the authorization of ship-recycling facilities, the development of ship-recycling plans or the elaboration of appropriate procedures to prevent adverse effects to human health and the environment. These and other issues will be addressed only by the non-mandatory guidelines that are currently being developed by IMO to ensure the effective implementation of the Convention, and which parties are only requested to “take into account”;

(b) It can be argued that the Convention places a disproportionate burden on shipbreaking States, which are primarily developing countries. While the Convention does require that all ships carry on board an inventory of hazardous materials, it does not impose any obligation on shipowners to pre-clean ships of their hazardous materials prior to their recycling in a certified ship-recycling facility. The Convention only calls for the amount of cargo residues, fuel oil and waste on board to be “minimized” prior to their dispatch to a recycling facility. The

²³ IMO press release, New international convention adopted to ensure safe and environmentally sound ship recycling, 18 May 2009.

Special Rapporteur considers that in order to minimize the transboundary movement of toxic substances contained on board end-of-life ships, stronger stipulations as to the decontamination requirements prior to dismantling should have been made in the IMO Convention;

(c) There is no provision in the Convention calling for the gradual phase-out of the “beaching” method and a move towards alternative methods of shipbreaking. While acknowledging that an immediate ban on the “beaching” method or the closing of the yards in South Asian countries would not represent a viable option, since shipbreaking is an important source of income for the countries concerned and provides jobs for many workers, the Special Rapporteur shares the views expressed by several NGOs that the dismantling of vessels on tidal beaches fails to comply with generally accepted norms and standards aimed at ensuring the protection of workers and the environment from the adverse effects caused by the discharge of hazardous materials present on end-of-life vessels into the environment;²⁴

(d) The Convention does not contain any provision for a ship-recycling fund or an alternative financing mechanism to help ship-recycling facilities improve their recycling standards and thus comply with the Convention’s requirements. In this regard, the Special Rapporteur notes with regret that a proposal for the establishment of a ship-recycling fund was rejected during the negotiations that led to the adoption of the new Convention. With the exception of cases where grants, loans or technical assistance is provided, the costs for improving human health and environmental protection will thus be borne by the ship-recycling facilities themselves;

(e) The new Convention stipulates that wastes generated from recycling activities should only be transferred to a waste-management facility authorized to deal with their treatment and disposal in an environmentally sound manner. However, there are no provisions in the Convention to ensure that waste dispatched to downstream facilities is traceable, thereby enabling verification of its proper handling, treatment and ultimate disposal. The Special Rapporteur notes that the Basel Convention emphasizes the importance of traceability of waste until its final disposal, so as to ensure that waste is managed in accordance with the principle of environmentally sound management;

(f) While the preamble refers to the need to promote the substitution of hazardous materials in the construction and maintenance of ships by less hazardous or non-hazardous materials, no provision is included in the Convention to require parties to use less hazardous materials wherever they are available;

(g) The Convention provides that ship-recycling States are required to approve ships that will be recycled within their jurisdiction. Such a determination will be made by review of the inventory of hazardous materials and the ship-specific ship-recycling plan, to ensure that the capabilities of the recycling facility match the ship to be recycled. However, ship-recycling States may opt out of an explicit approval procedure of each ship-recycling plan (and essentially

²⁴ NGO Platform on Shipbreaking, *OFF THE BEACH! Safe and green dismantling*, 2009.

of each ship) and only require a tacit approval procedure (regulation 9.4.2). The Special Rapporteur considers that to satisfy the Basel requirement of “prior informed consent”, explicit approval of every ship entering a party’s jurisdiction should be required;

(h) Finally, the Special Rapporteur notes that the stringent requirements for the entry into force of the new Convention raise concerns as to the time it will take before the Convention enters into force. According to various sources, even 2013 may be unrealistic. Therefore, the Special Rapporteur calls on the parties to the Basel Convention to consider, during their discussion on equivalency, steps to be taken during the interim period to ensure the environmentally sound management of ship-recycling facilities.

III. CONCLUSIONS AND RECOMMENDATIONS

63. **The Special Rapporteur welcomes the efforts undertaken by the international community to address the growing concerns about the poor working practices and environmental situation prevailing in most shipbreaking yards across the world. These efforts have resulted in the adoption of various sets of recommendatory guidelines which seek to ensure the environmentally sound management of shipbreaking activities and the reduction of accidents, injuries and occupational diseases too often associated with the dismantling of end-of-life vessels. The recent adoption by IMO of the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships is also witness to the serious commitment of the international community to the development of a safer and more environmentally sound management and disposal of end-of-life vessels worldwide.**

64. **The Special Rapporteur regards the new IMO Convention on ship recycling as a positive step towards the creation of an enforceable regulatory regime aimed at ensuring the protection of workers’ health and safety and the preservation of the environment, and encourages States members of IMO to take all appropriate steps to ratify the Convention within a reasonable period of time. In the interim period up to the Convention’s entry into force, the Special Rapporteur encourages shipbreaking States, flag States and the shipbreaking industry to consider applying the technical requirements of the Convention, as well as existing guidelines and standards, on a voluntary basis. He also recommends that the Conference of the Parties to the Basel Convention, the International Maritime Organization and the International Labour Organization continue working together with a view to avoiding duplication of work and overlapping of responsibilities and competencies.**

65. **The Special Rapporteur is of the view that shipbreaking is an issue that requires a global solution. The adoption of the new Convention, although representing a step in the right direction, is not sufficient to bring about the significant and urgently needed improvements to the working practices prevailing in shipbreaking yards or the elimination of the serious environmental pollution that shipbreaking yards generate. Therefore, the Special Rapporteur calls on all relevant stakeholders, including shipbreaking States, flag States, the shipbreaking industry and international organizations and mechanisms, to consider adopting and implementing additional measures to address the negative impacts of shipbreaking that are not covered by the new Convention. In particular, the Special Rapporteur recommends the adoption of appropriate measures in the following areas:**

- (a) **Pre-cleaning.** Developed countries should consider adopting appropriate measures, including awards for “green” ship dismantling, to prevent, in line with the Basel Convention Ban Amendment, the export of end-of-life vessels containing hazardous materials to developing countries which do not have the capacity to manage them in an environmentally safe manner. Similarly, shipowners are encouraged, in line with the emerging body of norms on corporate social responsibility and the “polluter pays” principle, to consider pre-cleaning their ships in developed countries, prior to their dispatch to recycling facilities in developing countries;
- (b) **Environmentally sound waste management.** Ship-recycling States should endeavour to enforce international obligations and national legislation on environmental protection and develop appropriate infrastructures for ship-recycling activities, including waste management facilities (e.g. landfill sites, incineration plants, etc.). National legislation should, in particular, lay down the conditions under which ships may be accepted into its jurisdiction for recycling. Taking into account that the “beaching” method does not and cannot, by its very nature, offer sufficient guarantees for the environmentally sound management of the hazardous wastes it generates, stakeholders should consider adopting all appropriate measures to ensure the gradual phasing-out of “beaching” and a swift and steady move towards alternative methods of shipbreaking;
- (c) **Workers’ rights.** Shipbreaking States should take steps to improve their regulatory and enforcement capacities in the field of labour law and worker safety, health and welfare, so as to strengthen the protection afforded to persons employed in the shipbreaking industry. They should also eliminate obstacles which de facto prevent workers in shipbreaking yards from exercising their freedom of association and right to collective bargaining, and set up an effective and reliable system of labour inspections, with the participation of workers’ representatives. Shipbreaking States should also take immediate steps, to the maximum of their available resources, with a view to realizing fully the right of workers to social security in the event of accidents and occupational diseases. Yard owners should take all appropriate measures, when needed through State support and international assistance and cooperation, to improve health and safety at work (inter alia by providing adequate personal protective equipment and safety training), promote better health care, housing and sanitation facilities for workers, and develop appropriate mandatory insurance schemes to protect workers in the event of accidents and occupational diseases;
- (d) **Data collection.** Ship-recycling States and yard owners should collect disaggregated statistical data on an annual comparative basis on workers who die or become disabled as a result of work-related accidents or occupational diseases, and make these data publicly available;
- (e) **Ship-recycling fund.** States and the shipping industry should consider establishing a ship-recycling fund to support the upgrade of facilities in accordance with the new Convention requirements and promote the development of alternative methods of ship dismantling (with a view to phasing-out “beaching” in the longer term). They should also consider the creation of a fund for victims of accidents and their families, aimed at

providing adequate compensation to injured workers or relatives of deceased workers for work-related accidents or occupational diseases resulting in death or permanent disabilities;

(f) International cooperation and assistance. Developed countries, regional integration organizations and international organizations should provide technical assistance to and cooperate with ship-recycling States and other interested parties on projects involving the transfer of technology, or aid funding to provide safety training for workers and support the establishment of basic infrastructure for environmental and human health protection in the recycling facilities.
