

Introduction

Ships, offshore installations¹ and pipelines² presently represent the bulk of man made structures at sea. Offshore wind farms and other renewable energy facilities are expected to occupy parts of the oceanic environment in the near future. With time ships deteriorate and are unsuitable to be used for carriage of goods or passengers. Offshore installations, on the other hand, primarily become unusable when the oil or gas field they are used on becomes exhausted or the cost of extraction exceeds the operating costs.

At the end of their commercially useful lives all these structures pose the same question: What is the best way of dealing with them? The answer depends on who is asking and which criteria are used to determine what is best. Thus for the owners the answer is easy: If the structure, whether a ship or an offshore platform, has scrap value higher than the cost of moving it to the scrap yard then selling on at least the parts that have some value is the best option. If the cost of removal exceeds the scrap value abandoning the facility or the ship is, in the absence of penalties, the least expensive option. Thus the market values for the recyclable parts determine what an owner wishes to do. This short term view may be counter argued if liability for preserving, marking, and insuring abandoned structures and paying of damages to third parties is efficiently imposed and taken into this account. Arguably it is the omission of this part that makes, in many cases, abandonment a financially attractive option.

In practice, most ships do have some value as scrap, especially if scrapping is taking place in countries where cheap labour is available and the lack of environmental regulation keeps the costs down. But ships travel and are easy to move between countries. By contrast the financial position is not so clear for offshore platforms. There are significant costs involved in removing them and thus in many cases recycling them is a costly exercise. This necessarily means that the owners of offshore facilities and to a lesser degree, ship owners of damaged ships would like to have the option of abandoning their property wherever it is, preferably without any risk of incurring any future liability arising from this abandonment. This is easier for ship owners who can organise one-ship companies but not so easy for owners of offshore facilities who are continuously under the jurisdiction of a state and presumably have more than one offshore facility in operation.

¹ Saldido R.E. (2005), Enduring Optimism: Examining the Rig-to-Reef Bargain, *Ecology Law Quarterly*, 32, 863-938 suggests that there are around 6,500 installations worldwide and their removal costs are about 40,000,000,000 dollars. Cameron P. (2000), Tackling the decommissioning Problem, at *Resources and Environment*, 14, 121-126 suggests the number is around 10,000 platforms in offshore waters. Hamzah B.A., (2003) International rules on decommissioning of offshore installations; some observations, *Marine Policy*, 27, 339-348 suggest 7,000.

² This paper does not deal with removal of pipelines.

The interests of other users of the sea are also significantly affected when offshore facilities are left in place³ or when a ship is scuttled. Navigation concerns suggest that sufficient clearance to ensure the safe passage of ship must be provided.⁴ Commercial fishermen appear to oppose the abandonment of parts of an offshore structure or ship because they may endanger fishing gear and make fishing practices like trawling unusable. Recreational fishermen and divers appear to support the abandonment or the turning of the offshore facilities into artificial reefs because they create points for activity for them. Concerns for the environment provide arguably the most controversial aspect for the option of abandonment. With respect to the local marine environment the option of turning abandoned facilities to artificial reefs has been considered attractive by the industry because it gives an environmentally friendly character to what is viewed by others as dumping of garbage at sea.⁵ The local environmental benefits associated with artificial reefs are believed to be in that these work as areas where fish production is enhanced.⁶ While there is no significant dispute on the assertion that artificial reefs do attract fish, it is unclear whether they are only concentration points or whether they in fact enhance fish production. Even if it is true that artificial reefs enhance fish production taking into account that the dominant reason for the reduction of fish is overfishing it is hardly arguable that the use of artificial reefs can be anything but an auxiliary measure together with the establishment of protected areas and strict fish quotas. The environmental risks associated with the chemical contamination of waters and sediments by the deterioration of the offshore structure are considered to be dispersed and not too significant. But even if this is true the question of the cumulative effects of the abandonment option remains unanswered. Thus, we do not know what the capacity of each oceanic ecosystem is in relation to the release of the various chemicals; nor do we know whether any response of such ecosystems will be gradual deterioration or sudden destruction or alteration. This uncertainty and the realisation that the state of the marine environment is deteriorating has led to significant public opposition to the abandonment option. The abandonment option is in general less energy consuming than the removal and therefore more efficient than removal in the sense of atmospheric pollution through the emission of greenhouse gases. However abandonment is in essence dumping at sea, and if multinational oil companies are permitted to do it then it can be argued that everybody should - a terrifying thought for the future of the marine environment which will be then firmly established as an extensive junkyard. Arguments for and against abandoning offshore facilities in situ or using them as artificial reefs are almost always based on what is called scientific evidence. However Woodliffe stated in 1999 "... examination of the large body of expert scientific studies quickly reveals that the analysis of environmental and other risks involved in identifying suitable removal and disposal options for offshore

³ Abraham P. 2001, Offshore Oil and Gas Facility Decommissioning in Nova Scotia and Newfoundland, 24 Dalhousie L.J., 333-360 suggests that decommissioning involves either reuse of parts of the platforms, partial or complete removal, deposit on the ocean floor, construction of artificial reefs.

⁴ The US Navy also feared that abandoned submerged structures may endanger the navigation of submarines or permit the hiding of foreign submarines. (???)

⁵ Holahan T., (2008) A framework for Alternative Energy Development: Shifting From Drilling Rigs to Renewables., B.C Env'tl. Aff. Law Review, 35, 321-348 describes the U.S. Rigs – to Reefs programme and suggests the development of a new Rigs –to-Renewables programme.

⁶ Rothbach D. (2007) Rigs-To-Reefs: refocusing the debate in California, 17 Duke Environmental Law and Policy Forum, 17, 283-295 suggests that the fish should be considered as a separate stakeholder.

installations is fraught with disagreement and uncertainty”.⁷ The scientific view is not much clearer today and is unlikely to be conclusively clarified because some of the concerns are very difficult to check.

For ships the issues are different. Because ships travel, the removal costs are in general low. Thus provided that there are facilities around the world which can do the job cheaply and there is demand for scrap metal the owners will have a vested interest in scrapping the vessel on land rather than abandon it. This in turn means that the chemical pollution and the risks for human health are going to be borne at the scrap yard. With preventive measures and environmental protection costing money, it is not surprising that most scrapyards are located in developing states where costs are kept at a minimum but the toll on human health and the environment is arguably at a maximum.

Thus ship-breaking raises a number of issues which can broadly be divided into three categories. First are issues related to the health and safety of the workers undertaking the dismantling operations of ships.⁸ The second category of issue relates to general environmental protection and the details of the procedure under which ship dismantling should be undertaken.⁹ The third category of issues requires consideration to the income from the ship scrapping activities. It has been argued that recycling must remain profitable for shipowners in order to ensure that ships reach the recycling destination and are not abandoned in a port¹⁰ or scuttled or abandoned at sea.¹¹

International regulation and international law also show differential treatment when scrapping of manmade structures is concerned. While both offshore structures and ships are registered at a state the usual arrangement for offshore structures is that they do remain subject to the jurisdiction of the registering state. As these are located at the territorial waters of the EEZ of a coastal state it is the coastal state alone, subject to international law, which has responsibility for the management of these structures and decision making powers. The downside of this is that with the decommissioning of

⁷ Woodliffe J., 1999, Decommissioning of Offshore Oil and Gas Installations in European Waters: The End of a Decade of Indecision? *International Journal of Marine and Coastal Law*, 14(1), 101-123, at page 102 providing as reference the “..list of witnesses and evidence taken before the HL Select Committee in Appendix 2 of its report”.

⁸ Environmental NGOs have suggested that 16% of all shipyard workers employed in ship-breaking in India suffer from asbestosis. Many of the yards employ children as workers. The International Labour Organisation (ILO) has been involved in the process of the development of the new Convention and will continue its collaboration in developing detailed guidelines for the adoption of safe procedures in the dismantling of ships. See the news release: ILO welcomes new regulations on ship breaking as crisis boosts the industry available from: http://www.ilo.org/global/About_the_ILO/Media_and_public_information/Feature_stories/lang-en/WCMS_106542/index.htm

⁹ The scrapping procedure may release substances to the atmosphere, to the ground and to marine environment. The applicability of the various regulatory and liability regimes normally applicable to ships could be an issue for ships and structures destined for recycling. Thus issues related to the management of the ballast water can be important (see MEPC 44/16) submission by Friends of the Earth International however it is unclear whether the 2004 International Convention for the Control and Management of Ships' Ballast Water and Sediments (not yet in force) will be applicable in all cases the ship is destined for recycling.

¹⁰ See IMO LC 27/14 where the issue is described as an important problem for developing states without the appropriate resources to deal with it. The Legal Committee considers it as a matter for the port state where abandonment takes place to resolve with the flag state and the shipowner. Arguably this not a realistic prospect in many situations. However the issue of abandonment is not dealt under the SRC.

¹¹ This is arguably dumping and is in violation of the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972 and 1996 Protocol Thereto. See also IMO LC/27/14.

offshore structures costing ten of millions of pounds and with tens or hundreds of them located in the same area significant amounts of money are at stake, large enough to unduly influence the decision making process of some states.

Ships on the other hand are under little control by the flag state and the coastal states do not have in principle much vested interest in their scrapping unless they are the state where they are scrapped.

Thus it is not surprising that different legal regimes have been developed to regulate and control the scrapping of ships and the scrapping of offshore structures although they both deal with, in essence, the same problem: the disposal of manmade structures used at sea in a way consistent with the notion of sustainable development.

In this paper we will discuss the international legal framework for decommissioning offshore structures and ships and we will assess its effectiveness.

The International law on scrapping of Offshore facilities

The 1958 Convention on the Continental Shelf¹² provides that “[a]ny installations which are abandoned or disused must be entirely removed”.¹³ This strict requirement¹⁴ was established on the basis of concerns for safety of navigation and security considerations and not for the purpose of protecting the marine environment.¹⁵

By the time the 1982 Law of the Sea Convention (LOSC)¹⁶ was to be agreed the oil industry has realised the high costs this strict requirement imposed on them and requested a reassessment of the obligation.¹⁷ LOSC Art. 60(3) significantly alters the obligation from a strict one to a one relying on the discretion of the coastal state. Thus, Art. 60(3) states: “...Any installations or structures which are abandoned or disused shall be removed to ensure safety of navigation, taking into account any generally accepted international standards established in this regard by the competent international organization. Such removal shall also have due regard to fishing, the protection of the marine environment and the rights and duties of other States.

¹² It was of course the need for appropriation of offshore oil and gas reserves that led to the development of the 1958 Convention on the Continental Shelf which establishes exclusive sovereign rights for coastal states over the continental shelf and exclusive rights for the construction of platforms and offshore facilities for the realisation of such rights.

¹³ Art. 5(5). Convention of the Continental Shelf, opened for signature Apr. 29, 1958, into force 10 June 1964.

¹⁴ Arguments have been made that this very clearly worded obligation has the objective to protect the rights of other users of the sea. Thus, where such rights are not interfered with the obligation is strict. However such interpretation is arguably erroneous and the clear wording of the text imposes an obligation without any exceptions. (See McDade (1987), *The Removal of Offshore Installations and Conflicting Treaty Obligations as a Result of Emergence of the New Law of the Sea: A Case Study*, 24 San Diego L. Rev. 645 (1987).

¹⁵ Gao Z. (1997) *Current Issues of International Law on Offshore Abandonment*, Centre for Petroleum and Mineral Law and Policy Discussion No. 14, 1-35, states that this was adopted on the basis of a UK suggestion.

¹⁶ United Nations Convention on the Law of the Sea, opened for signature Dec. 10, 1982, entered into force November 16, 1994.

¹⁷ McLaughlin R.J., (1990) *Coastal state discretion, U.S. Policy and the new IMO Guidelines for the disposal of offshore structures: Has Article 5(5) of the 1958 Continental Shelf Convention been “Entirely Removed?”*, 1 Terr. Sea J. 245 1990-1991.

*Appropriate publicity shall be given to the depth, position and dimensions of any installations or structures not entirely removed.”*¹⁸

In essence the decision on what is going to happen to disused offshore facilities comes under the discretion of the coastal state.¹⁹ Clearly “taking into account” and having “due regard” do not mean “complying with” the regulations or “respect/prioritise the fishing or environmental interests”. The interpretation of these words too because a matter of interpretation for the coastal state. It can be argued that provided that the agreed standards are strict enough acting in a manner consistent with them, even if not complying with them, would provide some degree of respect to the environmental and other interests affected.

The generally accepted international standards can in fact be found in guidelines developed by the IMO in 1989.²⁰ The guidelines reflect a compromise in essence adopting widely worded exceptions from the requirement of removal.²¹ First, the requirement for removal does not come into play if the offshore structure which has stopped serving its original purpose is now serving a “subsequent new use” or there is another reasonable, within the guidelines, justification for not removing it. While the first option, an alternative use may be argued as a valid recycling practice, it turns upon the question of how this is to be implemented by the coastal state, in particular, with respect which legal entity will be liable for its removal after the “new use” is also exhausted. It also begs the question on which criteria the “new use” be assessed. The guidelines themselves provide for some criteria to be applied by the coastal state. Particularly, they require evaluation of surface and sub-surface navigation risks,²² the rate of deterioration of the material; the effects of the materials on the environment at the time the decision is made as well in the future; the risk of dispersion of the materials; the “costs, technical feasibility, and risks of injury to personnel involved with the removal”; the determination of the new use.²³

Turning offshore facilities from hotels to prisons and basis for wind turbines has been proposed. However unless the oil company that originally installed the facility remains liable for its removal it is likely that smaller enterprises may well go out of business rather than pay the costs of removal.²⁴ In addition if the removal costs can be avoided by, say, installing a couple of wind turbines and donating the property to the state then arguably this is a very wide exception. Note though that the guidelines

¹⁸ This article was also introduced by the UK delegation. See United Nations Convention on the Law of the Sea 1982, A commentary, Nordquist M.H. Editor, Volume II, page 583, citing C.2./Informal Meeting/66 (1982, mimeo.), article 60, para.3 (U.K.).

¹⁹ In the U.S. under lease agreements for the construction of offshore structures the requirement is the complete dismantling of the oil rig. Outer Continental Shelf Lands Act, 43 U.S.C. §§ 1301, 1331-1356(2000). It is only where programs like the Rigs to Reefs programme permits that complete dismantling is possible. However the validity of these programs is hotly disputed. See: Rothbach D. (2007) Rigs-To-Reefs: refocusing the debate in California, 17 Duke Environmental Law and Policy Forum, 17, 283-295 and Saldido R.E. (2005), Enduring Optimism: Examining the Rig-to-Reef Bargain, Ecology Law Quarterly, 32, 863-938.

²⁰ Resolution A.672(16), adopted 19 October, 1989. Guidelines and Standards for the Removal of Offshore Installations and Structures on the Continental Shelf and in the Exclusive Economic Zone,

²¹ Guideline 1.1.

²² At least 55 m of underwater clearance is required by Guideline 3.6. Installations at international straits and archipelagic lanes should, according to guideline 3.7, be removed and are not subject to exceptions. Despite the strict wording it is arguable that the coastal State should only “take into account” the requirement and balance it against its own rights and interests.

²³ Guideline 2.1. Some of these requirements are further detailed in the remainder of Guideline 2.

²⁴ Guideline 3.11 imposes an obligation to the coastal state to ensure that legal title, the responsibility for maintenance and financial ability to deal for future damages are clear.

permit the coastal state to impose more strict requirements for the removal of offshore facilities.²⁵

The IMO Guidelines include also some standards that have to be “taken into account”, whatever this means. Thus the starting point is that all offshore installations that are in water shallower than 75 m and weight less than 4,000 tonnes, when the deck and superstructure are excluded, should be removed.²⁶ Probably the most important arrangement is the requirement that all emplaced structures on or after 1 January 1998 in waters less than 100m and weighing 4,000 tonnes should be entirely removed.²⁷ This, at the time the Guidelines were agreed, was an instruction for the new structures to be designed with their recycling in mind.²⁸ It is unknown to the author whether this has been complied with. However, if a new use is developed then the coastal state may decide that these, by default “to be removed facilities”, may in fact not be removed.²⁹ Any other offshore facility which does not fall within the above requirements may be left in place “without causing unjustifiable interference with other uses of the sea”.³⁰ While it may be argued that this is a reasonable arrangement there are also strong arguments against it. First it is clear that occupying space unnecessarily which is not only public, in the sense of being available for use to the citizens of the coastal state, but also common, in the sense of other states having express rights under customary law and the 1982 LOSC by definition is affecting the other users even if it does not at a particularly time affect the other uses of the sea. Second, the marine environment is by default affected by the establishment of the installation. This, presumably is done under the principle of sustainable development and it is accepted by the practice of various states which permit offshore drilling that this is the case. Thus the activity is permitted because there is a benefit provided. Where the benefit is not provided anymore there is no justification for continuing the interference with the marine environment for the sake of the financial benefit of the party which has been originally be given permission to operate on the basis of the economic activity. Oil companies do not need such protection as their financial reports indicate.³¹ The marine environment does need such protection from interference as the various environmental reports consider it at risk in several aspects. The green credentials of the IMO guidelines are contained partly in Guideline 3.3 which requires that the removal should not be done in a way causing significant harm

²⁵ Guideline 1.4.

²⁶ Guideline 3.1.

²⁷ Guideline 3.2.

²⁸ This is expressly stated in Guideline 3.13.

²⁹ Guideline 3.4.1. In one sense it is surprising that the non-binding character of the guidelines which only need to be “taken into account” needs further relaxation and express discretion to be granted to the coastal state.

³⁰ Guideline 3.4.2.

³¹ Guideline 3.5 introduces a further discretionary criterion to be applied which permits that the “to be removed” offshore platforms can may not be entirely removed if, amongst others, the operation involves “extreme costs”. Again one can agree that for installations in place when the IMO Guidelines were agreed this would reflect an effort of protectionism which is justifiable to an extent because the companies installing the facilities were not aware that they would have been required to remove the facilities. But for facilities falling under Guideline 3.2, that is installed after January 1, 1998, there can be no justification from the point of view of cost. Planning the enterprise should surely mean considering the end-of-life requirements. Environmental law had already by the required recycling and the IMO Guidelines were in existence by almost a decade. In addition the term “extreme cost” is not defined. Arguably environmentally safe removal costs more thus requiring no-harm to the environment from removal would surely increase the costs and therefore make the term “extreme” easier to reach. Arguably the coastal States have a duty, within their duties to respect other uses of the sea, not to permit installations which will then be impossible to be removed for whatever reason.

to the marine environment. If significant harm to the environment or threatened and endangered species is to be caused then the coastal state may permit the facility to stay in place.³² The managerial approach by the IMO is on a case-by-case basis. This means that both in terms of the interests of the other uses of the sea and in terms of environmental impact the assessment has to be done for each offshore facility separately. This approach ignores the fact that such facilities are concentrated in particular sea areas and may influence regional ecosystems³³ extensively in addition to any local environmental effects. In that respect they are outdated and involve significant environmental risks. The wide ratification of the 1982 LOSC implies that the discretionary Art. 60(3) and the IMO Guidelines provide the legal basis in respect of the Law of the Sea and that the strict obligation of Art.5(5) of the 1958 Convention on the Continental Shelf has been globally superseded at least to the extent of representing customary international law.³⁴ For states which remain parties to the 1958 Continental Shelf Convention it may be arguable that compliance with full removal is required even if the more recent arrangements provides them with discretion.³⁵ However as time passes and the state practice develops in accordance with Art. 60(3) of the 1982 LOSC Convention the position between parties to both Conventions is that the obligation under the 1958 Continental Shelf Convention "... applies only to the extent that its provisions are compatible with those of the later treaty".³⁶

³² Guideline 3.5.

³³ It is probably worth noting that Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive) adopts the ecosystem based approach (Art.3.3) and recognises under Art. 4 the management of the European marine environment on the basis of very large regions.

³⁴ See Woodliffe J., (1999) Decommissioning of Offshore Oil and Gas Installations in European Waters: the End of a Decade of Indecision?, *International, J. Marine & Coastal Law*, 101-123, stating that the UK considered Art. 60(3) as reflecting customary international law even before the 1982 LOS has entered into force. The reference given is Department of Trade and Industry, *Guidance Notes for Industry: Abandonment of Offshore Installations and Pipelines under the Petroleum Act 1987* (1995) p.2.

³⁵ Full removal satisfies the more lenient requirements of subsequent conventions. Thus, it is at least arguable, that as between themselves contracting states must remove offshore structures to comply. See also Gao Z. (1997) *Current Issues of International Law on Offshore Abandonment*, Centre for Petroleum and Mineral Law and Policy Discussion No. 14, 1-35 making the argument on the basis of 1979 Arbitration on the Delimitation of the Continental Shelf Case (France v. UK), 18 ILM 397 where at page 417 it is stated, in response to an argument by France that Art.6 of the Convention is superseded by the undergoing UNCLOS III discussions that "only the most conclusive indications of the intention of the Parties to the 1958 Convention to regard it as terminated could warrant this Court in treating it as obsolete and inapplicable...". Gao also argues that the developments in environmental law support the preservation of the obligation for total removal and therefore reject an argument that the obligation has been terminated by a fundamental change of circumstances.

³⁶ Art. 30 of the Vienna Convention on the Law of Treaties, Done at Vienna on 23 May 1969. Entered into force on 27 January 1980. United Nations, Treaty Series, vol. 1155, p. 331. Of course a more general customary international law principle must be called for as this treaty came into force after the 1958 Continental Shelf Convention. But see McDade P.V. (1987), *The removal of offshore Installations and Conflicting Treaty Obligations as a Result of the Emergence of the New Law of the Sea: A case Study.*, 24 San Diego Law review, 645- 686 for detailed arguments.

Dumping at sea.

Leaving an offshore structure at sea after it has stopped being useful or collapsing it to the sea bed is arguably dumping. Dumping at sea is defined under the 1982 LOSC Art. 1(5)(a)(i) includes “any deliberate disposal of wastes or other matter from vessels, aircraft, platforms or other man-made structures at sea”; (ii) any deliberate disposal of vessels, aircraft, platforms or other man-made structures at sea”. However the same article excludes from the definition of dumping under 1(5)(b)(ii) “the placement of matter for a purpose other than the mere disposal thereof, provided that such placement is not contrary to the aims of this Convention.” The question then is whether abandoning offshore facilities at sea or using them in a different context is permitted. Under Art. 210 contracting states are obliged to develop regulations and laws as well as other necessary measures in order to prevent, reduce and control pollution of the marine environment by dumping. However there is no prohibition of dumping but requirements that dumping will only take place with the permission of states, which for the EEZ and the territorial sea requires the prior approval of the coastal state. Presumably for the high seas the flag state must be the relevant authority. The dumping activity is further regulated by the 1972 London Dumping Convention³⁷ which predates the 1982 LOSC. The definition of dumping in the 1972 London Dumping Convention is identical to that in the 1982 LOSC.³⁸ However the “disposal of wastes or other matter directly arising from, or related to the exploration, exploitation and associated off-shore processing of sea-bed mineral resources” is excluded.³⁹ The 1972 London Dumping Convention prohibits the dumping of some substances, permits the dumping of others subject to the issuance of permits.⁴⁰ Provided that the offshore structures do not contain prohibited materials dumping of them is subject to the issuance of a permit.

The 1996 Protocol has modified the 1972 Convention significantly.⁴¹ We will refer to the amended instrument as the 1996 London Convention. The definition of dumping in the 1996 London Convention includes the deliberate disposal of offshore platforms as well as the storage of wastes from platforms on the sea bed and the abandonment of toppling of structures for the purpose of disposal.⁴² However it expressly excludes “the disposal or storage of wastes or other matter directly arising from, or related to the exploration, exploitation and associated off-shore processing of seabed mineral resources ...” Thus the protection of the offshore industry is also expressed in the 1996 London Convention which is otherwise considered much stricter than its predecessor because it prohibits all dumping except, subject to permit, acceptable wastes on the so-called “reverse list” under Annex 1.⁴³ Probably not surprisingly Art.1.4 of the Annex contains an exclusion for “vessels and platforms or other man-made structures at sea”. Thus dumping at sea is not prohibited either for ships or offshore platforms. It is only a question of permit subject to the requirements of the

³⁷ Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972, came into force August 30, 1975, presently has 86 contracting states.

³⁸ Art. 3(1)(a) and (b).

³⁹ Art. 3(1)(c).

⁴⁰ Art. 4. Exceptions are made where dumping is required due to force majeure or in emergencies under Art. 5.

⁴¹ 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter of 29 December 1972. The Protocol entered into force on 24 March 2006. It presently has 38 Parties.

⁴² Art. 1(4). It expressly excludes from dumping the placement of cables, pipelines and other man made structures at the bottom of the sea for a purpose other than disposal. (Art.1.4.3).

⁴³ Art.4(1).

coastal state in accordance with the convention. Apart from the fact that the shipping and oil industry are very influential it is very difficult to understand why such an exception is made. Ships and offshore structures are built with materials that are also used on land. During their operational lives they come into contact with toxic and polluting materials and are subject to deterioration at sea. The fact that their owners exploit the ocean and the oceanic resources surely does not make them less polluting than equivalent structures on land. Even if it is accepted that for some offshore structures such a discretionary approach is necessary surely for ships which can move or be moved easily around the world is not acceptable.

Probably the most famous attempt at dumping of an offshore structure was the UK authorised venture to dispose of the Brent Spar owned by Shell UK in 1995. The effort failed following the intervention of Greenpeace and boycotts of Shell gas stations in continental Europe.⁴⁴ This incident led to a significant legal development in the context of regional governance of the North Atlantic. In particular within the context of the OSPAR Convention⁴⁵ Decision 98/3 was taken.⁴⁶ This expressly states that “The dumping, and the leaving wholly or partly in place, of disused offshore installations within the maritime area is prohibited”.⁴⁷ However this is further qualified so as to provide discretion to contracting states where an assessment shows that “there are significant reasons why an alternative disposal” to recycling on land is the best environmental option. Permits may be issued in respect of offshore installations excluding their topsides which are either steel installations weighing more than 10,000 tonnes in air; gravity based concrete installations; floating concrete installations; concrete anchor base which result or is likely to result in interference with other legitimate uses of the sea⁴⁸ and in particular for the footings of older steel installations;⁴⁹ any disused installation when exceptional and unforeseen circumstances resulting from structural damage or deterioration can be demonstrated. Decision making is based on an assessment which must be done within the framework given under Annex 2. It is stated that the disposal options are to be evaluated and compared. A list of parameters to be taken into account for the evaluation are also provided under Annex 2. These include economic aspects which have caused concerns of economic reasons dominating the decision making.⁵⁰

According to an OSPAR Commission publication,⁵¹ since Decision 98/3 came into force on 9 February 1999, 122 offshore structures have been decommissioned on land

⁴⁴ See Mankaby S, 1997, Decommissioning of Offshore Installations *J. Maritime Law and Commerce*, 26(4), 603-615 reporting that the cost of decommissioning of the Brent Spar costed £46 million instead of £11 million for disposal at sea and pointing out that taxpayers will pay about 55% of the costs in respect of decommissioning the North Sea platforms. See also Woodliffe J., 1999, Decommissioning of Offshore Oil and Gas Installations in European Waters: The End of a Decade of Indecision?, *International Journal of Marine and Coastal Law*, 14(1), 101-123.

⁴⁵ Convention for the protection of the marine environment of the North-East Atlantic, signed in Paris on 22 September 1992.

⁴⁶ See Kirk E. (1999), OSPAR Decision 98/3 and the Dumping of Offshore Installations, 48 *International and Comparative Law Quarterly*, 458- 464 and Woodliffe J., 1999, Decommissioning of Offshore Oil and Gas Installations in European Waters: The End of a Decade of Indecision?, *International Journal of Marine and Coastal Law*, 14(1), 101-123.

⁴⁷ OSPAR Decision 98/3 on the Disposal of Disused Offshore Installations Art.2.

⁴⁸ OSPAR Decision 98/3 on the Disposal of Disused Offshore Installations, Annex I.

⁴⁹ Placed in the sea before February 9, 1999. *Ibid.* Art. 3(a).

⁵⁰ See Kirk E. (1999), *Ospar Decision 98/3 and the Dumping of Offshore Installations*, 48 *International and Comparative Law Quarterly*, 458- 464.

⁵¹ Assessment of impacts of offshore oil and gas activities in the North-East Atlantic, OSPAR COMMISSION, 2009.

and 5 permits for concrete substructures (4) and steel footings (1) have been granted. There are 81 offshore structures out of about 1,300 which may be eligible for a permit. Thus the practice so far does not support particular concerns in this respect. The decommissioning of offshore facilities is under OSPAR discretionary and based on the precautionary principle; the polluter pays principle; what is called best available techniques (BAT) and best environmental practice (BEP), including clean technology. This permits a case-by-case decision although it appears that in most cases the assessment results in recycling on land.⁵²

Practical issues

Decommissioning is dealt with by the coastal state law.⁵³ Thus differences in procedure and requirements are likely to exist.⁵⁴ Here an overview of some of the problems identified is provided. Of course it is clear that because international law in essence provides for wide discretion to the coastal state the national law requirements will in essence be the crucial ones for determining whether environmental protection will be achieved.

A reasonable practice adopted is the requirement that decommissioning should be considered as part of the original development plan required to obtain permission for the operation of the offshore structure from the coastal state forms part of the practice followed by some states.⁵⁵ However deciding what to do with a structure so far ahead in time includes some problems. Abraham (2001) suggests that on one hand the design of the facility is affected so as to facilitate decommissioning but also, having decided the method of decommissioning necessarily means that there is no incentive

⁵² Following the steps of OSPAR is far from easy in other parts of the world. See for example Moreno C.J. , (2009) Oil and Gas exploration and production in the Gulf of Guinea: can the New Gulf be Green?, *Houston J. International Law*, 31, 419-467. This discussing the difficulties of implementation of the Convention for Cooperation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region, opened for signature, 23 March, 1981, 20 I.L.M. 746. There are in essence two protocols to regional conventions. The 1989 Protocol Concerning Marine Pollution Resulting From Exploration And Exploitation Of The Continental Shelf , to the Kuwait Regional Convention for Co-operation on the Protection of the Marine Environment from Pollution. This provides under Art. XIII(1)(b) that each contracting state must ensure that its competent authority has the power to ask the operator of an offshore installation to “remove the installation in whole or in part to ensure safety of navigation and in the interests of fishing”. It also requires that practicable measures to ensure the operator has the means to pay for the actions. It also requires under Art. XIII (3) to take measures ensuring that “no offshore installation which is in use has floated at or near the surface and no equipment from an offshore installation, shall be deposited on the sea-bed of the continental shelf when it is no longer needed”. Clearly there is no obligation imposed to remove offshore installations in general. The second regional instrument is the The Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil

Signed in Madrid, Spain, on 14 October 1994, not yet in force. This under Art. 20 requires the removal of offshore installations “in order to ensure safety of navigation, taking into account the guidelines and standards adopted by the competent international organization” and taking due regards of fishing.

⁵³ In Europe decommissioning plans are to be submitted to governments between 2 and five years from the offshore facility stops being productive. Hamzah B.A., (2003) International rules on decommissioning of offshore installations; some observations, *Marine Policy*, 27, 339-348.

⁵⁴ The problems are more serious in developing countries where the oil industry in the absence of national law can escape liability for decommissioning altogether or recover through national arrangements. Hamzah B.A., (2003) International rules on decommissioning of offshore installations; some observations, *Marine Policy*, 27, 339-348 states that in Malaysia the national oil company absorbs the costs.

⁵⁵ Abraham P. 2001, *Offshore Oil and Gas Facility Decommissioning in Nova Scotia and Newfoundland*, 24 *Dalhousie L.J.*, 333-360

for new technologies and solutions to be sought for a structure that is likely to be decommissioned a few decades later.⁵⁶ Environmental impact assessments are also processes used to monitor the effects of the establishment and the decommissioning of the installation.⁵⁷

The issue of financial responsibility is an important one. Although decommissioning is part of the planning processes it does not make commercial sense to set aside funds for the decommissioning operation which will take place much later.⁵⁸ In some states the permit for operation involves a continuing obligation by the oil company to prove it is capable of meeting its financial responsibility⁵⁹ and undertakes liability in respect of damages incurred.⁶⁰

In addition the issue of liability for damages caused by partly removed or abandoned structures is an important one.⁶¹ The discretion granted to coastal states means⁶² that provided they comply with the international obligations they will not become liable against the flag state of a ship damaged by an abandoned structure.⁶³ However the liability of the owner of the abandoned offshore structure would be determined by national law. Thus the extent of liability, the kind of damages and duration of the obligation would be determined nationally.⁶⁴ Gao reports that in the UK the position is⁶⁵ that “the oil companies will be responsible in perpetuity”.⁶⁶

⁵⁶ Ibid. page 353.

⁵⁷ In the UK there is no statutory requirement for an EIA. However The Department of Energy and Climate Change Guidance Notes on the Decommissioning of Offshore Oil and Gas Installations and Pipelines under the petroleum Act 1988, URN D9D/734, version 5, January 2010 suggests that an EIA should support the decommissioning programme (Guideline 21.1)

⁵⁸ In the U.K. s. 38 of the Petroleum Act, 1998 gives powers to the Secretary of State. Annex F of The Department of Energy and Climate Change Guidance Notes on the Decommissioning of Offshore Oil and Gas Installations and Pipelines under the petroleum Act 1988, URN D9D/734, version 5, January 2010 explains the legislative background and the timing for applying s. 29 of the Act . The industry has developed Decommissioning Security Agreements posting security for decommissioning projects.

⁵⁹ In the U.K. there is no fixed time for providing security. It is usually required when the net remaining value of the field is equal or less 150% or 135% of the projected cost of decommissioning. See Mankabady S, (1997) Decommissioning of offshore Installations, J. of Maritime Law and Commerce, 28(4), 603-615.

⁶⁰ Ibid, page 358-359. However in the Canadian arrangements there is significant discretion granted on the basis that each facility is different.

⁶¹ Gao Z. (1997) Current Issues of International Law on Offshore Abandonment, Centre for Petroleum and Mineral Law and Policy Discussion No. 14, 1-35 suggests that this liability will include, responsibility for maintenance, third party liability, insurance premium, environmental impact and damage, compliance with future legal provisions and probably obligations towards future generations.

⁶² The way the coastal states shares the benefits with the oil company is also important in terms of liability. In a production sharing system the oil-company gives a part of the oil to the government. Thus the obligation and liability of decommissioning remains with the oil company. In concession systems the ownership of installations is with the government. Thus the oil company may escape costs of decommissioning. See Cameron P. (2000), Tackling the decommissioning Problem, at. Resources and Environment, 14, 121-126.

⁶³ The situation would have been different if Art.5(5) of the 1958 Continental Shelf Convention applied because then any remaining part of a disused offshore platform would have been a breach of the state obligations.

⁶⁴ Under the U.S. Rigs to Reefs Program the authority granting the permit is protected from liability, the permit holder is also protected as long as it complies with the permit requirements and the donating company cannot be held liable for the use of donated materials as long as these comply with the requirements. See Holahan T., (2008) A framework for Alternative Energy Development: Shifting From Drilling Rigs to Renewables., B.C Env'tl. Aff. Law Review, 35, 321-348.

⁶⁵ This does not mean that the UK considers that the decommissioning costs are for the oil company. McDade P.V. (1987), The removal of offshore Installations and Conflicting Treaty Obligations as a Result of the Emergence of the New Law of the Sea: A case Study., 24 San Diego Law review, 645-

The Recycling of Ships.⁶⁷

The ship-breaking industry is presently located in developing states. India, Bangladesh, Pakistan, China and Turkey are some of the most important ship-breaking countries and is an important source of income that comes at the price of health problems and working accidents.⁶⁸, damage to workers' long term health as well as long term contamination of the environment are the normal consequences of such industry.⁶⁹ Surely the responsibility for ensuring that working conditions at scrapyards is that of the state where the scrapyard operates.

However under the Basel Convention 1989⁷⁰ a general framework for the minimisation of international movement and the environmentally safe management of hazardous wastes has been developed. This is based on a "prior informed consent" process through which the exporting state must get the approval of the state where the recycling facility is as well as any other state through which the wastes will be transported and follow a documentation based trail until it is confirmed that the wastes have been recycled in a manner in accordance with the Basel Convention. The requirements of the 1989 Basel Convention⁷¹ apply equally to all hazardous wastes irrespective of their source. Thus scrap metal from offshore facilities should comply with this process if it is to be recycled at a state other than that of the state where the offshore facilities operates.

The 1995 Basel Amendment completely bans exports of hazardous wastes for final disposal and recycling from OECD countries to non-OECD countries. Although not yet in force, the European Union has given effect to it in the form of a Regulation.⁷² Ships arguably fall under the ambit of the 1995 Basel Amendment. Thus export of ships for recycling is prohibited from Annex VII countries⁷³ to non-Annex VII

686 suggests that seventy percent of the costs will be met by the UK tax-payer because conveying and treatment costs are allowable expenses for royalty relief.(at page 648).

⁶⁶ Gao Z. (1997) Current Issues of International Law on Offshore Abandonment, Centre for Petroleum and Mineral Law and Policy Discussion No. 14, 1-35, at page 31. He also points out that some states in the U.S. had accepted responsibility for artificial reefs. See The Department of Energy and Climate Change Guidance Notes on the Decommissioning of Offshore Oil and Gas Installations and Pipelines under the petroleum Act 1988, URN D9D/734, version 5, January 2010 Guiline 16.1.

⁶⁷ For a full discussion of the Convention see Tsimplis M.N, (2010), The Hong Kong Convention on the Recycling of Ships, L.M.C.L.Q. 305

⁶⁸ See for example the report by Prasanna Srinivasan "The Basel Convention of 1989, -A developing country's perspective" available from: http://www.libertyindia.org/pdfs/basel_convention_srinivasan.pdf suggesting a range between a death of a worker per day to official estimates of 50 deaths of workers per year (page 19).

⁶⁹ *Ibid.*

⁷⁰ For more information regarding the Basel Convention and the work of its various Technical and Legal Working Groups, see <http://www.basel.int>.

⁷¹ For comments on the Convention and its protocols see Tsimplis M.N., Liability and Compensation in International Transport of Hazardous Wastes by Sea: The Protocol to the Basel Convention" (2001) 16(2) International Journal of Coastal and Marine Law 295; D Wall and M Tsimplis, "Selling Ships for Scrap" [2004] LMCLQ 254. Tsimplis M. N., Tsimplis M.N, (2010), The Hong Kong Convention on the Recycling of Ships, L.M.C.L.Q. 305

countries. This is done for the purpose of ensuring disposal within appropriate environmental considerations, thus adopting a protective role for the environment and the work force of developing states. Such a prohibition causes financial hardship to developing states involved with ship-breaking. Of course such prohibition will apply also to the offshore structures after they have been removed and provided they contain hazardous substances. The difference between offshore structures and ships is that ships can, by their own power, travel to the place of scraping thus breaching the restriction.⁷⁴ This is much more difficult to do for offshore structures which also incur high costs just to be removed from location.

The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009 (SRC)⁷⁵ is attempting to provide a solution to several of the problems raised. It does so, not by only adopting general principles of law but by devising a system of control and standards through the ship construction and the ship recycling industry.

The Ship Recycling Convention (“SRC”)

The SRC considers at its preamble ship recycling as a contribution to sustainable development. It adopts the precautionary approach and declares the need to substitute hazardous materials in the future. The SRC accepts that ship recycling is the best option for decommissioned ships.⁷⁶ While it does not include an express obligation to minimise the export of hazardous wastes, as the Basel Convention does, the SRC provides for the control of use or complete restriction under Annex 1 (Chapter 2) of hazardous materials in ship construction and repair. Thus the long term view is adopted by the IMO looking on how to solve the problem for the future rather than create significant pressure in the shipping market now.⁷⁷ The approach taken by the SRC requires the gradual cleaning up of ships in operation as well as the development of ships with minimum hazardous materials⁷⁸ which will be easier to recycle in an environmentally friendly manner.

To which structures does the SRC apply?

⁷² Council Reg. 259/93/EEC on the Supervision and Control of Shipments of Waste within, into and out of the European Community, (OJ 1993 L30/1). This has been transposed into English Law by the Transfrontier Shipment of Waste Regulations 1994

⁷³ Namely OECD countries and Liechtenstein. The term OECD and Annex VII countries are used interchangeably throughout this paper.

⁷⁴ The issue of implementation of any legal regime to ships is always problematic. Ships can easily change flags and registration and can also be bought and sold quickly without much control over their future use. Thus from the development of the Basel Ban, suggestions have been made that the sale of an operating ship to a developing state would avoid the Ban as it would not be applicable to exports between developing states. See “Selling Ships for Scrap”, Wall and Tsimplis, [2004] LMCLQ 254.

⁷⁵ SR/CONF/45, 19 May 2009. The SRC was agreed on May 15th, 2009.

⁷⁶ The General Obligations under Art.1(2) also provide that the SRC does not restrict contracting States from taking more stringent measures which are in accordance with international law in order to prevent, reduce or minimise adverse effects to human health and the environment.

⁷⁷ This is very similar to the long term view adopted under the IMO Guidelines under Resolution A.672(16), adopted 19 October, 1989 with respect to the installation of offshore structures after 1998.

⁷⁸ See Annex Chapter 2 and Appendix 1 and 2.

Ships entitled to fly the flag of contracting states⁷⁹ are subject to the provisions of the SRC. In addition Ship Recycling Facilities⁸⁰ operating in contracting States are also subject to the application of the SRC.⁸¹ The term “ship” includes vessels of any type whatsoever which are or have been operating in the marine environment even where they have been stripped of equipment or are under towage.⁸² The definition excludes:

- structures of similar characteristics which have not been operated in the marine environment
- Similarly structures which have been built for operation in the marine environment but for one reason or another have never been actually deployed
- Vessels operating only within waters under the sovereignty and jurisdiction of the flag State⁸³
- ships smaller than 500 grt⁸⁴
- military ships and any governmental ship of a contracting state employed in non-commercial service.⁸⁵

Expressly included are submersibles, floating craft, floating platforms, self-elevating platforms, Floating storage units,, floating production storage and offloading units. Thus a clear line has been drawn.⁸⁶ All offshore facilities which are not fixed but floating are subject to the SRC. However fixed platforms and offshore structures are not covered by the SRC.

All the excluded structures would remain of course subject to the 1989 Basel Convention. However it is arguable that the 1989 Basel Convention applies in any case to ships until an exclusion is agreed under that Convention. The simple development of the SRC cannot modify the 1989 Basel Convention.⁸⁷

The Convention requires three criteria to be met in order to come into force.⁸⁸ First, it requires at least 15 contracting states.⁸⁹ Second it requires that the contracting states

⁷⁹ Or operating under the contracting state’s authority Art. 3(1).

⁸⁰ The definition of a ship recycling facility is very broad. Any defined area or site, yard or facility used for the recycling of ships falls under this definition. Art. 2(11).

⁸¹ SRC Art. 3(1.2).

⁸² SRC Art. 2(7).

⁸³ SRC Art. 3(3).

⁸⁴ Gross tonnage is defined under Art.2(8) as that calculated under the International convention on Tonnage Measurement of Ships, 1969 and its successors.

⁸⁵ Art. 3(2).

⁸⁶ Note though that under the Petroleum Act 1998 these structures are also dealt with. The Department of Energy and Climate Change Guidance Notes on the Decommissioning of Offshore Oil and Gas Installations and Pipelines under the petroleum Act 1988, URN D9D/734, version 5, January 2010 provides under Guideline 7.18-7.20 that such facilities will either be reused or taken to land for recycling. Thus no apparent inconsistency exists. Whether under exceptional circumstances such units may remain on site is still a possibility under the OSPAR arrangements.

⁸⁷ Art. 15(2) states that the rights and obligations of parties under other international agreements are not prejudiced by the SRC. The wording is very wide and there is no reference to pre-existing or future international agreements. The 1969 Vienna Convention on the Law of Treaties, Done at Vienna on 23 May 1969. Entered into force on 27 January 1980. United Nations, Treaty Series, vol. 1155, p. 331, under Art. 30(2) states that “When a treaty specifies that it is subject to, or that it is not to be considered as incompatible with, an earlier or later treaty, the provisions of that other treaty prevail.” An interpretation of Art. 15(2) on this basis would lead to the conclusion that the Basel Convention provisions prevail if there is a conflict with the SRC.

⁸⁸ Art. 17.

represent at least 40% of the gross tonnage of the global merchant shipping. The third criterion is that it requires that the maximum annual ship recycling volume of all the contracting states during the past 10 year is at least 3% of the gross tonnage of these states.⁹⁰ The aim of these complex criteria is to ensure that enough countries representing a significant amount of the global tonnage of which at least 3% is recycled will subscribe to the SRC.

The Regulations for safe and environmentally sound recycling of ships

The text of the SRC includes the Annex containing the regulations for the environmentally safe recycling of ships.⁹¹ The Annex is in itself a more complicated document that the text of the SRC tackling in more detail, issues related to the recycling practices. The Annex applies to the design, construction, survey, certification of ships larger than 500 grt.⁹² The implementation of the Annex is to be done in conjunction with the relevant International Labour Organization standards, and the “relevant and applicable recommendations and guidance developed under“ the 1989 Basel Convention. For contracting states to the 1989 Basel Convention, all such practices must be considered together with whatever additional requirements the SRC introduces. Thus, it is likely that the uniform implementation of the regulation cannot be guaranteed.

Hazardous materials listed in Appendix 1⁹³ are prohibited to be introduced in new or old ships. Each SRC contracting state must ensure that ships operating under its authority and ports, ship yards or other facilities in its jurisdiction involved in the building, repair, maintenance and operation of ships would also comply with the prohibition or restricted use permitted under the SRC.

The SRC tackles the recycling problem by imposing obligations in respect of ships and in respect of recycling facilities of contracting states. Only ships covered by or meeting the requirements of the SRC can be recycled at authorised ship recycling facility.⁹⁴

Specific obligations in respect of ships

Ships are controlled by flag states on the basis of the International Inventory of Hazardous Materials Certificate (“IHM”) and on the basis of the International Ready

⁸⁹ See MEPC 59/3/6 through which the European parliament resolution of 26 March 2009 On An EU Strategy for better ship dismantling has been submitted to the IMO for consideration. See paragraph E and paragraph 6.

⁹⁰ See SR/CONF.41.

⁹¹ The text of the Annex is an integral part of the SRC. Art. 1(5).

⁹² Reg. 2.

⁹³ Reg. 4. Asbestos, Ozone depleting substances (with some exceptions applying until, 1/1/2020), Polychlorinated biphenyls, antifouling components and systems prohibited under the 2001 Harmful Anti-fouling Systems on Ships are included in Appendix I.

⁹⁴ Reg. 17(2.1)

for Recycling Certificate. The IHM must be onboard every ship to which the SRC applies prior to recycling.

New ships⁹⁵ must have an IHM onboard from the time of their construction. The IHM is issued by the flag state⁹⁶ and is supplemented by three parts. The first part is a record of the location and approximate quantity of hazardous substances in the structure and equipment of the ship.⁹⁷ This is to be updated through regular surveys. Thus the IHM not only has information crucial for recycling the hazardous parts of the ship but may also acts be used for compliance with Regulation 4, that is, to indicate either that no hazardous materials have been used in repairs, maintenance or operation of the ship after the coming into force of the SRC or if there have been used that this use was in agreement with the restrictions provided under the SRC and the IMO provisions. The second and the third parts of the IHM must be completed by the flag state or a recognised organisation when the ship is destined to be recycled.⁹⁸ These list operationally generated wastes and the stores respectively.

Port state control is based on the validity of the IHM and its proper maintenance and updating. Lack of proper maintenance and updating of the IHM may render the IHM invalid.⁹⁹ The IHM also ceases to be valid when the ship's flag is changed.¹⁰⁰ A new certificate should then be issued, if, of course the new flag state is a contracting state to the SRC. This is an important arrangement for the implementation of the controls of the SRC.

The port-state control arrangements adopted under the SRC are consistent with LOSC 1982.¹⁰¹ Rights of inspection are provided to other SRC contracting states in respect of ships subject to the SRC. The purpose of the inspection is to ensure compliance with the requirements of the SRC. In the general case the rights of inspection are restricted to verifying that there is onboard an International Certificate on Inventory of Hazardous Materials or an International Ready for Recycling Certificate. If there is such a certificate onboard then this must be accepted.¹⁰² Thus the unfettered rights of a coastal state to inspect fully any ship using its port is in essence restricted on the basis of the certification system. A detailed inspection can be carried out by the port authorities but only where there is no appropriate certificate onboard, or where there are substantial discrepancies between the certificate and the condition of the ship or equipment or there are no procedures for the maintenance of the Inventory of Hazardous Materials.¹⁰³ The inspection should follow the IMO guidelines.

⁹⁵ A new ship is defined under Regulation 1.4 as one for which the building contract is placed on or after the entry into force of the SRC; or, where there is no shipbuilding contract, a ship with a keel laid six months after the entry into force of the convention or the delivery is 30 months after the entry into force of the SRC. It is suggested that where more than one of these is satisfied then the ship is a new ship.

⁹⁶ Or by a recognised organisation.

⁹⁷ Compliance with the IHM requirements is qualified to be "as far as practicable" under regulation 5(2). Compliance must be achieved within 5 years from the coming of the SRC or before recycling whichever occurs first. There is also a requirement that surveys should be harmonised with other statutorily required surveys (Regulation 10.5).

⁹⁸ This is achieved through a final survey, Regulation 10.4.1.

⁹⁹ Reg. 14(1.1).

¹⁰⁰ Reg. 14(1.2).

¹⁰¹ [United Nations Convention on the Law of the Sea 1982](#)

¹⁰² Art. 8.

¹⁰³ If there is evidence that a ship has, is or will violate the SRC arrangements a contracting state that has evidence can request that the ship is investigated at the port or offshore terminals of another contracting state. The inspection reports are then send to the requesting party, the flag state and the IMO (Art. 9(1)).

The rights of inspection are important for new ships.¹⁰⁴ These should each have an IHM onboard, regularly updated and amended in accordance with the construction, repair, maintenance, operation and modifications effected. Thus where the ship does not have a valid certificate or where the condition of the ship or its equipment is not in accordance with the particulars of Part I of the IHM or there is no procedure for maintaining Part I of the IHM, a detailed inspection in accordance with the IMO guidelines is permitted.¹⁰⁵

Provided that states where the major ship breaking facilities around the world subscribe to the SRC then the recycling of ships will have to be made subject to the existence of an IHM or the major facilities will not be available to such a ship. Existing ships are under an obligation to comply with the requirement to have onboard an inventory of hazardous materials at the latest 5 years after the entry of the SRC into force¹⁰⁶ or before recycling if this less than 5 years from the entry into force of the SRC.¹⁰⁷ However the International Certificate (IHM) for an existing ship, defined as being a ship other than a new ship,¹⁰⁸ is to be produced before recycling as an initial and final survey are to be conducted at the same time.¹⁰⁹

Ships registered in non-contracting states cannot be issued with an IHM certificate.¹¹⁰ The SRC requires that with respect to ships flying the flag of states that are not contracting states to the convention the contracting states should ensure that "... no more favourable treatment is given to such ships".¹¹¹ How this will be achieved is not clear and guidelines will be developed.¹¹²

Authorised Ship Recycling facilities.

With respect to Ship Recycling facilities the SRC develops standards, as well as surveying, monitoring and certification requirements. The SRC avoids the solution adopted by the 1989 Basel Convention, where it is up to the exporting state to decide whether environmentally sound recycling can be achieved at the state of import. It also clearly contradicts and is incompatible with the 1995 Basel Amendment (Ban), through which no hazardous wastes are to be exported in developing countries. By contrast it attempts to ensure that, in all countries, including the developing countries, the lucrative ship-breaking sector can become part of the sustainable development by adopting appropriate measures for workers' safety and for minimisation of the environmental degradation.

Contracting states must ensure appropriate authorisation and compliance with the SRC of any recycling facilities operating under their jurisdiction. Under Art. 12 SRC each contracting state will report to the IMO the list of ship-breaking facilities available.¹¹³ Thus the SRC ensures compliance with the requirement of environmentally safe recycling of ships by regulating globally, under similar standards, the available facilities. This is achieved by the use of recognised

¹⁰⁴ As defined under Reg. 1(4).

¹⁰⁵ Art. 8.

¹⁰⁶ The 5 year period applies only if it is not practicable to have the IHM inventory onboard earlier.

¹⁰⁷ Reg. 5.2.

¹⁰⁸ Reg. 10.3

¹⁰⁹ Reg. 11.

¹¹⁰ Reg. 12.4

¹¹¹ Art.3(4).

¹¹² See MEPC 59/3/4.

¹¹³ Art. 12.

organisations and nominated surveyors.¹¹⁴ Sanctions for breach of the SRC obligations,¹¹⁵ severe enough to discourage violations from occurring,¹¹⁶ should be introduced by all contracting states' national laws.¹¹⁷

The SRC requires each contracting state to:

- develop its national legislation, regulation and standards for the operation of ship recycling facilities that are “designed, constructed and operated in a safe and environmentally sound manner in accordance with the regulations of this Convention”.¹¹⁸
- establish a national authorisation system for Ship Recycling Facilities¹¹⁹ as well as develop inspection, monitoring and enforcement mechanisms¹²⁰
- designate competent authorities one of which must be the contact point to the IMO.¹²¹
- Carry out audits and provide the results to the IMO.¹²²

There is wide discretion on national governments on what powers they should grant to the competent authority and how this control system will be implemented. This creates a risk for a race to the bottom, to the absolute minimum required to ensure compliance with the SRC. The development of international standards and the auditing through recognised organisations is the only available safeguard in this respect.

Authorised recycling facilities will be issued with a certificate¹²³ which will include contact details, and a supplement. The supplement will certify amongst other things that the facility is capable of safe for hot work and safe for entry conditions;¹²⁴ the geographical boundaries of the ship recycling facilities;¹²⁵ the size of the largest ship that can be recycled. It will also specify the technical capability of the facility in particular whether specific hazardous materials can be removed, stored or processed through incineration, reclamation or treatment¹²⁶ and the responsible personnel and their certification. Where the facility is unable to process or dispose of the hazardous materials the authorisation requires that in any Ship Recycling Plan the place or process or disposal must be stated.¹²⁷ Thus, the authorisation document of the Ship Recycling Facility should have all the necessary information for a state or a

¹¹⁴ Art.12.3.

¹¹⁵ Art. 10.

¹¹⁶ Art. 10(3).

¹¹⁷ When a violation is confirmed the contracting state is obliged under Art. 10(1.2) to initiate proceeding against the recycling facility and also inform the IMO on the breach and actions taken and, failing to act within a year after receiving information from another contracting state, explain why no action has been taken.

¹¹⁸ Regulation 15(1).

¹¹⁹ Regulation 15(2). In doing so the IMO guidelines should be taken into account (Regulation 16.1).

¹²⁰ Regulation 15(3), including powers of entry and sampling.

¹²¹ Regulation 15(4).

¹²² Regulation 15(3).

¹²³ The relevant form is in Appendix 5 of the SRC. The language should be that of the authorising state with translation to English, French or Spanish (Reg. 16.4).

¹²⁴ Art. 1.3 of the Supplement to Appendix 5.

¹²⁵ Art. 2.1 of the Supplement to Appendix 5.

¹²⁶ Art. 2.2 of the Supplement to Appendix 5.

¹²⁷ Art. 2.2 of the Supplement to Appendix 5.

shipowner to assess whether a Ship Recycling Facility is authorised to remove and dispose of the hazardous materials as required under the SRC.

Each Ship Recycling Facility is required under the SRC to operate under management systems and procedures that do not pose health risks to the workers of the facility and in addition to other people in the vicinity of the facility.¹²⁸ In addition, the same working practices and management systems should “prevent, reduce, minimize and to the extent possible eliminate adverse effects on the environment”.¹²⁹

These very general considerations are to be dealt with in more detail by IMO guidelines which, hopefully, will ensure some minimum protection of the workers, the human health of population in the vicinity¹³⁰ and environmental protection as well as a level playing field for the various recycling facilities located in different contracting states.

The Ship Recycling Facility obliged amongst other things to provide for and ensure environmentally sound management of all the hazardous materials and wastes produced at that facility and to identify sites for waste recycling or disposal which are environmentally safe.¹³¹ In addition, the Ship Recycling facility is obliged to ensure that the hazardous materials stated in the IHM are identified, labelled, packaged and removed to the extent possible before the cutting of them.¹³²

The SRC is silent in respect of the time that the ship recycling facilities must be authorised. It is also unclear under what criteria would a contracting state delegate the authorisation process to a recognised organisation.¹³³

The development of appropriate guidelines and of recognised organisations capable of undertaking the certification and regular surveying is, in this respect paramount.

Under the SRC, recycling is permitted only at authorised,¹³⁴ ship recycling facilities¹³⁵ which, in addition, are authorised to perform all the necessary recycling actions the ship recycling plan provides for.¹³⁶ This is achieved through a system of prior informed consent which involves the flag state and the competent authority. The requirements for recycling and the suitability of the recycling facility are documented and controlled through the IHM and the information included in the Certificate of the Ship Recycling Facility. The flag state is responsible for issuing an International Ready for Recycling Certificate following the completion of a final survey and the final modification of the IHM. The suitability of the process is ensured through the development of an appropriate ship recycling plan approved by the competent authority of the state where the recycling authority is based. Approval depends on

¹²⁸ Reg. 17(1).

¹²⁹ *Ibid.*

¹³⁰ The term is not defined and different interpretations can be given.

¹³¹ Reg. 20(3).

¹³² Reg. 20(2). This includes hazardous materials which are not part of the ships structure.

¹³³ See IMO MEPC 59/3/2 for a submission by the Republic of Korea on the subject and Annex 4 of MEPC 59/3/3 May 20, 2009, calling, amongst other things for the adoption of such guidelines.

¹³⁴ The final survey provides for compliance with the IHM, that the Ship Recycling Plan reflects appropriately the IHM information as well as the requirement for safe-for-entry and safe-for-hot work requirements and that the Ship Recycling facilities holds a valid authorisation under the SRC (Reg. 10.4).

¹³⁵ Ship Recycling facility is, under Art. 2.11, a defined area, site, yard or facility, used for the recycling of ships. Thus, any area where intentionally activities of ship recycling take place is subject to this definition provided that it is somehow defined as such, probably under the requirements of national law.

¹³⁶ Reg. 8(1.2).

whether the contracting state has expressed,¹³⁷ under Art. 16(6) a requirement of explicit or tacit acceptance of ship recycling plans. Where explicit approval procedures have been adopted the competent authority must provide it expressly. If tacit acceptance is adopted then the acknowledgment of receipt has to specify a 14-day deadline by which the competent authority may object to the Ship recycling plan. Failure to do so will deem the plan as accepted.¹³⁸ After the ship recycling plan is approved it must be made available to the flag state or any recognised organisation or surveyors for inspection.¹³⁹

Conclusions.

Offshore structures and ships at the end of their lives pose the same question: how to dispose or recycle them in a way consistent with sustainable development. It is yet unclear how sustainability of the oceanic resources and environment can be achieved. Thus the way structures in the marine environment are dealt involve many discretionary aspects which permit short term financial benefits to dominate over long term development issues.

For offshore structures discretion and a case by case decision making process has been established despite an initial requirement under the 1958 Continental Shelf Convention to completely remove disused installations. Furthermore how the discretion is implemented depends on each coastal state and on the implementation of regional agreements. The costs of decommissioning and the liability arising from any remnants do not always fall on the oil company but, depending on the agreement between the oil company and the coastal state, may be paid partly by the tax payer. This may be argued as avoiding the “polluter pays” principle and encouraging environmentally unfriendly practices.

From the point offshore facilities are removed and brought on land they follow the same rules applicable to all wastes.

Both ships and offshore facilities when destined for recycling are subject to the 1989 Basel Convention and, as far as EU member States are concerned also to the prohibition of exports of hazardous wastes to developing states.

Because ships travel without a need to declare the owner’s intention for scrapping them they are presently recycled without many restrictions.¹⁴⁰ This freedom has led to significant ethical and practical problems in developing countries where human life and environmental standards are not followed by scrapyards.

With the development of the SCR it is hoped that a system by which ships and floating offshore facilities will be able to be recycled in authorised recycling facilities that follow internationally acceptable standards. If this arrangement is considered as adequate compliance with the 1989 Basel Convention and its 1995 Protocol ships as well as floating offshore structures will be able to avoid the restrictions imposed by the 1995 Basel Convention provided they comply with the SRC documentary requirements. As a result their export even where they contain hazardous materials to developing states will not be impeded. Parts of offshore structures which do not fall within the scope of SRC will continue facing the Basel obstacles.

¹³⁷ States may change their requirement from explicit to tacit and vice-versa through notification to the IMO Secretary General.

¹³⁸ Reg. 9(4).

¹³⁹ See SR/CONF/35 for the discussions on adopting the final text.

¹⁴⁰ They have been incidents where ships were detained for this reason. See Tsimplis M.N, (2010), *The Hong Kong Convention on the Recycling of Ships*, L.M.C.L.Q. 305

Both legal frameworks have the same stamp on them: the influence of a powerful industry ensuring successively exceptions for the recycling of its equipment. In both frameworks the IMO was the source of the compromise. By contrast the 1989 Basel Convention has very few exceptions and imposes very strict liability. The SRC itself can be seen as a way of avoiding the restrictions of the 1989 Basel Convention and its 1995 Protocol. However the provision of authorised recycling facilities may well provide an opportunity for recycling parts of disused offshore facilities in authorised and certified scrapyards.

With oil exploration is moving further offshore and in the Arctic, which presumably should be treated as a marine protected area due to its unique and vulnerable ecosystem, there is arguably a need to review the recycling arrangements of offshore facilities.¹⁴¹ Granting permission to exploit non renewable resources, that is oil and gas, and impose in the process new or additional pressures to the marine system cannot, may be justifiable under the sustainable development objective. However in my view such permission cannot be considered as including the right to occupy that area for ever excluding it from other users or establishing an artificial ecosystem. Thus returning to the strict principle of complete removal under Art. 5(5) of the 1958 Continental Shelf Convention appears the most reasonable approach satisfying concern about sustainability and provision for future generations especially in areas like the Arctic. As the development and implementation of regional treaties is not progressing as fast as the development of offshore exploration there is arguably a need to replace the IMO Guidelines with binding and clear obligations.

The development of the SRC by the IMO provides an example of international regulation of recycling practices for ships and floating offshore structures. Unfortunately it also appears weak and discretionary in its implementation although the development of further guidelines and an international auditing system may be proven key in establishing some minimum standards.

The case may be that international standards must be imposed to oil companies in relation to the decommissioning of offshore facilities. It is hardly arguable that companies that can comply with such requirements in one part of the world can avoid compliance in another on the basis of local legislation. On the contrary oil companies based in developed countries with established principles for environmental protection should arguably comply with these principles when operating in developing states. While this may be very difficult to impose legally without seen as intervening with the way the developing country operates consumer pressure may be the answer to the question if the development of an internationally acceptable practice fails. For developing states there is not much justification for taking such risks either. Degradation of their marine environment will not in the long term support their sustainable development. It is considered strongly arguable that the only certainty arising from any exception from recycling is that it benefits the oil companies and their shareholders. By contrast the risks of such practices are or will be borne by the present and future generations and the environment. Therefore as a matter of precaution abandoning offshore structures or its parts in situ should not be permitted unless it is proven that at the very least the harm to the environment from the

¹⁴¹ LOSC 194(5) referring to measures to be taken for the protection of the marine environment, including that arising from offshore installations states: “*The measures taken in accordance with this Part shall include those necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life.*” Thus for the Arctic a complete removal of all offshore structures is strongly arguable.

cumulative effects of such practices will not be significant. While this can be achieved under a discretionary arrangement it is certainly more difficult.