
An EU strategy for better ship dismantling

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1. **INTRODUCTION**

On 22 May 2007 the European Commission adopted a Green Paper on better ship dismantling, which sets out a range of possible measures whereby the EU could contribute to safer and more environmentally sound treatment of end-of-life ships worldwide. A public consultation process followed in which other European institutions, the Member States, stakeholders and the public were invited to comment. This opportunity was widely used by institutions and stakeholders inside and outside the EU. More recently, on 21 May 2008, the European Parliament adopted a resolution calling on the Commission and the Member States to take urgent action on ship dismantling in various ways.

This Communication is based on the results of the consultation, on the developments that have taken place in the meantime with regard to the draft international Ship Recycling Convention, and on information drawn from recent research, such as the Commission study on “Ship dismantling and pre-cleaning of ships”. It is accompanied by an impact assessment analysing the environmental, social and economic impacts of the envisaged measures. This Communication is also in line with the Commission's commitments set in the Action Plan for An Integrated Maritime Policy for the Union.

Compared to the situation which prompted the Commission to start work on a ship dismantling strategy in 2006, some positive developments can be identified today. Considerable progress has been made by the International Maritime Organisation (IMO) in the elaboration of a globally binding regime on ship recycling. More facilities are available in Europe and Asia which can provide a good or at least improved standard of ship dismantling. Last but not least, public awareness has grown about the problem and the urgency of finding a solution. However, in spite of the progress made, the fact remains that the vast majority of seagoing ships still end up in scrapyards without adequate infrastructure to protect workers from health risks and the environment from pollution.

2. **THE MAIN CHALLENGES ON THE WAY TO SAFE AND ENVIRONMENTALLY SOUND SHIP DISMANTLING**

2.1 **Economic drivers towards poor quality dismantling**

As analysed in the Green Paper of May 2007, the economics of ship dismantling are primarily driven by market factors like freight rates, the price of steel scrap and the costs of maintaining an ageing fleet, which decide at what point in time a ship will be scrapped. The choice of the dismantling location is influenced in particular by the metal price a facility can offer to the ship owner or to the intermediary “cashbuyer”. This price in turn depends on the demand for recycled steel in the area concerned and on the costs of the recycling operations.

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4 Commission Staff Working Document [...].
The costs of ship recycling differ considerably according to the price of labour and the costs of infrastructure for workers’ safety and environmental protection. Besides, a higher price for metal can be paid if the scrap steel can be recycled “cold”, without energy-intensive and thus expensive re-melting in electrical furnaces.

More than 80% of the larger end-of-life ships worldwide since 2004 (in terms of tonnage) have been dismantled in India, Bangladesh and Pakistan. In these countries the “beaching” method is used, which means that the vessels are driven — usually by their own steam — onto sandy beaches and broken up without heavy machinery and without other containment than the hull of the ship itself. Other countries like China, Turkey and several EU Member States where capacity exists for ship dismantling in dry docks, at piers and on hard slipways only account for a small fraction of the market.

Operators in South Asia employ many unskilled labourers at extremely low wages of about 1 dollar per day. Investment in permanent structures and machinery at the yards is very limited. Of the three countries mentioned, only India has developed some central infrastructure for hazardous waste management, workers’ training and health care in the last 2-3 years. The highest price for steel scrap from ships in the first months of 2008 — around $700 per ton for average quality — was paid by operators in Bangladesh where the standards of workers’ safety and pollution prevention were lowest, and most steel was processed without melting in re-rolling mills. There is thus a strong economic incentive for ship owners to choose recycling facilities with a particularly poor social and environmental standard.

2.2 Weak implementation of the current law on waste shipments

The Basel Convention on Transboundary Movements of Hazardous Wastes and their Disposal of 1989 provides for a worldwide system of prior written notification and consent for shipments of hazardous wastes between countries. An amendment adopted in 1995, which has not yet entered into force, establishes a ban on exports of hazardous waste from EU and OECD member countries to non-OECD countries. The EU has transposed the Basel Convention as well as the so-called Basel Ban Amendment into its legislation and prohibited the export of hazardous waste from the Community to non-OECD countries since 1998. The prohibition is currently contained in Articles 34 and 36 of Regulation (EC) No 1013/2006 on shipments of waste6.

Ships are not exempted from waste shipment law, and decisions under the Basel Convention have recognised that a ship may become waste as defined in Article 2 of the Basel Convention and that at the same time it may be defined as a ship under other international rules. The act of “discarding”, which is crucial for the definition of waste in EU law, is frequently identical to the decision of a ship owner — for example in a demolition contract — to send a ship for dismantling. As nearly all ships contain considerable quantities of hazardous materials like oils and oil sludge, asbestos, glass wool, PCB, TBT, heavy metals in paints and others, those that go for scrapping have to be regarded as hazardous waste.

Some decisions of EU Member States’ courts — the French Conseil d’Etat in the Clemenceau case and the Dutch Raad van State in the Sandrien and Otapan cases7 — have confirmed this legal interpretation. However, the rules of waste shipment law are rarely applied to ships sent

for dismantling. Most recycling countries — with the exception of Turkey — are reluctant to use the Basel Convention procedure of notification and consent for ships imported for scrapping. To apply the EC Waste Shipment Regulation and its export ban is difficult when a ship becomes waste outside European waters. Recent cases have also shown uncertainty on the part of some Member State authorities as to when and how to enforce the waste shipment rules in relation to suspected end-of-life ships.

2.3 A volatile market and future risks

The number and tonnage of ships that went for recycling in the years 2004-2007 has stayed well below the forecasts that were made in preceding years. Whereas the recycled tonnage was 10 million gross tons (GT) and more in any year between 1993 and 2003, the figures have not exceeded 5 million GT in the years since 2005. Parallel to this, the average age of a dismantled ship has risen from less than 27 years in the 1990s to more than 32 in 2006. This development reflects the unexpected rise in freight rates due to the economic boom in Asia.

The rise in demand has also led to a boom in shipbuilding over the last years. It is difficult to predict the exact consequences but there is a high probability that the growing backlog of older ships will in a few years result in a rebound of dismantling activity.

A specific risk exists with regard to oil tankers. Due to international and European legislation on the phasing-out of single-hull tankers two peaks of scrapping have been predicted for the years 2010 and 2015. The number of such tankers is currently assumed to be around 800 worldwide. It is uncertain, however, to what extent they will require immediate dismantling, as many of them can be converted to double-hull tankers or used for non-oil transport or storage purposes.

3. International State of Play

The IMO is planning to finalise its work for an international Convention on the Safe and Environmentally Sound Recycling of Ships in October 2008. The Commission and EU Member States are actively participating in the negotiations of this Convention which should be adopted at a diplomatic conference in May 2009. The ratification provisions for the entry into force of the Convention are still being discussed. Supplementing guidelines on the certification of ships and the operation of ship recycling facilities are to be adopted by the Marine Environment Protection Committee (MEPC) of the IMO in July 2009.

The draft Ship Recycling Convention — in line with other IMO instruments — does not apply to ships of less than 500 GT or to warships, naval auxiliary or other state-owned or operated vessels which are used only on government non-commercial service. In addition, ships for domestic transport, i.e. operating throughout their lifetime inside the waters of the flag state, will be excluded from the scope. However, the Convention requires that these ships act in a manner consistent with the Convention.

The Convention is meant to provide a comprehensive system of control and enforcement “from cradle to grave” and relies in particular on the survey and certification of ships and the authorisation of ship recycling facilities. Limitations are foreseen for the use of hazardous materials in shipbuilding and the most dangerous among them should be removed also from existing ships during their period of operation.

The current draft of the Convention establishes certain requirements for safety and environmental protection in ship recycling facilities but does not explicitly rule out beaching as a dismantling method. Implementation and compliance mechanisms are still under
discussed but a mandatory third-party audit for recycling facilities has been rejected by IMO parties. The decision whether prior informed consent of the competent authority is necessary before each recycling operation can start will probably be left to each recycling state as an opt-in clause in the Convention.

In the context of the Basel Convention, the question is whether the future IMO Ship Recycling Convention will ensure an equivalent level of control and enforcement to that established under the Basel Convention. The Commission and the Member States are working at IMO and Basel level with a view to ensure the establishment of equivalent level of control. This could be the condition for releasing ships covered by the new international regime from the scope of the Basel Convention.

4. Objectives of EU Action

The general objective of an EU strategy on ship dismantling is to ensure that ships with a strong link to the EU in terms of flag or ownership are dismantled only in safe and environmentally sound facilities worldwide, in line with the draft Ship Recycling Convention.

This includes as specific objectives: to prevent, in line with the EC Waste Shipment Regulation, the export of hazardous end-of-life ships from the EU to developing countries, and to reduce significantly and in a sustainable way the negative impacts of shipbreaking, especially in South Asia, on human health and the environment without creating unnecessary economic burdens.

In order to reach these aims, the following operational objectives will be relevant:

- Provide the necessary encouragement and guidance for the implementation of EC waste shipment law with regard to end-of-life ships;
- Work towards effective and early transposition of the forthcoming international Ship Recycling Convention in the EU;
- Assess the need and possible options to supplement the Ship Recycling Convention with the necessary measures to address negative impacts of ship dismantling that are not covered by the Convention and promote its practical effectiveness.

5. Action Areas and Tools

5.1. Early implementation of the forthcoming Ship Recycling Convention

Before the final negotiations for the Ship Recycling Convention in May 2009, and as its entry-into-force mechanism still remains to be specified, it is at present uncertain when the Convention will become binding in international law. Experience suggests that it can take several years from adoption until entry into force of such an instrument. This means that the new regime on ship recycling would become effective around the year 2015. As the draft Convention contains separate deadlines for compliance with the various requirements — for instance not later than five years after entry into force, or before going for recycling if it is earlier for an Inventory of Hazardous Materials to be present in existing ships (as opposed to new ships) — the full effect of the new international regime is likely to become effective even later.

Action or non-action by the EU can have an important influence on the ratification process and the effectiveness of the Convention in practice. If the EU does not act, this risks to be seen by the international community as a sign of low priority, and ratification by Member
States and third countries is likely to take place with additional delays. If the EU, on the other hand, takes action, in compliance with the provisions of the Ship Recycling Convention, this would carry weight in the international arena and could speed up the entry into force of the Convention. Experience with IMO conventions such as MARPOL\textsuperscript{8} and AFS\textsuperscript{9} has shown that third countries frequently ratify and implement an international agreement after the EU has made its rules binding for all ships within European waters.

In order to improve the current unacceptable situation as quickly as possible, it is thus crucial that key elements of the envisaged Ship Recycling Convention, such as the surveys and certificates for an Inventory of Hazardous Materials on board ships and for making ships “ready for recycling”, the major requirements for ship recycling facilities and the rules on reporting and communication of information, are taken up as soon as possible after adoption of the Convention. The ship-related requirements should be applicable to all ships entering EU waters, so that competitive disadvantages for vessels flying the flags of Member States and consequential incentives for re-flagging would be avoided. For the provisions on ship recycling facilities the envisaged guidelines which the relevant IMO committee plans to adopt in July 2009 should be taken into account.

\textbf{Action proposed by the Commission:}

- Start preparations for establishing measures on key elements of the envisaged Ship Recycling Convention as soon as adopted by the IMO diplomatic conference foreseen to take place in May 2009, in particular concerning surveys and certificates for ships, essential requirements for recycling facilities and rules on reporting and communication.

5.2. Clean dismantling of warships and other government vessels

The draft Ship Recycling Convention exempts three categories of ships from its scope: small vessels below 500 GT, ships used only on government non-commercial service, including warships which have a relatively high contamination with asbestos and other hazardous materials, and ships operating throughout their life only inside domestic waters.

Unlike the IMO, which traditionally provides for a “government” exemption due to concerns for national sovereignty, the EU is not a priori prevented from laying down environmental and safety rules for state-owned vessels. Article 296 of the EC Treaty in particular does not rule out EU action, but allows for such an exemption only in exceptional and clearly defined cases if this is necessary for the protection of Member States’ essential security interests which are ‘connected with the production of or trade in arms and war material’. However, in so far as the future IMO Convention regulates also the design, construction and operation of ships (for instance requiring an Inventory of Hazardous Materials), interests of military secrecy would have to be taken into account.

Extension of the Convention rules to small ships and domestic transport in the EU is a possible option but not regarded as urgent at this stage, since those ships do not normally go for dismantling to Asian facilities, and significant environmental and safety risks caused by their recycling in the EU are not apparent.

In order to make a regime on the scrapping of state-owned ships more effective, one of the options would be to impose conditions also on the sale of ships to third states or private companies before they become waste. As laid down in the UK Ship Recycling Strategy, sales

\begin{itemize}
  \item International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978
  \item International Convention on the Control of Harmful Anti-fouling Systems on Ships
\end{itemize}
contracts could contain clauses obliging the new owner to comply with IMO and Basel Convention rules on clean ship dismantling and not to dispose of the vessel without prior written consent of the Member State’s government. In addition, sales could be restricted to those countries, or private owners flying the flag of those countries, that have declared their agreement to apply for the time being the Basel Convention to end-of-life ships.

- **Action proposed by the Commission:**

| Further assess the option to include in the ship recycling measures, amongst others, rules for the clean dismantling of warships and other government vessels. |

### 5.3. What industry can do in the interim period

The entry into force of the Ship Recycling Convention and its implementation will normally take several years. There is thus a risk that the next peak of ship scrapping which is expected for 2010, due to the phase-out date for most single-hull tankers under the MARPOL Convention (Annex I), will lead to an uncontrolled expansion of sub-standard facilities in South Asia with increased negative impacts on the environment and human health. The potentially simplest and quickest way to change practices on the ground already in the interim period, before entry into force of the Ship Recycling Convention and implementing measures, would be a voluntary commitment by the relevant stakeholders. If ship recycling facilities agreed to improve their environmental and safety performance in line with the emerging new standards, and ship owners were ready to pay the price for this in terms of reduced profits, the amount of pollution and the number of fatal accidents and occupational diseases could be significantly reduced.

The financial burden for ship owners would not be excessive. The additional costs of using a clean and safe recycling facility instead of a beach with polluting and dangerous working conditions are estimated at between 50 and 150 US dollars per ton of ship steel (Idt). This compares to the current price of around 700 $/Idt that South Asian facilities pay to ship owners or the intermediate cashbuyers.

Under these conditions and in view of the principles of producer responsibility and “polluter pays”, subsidies out of public funds for clean ship dismantling cannot be justified. Instead, European ship owners can be expected to act in a spirit of corporate social responsibility. Practical examples for this exist already today: the Maersk Group of shipping companies, for instance, maintains a partnership with Chinese facilities whose environmental and safety standards have been upgraded through technical assistance and training. Some of the major oil companies follow a similar concept.

Voluntary action by European ship owners, their associations and their customers could be encouraged by an EU-wide public campaign and systematic high-level negotiations with major stakeholders in the field. A new specific EU award for exemplary ship recycling activities or the inclusion of ship dismantling in a re-introduced “Clean Marine Award” could provide public recognition for recycling and shipping companies with a clear environmental profile. In addition, guidance for ship owners with a list of “green” ship dismantling facilities worldwide could fill remaining knowledge gaps and provide benchmarks.

Public funding to third countries could play a limited role in the framework of development aid programmes where technical assistance could promote in particular the safety training of workers and support the establishment of basic infrastructure for environmental and health protection in a poor state like Bangladesh. However, any such financial support would necessarily depend on the willingness and the strong support of concerned governments and industry to cooperate for the improvement of ship dismantling practices. Moreover, additional
actions may be needed to ensure the effectiveness of technical assistance and voluntary measures, such as political follow-up, incentives, such as advantages for high standards sites.

*Action proposed by the Commission:*

- Encourage voluntary industry action by various measures, such as an EU-wide public campaign, an award for exemplary activities and guidance with a list of clean ship dismantling facilities.

### 5.4. Better enforcement of waste shipment rules

The current efforts for an international Ship Recycling Convention aim, among other things, at avoiding regulatory duplication and exempting end-of-life ships (at least merchant vessels) from the rules of the Basel Convention on Transboundary Waste Movements. Provided that the Ship Recycling Convention enters into force and that the Parties to the Basel Convention regard it as ensuring an equivalent level of control, larger commercial vessels on their final voyage to the demolition yard would no longer be subject to waste shipment rules.

However, it would in any case take several years until the Basel Convention is amended along these lines and even more until this amendment is transposed into domestic law. In the short and medium term the EC Waste Shipment Regulation will remain applicable to end-of-life ships. An EU ship dismantling strategy therefore has to look into measures which could improve the implementation of waste shipment rules in relation to end-of-life ships and in particular prevent direct exports of such ships from the EU to developing countries.

Enforcement of the EC Waste Shipment Regulation by the Member States could be strengthened by a combination of measures such as guidance from the Commission on the application of the Waste Shipment Regulation to end-of-life ships, focused projects in the framework of IMPEL-TFS\(^\text{10}\) and increased cooperation between authorities within the EU as well as with countries of transit and destination. The Commission may also come forward with proposals on specific minimum requirements for inspections.

The effectiveness of the EU control system for waste shipments could be further enhanced by the establishment and maintenance of a list of ships that are ready for scrapping taking into account the procedures contained in the future Ship Recycling Convention. The feasibility of establishing such a list needs to be further assessed by the Commission, in particular in the interest of the legal clarity of the relevant obligations and rights of authorities to exchange data about such ready for scrapping ships. In view of the inevitable administrative burden of such a measure, its introduction might be made dependent on whether or not voluntary action by the shipping industry improves the situation significantly in the next 1-2 years. Better implementation of the current waste shipment rules will provide an additional incentive for the shipping industry to improve practices already in the interim period and thereby help to limit negative anticipatory effects of the forthcoming ship recycling measures.

*Action proposed by the Commission:*

- Improve enforcement of the current waste shipment law with regard to end-of-life ships by guidance from the Commission, more multilateral cooperation, and examine the feasibility of rules on a list of ships ready for scrapping.

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\(^{\text{10}}\) IMPEL = European Union Network for the Implementation and Enforcement of Environmental Law; TFS = cluster on TransFrontier Shipments of waste.
5.5. The case for auditing and certification of dismantling facilities

The future international Ship Recycling Convention will rely in particular on a system of surveys and certificates for ships and on authorisations for ship recycling facilities granted by the competent authorities of recycling states. This approach reflects the high value of national sovereignty in international law. A potential weakness of the control system is that the existing governance problems in some developing countries and the lack of a non-compliance mechanism in the draft Convention might reduce its effectiveness in practice.

A study by the European Maritime Safety Agency (EMSA) has looked into possible solutions to the dilemma and proposed a certification and audit scheme for ship recycling facilities as a way to establish more transparency and ensure, through the services of independent recognised organisations, a more level playing field worldwide\(^{11}\). Taking into account the developments at international level, this scheme would build on the provisions of the forthcoming Ship Recycling Convention and on the planned specific ISO standard 30001 for ship recycling facilities and would include a system of quality levels. An important element would be the publication of the certificate categories in connection with a list of ship dismantling facilities worldwide.

The provisions on auditing and certification of dismantling facilities are still under discussion at IMO level. Depending on the outcome of those discussions the Commission will examine how it can be ensured that ships operating in Europe, linked to European ownership or flying the flags of EU Member States go for dismantling to facilities certified and audited under this scheme while minimising possible negative effects on competitiveness of European maritime industry. This will be necessary in order to quickly make the system fully effective.

- **Action proposed by the Commission**

- To further assess the feasibility of developing a certification and audit scheme for ship recycling facilities worldwide and, based on the current discussions of the Ship Recycling Convention, evaluate how it can be ensured that a maximum number of ships, including ships flying the flags of Member States go for dismantling to facilities certified and audited under this scheme.

5.6. Ensuring sustainable funding

The underlying concept of the future Ship Recycling Convention is that its provisions, together with market forces, will be sufficient to make ship dismantling a safe and environmentally sound activity within the coming years. In reply to the option of a “ship dismantling fund” proposed in the Commission’s Green Paper, the shipping industry has argued that such a fund and the levies to feed it would create unnecessary administrative burdens. According to industry expectations, the market restructuring process under the new rules and standards will provide the funds that are needed to upgrade ship recycling facilities worldwide to a level of compliance with the Convention.

There is nevertheless a risk that unclear provisions on recycling standards (e.g. requiring in general terms the prevention of spills and the safe and environmentally sound removal of hazardous materials but not prohibiting the beaching method as such) and the probable lack of non-compliance mechanisms in the Convention will allow poor practices to continue and create a disincentive to investment.

Further developments should be closely monitored. If it turns out that the forthcoming international legislation and the reactions by market participants do not deliver the desired result, the option of a funding system implementing the “polluter pays” principle should be reconsidered. Although a solution at the level of the IMO would be preferable, an EU-wide system involving all ships that operate in EU waters should not be ruled out.

In order to assess the possible instruments and their impacts more precisely, the Commission will launch a study on the issue of a “ship dismantling fund” in the second half of 2008.

Action proposed by the Commission:

- Assess the feasibility of the option of a mandatory international funding system for clean ship dismantling (“ship dismantling fund”) on the basis of the results of a study to be launched by the Commission.

6. CONCLUSION: AN INTEGRATED POLICY FOR BETTER SHIP DISMANTLING

If the aim of ensuring safe and environmentally sound dismantling of European ships is to be achieved by the year 2015, an integrated policy approach is needed. Rules to implement key elements of the envisaged Ship Recycling Convention and, if proven to be necessary, the possibility to supplement it, will have to be combined with measures to encourage voluntary action by the shipping industry in the interim period and to improve enforcement of current waste shipment law in relation to ships.

The Commission proposes to start developing rules on ship recycling that transpose the essential Convention requirements for ships (surveys, certificates, Inventory of Hazardous Materials) and ship recycling facilities, as well as obligations for reporting and communication of information. It should be assessed if the scope of these rules should also include warships and other government vessels that are not subject to the Ship Recycling Convention. Depending on the discussions on the Ship Recycling Convention on auditing and certification of dismantling facilities, the Commission will examine how it can be ensured that a maximum number of ships, including ships flying the flags of EU Member States, go for dismantling to facilities certified and audited under this scheme.

The shipping industry has the means and — in view of the “polluter pays” principle — also the responsibility to improve ship dismantling practices in the interim period, until the new international regime takes effect. In order to promote swift action, the Commission proposes to encourage voluntary commitments by a range of measures including public campaigns, award schemes and guidance to ship owners. Technical assistance to developing countries for the upgrading of their relevant infrastructure can also play a role but will depend on cooperation by recycling states.

On the other hand, better enforcement of current waste shipment law with more guidance and multilateral cooperation can contribute to the transition process and limit negative anticipatory effects. The Commission will examine the feasibility of measures to establish a list of ships ready for scrapping.

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The present Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions is meant to stimulate discussion and to prepare the way for the legislative proposal that will be initiated after the adoption of the Ship Recycling Convention foreseen to take place in the IMO diplomatic conference in May 2009. The Commission therefore invites the other EU institutions to provide their views and contribute to an effective EU policy on better ship dismantling.