



**PREMIER MINISTRE**

**Interdepartmental Committee  
on the Dismantling of Civilian and Military End-of-Life Ships**

**(MIDN)**

**REPORT**  
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## Introduction

Established in March 2006, under the guidelines of the President of the Republic and the Prime Minister, the Interdepartmental Committee on the Dismantling of Civilian and Military End-of-Life Ships (MIDN) was entrusted with a twofold mission: on the one hand, contributing to the emergence of binding rules for a dismantling respectful of individuals and the environment, and on the other hand, identifying the conditions for a viable dismantling industry in France or in Europe.

The MIDN gathers executives and experts from the major ministries involved in dismantling issues. It is chaired by **Xavier de la Gorce**, General Secretary for the Sea and by **Jean-Noël d'Acremont**, former President of the Chantiers de l'Atlantique. General **Xavier Lebacqz** (Armament) is entrusted with the project management. The Committee has worked in close and permanent cooperation with experts from the authorities involved in negotiations and assessments. This collaboration has significantly contributed to smoothing and supporting the work of the MIDN.

The current international negotiations and the prospective dismantling of French and European ships have led the MIDN not to limit itself to a mere analyst and proposal-maker. Instead, together with the relevant authorities, the MIDN has taken an active part in European and international negotiations and has contributed to preparing how to deal with special cases such as the former Clemenceau and other decommissioned military hulls.

The MIDN is committed to clarifying the technical, industrial and economical scopes of dismantling. With this aim in view, it has already visited a score of sites throughout the world and has met dozens of players of the dismantling chain. It has also coordinated and boosted the actions and dialogue of the French administration within international and European authorities involved in dismantling issues: the IMO, the Basel Convention, the ILO, the European Union and the European Commission.

It has also endeavoured to delineate and better define French and European regional contexts. Major efforts have been carried out for gaining skills, inventorying and compiling data. To be sure, this work will be most valuable during future negotiations and activities.

The present report, completed after a thorough and backed-up analysis, puts forward fourteen proposals.

The MIDN's work has been carried out in parallel with that of MP **Marguerite Lamour** within the framework of a parliamentary consultative committee. Together with Mrs Lamour, the MIDN has visited several yards.

Addressing the very complex issues involved in dismantling implies that the ongoing works should be continued and that the relevant authorities and ministries should make use of the analysis and proposals put forward in the present report.

One of the keys to addressing these issues is the interdepartmental management of this file, wished by the Prime minister. This interdepartmental process should be confirmed during the upcoming steps.

## Summary of the report

The analyses and proposals drawn up in the present report reveal a contrast between the issues relating to State-owned ships and those relating to merchant vessels – that make over 95% of the global fleet.

As long as the global dismantling industry does not improve its protection of individuals and of the environment, which will probably require a decade, European State-owned ships, mostly military, are to be dismantled in the EU or in the EFTA, according to international law. The German and British governments, as well as the European Commission's General Directorate for Environment, have extended this zone to OECD countries.

The merchant vessels flying the French flag ready for dismantling must stay within the European zone. However, this restriction is limited in scope, since the French merchant fleet is one of the youngest fleet in Europe...

The IMO Convention on ship dismantling is now imperative to monitor the dismantling of merchant vessels. It should lead to a text which, once endorsed and signed by a significant number of States, by 2010, should impose legal obligations on the States owning ships, ports or doing recycling and on maritime professionals.

A number of players consider this as the very beginning of a virtuous circle which will gradually regulate the dismantling industry, a worrying sector where Bangladesh ranks first in the world but does not appear to improve its working conditions or the preservation of the environment. Countries that work the hardest to improve their yards, such as China or Turkey, might be increasingly marginalized. A few Indian yards follow the same path, but might also experience similar difficulties.

There should be a consensus on audits and international certifications aimed at assessing the evolution of dismantling yards, the quality of green passports and of dismantling plans, which will be the cornerstone of the Convention. Economic assistance to yards – limited to activities of professional training and investment decisions – could also be developed but the decision to finance potential adjustments would fall within the competence of the yards.

Should the steps provided for in the IMO Convention be less efficient than expected or be hindered by the national prerogatives of recycling countries, the MIDN advises to prepare and discuss ideas on incentives that should be nevertheless also be binding.

In this respect, the MIDN has suggested that maritime professionals should be encouraged to earmark money for financing the extra cost of a safe and clean dismantling, which would amount from USD 50 to 150 per lightship tonne, depending on the sites involved and the significance of the investments to write off. This is a awkward issue which needs to be better defined within the IMO, with all economic players involved in dismantling.

The European Union has a driving role to play, not only in the processing of European State-owned ships (which barely represent 40,000 tonnes a year), but also in improving the efficiency of the IMO Convention, so as to decently process the 5 to 10 millions of tonnes of ships that are ultimately recycled worldwide. As early as in September 2006, the MIDN recommended guidelines to the European Commission, which should soon release its green book on dismantling.

Regarding European State-owned ships, especially military ships, the leading players are the British and French Navies, which both own dozens of hulls to be dismantled within the next decade, and even by 2010 for some hulls in poor condition. The high cost of recoverable metal give good reason for a swift implementation of this process, which could enable to carry out these dismantling operations in Europe without the help of public funds.

As for the French Navy, it has entrusted its Fleet Support Service with this mission, it is currently defining dismantling strategies and a specific budget allowance should be set up. However, the French Navy still needs to retain a few hulls usable as shooting targets, which should be properly cleaned-up prior to immersion.

The dismantling of some ships may be carried out via sales, whereas others may be dismantled via service providers. It would be wise to have the Navy act as the global manager of these operations, including at the financial level. The Navy would manage the income from sales of some ships with lucrative dismantling, or even the sales of ships on the second-hand market, which could partly offset dismantling expenses due to other ships. A special budget allowance (to be identified and initially allocated a few million euros) would be established for such offsets.

Under a decree released in August 2006, the income from sales of public assets goes to the authority to whom they were allocated. A memorandum of agreement could be drawn up on the cooperation between the Navy and the State Estate Services, so as to give the Navy the primary responsibility for managing its sales and purchases.

It is necessary to promote, as soon as possible, exchanges of information on a contractual basis and even a certain degree of coordination with our European partners, starting with the British.

The MIDN recommends that the competition among yards be encouraged, rather than subsidizing the setting up of new dismantling infrastructures, insofar as the dismantling industry in Europe will only apply to a few State-owned ships and even a fewer heavy tonnage ships. Indeed, for the most part, the existing yards can be adapted to process European ships during the ten coming years. Each highly mechanized yard should be able to process over 80,000 tonnes a year.

However, a massive influx of State-owned ships in poor condition – on top of which there may also be wrecked merchant vessels to be swiftly dismantled, may enable the emergence of new industrial players in Europe. The rules of the market may prompt new French and European players to invest and optimize their value for money ratio, in spite of the difficulties to adapt or establish infrastructures and to draw up reports providing evidence of the respect of standards on the protection of individuals and the environment. It appears to currently be the case in Great Britain.

Likewise, it has become an emergency to undertake efforts to better define the processing of all small ships and floating devices. Throughout the years and with the hardening of rules on waste and asbestos, these ships and devices have started to amass in our ports and rivers. Even though they only amount to a few tonnes of wreckage spread out across the French maritime perimeter, regional actions combining the military Navy with the civilian navy should be encouraged. Through lack of such efforts, the accumulation of ships will continue and they will only be eliminated on an individual basis at prohibitive prices.

It is noteworthy that the dismantling of heavy hulls can cost or yield up to USD 500 per tonne. Given the ever higher costs of metal, there is now a trade towards selling ships rather than buying dismantling services, including in European yards.

The solving of dismantling issues is a long way off, and the actions to be carried out are numerous and central to the emergence of an efficient IMO Convention, that is a Convention which will be both acceptable to and accepted by major dismantling countries.

Over and beyond the proposals put forward in the present report, bilateral exchanges with our major European partners should be bolstered as soon as possible, so that together, we can set the conclusions of the EC Green Book on Dismantling, to be published in March. The German EU Presidency considers organizing a EU workshop during the spring.

Negotiations on the IMO Conventions are to enter a very active phase, with the MEPC meetings that are to take place in London next May and July. There should also be meetings with a few participants from Asian dismantling countries, the IMO Secretariat, the German EU Presidency, economic players, including ship owners and experts from the French administrations involved. The General Secretariat for the Sea will see to the interdepartmental coordination of the guidelines set for the French delegation for these meetings.

There should be a continuous interdepartmental team work carried out by a few number of experts from all the ministries involved, including the MoD and the General Secretariat for the Sea, to draw up French and European strategies for the dismantling of big State-owned ships – especially for military ships. Eventually, the General Secretariat for the Sea will have to closely follow regional discussions on the processing of pleasure and fishing boats and also and mostly of military and civilian small ships and floating devices, which are not easy to move over large distances.



# REPORT

## I. A snapshot of current dismantling

### I.1. Dismantling as an imperative for the maritime security services

Ships sent to demolition have an increasingly high average age. A few years ago, they were 25 year old on average. Today, their average age has reached 30 year old and tends to be 35 year old. Predictably, during the coming years, there will be a significant increase in the number and tonnes of ships to be dismantled, which should represent about 10 million tonnes a year.

The swift implementation of rules on ship dismantling will significantly reduce the risks to security at sea, human life and the environment. Improving the dismantling conditions comes within the scope of an approach to sustainable development.

The current worrying situation of dismantling gives good reasons for combining all efforts of the maritime community, international organizations, the European Union, States and NGOs, so as to meet the issue of a predictable major influx of ships to be dismantled within the next few years.

The safe and clean dismantling of ships stands as a major requirement for a number of reasons:

- ♦ the health of workers and the protection of the environment in dismantling yards;
- ♦ the protection of the maritime environment: dilapidated ships are not meant to be abandoned in ports or on beaches;
- ♦ the security of sailing and the safeguard of human life at sea: maintaining end-of-life ships in service presents real danger;
- ♦ sustainable development: taking part in sustainable development, by championing metal recycling, a process that uses less energy and fewer mineral resources.

The current situation of dismantling is worrying insofar as most Asian dismantling yards, which deal with over 90% of the market, are usually “under the standards”.

Indeed, since the 80's, industrialized countries have neglected dismantling activities – except for small-size ships – and have turned to Asian countries, where manpower costs less, yards offer larger available spaces and labour and environmental rules are less binding and abided by. This resort to Asian countries is also due to a lack of sufficient quantities of available local scrap metals for steelworks and to a significant need for recycled equipment.

Asian yards have sufficient dismantling capabilities to meet the destruction needs of obsolete ships. However, the current pace and volume of dismantling prove to be insufficient to fully make use of these capabilities and ensure their sustainability.

The global fleet – save fishing boats – represents about 45,000 high seas units. Assuming that ships have an average operation life of 30 years, 1,500 ships should be dismantled each year. Yet, the reality is fairly different: between 1994 and 2004, the number of dismantled ships varied from 500 to 1,200 ships, which means that during the same decade, the destruction of transport capabilities fluctuated between 15 million dead-weight tonnes (DWTs) at the beginning of the period, with a peak of 30 million dead-weight tonnes (DWTs) in 1999, followed by a slow decrease down to 7 to 6 million dead-weight tonnes (DWTs) in 2005/2006 with about 300 ships per year.

This recent shortage in ship building results in a higher average age of ships sent to dismantling, which rises with each year. This average age has risen from 26 year old between 1994 and 1999 to current averages of 29 year old for oil-tankers, 30 year old for cargos and 34 year old for liners or ferries.

Since 2003, freight rates have reached a high level, which largely explains why ships are maintained in service beyond their usual operational life. But the massive arrival of new ships on the market and the hazards of international exchanges can change things.

We should thus expect a significant increase in the volume of ships to be dismantled between 2010 and 2020. By 2020, not all dismantling yards will have successfully implemented safer and cleaner recycling with the sole impulse of the countries involved. Therefore, it is essential that an ad hoc IMO Convention quickly comes into force with adequately binding terms and associated incentives.

## **I.2. Significant economic stakes for some Asian countries and a very unstable dismantling market**

The factors that rule the dismantling economy – i.e. freight rates, the price of metal, Asian regional specificities and the complexity of the ship owner sector and its commercial practices – make it very hard to control the evolution of the market. Yet, dismantling is and will keep on being a major and crucial market for Asian countries with low wage bills. Bangladesh performs over 70% of the global dismantling all by itself.

The global fleet has risen from 650 million dead-weight tonnes (DWTs) in 1995 to 920 million DWTs in 2006, which represents an over 40% increase in transport capabilities but has not been sufficient to meet the increase in goods exchanges entailed by globalization. As a result, ship owners have kept their eldest ships in order to benefit from the rising freight prices, which has rarefied the hulls to be dismantled.

Between 1999 and 2006, the global tonnage of dismantled ships has been divided by four:

Dismantling countries bluntly suffered from the effects of rising freight rates, over which they have no hold. Yet, some countries have no alternative, such as Bangladesh who draws 70% of its steel production from recycled ships and where 3 million people directly and indirectly live on the sector of steel and equipment recycling.

There are often terrible consequences for employment: although Bangladesh has apparently managed to stand firm by increasing the purchase prices of ships, the Alang shipyards, in India, have reduced their workforce from 200,000 workers to less than 40,000 workers and there have been even more drastic job cuts in Turkey or Pakistan.

## **II. Dismantling industries and techniques**

### **II.1. An overview of the types of yards**

Below are the major types of industrial dismantling processes:

- ✦ a highly mechanized process with light manpower, that only exists in Western countries with capabilities of around 1,000 tonnes/man/year;
- ✦ a non-mechanized process with very heavy manpower, used in the Indian subcontinent with a productivity of a few dozens of tonnes/man/year;
- ✦ an intermediate process with a few equipment but also significant manpower, that is used in Turkey, China and even in some yards on the American continent, with a productivity of a few hundreds of tonnes/man/year.

### **II.2. Sound industrial and technical practices**

#### **II.2.1. Processes for preserving individuals and their environment**

The residual depollution and the gradual afloat cut-out, followed by the completion of the dismantling of ship hulls in dry-dock or on inclined plane, appears to be the most effective process. However, whatever process is selected, what really matters is the quality and the relevancy of the industrial process, the appropriate training of professionals and their ability to preserve the security of individuals and the environment. Although in-dock dismantling offers a high level of safety, it is conceivable that on-beach dismantling could be well adapted and managed so as to limit environmental hazards and sanitary risks, even though it might be complicated.

By and large, the key to any dismantling process respectful of the workers and the environment lies in a prior knowledge of hazardous and polluting materials aboard the ships and an adequate adaptation of the yards working on these ships. After taking and drawing from these steps (e.g. a green passport delivered by the ship owner and complemented by a recycling programme issued by the yard), the yard can choose or adapt the organization of the “standard” processes it was using before working on the ship to be dismantled, while also remaining sufficiently competitive in the face of the “standard” processes of its competitors.

These are vital initial requirements, which must be supplemented with an organization and some equipment that enable the firm to guarantee a respect of the environment and the health of the employees during the works, and that also see to it that the firm will process waste or will have it processed in an ecologically rational way.

The clean and safe dismantling as used by most yards in the OECD and some Chinese yards mainly consists in:

- ♦ collecting all ship documentation, especially the green passport or similar documents;
- ♦ once the ship is safe and from the outset of the contract negotiations, checking the inventory and drawing up a dismantling programme covering cleaning-up and removal, and consistent with the inventory, while ensuring an optimal recycling of all recyclable raw materials;
- ♦ cleaning-up and cleansing the ship as exhaustively as possible without jeopardizing its structural integrity, while also limiting risks for workers (removal of the batteries, cleaning of the oil tanks and capacities, removal of equipment, removal of asbestos, removal of cord plies, etc.);
- ♦ continuing the afloat or dry-dock ship decontamination, if the initial cleaning-up was not full, cutting up the ship into parts of variable size, according to the ship and the way she is lifted. Afterwards, laying down the ship parts over waterproof and drained platforms, where they will then be thoroughly cleaned up and cut. The whole process globally consists in cutting up the ship based on a logic of successive layers and parts, generally from top to bottom by avoiding working in-door or in a confined atmosphere, as far as possible;
- ♦ accumulating and collecting in the bottom of the ship the effluents caused by prior operations or bad weather, whether they happened afloat or on in-dock;
- ♦ lifting the ship’s hull up an inclined plane or putting her in dry-dock or bed, before finally cutting her into vertical sections after pumping out the effluents.
- ♦ cutting down and sorting metals, so as to end up with scrap parts to be sold to steelworks.

The main hazardous materials to carefully watch are asbestos, radioactive materials, hydrocarbons and residual oils, heavy metals, polychlorinated-biphenyls (PCBs) and tributyltins (TBTs) contained in the ship.

In Western countries, controls and accreditations pertaining to a permanent dismantling site are subject to preliminary investigations for ICPE or IOTA<sup>1</sup> sites. The national and/or regional authorities are in charge of the controls and accreditations pertaining to specific rules applying to workers, known as the “HSCT<sup>2</sup>” regulations. Ship-dismantling operations carried out on the EU territory must strictly abide by the European laws pertaining to workers’ protection (especially to the prevention of risks associated with asbestos, dangerous chemical agents and CMR (carcinogenic, mutagen, reprotoxic) substances.

### 2.2.2. The limits of a full and preliminary decontamination

**The diversity of ships entails that the extent of the decontamination carried out as a preliminary to dismantling should be defined on an individual basis and according to environmental, economic and technical criteria. However, the feasibility and the actual interest of a full decontamination before the ship is sent to a dismantling yard prove to pose problems.**

The completion of a full “depollution” of ships is sometimes presented as a guarantee of a subsequent clean and safe dismantling. Yet, a full decontamination may sometimes end up in impracticability (damages to the structure of the ship).

The feasibility of preliminary “depollution” operations cannot be considered separately from economic factors. Having two successive operations – that is a full “depollution” followed by a

<sup>1</sup> ICPEs: facilities classified for environment protection; IOTAs facilities, works, jobsites and activities subject to water regulations.

<sup>2</sup> HSCT regulations: “hygiene, security and work conditions” regulations.

dismantling – is more expensive than performing these tasks in a single operation. Excessively stringent regulations could entail too high costs, which could lead to circumventions of the regulations.

Separately, it would be a pipe dream to hope that ship owners would clean up their ships in Europe or in OECD countries at vast expense before towing them in Asia where their dismantling would be completed. Actually, a preliminary full decontamination, hardly performable without damaging the ship structure, would involve a subsequent towage –if possible – of the ship towards her dismantling site.

Moreover, controversy about the adequate extent to which ships should be cleaned up before making a decision on their abidance by limits on waste exports may dissuade ship owners willing to take such a path.

Anyway, even if carrying out the decontamination of ships prior to their dismantling definitely appears as an improvement, it does not guarantee that the subsequent dismantling will be completely safe for the workers and the environment, especially if the industrial processes or the tools used in the yards involved are ill-suited or defective.

### 2.2.3. Sound practices

**Safe and clean dismantling, in the “western” way, does not require significant manpower. A yard with 100 workers, if optimized, should be able to process about 100,000 tonnes per year, which makes more than the total French military tonnage dismantled during one decade!**

**Associating naval dismantling yards with industrial structures specialized in land equipment recycling offers an additional guarantee for the know-how and economic efficiency of the whole process.**

Some highly mechanized yards can process up to 100,000 tonnes of ship per year with only about 100 workers, including subcontractors (such is the case in Belgium, in the Netherlands and in Denmark for ship dismantling, and in Norway for the dismantling of oil platforms' metallic substructures). Other less mechanized yards (e.g. American yards) use mechanization and blowtorches and can process similar volumes with 225 workers. All these Western yards deliver the recycled raw materials produced in the joint sector for land scrap metals recycling. The materials incompatible with steel recycling are the only materials that are searched for and separated from the metals to be recycled (these incompatible materials are asbestos, radioactive or copper materials etc.).

In mechanized yards, a single hydraulic shear can perform the work of a few dozens “hand burners”, for an initial investment of one million euros. Conversely, with a completely manual process, yards employ several thousands of workers, as it often proves to be the case in the Indian subcontinent.

### 2.3. Examples in a few European yards

**There are several European dismantling yards, which mostly deal with the niche market of ships restricted to European waters that are too small or unfit for sailing to Asia or Turkey.**

The MIDN has visited a number of Western yards that now enforce the above-mentioned sound practices. These yards include the Van Heyghen in Gent, Belgium and Scheepssloperij, in 's-Gravendeel, Netherlands.

These mechanized yards share skills and work in synergy with land scrap metals recycling yards, and use part of their facilities. Most of the process they carry out consists in performing a maximal preliminary “depollution” of ships, followed by the cutting of the ship into successive horizontal sections, afloat and with highly mechanized tools. At the end of the process, the ship sole that has been used to collect effluents during the afloat cuttings is lifted up an inclined plane and drained prior to being torn to pieces from the front by hydraulic comminators.

These yards hold all the necessary licenses issued by the State where they are established to perform ship dismantling and recycling works. Due to their continuous activity, they also meet

the requirements set in regulations equivalent to the French criteria for ICPEs (facilities classified for environment protection).

European yards deal with a large number of fishing boats, inland water ships and marginally small military or merchant vessels. They work in a competitive European environment but with ships limited in size or in poor condition, for which sailing to Asian countries or even to Turkey would not be economically interesting, due to the transport expenses involved.

## **2.4. Developments in progress in China and Turkey; developments initiated in India**

**China and Turkey have made significant efforts to upgrade some of their yards, which are unfortunately weakened in a market where the highest bidder is the ruler, notwithstanding health and environmental issues.**

In China, partnerships with European (Maersk and BP), or even US professionals have given impetus to the yards of Zhong Xin and Shuangtui, which have undertaken the upgrade of their facilities and processes and now meet the Western requirements regarding environmental and working conditions management (certifications ISO 14001 and OHSAS 18001).

In Turkey, thanks to their collaboration with Western countries, especially with Germany, some yards in Aliaga (e.g. LEYAL) have achieved significant improvements and now also meet the Western management standards (ISO 9001, ISO 14001 and OHSAS 18001).

In India, some yards that already abide by the ISO 9001, ISO 14001 and OHSAS 18001 standards, have invested in individual equipment for workers and in their training. They are also following the example of the Shree Ram Vessel yard, since they are now starting to upgrade their production tools (mechanized shears, cranes) and their disposal of hazardous waste (individual containers and equipment for asbestos disposal, waste storage in processing centres). The Indian Supreme court is currently examining the recommendations a technical committee put forward on the regulations that should be enforced in the Alang dismantling yards. The conclusions of this report should soon be publicly released.

Yet, these exemplary initiatives make these firms lose competitive advantages and markets, for the benefit of yards from the Indian subcontinent, that are less scrupulous as regards the environment and workers.

## **3. Actions feasible by the international community**

### **3.1. An ill-suited legal framework**

Although the Basel Convention covers a wide scope and has explored the ship dismantling matter, its mechanisms are not well suited to the ship dismantling issue. In particular, the role of export States and the moment when ships turn into waste raise many questions.

A pragmatic solution must therefore be found, within the best suited international framework, that is, an IMO Convention, so that all merchant ships, whatever their flag is, be swiftly dismantled in homogenous, clean, and safe conditions in a world dismantling market fully cleaned up and regulated, without any competition distortions.

Separately, the merchant fleet flying the flags of EU Member States does not feel that it has anything to do with naval demolition, due to its age. When they exceed 25 years old, that is when the issue of dismantling arises, merchant vessels seldom fly the flags of EU Member States, even if their owners are European.

European ships to be dismantled are under the EU regulations pertaining to waste and the protection of workers' health. It is noteworthy that European State-owned ships only make a negligible percentage (less than 1%) of the overall volume of ships dismantled worldwide. These ships can thus only have marginal effects on the decrease in the pollution stemming from naval dismantling and on the improvement of the health and security of employees working in recycling yards in less developed countries.

The amendment (Ban Amendment) to the Basel Convention<sup>3</sup> on the Control of Trans-boundary Movements of Hazardous Waste and the European rules that apply this amendment forbid any export of hazardous waste outside the OECD area. Waste transfers are subject to a special control that depends on the nature – hazardous or not – of the waste concerned as well as on the processing it is to undergo in its final destination country (recovering or disposal).

Under this amendment, endorsed in 1995 by the parties, trans-boundary movements of hazardous waste “are only authorized among the parties and other States which are members of the OECD, EC and Liechtenstein”. The Ban Amendment has not yet entered into force as regards international law, but applies to EC Member States by virtue of the EC regulation enforcing the Convention.

The United States have not endorsed the Basel Convention. Separately, although asbestos is categorized as hazardous waste, some of the parties that signed the Basel Convention (Canada, Brazil...) have not banned its production and this material is still in use in the major dismantling countries.

Considering that the ship dismantling issue was not the subject of adequate action at the international level, parties to the Basel Convention have deemed that a ship might be considered as waste and therefore come under the scope of the Convention<sup>4</sup>.

Yet, the application of the Basel Convention to end-of-life ships raises a twofold issue: the Convention puts very heavy responsibilities on export States, from which waste leave. But regarding end-of-life ships, the concept of export State does not make much sense because it is quite difficult to define the exact point when the transfer really begins (the issue of call ports). Besides, export States – provided they are definable and defined – usually do not have any leverage with ship owners.

Separately, although the Basel Convention acknowledges the fact that ships may be classified as waste, there are currently no simple ways to find out from which point a ship must be considered as waste. Must there be a clear intent to get rid of the ship? Such an intent is easily noticeable for State or merchant vessels that are abandoned or no longer fit for sailing due to accidents at sea, but is hard to see for most ships. When merchant vessels are still fit to sail and/or repairable, the decision to dismantle them only becomes definitive when the dismantling contract is signed

Hence, the inappropriateness of the Basel Convention's tools to the realities of the dismantling sector justifies to explore new international instruments.

**With this aim in view, the Environment Council on 24 June 2005 has come out in favor of our negotiations on a plan for a binding instrument within the IMO framework. This instrument should guarantee a level of environmental protection equivalent to that of the Basel Convention, while also providing a solution to the problems posed by the enforcement of the Basel Convention and of the regulations on waste transfer in the maritime economic sphere.**

If the IMO Convention were not ratified, there would be a very high risk to have applied regulations specific to ship owners from European countries, while the economic reality of the dismantling market would impose its dictates on those countries that are dependent on steel recycling.

Such a double-standard regime could prompt some ship owners to switch flag whenever required, while also aiming for maximal profits when selling their ship, which would lead to a minimum abidance by environmental and social criteria. However, it is noteworthy that European ships only have a few ships dismantled, since the fleet flying the EU member-States flags is still relatively young (with an average age of 15 years old), and even very young in France (with an average age under eight years old).

<sup>3</sup> 169 States are party to this Convention, signed in Basel on 29 March 1989 under the aegis of the UN Environment Programme (UNEP), and which entered into force on 5 May 1992.

<sup>4</sup> OEWG-II/4 Decision on an ecologically consistent management of ship dismantling, made during the 7th Meeting of the Conference of the Parties to the Basel Convention (COP 7, 25-29 October 2004).

## Proposal 1

the French qualification of dismantling operations, added to the necessary exemplarity of the standards applied to the protection of workers and the environment, lead the MIDN to put forth that the dismantling of French ships be carried out within the EU and the EFTA. Neither our British nor German partners share this view, and neither does the European Commission's General Directorate for Environment, who believe that dismantling within the OECD – granted that these yards be mended to meet European standards – would not raise any legal issue.

The European Parliament and Council n° 1013/06 regulation of 14 June 2006 rules that toxic waste may only be transferred towards OECD member States within the framework of a recycling reclamation operation. If this waste is meant to be eliminated, it may only be eliminated within the EU/EFTA. Now, the dismantling of end-of-life ships is a compound waste processing operation, involving the recycling of matters (metals, mostly), and the elimination of toxic material (asbestos, chiefly).

Some of our partners from the European Union and from the European Commission's General Directorate for Environment give priority to the rules applicable to recycling reclamation – inasmuch as the amount of metals to be recycled in a ship is higher than that of the waste to be eliminated. They thus consider the yards within the OECD perimeter as eligible, provided that they fully abide by the state security and environment standards. For instance, the British have published their strategy on the website of the Ministry of the Environment (DEFRA), which explicitly plans a dismantling perimeter extended to the OECD. Likewise, the German navy has recently sent a frigate to be demolished in a Turkish yard.

None of these interpretations has so far been corroborated or denounced by a jurisprudence from the Community.

*Cf. proposal 1.*

### 3.2. The necessity of a IMO Convention dedicated to dismantling

**The expected developments of the IMO Convention cover three issues: the inventory of dangerous materials in ships (green passport), the certification of dismantling yards that respect environmental standards and the health of workers and, eventually, the implementation of controls enabling flag, port and recycling States to manage the whole process of a clean and safe end-of-life ship dismantling.**

Since late 2005, negotiations pertaining to an international convention for a safe and clean dismantling of ships has entered an active stage. Yet, these discussions are unlikely to be finalized before 2008-2010 unless major ship owners, their country and the flag States, as well as the countries with significant dismantling industries, eventually become aware of its importance, considering the fact that economic interests carry heavy weight.

The current period of intensive negotiation, which is to culminate in the IMO Diplomatic Conference in 2008, will have a special significance to assess the likelihood of the completion of a really abiding convention, one that could lead to a gradual transformation of dismantling practices and economy during the next decade.

Whatever the extent of constraints of the final convention is, the pitfall to avoid will be to have inappropriate procedures that unscrupulous ship owners could easily bypass, with the complicity of some flag States and some dismantling States existing or currently emerging in the dismantling down-market industry.

Another pitfall would be to see the emergence of a Coalition of dismantling countries from the Indian subcontinent, who would also bypass the IMO Convention on the pretext that such a convention would impose excessively stringent standards in view of the economic conditions of the countries concerned.

As for the green passport, although it bodes well for new ships – whose builders and equipment manufacturers are increasingly subject to an obligation of traceability – the technical and financial difficulties of its enforcement to existing ships should not be underestimated.

Yet, the players involved should not lose their motivation because of these reservations, since the only way to make the current situation gradually progress is an IMO Convention.

**It will be necessary to see that the drawing up of the IMO Convention fully heeds the benefits of the Basel Convention, the International Labour Organization (ILO) and the European Union, so as to delineate a text well suited to the reality of the maritime scene.**

### 3.3. The Green Passport

The Green Passport aims at making an inventory of dangerous products contained in the ship, from its building to its dismantling.

The “Green Passport” is a notion – not yet compulsory – which was introduced in 2003 by the IMO (International Maritime Organization). It aims at setting up an ecologically rational administration of potentially dangerous material on board a ship for various reasons (structure, equipment, operation and stock), via a regularly updated inventory of these various substances.

The green passport may be regarded as an inventory of the various dangerous or toxic substances which the ship contains, dispatched in three different lists depending upon the reasons of their presence on board:

- ✦ the design, manufacturing or maintenance of the ship (products linked to the structure or to the operational or environment equipment);
- ✦ its operation (operation waste);
- ✦ the necessary stores for the life of the ship and her crew (stores and supplies).

Within the IMO frame of mind, this document should be set up on the owner's request and financial participation as early as the time of the ship's design, and should be issued by a classification organization at the time of her entry into service. The document should be filled in all along the ship's life and be kept on board.

Filling in a green passport should imply that the dismantling yard be provided with a thorough file on the ship's architecture and compounds, as well as the equipment and processes implemented during the ship's full life cycle – from her building to her securing process. This information is indispensable for the dismantling yard personnel, in order to prepare and implement an industrial process aiming at reducing the risks for the workers, the environment and the ship herself.

The Green Passport must be set and followed up, in a pragmatic and efficient way. Making very precise measurements or spotting traces of toxic substances is undisputedly useful. However, the precise localization of compounds and material containing pollutants and harmful substances in significant amounts must be considered as a priority. It will then be incumbent upon the yard to determine the waste process and treatment procedure.

Cases of uncertainty or physical impossibility to rule upon the existence of toxic products during the inventory will have to be identified as such, so that they be processed in time during the dismantling, and that necessary caution be taken for them in the recycling planning.

#### The specific case of military ships

Even though the IMO Convention project on the dismantling of end-of-life ships does not include military ships in its overall scope, two main directions tend to give a viable prospect:

- ✦ designing green passports for new ships, and initiating thinking on the implementation of this method for end-of-life military ships;
- ✦ then, for their last trip, carrying out the voluntary reintegration of military ships within the field of the Convention.

An approach to make an inventory of toxic substances has been implemented by several European countries such as France, the United Kingdom, Germany and Sweden, for their military ships. These countries' acknowledged goal, however, has never shown to refer systematically to the green passport.

*Cf. proposal 2.*

#### Proposal 2

at the end of the ship's life, the Green Passport's degree of accuracy must enable to make the best of the ship's industrial dismantling process. Amounts do count, indeed, but even more so the spotting of harmful products and the assessment of the danger they really represent. The MIDN suggests the promotion of this principle within the works of the IMO on the green passport as well as the inventories of military ships' toxic products.

### 3.4. Problems posed by controls

The international recognition of the certificates delivered within the framework of the IMO Convention, especially the “ship fit for recycling” certificate delivered by the flag State on the basis of an updated green passport and a recycling programme set up by an authorized or “labelled” yard, is a key point of the Convention. On-site checking of these certificates should be carried out with respect for the States’ sovereignty, especially when it comes to controlling dismantling premises.

The IMO Convention project has provided for various mechanisms to see that the principles set forth in the Convention are applied. These may be carried out by the flag-flying State, the port State<sup>5</sup> and the State where the dismantling yard is located.

Controls are carried out all along the ship’s end-of-life cycle (checking the listing of toxic substances especially), the final check prior to the dismantling includes the following data:

- ♦ the validation of the inventory of toxic substances on board;
- ♦ the ship’s recycling plan (in accordance with the inventory and with the capabilities for the dismantling and processing of toxic substances of the yard entrusted with the ship’s demolition);
- ♦ the delivery of an international “fit for recycling” certificate by the flag State, which must see that the recycling premises have the required capabilities to process the identified toxic substances;
- ♦ the authorization granted to the yards by their national authorities for a dismantling in accordance with the IMO Convention.

The recycling or dismantling plan must be set up by the dismantling yard with the ship owner, on the basis of elements included in the green passport, as well as assessments which can be made by the yard on board, prior to the dismantling itself. This plan is logically meant to be available before the pertaining contract is signed, as it should stand out as the reference document. It should also be outlined before the ship enters the yard, and sent to the ship owner in due time, prior to the departure so that the ship owner can take the necessary prior decontamination measures that might be imposed upon the yard’s limits in terms of technical skills.

The “Ready for recycling” certificate will be produced by the administration of the flag State on the basis of the recycling plan presented by the authorized yard and on the basis of the ship’s green passport, produced by its owner. This certificate will enable to initiate the notification process between the authorities of the flag State and the State of the authorized dismantling yard. This certificate will also enable the flag State’s administration to have information about the conditions of the ship dismantling. Indeed, the flag State must make sure that the ship will be dismantled in acceptable conditions, as stated by regulation 1013/2006 of 14 June.

The current project rules that “the prior removal of toxic substances is not compulsory if the selected recycling premises are fully authorized to deal with this kind and amount of substances”. The implementation of the IMO Convention thus hinges upon the definition of the authority in charge of delivering various certificates especially a certificate enabling to identify the recycling premises in accordance with their ability to process toxic substances.

The “labelling” of recycling premises will have to include a necessary transition period, which will depend upon the level of the country’s technical and economic development, and will demand a flexibility in negotiating, so as to avoid “dismantling countries” to feel rejected from the proposals of IMO and to refuse to apply to international texts.

After having taken cognizance of the “ready for recycling” certificate, the State where the dismantling must be performed should have the right to forbid the dismantling operations to be carried out on its territory – within a period of time yet to be defined. That is a very important point of the project, since it is legitimate that the State in which the dismantling is to take place can deny the entry of some ships, for instance if it thinks that the dismantling will entail

<sup>5</sup> Solutions should be sought in the memoranda of understanding (MoU) on the control of ships by the port State (Paris MoU and Tokyo MoU), and via the implementation of the measures put forth during the second joint ministerial conference of the Paris and Tokyo MoU, «reinforcing the circle of responsibility” (November 2004).

consequences on health and the environment.

From a contractual point of view, the implementation of this measure could lead to many disputes. Should the recycling State take too long to make its decision public, the seller – possibly a “cash buyer” could seek for recycling premises unauthorized by the Convention – if need be, once having changed the ship’s flag.

The IMO Convention relies upon the issue of certificates validated by a “competent” authority, yet to be defined. Classification societies could do, but all classification societies have not been granted international recognition.

*Cf. : proposal 3.*

### 3.5. A necessary international financial support

Experience proves that one cannot rely on virtuous practices based on free will. One must therefore incite maritime professionals to choose clean demolition sites.

Several incentives can then be considered: assistance to yards, assistance to professionals – or even more restricting measures.

Direct assistance to yards would rather come under the competence of multilateral financial institutions such as the World Bank, the African Development Bank, etc. – non exclusive of a technical support for the training, labelling and feasibility surveys which could use a EU contribution.

Providing a direct assistance to professionals in order to encourage them to select already labelled yards implies being ready to support the additional cost induced by the selection of a clean site. In such a case, it would be advisable to set up a private funding managed by an international institution, such as, for instance, the IMO – floated by taxes deducted from new ships, shipped tonnage or ship registration.

All these measures have advantages and drawbacks. They must however indiscriminately apply to all maritime professionals, so as to avoid distortions in competition.

The amount of that fund – around 500 million dollars to process the dismantling volume worldwide – would only be awarded to professionals who agree to have their ships demolished in labelled yards.

Finally, one could consider more restrictive incentives – inspired from the US OPA (Oil Pollution Act) – which would impose upon any professional sailing towards a port belonging to a country which has applied these measures to produce a recoverable surety if it has its ship demolished in a site that meets international standards.

Such a measure – which is economically neutral for sites which carry out the dismantling of ships – is likely to be questioned by professionals of the maritime trade, but would have the advantage of being more quickly efficient and would respect competition and the rules of the market.

*Cf. : proposal 4.*

## 4. The specific case of state-owned ships

### 4.1. The extent of requirements

The market of ship dismantling in Europe is thought to be about 500,000 to 700,000 tonnes over a period of 10 years, to be compared with the 60 to 100 million tonnes’ merchant vessels to be demolished worldwide over the same period of time.

There are many possible destinations for military ships withdrawn from service: museums, breakwaters, spare parts, sales, shooting targets – and dismantling is just one solution among many. Moreover, a same ship may experience several of these steps before it is dismantled. Furthermore, the amount of all ships already long withdrawn from service, whose dismantling has become necessary considering their condition, must be further added to that of ships that are still in service but about to cease their operational activities. The overall trend which, for

### Proposal 3

the MIDN suggests the implementation of an ensemble of audits and international labels or standards by independent organizations. Some recycling countries, however, may fear a lack of flexibility in the adjustment of yards in line with the progress of standards in these countries’ industrial economy.

### Proposal 4

in order to reinforce the terms of the new IMO convention, the MIDN offers – along with major actors (institutions, industries, ship owners and financiers), to look for financial encouragement mechanisms destined to put forth a “clean and safe” dismantling, should the sole IMO convention not suffice to clean the market.

many years, has affected the European military fleets is an overall decrease in the total number and tonnage of these fleets. It is unlikely that this trend should be reversed in the forthcoming decade.

Civilian administrations, for their part, use ships of various sizes – from small, several metres-long patrol boats to ships several hundred metres long – that are regularly replaced according to their condition and obsolescence. Old ships are also directed towards several destinations (museums, re-use), but most of them are actually dismantled. However, their overall number and mass are lower than military ships'. One can thus consider dismantling solutions liable to meet military requirements as suitable for civilian State-owned ships of a similar size.

#### **4.1.1. The French military fleet**

**The French military fleet to be dismantled over the next ten years amounts to about 80,000 tonnes, that is a few dozen ships over 1,000 tonnes (20 to 40 depending upon second-hand sales, target shootings or other uses). 100 to 200 small hulls and floating devices – some of them containing asbestos – should add to these hulls.**

**A few hulls, over 1,000 tonnes, are to be dismantled in the next three years. Some of them, considering their condition, are to be dismantled as a priority.**

**The overall volume of European State-owned ships to be dismantled in Europe or in OECD member States should amount to 400,000 tonnes over the next ten years.**

**The current regulations lead to a specific procedure for the dismantling of French ships. For many ships, the dismantling reports will have to be carried out prior to transferring the ownership of recyclable parts.**

The French Navy has taken the issue of the dismantling of end-of-life ships into serious consideration. It has defined their dismantling strategy and commissioned its fleet support services (SSF) in order to assume the project management of the contractual part. A specific allocation should then be planned.

The dismantling of some ships could be subject to sales. For others, a service delivery will have to be purchased. The Navy should be entitled to manage these operations – including the financial aspect which involves the income from sales of some ships whose dismantling turns out to be profitable, even second-hand sales which could provide a partial compensation for the budget allowance allocated for the dismantling of other ships – which should be identified and initially endowed with a few million euros).

An August 2006 decree rules that the income from sales when an item is sold, is allocated to the administration which formerly owned it. The common work between the Navy and the Estates Services could lead to a protocol providing the Navy with the broadest possible room for manoeuvre to manage sales and purchases.

##### **4.1.1.1. Large recent ships**

The latest dismantling forecasts for ships over 1,000 tonnes supplied by the Navy signal about a score of units to be dismantled during the forthcoming eight years, for a full mass of about 80,000 tonnes. Besides, such a hypothesis considers that several dozens of other ships should indeed be sold. The Navy should nevertheless keep these thoroughly cleaned-up hulls to use them as shooting targets for the development of weapon systems and the training of forces.

Except for the hull of the former *Clemenceau*, which could demand specific means, the size of other State-owned ships (all under 11,000 tonnes and under 200 metres long) does not pose infrastructure or device problems for their dismantling.

This should amount to a minimum average of 3 ships to be dismantled per year, for an average mass of 10,000 tonnes per year for the eight years to come. Considering their size and condition, all these ships – with a few exceptions – could find a solution for their dismantling, after being towed, in any European yard adjusted to their respective sizes.

#### 4.1.1.2. Large ships in poor condition

A few large, old ships which have long been kept as breakwaters on every maritime front are in poor condition. Given many uncertainties about their continued sailing ability, finding specific dismantling solutions for these particular ships, separate from the case of other light and heavy-tonnage ships, stands as an emergency. One could quickly consider resorting to large lifting and transport ships to convey these worn hulls towards European yards, so as to put forth a safe and adequate solution to each particular case.

#### 4.1.1.3. The smallest ships

A quick survey of the ten forthcoming years shows that in each of the major military ports of Metropolitan France (Brest and Toulon), there are a great number of small ships or port vehicles – about sixty units for lightship displacement under 350 tonnes and a full mass of about 4,000 tonnes for each of these ports – that will be scrapped and probably have to be destroyed since they cannot be re-used. For technical reasons – impossible towage in high seas – and economical – transportation costs – mainly related to the number and size of these crafts, it is very likely that their dismantling will have to be carried out locally. On each maritime front, optimised contractual strategies, gathering military and civilian requirements, and calling upon local companies as well as major firms will have to be considered.

*Cf. Proposals 5 and 6*

#### 4.1.2. The French civil State fleet

On an overall population of 245 units over 100 gross tonnage which make up the French State civil fleet, a vast majority is made up of small ships, the dismantling of which shall be similar to that of military ships of a similar size, on the maritime front under concern. For the few large ships – yet usually smaller than the military ships – only 16 ships under 10,000 tonnes will be sent for dismantling within the next 5 years.

*Cf. Proposal 7*

#### 4.1.3. European military fleets

By and large, one may consider that among the other European navies, only the British Royal Navy faces a similar problem to that of the French Navy, with about thirty ships and a total mass of about 90,000 tonnes to be dismantled in the ten forthcoming years. On the whole, the remaining European navies represent a mere 120,000 tonnes and about a hundred ships over the same period of time.

Which leads us to list – for all European military navies, including the French – about 150 ships over 1,000 tonnes and a total mass of 300,000 tonnes to be dismantled during the ten forthcoming years.

For small military ships, or military ships in poor condition, each of the States will face the same problem as the French Navy and will have to seek for essentially local solutions. However, it is unlikely that their dismantling should justify the setting up of specific sustainable industries.

#### 4.1.4. European civil State fleets

Because of the major scattering of the State services which implement ships and because of the differences in the structure organization among States, it has not been possible to make a detailed and precise list of the civil State ships to be dismantled in the years to come. Besides, this population includes a wide variety of ships that range from excursion boats to ships over 100 metres long; both shall obviously not be provided with identical dismantling solutions. Nevertheless, considering existing fleets and their average age, one can consider that European civil State ships to be dismantled in the ten forthcoming years should not exceed 100,000 tonnes.

#### Proposal 5

contractual strategies for hulls to be dismantled in 2007/2009 are currently being designed and will have to be quickly implemented on maritime fronts. Such is the action already taken by the French Navy.

The allowance the Navy has required should also be safeguarded against budget turbulence liable to occur within the next few years, so as not to ruin the implemented dynamics.

#### Proposal 6

The income from sales of ships whose dismantling has been profitable – or even from ships sold second-hand – could well contribute to the specific allowance in order to compensate for the dismantling costs of other ships (a 10 August 2006 decree rules that the income from sales of an item is allocated to the administration which formerly owned it).

#### Proposal 7

inventories and processing strategies for small ships and floating devices should be designed within the framework of regional meetings among civilian and military actors.

#### 4.1.5. Abandoned or wrecked ships

European States are often confronted to the confiscation of ships in violation of the law, or to merchant vessels that are abandoned inside their ports or on their coasts by tactless owners, after an accident. Experience shows that, even when resorting to national or international justice, the practical capabilities of a State to sue these owners for forcing them to free these areas and to resume responsibility for their abandoned ships are very little. In these cases, the only way for national authorities to part with these ships – often in very poor condition – is to take the financial and technical responsibility for their dismantling.

In statistical terms, even though the extension of the lifetime of many merchant vessels leads to a credible rise of these desertions, the total mass of ships to be dismantled in such conditions, all over Europe, should not exceed a few dozen thousand tonnes, and will lead to dismantling operations in local yards.

#### 4.1.6. State synthesis

The merger of the various ship sources whose dismantling will have to be supported by European States over the next ten years does not exceed a total mass of 400,000 tonnes. This amount actually covers two different populations:

- ♦ a population of civil and military State ships whose size and condition enable nautical movement, which is a token of a massive competition of dismantling assets. Over the aforementioned 400,000 tonnes, this population probably stands for over 90% in terms of mass;
- ♦ a population of small State civil and military ships, or larger ships whose poor condition or value are bound to restrict or forbid the transportation or towing, and who will have to undergo dismantling operations in the vicinity of their berth. In terms of mass, this population is likely to stand for less than 10% of the same 400,000 tonnes.

#### 4.1.7. European synthesis

In order to assess the capability of the European industrial network to swallow up the total mass of the ships, that for various technical or judicial reasons will have to be dismantled in the ten forthcoming years, it is necessary to supplement the mass of European State ships – 400,000 tonnes – with that of the various merchant vessels that will end their lives in Europe.

Indeed, some vessels ship owners, thus following the example or advice of their national authorities, want to have their ships dismantled in Europe, for reasons pertaining to their public image or because of possible towing hazards. The amount of these merchant vessels of various sizes will add to the usual population of fishing boats and inland water boats which are always processed in Europe. The mass of this population may be estimated around 100,000 to 300,000 tonnes over the next ten years.

The total mass of new European ships to be swallowed up by the yards of our economic area will thus approximately amount to 500,000 to 700,000 tonnes for the ten years to come.

### 4.2. Adjusting the industrial network

**The number of jobs and revenues at stake in the dismantling industry in Europe is quite small. The world dismantling costs, depending upon the type of ship and her dismantling localisation, range from USD – 500 to + 500 per tonne. The current rates of metals indicate a likely increase in cleaning up and dismantling operations which enable to remunerate ship sales to European industrialists.**

The transitory dismantling period of State-owned ships in EU/OECD could last from 5 to 10 years, the time for the IMO Convention to be settled, the international market to be cleaned up, the regulations on waste to evolve according to the particular cases represented by ships, and for the end-of-life ships to follow the IMO regulations – on a free-will basis.

Even if the mass of State-owned ships to be dismantled in the next ten years appears marginal

compared to that of merchant vessels, this dismantling must nevertheless be carried out in an exemplary way. If that period should last until 10 years, Europe should make the best possible arrangements to dismantle about 400,000 lightship tonnes of State-owned ships, plus 100,000 to 300,000 tonnes for the dismantling of hundreds of small merchant vessels, as well as larger ships, in such a poor condition, however, that it will be impossible to tow them safely towards Turkey or Asia.

Given the existing yards in Europe – and their acknowledged adjustment capabilities, it seems quite clear that the dismantling of the main State-owned or merchant vessels forced to remain inside Europe for the ten years to come can be sustained by current capabilities, after possible adjustments, in the framework of a wide European competition.

For a very minor part of this total mass, the size and condition of these ships require to resort to local dismantling facilities, so as to avoid costly transportation and towing. This very reduced population will even less justify the setting up of permanent yards. It will, however, require to find practical and temporary solutions which the regarded national authorities must quickly consider.

*Cf. proposal 8.*

### 4.3. The French industrial mobilisation and regional prospects

#### 4.3.1. Dismantling economic data

**Depending on the countries and the levels of investment and amortization, the additional costs of a clean and safe dismantling wavers between USD 50 and 150 per tonne.**

One should keep in mind the following economic data, which the MIDN has drawn from a number of meetings and visits in yards. The MIDN has thus visited about twenty of them, specialized not only in ship dismantling, but in that of other land or maritime equipment as well, in the USA, Belgium, the Netherlands, Italy, Great Britain, Lithuania, Latvia, Turkey, India, China and Norway.

Depending upon the type and size of the ship, upon the dismantling process and site, and depending upon the variations of freight rates and raw material rates, the price bracket for the dismantling ranges from – USD 500 to + 500 per on-ballast tonne. Hence:

- ♦ today, in Bangladesh, a ship sold as is, is purchased by the yard to the owner at a price ranging between USD 400 and 500 per tonne;
- ♦ a ship sold as is, yet subject to thorough dismantling processes, can be purchased between USD 100 and 200 per tonne – if only slightly polluted, as negotiated in some European or Turkish yards;
- ♦ a complex and very polluted ship – for instance a military combat ship – could cost her owner up to a few hundred dollars per tonne in these European yards.

Setting up “integrated” dismantling facilities – “integrated” meaning that the yard gathers the cleaning-up, cutting, reinforcement and conditioning of the remaining waste and is capable of processing 100,000 tonnes per year – from scrap, requires an investment of about 20 million euros. If adjoined to an existing metal recycling land yard, the profitability of the investment shall be reached at a lower level of scrap metal processed.

Nevertheless, as is the case in France, its activity license in Europe shall be subject to ICPE and IOTA-like regulations (ICPEs: facilities classified for environment protection; IOTAs: facilities, works, jobsites and activities subject to water regulation), the inquiry period of which – given their complexity – might take as long as a couple of years.

From the economic analyses led from the known basis of the production loads and products from the various dismantling yards worldwide, the MIDN has concluded that, according to the current market conditions, the additional costs for the production of a clean and safe yard could amount to USD 50 to 150/ ship tonne, depending upon the country and the level of investments already made.

With an average dismantling price of EUR 300/tonne, and a resale value of about EUR 200/tonne for recycled metals, the dismantling of all European State-owned ships – 400,000 tonnes – to be recycled over ten years would generate a yearly revenue of about 20 million euros.

### Proposal 8

the European market of ships to be dismantled does not require to subsidize new industrial capabilities; with a little adjustment, existing European yards should be able to cope with that load in a safe and clean way. Yet, the flow of State-owned ships to be dismantled within the next years could also enable new European dismantling professionals to emerge. In such a competitive game, the importance of geographic vicinity should be stressed.

There already are profitable yards in Europe, with enough capacities, on the whole, to sustain the mass of identified merchant vessels and State-owned ships in the ten years to come.

For these yards, ship dismantling activities supplement the land activities – as they are adjoined to an industrial recycling yard. Should they even swallow up the entirety of this new naval input, this activity would remain a minority.

However, the competition and the consequences of vicinity – especially in the case of business conditions where current industrial facilities are overloaded – could lead to the emergence of new professionals and to their permanent entry in the market.

#### **4.3.2. Industrial projects currently considered in France**

Many companies – by way of press releases or statements – have voiced their concern and thinking about the implementation of new sectors on the French coasts. These various projects have been mentioned by the MIDN during meetings with local civil or military players on all three maritime fronts.

Group Bartin, which has already put money into aircraft dismantling in Châteauroux, has voiced its interest for the setting up of a dismantling sector in Bordeaux for large metallic ships, jointly with group Europlasma. Bartin takes a keen interest in the dismantling of fishing ships.

Group Suez, whose subsidiary company Sita has participated in the dismantling of the Lucifer near Cherbourg, has revealed its reflections on the setting up of a branch on French coasts. It has however failed to comment on the precise location and industrial terms of the project.

Companies CFF Recycling (metal recycling) and Isotherma (asbestos removal) have pooled with a view to setting up a dismantling sector for civil and military ships. Within group Enys, SDI company, pooled with group Adani (India), has voiced its interest for the setting-up of a branch in the Cherbourg commercial port.

An economic interest group dubbed “Brest Force Plus” was set up on the initiative of SIB (asbestos removal) and Guyot group’s Brest Récupération (metal recycling), joint with some twenty other local SMBs, in order to set up an industrial ship dismantling sector in the port of Brest. The Brest Chamber of Commerce and Industry (CCI), the administrator of the commercial port docks, primarily wishes to use them for naval repairation.

In the Marseilles port, it is currently debated as to whether or not dry dock 10 should be used for the dismantling of a commercial ship.

Véolia company has shown a keen interest for dismantling units.

DCN company, while highlighting its knowledge of ships and complex process engineering, puts forth its participation in industrial dismantling pools without claiming the latter’s project management.

Other industrialists have joined MIDN, for issues pertaining to industrial processes and to the use of industrial devices – floating docks, for instance – and for projects of branches in Europe or worldwide.

On the whole, the CCI are yet undecided as to whether making a priority of using their facilities for various commercial or industrial activities, or mortgage them for the benefit of dismantling sites, which raise problems in terms of reputation, and whose profitability has not yet been proven. The Cherbourg CCI keeps a sharp eye to possible nuclear-propelled submarines dismantling activities.

## 5. A European mobilization during the transition period is necessary

### 5.1. The European Union's maritime policy and the green book of dismantling

Strictly national or European solutions addressing worldwide problems cannot lead to any long-lasting achievement. Confronting the issue of ship dismantling to regional solutions will only lead possibly concerned ships to shy away from a restrictive jurisdiction.

In order to stand by the aim of an IMO diplomatic conference in 2008, the convention text and guidelines should be simultaneously worked out. A minimum grounding of demands, in accordance with European Parliament and Council rule 1013/2006 pertaining to waste transfer, must be worked out. This new rule does not specifically address ship dismantling, but nevertheless reminds, in its grounds, that the dismantling of end-of-life ships be carried out in a secure and ecologically rational way<sup>6</sup>. With this aim in view, these rules refer to the specific (non-binding) guidelines endorsed within the frameworks of the Basel Convention, the IMO and the ILO.

The new community rules remind of the "efforts currently accomplished – especially the inter-agency joint work among the ILO, the IMO, and the Secretariat of the Basel Convention, to implement restrictive demands likely to realistically and efficiently address the issue of ship dismantling".

European countries must seek concerted answers to such sensitive issues in order to achieve a wide range support from the main recycling flag States to the Convention.

The European Union's maritime policy must be considered as a whole, as its various components interact. European works have been realized by the composition of a green book – an inventory and reflection document, validated by the Commissioners' college – which was published in June. Entitled "Towards a maritime policy of the Union: a European vision of the seas and oceans", this green book is open to a broad consultation until 30 June 2007. The European Council's conclusions are expected by December.

There are major economic stakes: almost 90% of the EU's foreign trade and over 40% of its domestic trade is ship borne. Each year, 3.5 billion tonnes of goods and 350 million passengers travel through Europe's 1,200 maritime ports. Directly or indirectly, Europe controls over 40% of the world fleet.

Governance is a key topic of the green book: the European community and its member States are parties in over 100 multilateral agreements on maritime affairs; six European agencies and seven commissioners tackle sea-related issues.

Furthermore, the Commission has planned the publication of a specific green book for ship dismantling in March 2007. This green book aims at listing the measures mentioned on that topic in the green book on the European maritime policy. The latter indeed includes a major passage on naval demolition which must be referred to in preference and priority, but which should as well be more fully and accurately developed.

If enabled by the agenda, the results of the European consultation on ship dismantling should be a full part of the white paper on the definition of an overall maritime policy for the European Union.

The consultation on ship dismantling should hinge upon two approaches: the first one will be dedicated to the international action of the Commission and member States, so as to improve the current situation of naval demolition in the countries where it is actually being carried out and essential; the second one will be dedicated to the Union's proper policy within European borders.

The idea of the first approach is to initiate a meaningful change in current wanderings, thanks to a combination of reinforced international standards, applicable to all and everywhere, and, in a modernized form, to qualified assistance to the renewal of yards – especially in the Indian sub-continent where most of the naval demolition worldwide is carried out.

The second approach, which is specific to the EU, should aim at the dismantling of ships which, for some reason, do not fit within the framework of this international ship market, and which

#### Proposal 9

the MIDN suggests that France encourage the EU to be resolute in helping the emergence of the IMO convention and show the way by adopting a support and transition plan.

#### Proposal 10

the MIDN has offered a significant and backed-up contribution to the Commission for the forthcoming "green book for the dismantling of end-of-life ships". It is suggested to keep on putting forth measures and studies, especially for subjects pertaining to:

- + the participation in the emergence of international standards – or European labels, for a given period of time – including by providing technical and financial assistance to yards which have taken steps towards certification;
- + encouraging – in a symbolic or financial way – any partnership among maritime professionals, ship owners and "clean and safe" dismantling yards;
- + the specific conduct of a discussed European action for the dismantling of State-owned ships;
- + looking for possible follow up measures and financial encouragements in order to support – if necessary – the implementation of the IMO convention.

#### Proposal 11

the European Commission's General Directorate for Environment wishes that the EU would apply as party to the IMO Convention on ship dismantling – starting with introducing a REIO – regional integration organization – clause. The MIDN suggests that this possibility be examined within the framework of the consultation on the green book pertaining to the set-up of a future maritime policy for the EU. An interdepartmental discussion on that matter will be continued.

<sup>6</sup> Ground 35 and Appendix VIII.

require a definition of a European naval demolition sector which is reliable as well as exemplary, even if that requires to take the smallest possible distance towards market regulations.

The MIDN offered several measures to the European Commission, among which the planning of international standards that give a specific recognition to naval demolition yards with an ecologically rational administration.

The EU could provide them with the technical and financial assistance that would enable them to implement a gradual updating in terms of protection of the maritime environment, and in terms of health and security at work.

The survey on the issue of dismantling<sup>7</sup>, notified during the summertime by the Commission (General Directorate for the Environment) to a Danish company, could shed new light on the matter.

*Cf. proposals 9, 10 and 11.*

## 5.2. Bilateral partnerships

**The French position, which consists in reducing the dismantling perimeter of EU and EFTA State-owned ships, differs from that of our closest European partners.**

European positions do not match yet. The British, the Dutch, the Germans and the European Commission's General Directorate for Environment tend to consider that the recycling and upgrading of the 95% of "waste/ship" (as authorized by the European regulations within the OECD) have a legal leadership over "minor" operations to do away with the 5% toxic waste derived from dismantling whereas, strictly speaking, the European regulation does not allow the export of toxic waste to be disposed outside EU/EFTA.

Some consider that OECD member States yards – such as Turkey's – may de facto compete for the dismantling of European State-owned ships. As far as France is concerned, the export of toxic waste for disposal – whether or not derived from a dismantling and majority upgrading operation – should never be allowed outside the EU and EFTA.

The dismantling of State-owned ships in the OECD outside EU/EFTA – including the repatriation of toxic waste derived from dismantling operations – could, legally speaking, be considered. It is also possible that certain EU/EFTA countries, should they agree to dismantle their neighbours' ships, would demand, as a prior condition, that toxic residual waste be returned for disposal in the ship-owning country.

The situation of OECD countries outside EU within the dismantling scene – especially that of Turkey – is not to be overlooked. Actually, Turkish yards have undertaken environmental and health enhancement works which are recognized by experts and by the European Commission.

Despite the limited mass which they represent, a common inventory of European State-owned ships likely to be dismantled in the forthcoming ten years becomes an absolute necessity in order to gain a fair enough visibility of the adjustment of European or national dismantling assets available or yet to be adjusted.

This inventory is also necessary to assess the financial burden and look for cooperation or even coordination, so as not to generate shortages or overloads in existing branches or considered temporary solutions. In order to make the best of national subcontracting processes, European dismantling programmes and coordinate offers could be developed within a formal reciprocal framework.

Considering the dominant portion, in number and movement, of military ships in this inventory, European cooperation will first and foremost have to address that particular field. Solutions found for military ships could also well be applied to civil State-owned ships as well as merchant vessels stuck in ports, and whose burden – as well as the responsibility for their dismantling – would be incumbent to European States.

*Cf. proposals 12 and 13.*

<sup>7</sup>This survey follows several EU-funded surveys (« SHIPDISMANTL » -2005/2009, « SHIPMATES » 2004/2007, ECODOCK, COWI... cf. appendix).

### Proposal 12

the MIDN puts forth an optimal exchange of information with our European partners, the examination of possible common contractual clauses, even, to some degree, gathering invitations to tender for European State-owned ships, especially British and French. A labelling and selection of yards fit for a safe and clean recycling, akin to the procedure implemented in the United States, should be given thorough thinking.

### Proposal 13

the establishment of a formal framework for cooperative exchange among the European military navies should be further explored. This cooperative framework could then be used as a basis for extending the cooperation to civilian services. Such cooperation could be explored with the British at first, and then with other European Navies.

## 6. A road map for the forthcoming months

*Cf. proposal 14.*

## 7. Conclusion

Below are the main proposals put forward by the MIDN in the present report:

**Proposal 1:** in view of the French interpretation of European texts and considering that standards should stand as examples, the MIDN recommends that the dismantling of French ships within the EU or EFTA countries should now be restricted. Our British and German partners, as well as the European Commission's General Directorate for Environment do not share this view, since they think that dismantling within the OECD area should not pose any legal problem, provided OECD countries upgrade their yards so as to abide by European standards.

**Proposal 2:** at the end of the ship's life, the Green Passport's degree of accuracy should enable to make the best of the ship's industrial dismantling process. Amounts do count, indeed, but especially the spotting of harmful products and the assessment of the danger they really represent. The MIDN suggests the promotion of this principle within the works of the IMO on the green passport as well as the inventories of the toxic products contained in military ships.

**Proposal 3:** the MIDN suggests the implementation of an ensemble of audits, international standards and/or labels by independent bodies. However, some recycling countries may fear a lack of flexibility in the adjustment of yards in line with the progress of standards in their industrial economy.

**Proposal 4:** so as to consolidate the provisions of the new IMO Convention, the MIDN proposes to look for financial incentives aimed at promoting a safe and clean dismantling – along with a few major players (institutions, industries ship owners or financiers) –, should the sole IMO Convention not prove sufficient to clean the market.

**Proposal 5:** contractual strategies for hulls to be dismantled in 2007/2009 are currently being designed and will have to be quickly implemented on maritime fronts. Such is the action already taken by the French Navy.

The MIDN also suggests that the budget allowance which the Navy has required should be safeguarded against budget turbulence liable to occur within the next few years, so as not to ruin the implemented dynamics.

**Proposal 6:** The income from sales of ships whose dismantling has been profitable - or even from ships sold second-hand - could well contribute to a specific budget allowance in order to compensate for the dismantling costs of other ships (a 10 August 2006 decree rules that the income from sales of an item is allocated to the administration which formerly owned it).

**Proposal 7:** inventories and processing strategies for small ships and floating devices should be designed within the framework of regional meetings among civilian and military actors.

**Proposal 8:** the European market of ships to be dismantled does not require subsidizing new industrial capabilities; with a little adjustment, existing European yards should be able to cope with that load in a safe and clean way. Yet, the flow of State-owned ships to be dismantled within the next years could also enable new European dismantling professionals to emerge. In such a competitive game, the importance of geographic vicinity should be stressed.

**Proposal 9:** the MIDN suggests that France encourage the EU to be resolute in helping the emergence of the IMO Convention and show the way by adopting a support and transition plan.

**Proposal 10:** the MIDN has offered a significant and backed-up contribution to the Commission for the forthcoming "Green Book for the dismantling of end-of-life ships". It is suggested to keep on putting forth measures and studies, especially for subjects pertaining to:

- + the participation in the emergence of international standards – or European labels, for a given period of time – including by providing technical and financial assistance to yards which have taken steps towards certification;

### Proposal 14

assign the General Secretary for the Sea to the coordination of interdepartmental actions, without prejudice to each ministry's and to the General Secretariat of European Affairs' remit. This mission will focus on the following goals:

- + releasing and making use of the final MIDN report and continuing the works;
- + continuing negotiations on the IMO Convention (MEPC meeting in May and July);
- + drawing up, in connection with the General Secretary for European Affairs, well backed-up proposals on the Commission green passport, which is expected in March, and taking an active part in European workshops contemplated by the German EU Presidency;
- + participating in the drawing up of French and European strategies on the dismantling of big State-owned ships, especially of military ships;
- + supporting and extending regional thinking on the processing of pleasure and fishing boats, and of small ships and not very movable floating devices.

- ♦ encouraging – in a symbolic or financial way – any partnership among maritime professionals, ship owners and “clean and safe” dismantling yards;
- ♦ the specific conduct of a discussed European action for the dismantling of State-owned ships;
- ♦ looking for possible follow-up measures and financial incentives in order to support - if necessary - the implementation of the IMO Convention.

**Proposal 11:** the European Commission’s General Directorate for Environment wishes that the EU applied as a party to the IMO Convention on ship dismantling – starting with introducing a REIO – regional integration organization - clause. The MIDN suggests that this possibility be examined within the framework of the consultation on the green book pertaining to the set-up of a future maritime policy for the EU. An interdepartmental discussion on that matter will be continued.

**Proposal 12:** the MIDN puts forth an optimal exchange of information with our European partners, the examination of possible common contractual clauses, and even, to some degree, pooling calls for tenders for European State-owned ships, especially British and French. A labeling and selection of yards fit for a safe and clean recycling, akin to the procedure implemented in the United States, should be given thorough thinking.

**Proposal 13:** the establishment of a formal framework for cooperative exchanges among the European military navies should be further explored. This cooperative framework could then be used as a basis for extending the cooperation to civilian services. Such cooperation could be explored with the British at first, and then with other European Navies.

**Proposal 14:** assign the General Secretary for the Sea to the coordination of interdepartmental actions, without prejudice to each ministry’s and to the General Secretariat of European Affairs’ remit. This mission will focus on the following goals:

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- ♦ supporting and extending regional thinking on the processing of pleasure and fishing boats, and of small ships and not very movable floating devices.

## *Mandate given by the Prime minister*

*Le Premier Ministre*

0328/06/SG

Paris, le 06 MAR. 2006

Monsieur le Secrétaire général,

Le démantèlement des navires en fin de vie pose, au plan mondial, des questions de sécurité et de santé des personnes et de protection de l'environnement. Actuellement, l'Europe ne dispose pas des capacités nécessaires au démantèlement des grands bâtiments permettant de répondre à ces questions.

Dans ce domaine, la France se doit d'être exemplaire et d'agir dans la plus totale transparence. En conséquence, j'ai décidé de créer une mission interministérielle pour traiter ces questions.

Le secrétariat général de la mer étant chargé d'animer et de coordonner l'action interministérielle dans le domaine maritime, je vous demande de bien vouloir me proposer, pour le 31 mars, une préfiguration de cette mission.

Vous pourrez, à cette fin, rechercher le concours de Monsieur Jean-Noël d'ACREMONT qui sera prochainement désigné comme co-président de cette mission interministérielle.

L'organisation retenue devra être articulée autour des principaux ministères concernés : écologie et développement durable, défense, transports et mer, travail, économie, finances et industrie, affaires étrangères et affaires européennes. Elle devra également y associer le Secrétariat général des affaires européennes.

Monsieur Xavier de LA GORCE  
Secrétaire général de la mer  
16 boulevard Raspail  
75007 Paris

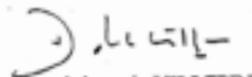
Le mandat de la mission interministérielle est double :

- > proposer un processus pertinent d'élaboration et de mise en œuvre effective, dans des délais rapides, de réglementations internationales rigoureuses applicables à tous les acteurs concernés par le démantèlement des navires en fin de vie.
- > définir quels seraient les conditions et les délais de création d'une filière viable de démantèlement total ou partiel des navires civils et militaires en France ou en Europe, dans le respect de nos engagements internationaux en matière de sécurité et de santé des personnes et de respect de l'environnement.

Ces travaux devront être conduits en étroite liaison avec nos partenaires européens, ainsi qu'en relation avec d'autres pays concernés par cette problématique, notamment ceux hébergeant aujourd'hui des chantiers de démolition, avec lesquels un partenariat pourrait être noué sur ces sujets.

J'attends de cette mission qu'elle puisse me rendre compte de l'avancement de ses travaux par un rapport d'étape sous six mois et me livre ses conclusions définitives au premier trimestre de l'année 2007.

Je vous prie de bien vouloir agréer, Monsieur le Secrétaire général, mes salutations distinguées.

  
Dominique de VILLEPIN

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<b>Xavier de la GORCE:</b>	General Secretary for the Sea, co-President
<b>Jean-Noël d'ACREMONT:</b>	former President of the Chantiers de l'Atlantique, co-President
<b>Xavier LEBACQ:</b>	General Engineer (Armament), Director
<b>Edouard GUILLERMOZ:</b>	Senior Executive Official, Ministry of the Economy, Finances and Industry
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