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SHIP-RECYCLING: EVOLUTION OF THE LEGAL FRAMEWORK AND FUTURE ISSUES

INTRODUCTION

The process of demolition of a ship that takes place at the end of her life nowadays is defined as ship-recycling. This process consists in dismantling the ship with the intent of recovering, re-using and recycling as many materials as possible.

Demolition of ships is an ancient practice with a secular history that became an actual issue for the shipping industry since the end of the 20th century. In particular, between the end of 1997 and 1998 two journalists, Gary Cohn and Will Englund, published on the *Baltimore Sun* twelve articles about ship-scrapping and were awarded with the *Pulitzer Price for Investigative Reporting*[1]: their work revealed to the world all risks for human health and the environment involved in the process of dismantling a ship with the "beaching method". This latter is the method commonly used in Bangladesh, India and Pakistan – where most of ships are demolished worldwide[2] – and consists in laying the vessel on the high tide directly on the beach where she is dismantled in pieces during low tides, generally with very poor precautionary measures both for workers and for the environment.

Since the beginning of the new millennium the International community began to face the issue and so committed in finding a way to solve the problems connected with the standards used by the ship-recycling industry. The first type of reaction consisted in adapting to the new issue the existing legislation such as, at an international level, the 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal[3] (hereinafter the "Basel Convention") and, at European level, the regulations concerning shipment of waste i.e. are Council Regulation (EEC) No. 259/93 (hereinafter the "1993 Regulation") and Regulation (EC) No. 1013/2006 (hereinafter the "2006 Regulation") later amended by Regulation (EU) No. 660/2014.

Despite these efforts the issue was not solved: most ships at the end of their trading life continued to be dismantled in those same countries by the beaching method, with serious consequences for the environment and for workers' health. Thus, both the International community and the European Institutions focused on drafting a regulatory instrument specific to the issue. The results of this commitment were the 2009 Hong Kong Convention for the Safe and Environmentally Sound Recycling of Ships (hereinafter the

[1] All articles are available on the Pulitzer Prize website: <https://www.pulitzer.org/winners/gary-cohn-and-will-englund>.

[2] In 2017, up to 80% of the global end-of-life tonnage was broken up in those countries (Source: NGO Shipbreaking Platform, *2017 Annual Report* (2018) <https://www.shipbreakingplatform.org/wp-content/uploads/2018/07/Annual-Report-2017-Final-Spreads.pdf>, accessed 15th May 2020; NGO Shipbreaking Platform is a platform of non-governative organizations actively engaged in protecting workers' right and the environment in relation with the ship-breaking activities; on their website (<https://www.shipbreakingplatform.org>) several documents and reports describing the issue can be accessed.

[3] The Basel Convention has entered into force on the 5th of May 1992 and has been ratified by 187 States (source: http://www.basel.int/?tabid=4499; accessed 15th May 2020); the European Union is party to the Convention.

"Hong Kong Convention" or "HKC") and Regulation (EU) No. 1257/2013 on recycling of ships (hereinafter the "2013 Regulation" or "EUSRR"). The HKC has not yet entered into force, while the EUSRR is in force since 31st December 2018[4].

This essay provides a description of the evolution of the ship-recycling legal framework with the aim of highlighting the progress that has been made and what are the practical issues to be considered in the near future in order to ensure that the regulatory instruments recently adopted can efficiently tackle all issues related to the ship-recycling activities.

1. EVOLUTION OF THE LEGAL FRAMEWORK BEFORE THE HONG KONG CONVENTION

1.1 First of all, as a necessary premise it is to be recalled the United Nation Convention on the Law of the Sea ("UNCLOS") which is considered the "Constitution of the Seas"[5]. Part XII of UNCLOS, dealing with the protection and preservation of the marine environment, has some provisions that may be applicable to ship-recycling activities[6]. UNCLOS is a "framework convention", i.e. a treaty that "has to be filled with substance by other instruments, both regionally and globally"[7]. For this reason it is here more appropriate to consider those legal instruments relevant to ship-recycling specifying the obligations provided by UNCLOS, starting from the Basel Convention and the European regulations on shipment of hazardous waste, with the aim of understanding how these instruments were interpreted in relation to the new ship-recycling issue. Both the Basel Convention and the 1993 and 2006 Regulations were introduced with the aim, on the one hand, of ensuring the safe and environmentally sound management of hazardous wastes and, on the other hand, of reducing and controlling their transboundary movement, normally taking place from developed countries to developing countries where they were often disposed of with serious risks for human health and the environment. According to the abovementioned instruments, shipment of hazardous waste is to be considered as the last resort, an exception to the rule that waste has to be disposed of as much close to its source as possible.

In fact, the transboundary shipment of hazardous waste is permitted only in exceptional cases and only if the double mechanism of prior notification and prior informed consent is complied with: the Exporting State is requested to previously notify the Importing State as well as all Transit States and to obtain their

[4] Article 17,1 of the Hong Kong Convention lists the three criteria to be fulfilled for its entry-into-force; art. 32 of the 2013 Regulation considers the time of application of the EUSRR and indicates at the second paragraph certain provisions that have different time of application in comparison with the general timeline indicated in art. 32, 1 (b).

[5] M. H. Norquist et al., *United Nations Convention on the Law of the Seas 1982 – a commentary* (1991), Martinus Nijhoff Publishers pag. 11-12; accessed 17th May 2020

[6] The most relevant are artt. 192, 194, 197, 200, 204, 206, 207, 211, 213, 217, 218, 219 and 220.

[7] U. D. Engels, *European Ship Recycling Regulation* (2013), Springer. Accessed 20th May 2020.

prior consent. Moreover States may refuse a particular shipment of waste and may also ban the entry of a particular type of waste within their territory.

1.2 Over the years both legal instruments were interpreted as being applicable also to ship-recycling in consideration of their definition of waste as a substance or object that is "disposed of"[8]. At an International level, during the 7th Meeting of the Conference of the Parties to the Basel Convention[9] it was explicitly recognised that a ship may become a waste according to the Basel Convention. This Convention applies not only to substances or object that are disposed of, but also to the same items when intended to be disposed of. Thus, when an end-of-life ship - having on board hazardous materials– sails to a foreign country during her last voyage towards the recycling yard, she then falls within the scope of application of the Basel Convention.

The main issue for the effective enforcement in relation to ship-recycling activities of both the Basel Convention and the 1993 and 2006 Regulations was identifying the intention of disposing of a ship, not only because a ship is a moving asset, but also and mainly because such an intention is subjective, therefore difficult to detect. One would think about objective elements which may reveal the intention of a shipowner to dispose of a vessel: for example, the age and conditions of the ship, her course towards ship-recycling yards, the previous conduct of that particular shipowner with regard to other end-of-life ships, lack of renewal of her class certificates, or the end of her trading as a mean of transport[10].

The reality is that this intention is difficult to detect as well as to prove. For this reason, the effective enforcement of the regulatory framework provided by the Basel Convention as well as by the European Regulations on shipment of waste in relation to ship-recycling activities proved to be very challenging at a practical level. A study prepared by the European Commission[11] revealed that 90% of the ships falling within the scope of application of the 2006 Regulation ignored or circumvented the applicable legal framework. It is noteworthy that this Regulation brings at European level the so-called "Basel Ban". This ban, prohibiting the exportation of hazardous wastes to non-OECD countries, was adopted by the Parties to the Basel Convention in March 2004 but has not yet become enforceable at an International level, while the 2006

[8] Art. 2,1 of the Basel Convention and art. 2,1 lett. a) of the 1993 Regulation.
[9] The 7th Meeting was held in Geneva from 24th to 29th October 2004. See "Decision BC VII/26 – Environmentally sound management of ship dismantling" <http://www.basel.int/TheConvention/ConferenceoftheParties/Meetings/COP7/tabid/6148/Default.aspx>.
[10] See, for example, R. Lagoni and J. Albers, *Schiffe als Abfall? - Zur Anwendung des Basler Übereinkommens und der EG-Abfallverbringungsverordnung auf Seeschiffe* (2008), in "Natur und Recht", vol. 30 p. 220-227; accessed 22th May 2020
[11] European Commission, *Proposal for a Regulation of the European Parliament and of the Council on Ship Recycling* (23rd March 2012), < *Proposal for a Regulation of the European Parliament and of the Council on Ship Recycling* >; accessed 22th May 2020.

Regulation is binding for all EU Member States. Bangladesh, India and Pakistan are non-OECD Countries but in the last two decades more than two-thirds of the end-of-life ships were dismantled in those countries [12].

1.3 In fact, there are different *escamotages* that a shipowner may take in order to circumvent the abovementioned legal frameworks: for example undertaking a series of change of ownership of the ship to shell-companies and/or change of flag, registering the ship under an extra-UE flag that is not Party to the Basel Convention; trading the ship on her last voyage to the recycling yard; or selling the ship to a so-called cash-buyer who takes control over the ship "as she is", organizing her transboundary voyage towards the recycling yard. In fact, there are some political cases that became known publicly and showed clearly all limits of attempting to adapt the existing legislation to the new issue of ship-recycling[13].

Truth is that, in the last two decades, most of the cases of breach or circumvention of the existing legislation in relation to demolition of ships went under-covered. No relevant sign of change in relation to the percentage of worldwide ships dismantled in Bangladesh, India and Pakistan, nor a serious improvement in the standards used there emerged. The issue described by the Pulitzer Prize winners remained unsolved, as at a practical level the solution provided by the Basel Convention and the European Regulations on shipment of waste resulted difficult to be enforced. For this reason both the International Community and European Institutions committed in drafting legal instruments specifically dealing with the recycling of ships, with the aim of providing an effective solution to the issue. The Hong Kong Convention and the European Union Regulation on Ship Recycling do represent the product of these efforts[14].

2. THE HONG KONG CONVENTION AND THE 2013 EU REGULATION

2.1 In May 2009 the Hong Kong Convention was adopted, while in 2013 the European Institutions adopted Regulation N. 1257/2013 on recycling of ships. Both legal instruments aim for a triple goal: to protect human health as well as the environment while enhancing ship safety[15]. Their scope of application is wide and inclusive, because of their "cradle-to-grave" approach: their aim is not only limited to specifically regulating the ship-recycling operations, but is extended to the whole life of a ship[16], from her projecting and

[12] Source: N. Mikelis, *The Recycling of Ships* (2018), pag. 3.

[13] See, for example, the following cases: "Blue Lady", "Sea Beirut", "Kong Frederik IX", "Clemenceau", "Otapan" and "Sandrien".

[14] Concerning the relation between the Basel Convention and the Hong Kong Convention no conflict shall create when this latter Convention will become binding as this regulates ship-recycling activies more specifically than the former one, thus prevailing; the 2013 Regulation deals expressly with its relation with the 2006 Regulation, stating that this will remain applicable for all ships falling outside the scope of the 2013 Regulation.

[15] Art. 1 of both the HKC and the EUSRR.

[16] Most of the ships fall within the scope of application of both legal instruments, as exemptions only apply to ships of less than 500 gross tonnage or operating throughout their life only in waters subject to the jurisdiction of their Flag State, to warships and ships owned or operated by a State on government non-commercial service (reg. 3, Annex I HKC and art. 2 EUSRR).

construction until her dismantling, including her operating lifetime. Contents of both legal instruments may be divided in two different parts: i.e. the provisions regarding ships and ship-recycling yards respectively. This is an inclusive approach focused at resolving the problem at its roots consisting in the presence on board of several hazardous materials that are generally not identified nor disposed of in a safe and environmentally sound manner.

2.2 As far as ships are concerned, the main features of both legal instruments are the Inventory of Hazardous Material[17] and the Ship Recycling Plan[18]. The former document plays a key role as it permits, through its Part I, to identify the type, amount and place of all hazardous materials contained on board, thus enabling their careful handling and disposal; ships are required to undergo periodic inspections[19] in order to verify the completeness and truthfulness of the Inventory, which has to be kept on board and duly updated through the entire operational life of the ship; during dismantling activities Part II ("operationally generated wastes") and Part III ("stores") shall be added to Part I in order to complete the Inventory.

In order for ship-recycling activities to begin, the Ship Recycling Plan shall have to be drafted by the yard and approved by the State where the activities take place which has to verify and ensure the compliance with all requirements. Indeed, this detailed and specific document identifies all operations and precautions that are going to be implemented during the safe and environmentally sound dismantling of that specific ship. According to both legal instruments ships flying a flag of either an EU Member State or a State Party to the Convention have to be recycled only in authorized yards.

2.3 Coming to ship-recycling yards, the main requirements of both legal instruments are the Ship Recycling Facility Plan[20], where various information including the method of ship-recycling adopted and all precautions taken by the relevant yard shall be entered, and the necessary authorization from the competent national authority[21]. According to the Hong Kong Convention this authorization is issued by the State[22] where the yard operates and not by a supranational entity. The same mechanism applies for European yards according to the 2013 Regulation (art. 14). On the other hand, a different system is provided under the 2013 Regulation with regard to "extra-EU" yards: art. 15 requires them (i) to submit an application to the European Commission, (ii) to undergo an initial and a mid-term inspection carried out by an independent surveyor

[17] Reg. 5, Annex I of HKC and art. 5 of EUSRR

[18] Reg. 9, Annex I of HKC and art. 7 of EUSRR.

[19] Reg. 10, Annex I of HKC and Art. 8 of EUSRR. There are four types of inspection: an initial survey before the ship is put into service, a renewal survey at intervals not exceeding five years, an additional survey that may be requested by the ship-owner after a change, replacement or major repair, and a final survey that takes place before the ship is put out of service and thus dismantled.

[20] Reg. 18, Annex I of the HKC and art. 13 of the EUSRR.

[21] Art. 16 of the EU Regulation No. 1257/2013 request ships flying the flag of a Member State to be recycling only at facilities included with in the European List of authorized ship-recycling yards.

[22] According to Reg. 16, Annex I of HKC this duty of authorization may be delegated to "recognized organizations".

appointed by the said Commission and (iii) to accept further unannounced inspections in the future arranged by the European Commission with an aim of verifying the compliance by the yards with all requirements of art. 13 of the Regulation.

2.4 The abovementioned different system for extra-EU yards is not the only element distinguishing the European legal framework from the International one. On the one hand, the 2013 Regulation brings at the European level the requirements of the Hong Kong Convention; in fact, reference to this Convention is made in the Recitals of the Regulation, in particular, Recital No. 5 states that the Regulation "is aimed at facilitating early ratification of the Hong Kong Convention […] by applying proportionate controls to ships and ship-recycling facilities on the basis of that Convention". On the other hand, the 2013 Regulation establishes some more strict requirements in relation to specific aspects, implementing art. 1,2 of the Hong Kong Convention which allows introduction of more stringent measures by Contracting States.

In this connection the 2013 Regulation lists two more hazardous materials[23] whose presence on board shall be accurately specified in the Inventory and, with regard to ship-recycling facilities, it aims at regulating treatment of wastes not only within but also outside these facilities in order to ensure their safe and environmentally sound disposal: art. 13, 1 letter g) par. Ii) requires the yard to document all quantities of waste generated from the ship-recycling activities and to transfer them only to waste management facilities that are authorised for their treatment. Moreover "extra-UE" yards are required to specify, for each hazardous material, which "waste management process will be applied within or outside the ship recycling facility" and to "provide evidence that the applied process will be carried out without endangering human health and in an environmentally sound manner" (art. 15.2 lett. f) par. ii)). These yards are also obliged to ensure that the waste recovery or disposal operations' standards are equivalent to relevant international and European standards (art. 15.5). It is therefore clear that the European Regulation is not focused to ensure sound management of waste but also its careful treatment and disposal, with particular attention to "extra-UE" yards that usually operates with poor standards.

2.5 In addition to the abovementioned differences between the Hong Kong Convention and the 2013 Regulation there is one stricter requirement of the latter that at a practical level may play a fundamental role in the future of the ship-recycling industry. This is the so-called "beaching ban", consisting in a prohibition to proceed to the demolition of a ship using the beaching method which is actually the most used method of ship-recycling on a global scale and in particular in south Asian Countries. This ban results from a strict interpretation of three provisions of the 2013 Regulation:

[23] These are the perfluorooctanesulforic acid ("PFOS") and the hexabromocyclododecane ("HBCCD").

(i) art. 13, 1 letter c) lists the requirements for ship-recycling facilities; literally, this provision requires them to operate "from built structures";

(ii) art. 13, 1 letter f) requires yards to prevent adverse effects on human health and the environment, including the "control of any leakage, in particular in intertidal zones"; reference to intertidal zone is very relevant for the reason that here the risk of marine pollution from any leakage is very high[24] but also because most of south Asian ship-recycling yards dismantle ships directly on the shoreline after having beached the vessel on the high tide;

(iii) art. 13, 1 letter g) par. i) requires the handling of hazardous materials as well as of waste generated during the ship-recycling to be conducted only on "impermeable floors with effective drainage systems".

These three requirements represent the solution adopted by the European Institutions at the time of drafting the Regulation: this is a compromise solution between the position of the Environment Committee of the European Parliament, giving expression to the NGOS' viewpoint of banning the beaching method, and the working group appointed by the European Council which challenged that viewpoint. Being a compromise solution, it will be essential to observe how these three requirements will be interpreted on a practical level. A Communication[25] from the European Commission dated 12 April 2016 may suggest that 2013 Regulation provides a beaching ban, although the interpretation of its text given in that Communication is not totally *trenchant* on the point.

2.6 In the near future it will be interesting to see what the EU Commission will do when further updating the EU List. Admitting south-Asian yards that can ensure a sufficient level of protection for the environment and human health may represent a further incentive for sub-standard yards to improve their own standards, as the inclusion in that List would permit to become part of the EU flagged ships' market[26].

Some considerations can be made the different consequences originated by the introduction of the Hong Kong Convention and the 2013 Regulation respectively on standards used by ship-recycling yards. It is

[24] It has to be considered that areas that are not covered by the sea on the low tide then become inundated on a high tide. As a consequence, toxic substances that are released on the shoreline on the low tide are then spread directly in the sea when the high tide covers that littoral area. For more information on intertidal zones see, for example, Capital Regional District, *What is the intertidal zone*, < https://www.crd.bc.ca/education/our-environment/ecosystems/coastal-marine/intertidal-zone>.

[25] Communication 2016/C 128/1 from the European Commission – Technical guidance note under Regulation (EU) No 1257/2013 on ship recycling, providing "requirements and procedure for inclusion of facilities located in third countries in the European List of ship recycling facilities; <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.C_.2016.128.01.0001.01.ENG&toc=OJ:C:2016:128:FULL>.

[26] This is a relevant ship-recycling market share, as approximately 35% of world fleet fly an European flag (source: European COmmission, *Shipbreaking: Updated list of European ship recycling facilities to include seven new yards* (23.01.2010) <https://ec.europa.eu/info/news/shipbreaking-updated-list-european-ship-recycling-facilities-include-seven-new-yards-2020-jan-23_en>).

appropriate to focus in particular on India as Pakistani and Bangladeshi facilities generally adopt even lower standards of dismantling, thus the former country being the most "advanced" one, closer to meet the requirements imposed by the Convention and the 2013 Regulation.

On the one hand, more than half of Indian ship-recycling yards have obtained from classification societies the so-called "Hong Kong Convention Statement of Compliance" (hereinafter referred to as "SOC"), which is considered to be in the future the mandatory document for authorization when the Convention will become binding; as it has been said above, according to the Convention a State may entrust recognised organizations (such as classification societies) for the process of authorizing yards within its jurisdiction, being that State the only entity that has the power and is responsible for the authorization of all yards operating under its authority.

On the other hand, so far no south-Asian yard has been included in the EU List, although more than one Indian yard submitted its application. This is not only due to some specific higher requirements imposed by the 2013 Regulation, but also because a single authority (the European Commission) is responsible for considering all applications for inclusion in the EU List coming from "extra-EU" yards: this would ensure same assessment criteria to be applied to all and at same time the assessment is conducted in an impartial and independent manner. This latter is an important aspect which may not be always ensured by the Hong Kong Convention as according to it a "recycling State" bears the privilege of a final decision on authorizing the yards within its territory and may then have an interest on its local ship-recycling industry.

This impartial approach in verifying yards' standards is more suitable to ensure the actual compliance with the rules, potentially preventing detection and prosecution of any violation.

2.7 With regard to this latter aspect, both legal instruments have relevant provisions: according to art. 9 of the Hong Kong Convention, a Flag state or a "recycling State" may be requested[27] to conduct investigations onto a ship flying its flag or a ship-recycling yard operating under its jurisdiction and, in case a breach is detected, to apply sanctions according to art. 10; art. 23 of the 2013 Regulation features a slightly different approach, as the "request for action" is given not only to Member State but also to all "natural or legal persons affected or likely to be affected" by the breach and, in particular, NGOs are expressly included in this category. Moreover, "request for action" only concerns ship-recycling yards as it deals with a breach of art.

[27] Both legal instruments do not establish obligations only for ship-owners and ship-recycling yards, but also for States. The Hong Kong Convention request Parties to give complete effect to its provision (art. 1) as well as to ensure its enforcement (artt. 4, 5, 6); States are also requested to cooperate not only in the detection and sanction of violations (art. 9 and 10) but also in communicating information (art.12) and providing techinal assistance (art. 13). The 2013 Regulation contains some similar provisions (artt. 21-23 in particular).

13 providing the requirements for the inclusion in the EU List; effective compliance of ships with the 2013 Regulation is ensured by art. 11 through the well-known mechanism of Port State Control.

2.8 In conclusion from a practical point of view it can be said that both legal instruments have given to date positive effects on the ship-recycling industry, incentivizing yards in improving their standards and giving rise to a cultural change throughout this industry as well as throughout the shipping community, which is now facing one of its greatest challenge i.e. converting into a green innovative industry. Both instruments are very detailed and their "cradle-to-grave" approach effectively helps in solving the problem at its roots. Still there is a long way ahead for demolition of ships to really turn into a safe and environmentally sound process of recycling and there are still some open challenges in the near future that need to be considered.

3. FUTURE CHALLENGES OF THE SHIP-RECYCLING INDUSTRY

3.1 At present the main challenge for the ship-recycling industry is the entry-into-force of the Hong Kong Convention. The Convention will become binding 24 months after the fulfilment of three conditions:

1. ratification of 15 States;
2. contracting Parties representing at least 40% of the gross tonnage of the world's merchant fleet;
3. combined maximum annual ship-recycling volume of those States during the preceding 10 years representing at least 3% of their combined merchant fleet;

Identification of three different requirements is aimed at ensuring that when the Convention will enter into force there will be a ship-recycling capacity able to satisfy the relevant demand of Contracting States, therefore ensuring effective enforcement of the Convention.

The first condition has recently been fulfilled as in November 2019 India became the 15th Contracting State. The combined merchant fleet of Contracting States now represents, in gross tonnage, 30.21%[28] of the world fleet: the second requirement is therefore at 3/4 of its goal. Nonetheless, its fulfilment is not that far away considering that all EU Member States shall have an interest in ratifying the Convention; the reasons for this interest consist in realizing one of the aim of the 2013 Regulation that is facilitating the entry-into-force of the Convention (Recital n. 5) and, more importantly, ensuring that a legal framework consistent with the one of the 2013 Regulation (that is now applicable for EU States) becomes binding at an International

[28] IMO, *Status of IMO Treaties* (18.05.2020), < http://www.imo.org/en/About/Conventions/StatusOfConventions/Documents/Status%20-%202020%20May.pdf> accessed on 27th May 2020.

level. Ratification by European main Flag States (Greece, Cyprus, UK[29] and Italy) may result in an increase of around 7 points of percentage of the second requirement, substantially shortening the gap for compliance.

India's ratification of the Hong Kong Convention resulted in a substantial contribution towards the fulfilment of the third condition provided by art. 17, as India is, together with Bangladesh, the world greatest ship-recycling State. For the third condition to be satisfied it is necessary that at least another major recycling State (such as Bangladesh and Pakistan) ratifies the Convention. With regard to Bangladesh and Pakistan it can be expected that this will happen only when the majority of their yards will be provided with a Hong Kong Convention SOC, so that when the Convention will become binding they will be able to operate in compliance with its requirements. This is what happened with India.

The effectiveness of the improvements made by yards in order to obtain a SOC may be challenged, considering the mechanism of the Hong Kong Convention not ensuring that the same assessment criteria is applied by all recognized organizations and that this evaluation may to some extent not be completely impartial, as the recycling State giving the authorization to yards operating within its jurisdiction may potentially have an interest in its national ship-recycling industry. *De jure condendo* States Parties may consider to introduce an amendment to the Hong Kong Convention providing for a unique international organization (IMO for example) to conduct unannounced independent surveys in ship-recycling yards in order to verify effective compliance with all requirements of the Convention in a similar way to the mechanism provided for at art. 15 of the 2013 Regulation for extra-UE yards.

At present, pending the Convention to become binding, there is one peculiar aspect of the 2013 Regulation that indirectly plays a role at an international level. In fact, art. 32, 2 b) of the Regulation requires "extra-UE" ships to have on board an inventory of hazardous materials when calling at a Member State port. Therefore this provision potentially impacts on several ships considering the importance from a trading point of view of European ports, further incentivizing shipowners to have on board the inventory, which is one of the main features of both the Convention and the Regulation. Presence on board of a compliant and updated inventory may be verified through Port State Control according to art. 11 of the Regulation.

3.2 Another challenge for the ship-recycling legal framework is its actual enforcement. A very high percentage of breach or circumvention accompanied the attempt of adapting the existing regulatory framework to ship-recycling activities. Therefore this method of tackling the issue resulting practically ineffective. It will be interesting to observe in the near future if judicial authorities will pursue violations and thus ensure effective enforcement of the legal framework. It is to be noted that, recently, some cases of

[29] United Kingdom is considering to introduce trough a specific legal instruments the provisions of EU Regulation No. 1257/2013 in order for them to apply even after "Brexit".

investigation of violation of shipment of waste regulations resulted in sanctions for ship-owners/ship-managers. In particular, the so-called *Seatrade case* decided on the 15th of March 2018 is important as the criminal Court of Rotterdam decided to punish those managers who took the decision resulting in the 2006 Regulation being circumvented and at same time to fine the ship-owning company. This ruling was based on evidence collected by public prosecutor through a very deep investigation which came to process internal e-mails of the company. Sanctions imposed by the Court were reduced because this ruling being the first one of its kind. Today, more investigation and proceedings about possible breach/circumvention of the legal framework applicable in relation with ship-recycling activities are on-going[30] and it will be very interesting to observe what will be in the future the level of effective enforcement of the 2013 Regulation and, when binding, of the Hong Kong Convention.

3.3 The third and last future challenge that is herein considered is the so-called reflagging issue. This issue does not concern only the recycling of ships but is a general issue of the shipping industry[31]. The process of reflagging a ship, consisting in registering a vessel under another flag, may be a relatively easy and quick task. This process allows to submit the ship to another jurisdiction and thus to another legal framework and it can be undertaken with the aim of reducing the legal burden to comply with. With particular reference to ship-recycling there are some "open registers"[32] that are commonly used for end-of-life ships: most common "end-of-life registers" currently are Saint Kitts and Nevis, Comoros and Tuvalu[33]. A way to circumvent applicable legislation consists in selling the end-of-life ship to a cash-buyer that proceed to re-register the vessel under the flag of a State which prescribes less stringent requirements in relation to the demolition of ship as, for example, under a flag of an extra-UE State that has not and will not ratify the Convention. End-of-life registers will be even more appealing as they offer very convenient "last voyage packages" for reflagging a ship under their jurisdiction.

This third challenge is the one that will have a greater impact in a long-term scenario, even when the Hong Kong Convention will become binding. In order to deal with this future challenge there are several solutions that may be adopted. For example, one approach would be to limit the possibility of reflagging a ship requiring the necessary authorization of the previous Flag State, that is what happens in relation with

[30] Reference can be made, for example, to the *Eide Carrier, Eurus London* and *FPSO North Sea* cases. For more references please see the NGO Shipbreaking Platform website < https://www.shipbreakingplatform.org/issues-of-interest/cases/>.
[31] On the topic of Flag State responsibility and the reflagging issue see, among other, J.N. K. Mansell, *Flag State Responsibility* (2009), accessed in May 2020.
[32] "Open registers" are those ones that do not imposes particularly strict requirements neither complex process for the registration of a ship.
[33] NGO Shipbreaking Platform, *What a difference a flag makes* (2015) < https://www.shipbreakingplatform.org/wp-content/uploads/2019/01/FoCBriefing_NGO-Shipbreaking-Platform_-April-2015.pdf> accessed on 27 May 2020.

fishing vessels[34]. Another example would consist in regulating the purchase of second-hand ships that are destined to be dismantled in the next few years, by inserting in the sale contract specific clauses that imposes on the buyer the obligation to recycle the ship in conformity with certain standards (the Hong Kong Convention standards). A solution complementary to this one would consist in drafting a list of ships that are going to be dismantled in the near future, depending on their age, the current market demand for that type of ship and other elements[35]. This list would also help in monitoring the effective compliance with and enforcement of the Hong Kong Convention and the 2013 Regulation.

CONCLUSION

In conclusion, the Hong Kong Convention and the 2013 Regulation provided a specific and valid answer to all issues related to ship-recycling facilities, after that the attempt of regulating the matter through the adaptation of the existing legal framework resulted to be ineffective on a practical level. Some improvements of the ship-recycling standards globally used have been made but there is still a long way to go in order to properly talk about demolition of vessels as ship-recycling. This is one of the many challenges that the shipping world is currently facing in order to turn into a greener industry and reality is always changing faster than law. Even if appropriate legal frameworks specific to ship-recycling have been introduced both on the international and the European level, there still are some challenges that the international community needs to face in order to ensure the effective solution of the issue through substantial implementation of both the Hong Kong Convention and the EU Regulation n. 1257/2013.

[34] A. Yankov, *Reflagging of fishing vessels: critical assessment of its impacts on the enforcement of fishing regulations and the responses thereto* (2002) p. 195-202, Marine Issues.

[35] U. Engels, *European Ship Recycling Regulation* (2013) p. 217.