



The European maritime transport policy with respect to sustainable development issues and climate commitments

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THE EUROPEAN MARITIME TRANSPORT POLICY WITH RESPECT TO SUSTAINABLE DEVELOPMENT ISSUES AND CLIMATE COMMITMENTS

Opinion of the Economic, Social and Economic Council
presented by

Mr Jacques Beall, rapporteur

on behalf of the
Section for European and International Affairs

Question referred to the Economic, Social and Environment Council (ESEC) after the decision from its Bureau dated 10 May 2016, in accordance with Article 3 of Amended Order n° 58-1360 of 29 December 1958 introducing the law on the Economic, Social and Environment Council. The Bureau tasked the section des affaires européennes et internationaleswith drafting an opinion entitled:*European maritime transport policy with respect to sustainable development issues and climate commitments*. The section des affaires européennes et internationales, chaired by Mr. Jean-Marie Cambacérès, appointed M Jacques Beall as rapporteur.

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Opinion

presented on behalf of the Section for European and International Affairs

The whole draft opinion was unanimously
adopted by public vote.

THE EUROPEAN MARITIME TRANSPORT POLICY WITH RESPECT TO SUSTAINABLE DEVELOPMENT ISSUES AND CLIMATE COMMITMENTS

Jacques Beall



Summary of the Opinion

In the European Union (EU), maritime transport, despite taking a relatively small proportion of gross domestic product (GDP, 145 billion euros i.e. 1%), represents more than 640,000 direct jobs and 40% of global gross tonnage. It is also of strategic importance since 90% of goods are transported by sea worldwide, of which 70% in European waters.

The 2009/2018 European maritime transport strategy, presented by the European Commission in January 2009, aimed to make this sector "more competitive and sustainable" and was based on several foundations: sustainable development, economic growth, the opening of markets in a context of fair competition and high social and environmental standards. The review of this strategy, launched in summer 2016 and formalised by the publication of an interim report by the Commission, provided the opportunity to highlight contrasting results. For instance, real progress has been made on the legal level with the adoption of very advanced legislation in terms of safety or a legal framework designed to guarantee the living and working conditions of seafarers. However the corpus compiled by the EU is unevenly and insufficiently applied, creating major intra-community distortions. On the environmental level, although the original objective of the strategy - "zero-waste and zero-emission" - seemed unrealistic and much remains to be done, the EU is a pioneer in environmental standards and remains a decisive stakeholder for global adoption of measures aimed at reducing the impact of the maritime sector on the climate.

For the ESEC the review of the strategy must also be the opportunity to adapt to a renewed global sustainable development agenda, characterised by the adoption of the Sustainable Development Goals (SDGs) in New York, September 2015, then the signing of the Paris Agreement in December 2015 at the Convention on Climate Change. This new agenda implies strong commitments from the EU and a new integrated vision of sustainable development questions that our Assembly had described in its opinion entitled "*French international cooperation policy within the framework of the sustainable development 2030 agenda*" (rapporteur: Mr. Philippe Jahshan).

In reviewing this strategy and as part of the "2017 European maritime year" campaign, the EU needs to continue to take the leading role at the global level on environmental issues, by working to ensure that the impact of maritime transport on the environment and climate are better taken into account, in particular given the negative externalities of the sector. On the social level, European maritime transport policy must in the future help effectively fight social dumping which has worsened internationally but also within the EU.

THE ESEC'S RECOMMENDATIONS

↳ Reviewing the redistribution of the Trans-European Transport Network (TEN-T) to guarantee territorial cohesion in Europe.

For the ESEC, it is essential that the next revision of the TEN-T, scheduled for 2023, includes the need to open up peripheral regions. In France, West-East connections and the Atlantic seaboard are excluded from the current outline. In general, this tool must be diversified to become a territorial cohesion instrument within the EU and not a tool that validates and funds existing and already sustainable routes.

In parallel, this review involves budgetary redeployment with a complete review of criteria for the allocation of Connecting Europe Facility (CEF) funds and therefore projects ultimately selected by the Commission. This orientation therefore falls under the responsibility of Member States which are required to submit projects and under that of the Commission which selects them according to the initial objectives of the programme. The revision of the CEF, planned for 2020, must be the opportunity to see the state-of-play on progress made and set new priorities.

Moreover, several tools can be set up by the EU to favour the modal shift towards maritime transport and to fund the greening of the European fleet:

- a new European aid programme to develop maritime transport, replacing the "Marco Polo" programme which stopped in 2013. The approach will consist in giving European aid to shippers on the basis of environmental criteria, so that they use maritime rather than road transport;
- financial instruments such as the "eurovignette", which need to be reviewed to be more restrictive, or taxes such as Mare Bonus which the Italian authorities set up to encourage the modal shift towards maritime transport;
- financial support provided by the Juncker Fund and the European Investment Bank (EIB) to facilitate private sector investment.
- the use of commercial defence instruments to combat unfair practices of third countries which distort competition at the global level.

↳ Introduction of employment-friendly measures by promoting quality training and fighting social dumping.

Precise and reliable training and employment statistics in the European maritime sector

The ESEC believes that it is imperative to feedback all information regarding training centres and qualifications, main outlets, difficulties encountered, State by State, but also quantify the employment market for each sector and type of activity by precisely identifying research and innovation centres.

Summary of the Opinion

Promoting training

The ESEC proposes to develop a quality training policy in line with the future issues of innovation and sustainable development and create a European network of naval schools in conjunction with specialised universities and research centres. Our Assembly is also in favour of adopting an "Erasmus Sea Programme".

Promoting an ambitious sea employment policy

The ESEC advocates increasing and improving the employment of seafarers who are EU nationals. This involves:

- facilitating investment in areas with high added-value in terms of jobs and skills;
- conditioning the granting of public aid on European shipowners complying with social and environmental criteria;
- favouring employment of sailors under European conditions and guaranteeing decent working conditions. Within this framework, it is urgent to implement a base of common ambitious social provisions. The aim is to set up a barrier-free European area not only based on the facilitation of traffic and administrative simplification but also an area without social dumping with upgraded, harmonised social standards. The ESEC is in favour of launching discussions on the notion of "community waters" i.e. a maritime area without borders within which common social rules would be applied;
- authorise, in the maritime service sector, State grants and certain arrangements that are considered to distort fair competition to fight social and fiscal dumping in countries outside the EU.

In general, it is essential that constraints applied on European shipowners and their vessels do not distort competition and cause the exodus of jobs outside the EU. That is why the ESEC believes that it is indispensable for the EU and Member States to debate the fight against social dumping and flags of convenience on the global level.

Fighting social dumping and upgrading standards.

The ESEC considers that it is necessary to:

- reinforce social employment conditions in maritime transport by implementing the provisions of the Maritime Labour Convention, MLC 2006, of the International Labour Organisation (ILO) not yet covered by European legislation (recruitment and placement, wages, workforce, social security including medical insurance and coverage of occupational accidents as well as the pension system);
- Include seafarers in the ongoing discussions for a European base of social rights.

Guaranteeing working conditions for seafarers

The ESEC considers that it is essential to:

- reinforce resources, tools and controls on working and resting conditions on board by prioritising the issue of working and resting hours as well as assessing crews' level of fatigue;
- do a study on well-being at work and health of seafarers;
- make regulations evolve on the workforce of vessels in line with minimal resting times, taking into account the various criteria (size of vessel, type of activity, frequency of stops, etc.).

➔ Control and reduce abuses observed as part of the dismantling of European vessels

Communicate and inform about social and environmental damage caused by dismantling

To fight abuses in compliance with working conditions as well as environmental protection of dismantling sites, the ESEC firstly considers that the international community *via* the International Maritime Organisation (IMO) and the ILO must lay down rules to improve information on actual living and working conditions in dismantling sites.

It is also necessary to organise transparency on this subject on the European and global levels and make information accessible which enables this activity to be monitored while taking into account the entire chain, from deflagging to the deconstruction sites.

Take action to improve the international and European legal framework

The ESEC calls for:

- broad ratification of the Hong Kong Convention of the IMO, only so far ratified by Panama, Norway, Congo, France and Belgium, to open the way for better control of the recycling of vessels on the global level;
- finalisation and completion of European legislation on the recycling of vessels, in particular, with the recycling licence project proposed by the Parliament. It supports the idea of a directive that would more specifically focus on the certification of dismantling sites.

Developing a European ship dismantling sector

The ESEC is in favour of financial support given to the implementation of a genuine European dismantling sector that would help consolidate existing sites and secure their jobs.

Summary of the Opinion

The development of this sector implies:

- the implementation of a genuine European programme backed by the Juncker Plan to promote private investments in this sector;
- the introduction of the concept of extended responsibility of industrialists in the sector therefore internalisation of the cost of the ship through to its dismantling;
- favouring the emergence of a European sustainable development label for maritime transport, in which recycling would be one of the components.

Reducing the environmental impact of maritime transport

Adopting greener means of propulsion and fuels to reduce maritime transport emissions

Although the proportion of carbon dioxide emissions (CO_2) due to the global maritime transport sector is lower than that of the road or air sector, its environmental impact is constantly growing. If no measures are taken to reverse the rate of emissions in the sector, they could, in 2050, strongly increase by 50% to 250%, according to different scenarios. The main issue lies in the propulsion mode of ships and fuel, as the different types of emissions are inseparable (greenhouse gas, soot, sulphur and nitrogen oxides, fine particles).

As far as greenhouse gases (GHG) and other climate pollutants are concerned, the ESEC considers that it is essential to:

- bring the two information-collection systems on European emissions closer together through operational regulation as of 2018 and that of the IMO for 2019 to rapidly gain access to reliable and precise data on ships, their movements and their emissions, on the European and global level;
- reinforce research on the climatic impact of maritime transport and in particular the regional impact of soot;
- monitor the work of the Marine Environment Protection Committee (MEPC) of the IMO on the strategy to reduce GHG emissions of marine transport, in particular on the content of the "initial strategy" which must be launched between now and 2019 and on the implementation conditions of a fuel tax;
- impose a speed limit on vessels in community waters, depending on their types and activities;
- support the position of the European parliament to take into account emissions of the maritime sector in the European carbon market.

For other emissions (sulphur, nitrogen), the ESEC recommends:

- continuing with the installation of Emissions Control Areas (ECA) especially in the Mediterranean, by implementing sanctions in the case of overruns;
- moving towards a ban on heavy fuel, given vessels' engines;
- developing electrical connections at the quayside.

Reducing other maritime transport impacts (waste, black and grey water, etc.)

The ESEC calls for:

- the harmonisation of vessels' waste reception facilities and for them to be made effective in terms of the "zero-waste zero-emission" long-term goal;
- the provision of European port facilities with treatment units for vessels' wastewater;
- the reduction of impacts on marine mammals caused by acoustic pollution and risks of collision;

Promoting innovation, a major issue on the European level

The ESEC considers that it is necessary to:

- perform an inventory of research on ship propulsion;
- promote innovative processes to reduce or even eliminate emissions;
- support research and development investments (design of ships, energy efficiency, wind support, hydrogen);
- promote European shipowners' initiatives in terms of maritime transport labelling on the basis of sustainable development criteria (GHGs, CSR), take stock of the existing situation and establish the criteria of this label, in consultation with all the sector's stakeholders (shipowners, NGOs working in environmental protection, unions and employers, etc.);
- communicate and inform consumers about the total CSR footprint of the final product, including transport.

Safety and security issues: reinforcing the harmonisation of practices within the EU, reasserting the role of the European Maritime Safety Agency and improving the management of container loss

Strengthening port State controls

For the ESEC, the main issue is the lack of harmonisation in the implementation of directive 2009/16 on port State controls. The Commission needs to find levers to make this issue become a priority for all States. One of them consists in opening data on detailed assessments for each State to civil society. These assessments also need to be systematically transmitted to the ad hoc commissions of European and national Parliaments, the European Economic and Social Committee (EESC) and other relevant organisations.

Particular note should be taken of the following: avoid competition distortions between European ports; take better account of the social dimension in inspections carried out, in particular regarding the ability to analyse crews' state of fatigue; and also work on the harmonisation of sanction procedures as well as the level of penalties.

Summary of the Opinion

The ESEC asks to ensure that safety and security conditions on board vessels are guaranteed.

Striving towards a better operation of the European Maritime Security Agency, (EMSA)

The ESEC considers that it is necessary to:

- better share knowledge and know-how of the EMSA with third countries through regional “IMO” partnerships (in the Mediterranean, etc.);
- secure but also strengthen the Agency’s resources with respect to its central role in security and safety, to the need to go further in the field of inspecting seafarers’ living conditions, the issues of emerging risks but also the role it should/could have in ultra-peripheral regions and in the support of third countries, like its new mission based on the coast guard function.

Address the issue of container loss

The ESEC recommends:

- assessing, first and foremost, the relevance and adaptation of the European regulatory framework in the container loss issue, which requires the effective implementation of existing provisions on this subject. Special care needs to be taken in the implementation of the provision governing the verification of container weight before loading and its notification to the various stakeholders;
- setting up real traceability of containers throughout the logistics chain in relation to mandatory notifications of the transport of hazardous goods imposed on the various stakeholders. Likewise, the different stakeholders must be able to guarantee effective collection and dissemination of data on lost containers.

 **Towards greater transparency to bring maritime transport more in line with sustainable development issues.**

Towards increased transparency

The ESEC advocates that European institutions which intervene in the maritime transport field cooperate more with Civil Society Organisations (CSOs), make the different reports available — especially horizontal analyses by the EMSA — and involve civil society in follow-up committees in charge of assessing and controlling the implementation of applicable legislation. Access to data concerns all stakeholders, institutions and agencies in order to assess the effectiveness of controls and measure differences between Member States of the EU but also industrialists on the subject of data relating to vessels’ polluting waste and emissions.

In general, our Assembly believes that it is indispensable to support the social rights and environmental advocacy and defence action targeting the EU and IMO conducted by CSOs and ensure that they are involved in works to re-establish the balance with respect to the representation of private lobbies (shipowners and industrialists).

Guaranteeing better coordination of the different institutional stakeholders

The ESEC considers that efforts need to be deployed to move towards better European coordination between the different Member States then with the Commission to develop a common position.

Moreover, better cooperation between maritime transport stakeholders (private, public stakeholders, universities, NGOs) helps improve transparency but also to build a more solid position.

More generally, the ESEC insists on the importance of European solidarity with respect to the different international agreements and therefore supports the Commission's efforts to promote ratification and effective application among Member States but also neighbouring countries or partners of all these agreements, namely regarding social norms and working conditions of seafarers and on environment protection, like the Hong Kong agreement on dismantling.

Introduction

The globalisation of maritime transport takes on a new dimension when maritime trade benefits from technical progress in terms of shipbuilding and the opening of new shipping routes. One of the most recent major advances in maritime transport was the creation of the container in the 1960s, which led to the development of specific container ships and the transformation of the logistics chain, including port infrastructure. There is growing interdependence between containerisation closely linked to international trade and the globalisation of exchanges. The issue of maritime transport is inseparable from that of international trade. Its low relative cost is one of the reasons explaining the relocation of several industrial productions towards low-cost countries. However, this essential theme is not the subject of this presentation.

In the EU, maritime transport, despite taking a relatively small proportion of GDP (145 billion euros i.e. 1%), represents more than 640,000 direct jobs and 40% of global gross tonnage (see Appendix). It is also of strategic importance since 90% of goods are transported by sea worldwide and 70% of this maritime transport occurs in European waters. By launching the 2009/2018 European maritime transport strategy, the European Commission wanted to make the sector "more competitive and sustainable", both by anticipating future challenges related to innovation or digitisation and by tackling social and environmental dimensions. The revision of this strategy started in summer 2016. The initial conclusions were published in a progress report to the European Commission in late September 2016 as part of a renewed global sustainable development agenda, involving new commitments for the EU and its Member States. Europe was very active in elaborating sustainable development goals (SDGs) in New York in September. It also signed up to the Paris Agreement in December 2015 during COP 21. Europe must now act to adapt its policies to these new imperatives in all relevant fields and propose an integrated vision of these issues. Our Assembly recalled this in its opinion entitled "French international cooperation policy within the framework of the sustainable development 2030 agenda" (rapporteur Mr.Philippe Jahshan): "The ESEC urges the EU to uphold this duty now by fully honouring its commitments to implement SDGs and the Climate agreement. The EU supported the social pillar of the agenda and, in our assembly's opinion, it is essential that it continues to defend this vision".

By revising this strategy and as part of the "2017 European maritime year" campaign, the EU should therefore take into account this integrated vision of sustainable development issues. It needs to take a leading role at the global level in environmental issues by working to ensure that the impact of maritime transport on the environment and climate are better taken into account, particularly by weighing up negative externalities in the sector, as well as the social aspects to fight social dumping phenomena that have worsened at the international level but also within the EU with the financial crises of 2008 and 2010.

One of the essential issues that the ESEC has identified as part of the review of this strategy to move towards a maritime policy that integrates all sustainable development pillars is the necessary redistribution of the Trans-European transport network and consequently of motorways of the sea in order to offer a mesh that is more in line with the imperatives of territorial cohesion in the EU; action in favour of the social aspect of the sector, hitherto largely neglected and a priority to be given to issues related to the employment and working conditions of seafarers; the need to speed up consideration of the impact of the sector on the environment which is constantly growing and which, for the time being, international climate commitments fail to meet.

Finally, the ESEC has identified a number of fields in which the EU can and should progress, in particular in terms of access to data and transparency, applicable practices in the context of ship dismantling or maritime transport safety.

I. PRESENTATION OF THE EUROPEAN MARITIME TRANSPORT STRATEGY 2009-2018

This first section sets out the strategic objectives and recommendations regarding the EU's maritime transport policy through to 2018 as presented by the Commission in its Communication dated 21 January 2009 (COM/2009/0008). This strategy is part of the EU transport policy¹ and of the integrated maritime policy², with the main objective of "[serving] the sustainability and competitiveness of current and future shipping operations". It also aimed to more consistently coordinate maritime issues, mainly the transport, energy and environmental protection fields.

A. Objectives

The strategy, as adopted by the European Commission in the field of maritime transport in 2009, was based on several foundations which resulted in an extensive legal corpus. It was established around the key values of sustainable development, economic growth, the opening of markets in a context of fair competition and high social and environmental standards. However much progress is still needed to complete its implementation and adapt it to developments in the sector.

1. Guaranteeing fair competition in a globalised context

Despite the widely globalised nature of the maritime sector and the repercussions of the financial crises of 2008 and 2010 (fall in demand, overcapacity crisis), the Commission was expecting growth in the sector over the decade thanks to increased economic integration between Member states and neighbouring countries. It also focused on the strategy's framework, on the necessity to achieve free access to services while guaranteeing loyal and fair competition on the European and, above

¹ COM (2006) 314 final dated 22 June 2006: "Keep Europe moving: a transport policy for sustainable mobility".

² COM (2007) 575 final dated 10 October 2007: "Blue Book".

all, international level. In this respect, the adoption of rules to fight unfair competition of non-EU countries was mentioned. These states are often favoured by less restrictive regulations, in particular concerning social provisions and working conditions, cheaper labour or the granting of public aid. Finally, the Commission believed that the global context had highlighted the need for countries to take responsibility as States of the port and/or flag.

2. Offering a protective legal framework for seafarers

The strategy of the European Commission also aimed to improve work conditions, skills and know-how of seafarers as well as help in professional qualification by fighting the shortage of skilled labour in transport maritime. It recommended improving the image and appeal of these professions as well as employment and career opportunities in marine transport. The main objective in this context was to transpose into European Law the MLC adopted by the ILO on 23 February 2006 in order to establish a minimal level of rights in this sector. Finally, it seemed essential to improve education, mobility of labour and training, including continuing training of seafarers.

3. Eliminating the impact on the environment with the "zero waste-zero emission" objective

In the long-term, the Commission asserted the ambition of creating greener maritime transport that creates no waste, no emissions of polluting particles and the ambitious goal of "zero-waste zero-emission" for maritime transport featured explicitly in its communication. To achieve this end, the Commission had put forward the following proposals:

- reducing GHG emissions produced by maritime transport;
- improving the environmental quality of marine waters;
- optimising operating waste management and waste produced by the dismantling of ships;
- reducing sulphur oxide (SOx) and nitrogen oxide (NOx) emissions of ships;
- promoting greener maritime transport by setting up a continuous transport environmental performance improvement system and modulating taxes and duties according to the efforts made.

4. Improving safety and security of maritime transport

In terms of security, in 2001, the Commission set up one of the most comprehensive and safest regulatory frameworks in the world.

In 2009, the Commission proposed to revise the EMSA's mandate, reinforce international cooperation so that Member States may take responsibility as flag, port or coast State and be bound by all applicable international agreements.

The issue of maritime surveillance, which also concerns safety, implied setting up an integrated information management system to identify, control, monitor and signal all vessels at sea and create a cross-border and cross-sector surveillance system within the EU.

In terms of security, the Commission wanted to secure maritime transport by preventing acts of terrorism and piracy at sea. To achieve this goal, it was planned to secure navigation areas, protect crews and passengers, apply rules proportionate to the international level and promote a culture of safety within international maritime transport.

5. Complete the single market

The Commission also aimed to complete the single market by developing short sea shipping within the EU by creating a European maritime transport space without borders ("intra-European waters"). This maritime space would facilitate the development of motorways of the sea and intermodality and interconnection with the hinterland. Its other priorities were to eliminate superfluous administrative barriers, harmonise and simplify administrative documents, open port services to competition and attract investment to the port sector.

6. Favour research and development

This strategy aimed to develop the technological research and development needed for the competitiveness of the maritime sector in Europe to progress in terms of energy efficacy of vessels, to reduce negative effects on the environment and to improve the quality of life at sea. It was therefore intended to set up a reference framework for the provision of "e-maritime" service on the European and international levels.

B. The conclusions of the European Commission's progress report³ on the implementation of the strategy and lines of action envisaged

In late September 2016, the European Commission published a progress report on the implementation of the Union's maritime transport strategy for 2009-2018. This section proposes to recall the main conclusions and lines of action envisaged, without commenting on them at this stage, with a view to revising this strategy. As a preamble, the report underlines the change of economic paradigm since 2009, a major consequence being a chronic overcapacity crisis. Furthermore, it recalls that although the EU conducts a common policy called the "integrated maritime policy" in the field of maritime transport, Member States are the real stakeholders of this strategy. It is important to remember that transport is a competence that is shared between the Commission and Member States pursuant to article 4 of the Treaty on the Functioning of the European Union (TFEU), which means that both may take legally binding action in this field and that Member States only exercise their competence insofar as the EU has not exercised its own.

The report presents four strategic fields in which progress has been made and possible areas for improvement to achieve initial objectives.

1. Reinforced maritime security moving towards greater efficiency

The EU has developed very advanced legislation in terms of maritime safety and security, particularly concerning the entire responsibility chain (following the oil spills of the late 1990s and early 2000s). The "3rd maritime package" of 2009 strongly reinforced maritime security with directives on the flag State, port State, certification companies and property damage insurance mechanisms. Furthermore, the EMSA provides support for the implementation and follow-up of legislation and has developed its operational capacity and information tools. In the field of maritime security, the European Commission wants to maintain its effort so that the European regulatory framework may be as strict as possible in terms of prevention and response to accidents. For that, it is necessary to rise to new challenges like the security of passenger ships, mega-ships or the terrorist risk.

2. Administrative simplification requiring the digitisation of data

The initial objective of the strategy was to harmonise administrative formalities to make the internal market more effective.

The implementation of the SafeSeaNet tool has normalised and centralised the exchange of information in the Union resulting in better maritime security at the

³ "Commission Staff Working Document on the implementation of the EU Maritime Transport Strategy 2009-2018", SWD (2016) 326 final, 30 September 2016. Available in English only.

quayside and at sea, better environment protection and better anticipation of pollution. Since 2009, measures have also been taken to rationalise processing of information by port authorities, exchange information between the departments of Member States and improve maritime surveillance, in particular the directive on declarative formalities applicable to ships.

The Commission indicates that it has launched work designed to modernise rules applicable to State aid for the funding of port infrastructure. The aim is to remove the obligation to notify such aid for investments made in the ports.

3. A “zero-waste zero-emission” objective has not yet been reached

The Commission adopts “zero waste zero emissions” as one of the most important objectives of the 2009 strategy and reviews the progress made since 2009, for example, the adoption of “the energy efficiency design index” which is mandatory for ships built after 2013. It also discusses the introduction of the Monitoring, Reporting and Verification system (MRV, see II. D. 2.), considered as a step forward even if data collection of GHG emissions is only a first stage and it will then be necessary to target effective emission reduction objectives. It also recalls the initiatives taken to integrate the most recent provisions of the MARPOL Convention, on port installations required to treat ship-generated waste, into European law. Finally, it underlines that the CEF, a TEN-T funding instrument, supports green shipping with more than 185 million euros dedicated to it in 2014 and 2015.

4. The social dimension

In its progress report, the Commission notes that, given the initial objectives set out in the strategy — guaranteeing a high level of skills and qualifications and decent living and working conditions for seafarers — the results are significant, with the transposition into European law of MLC 2006 of the ILO, mainly through the adoption of the 13/EC directive of 16 February 2009, then the 54/EC directive of 20 November 2013. The inclusion of seafarers in five directives of the EU on labour law is also a major inroad⁴.

Moreover, the European Commission observes that despite three successive enlargements of the EU in 2004, 2007 and 2013, the number of European seafarers has constantly declined (220,000 seafarers in 2016, i.e. 18% of seafarers worldwide). It therefore proposes to tackle the challenges linked to innovation and sustainable development by strengthening bridges between jobs and training so that seafarers may benefit from a very high level of qualification.

⁴ Directive no. 1794/EC of 6 October 2015, no. 94/EC which amends directives 2008/94, 2009/38, 2002/14, 98/59 and 2001/23.

C. Real inroads to be developed

The European strategy 2009-2018 fixed objectives for maritime transport that were both ambitious and sometimes difficult to reconcile, such as guaranteeing social rights for seafarers and eliminating the sector's footprint on the environment while fostering competitiveness. Moreover, in its initial presentation, the objectives are presented individually and not interrelated, reflecting an approach that did not address the three pillars of sustainable development in an integrated manner.

The results, whose main developments since 2009 are presented below, are mixed. For example real progress has been made on the legislative level but the corpus set up by the EU is unevenly and insufficiently applied, creating major intra-community distortions. In addition, the launch of the strategy has suffered a trend reversal in maritime transport caused by the financial crises of 2008 and 2010.

1. Support of sustainable development to deal with distorted global competition

Although under Article 107 of the TFEU, State aids are generally prohibited so as not to distort free competition, the maritime transport sector derogates — at least partially — from this principle. Moreover, in its 2009 Communication, the Commission admitted the need to "A clear and competitive EU framework for tonnage taxation, income taxation and state aid should be maintained and, where appropriate, improved, [which] should allow positive measures to support greener shipping efforts, technological innovation as well as maritime careers and professional skills".

Global competition in the European maritime transport sector results in social and environmental dumping, insufficient maritime safety standards or territorial water protection measures — as in the United States with the very protective Marine Merchant Act or Jones Act.⁵ In this context, the European Commission currently authorises public support of the European maritime sector provided that the recipient of aid complies with the pillars of sustainable development: economic, social and environmental. For instance, State aid for green shipping of the fleet of a Member State to fund vocational training programmes for sailors or research and development are authorised. Over and above that, in 2003 to 2013, the sector received aid via the "Marco Polo" programme aimed at promoting the modal shift and reducing emissions caused by road transport (see III. A.).

⁵ The *Marine Merchant Act* or *Jones Act* (1920) regulates maritime transport in American waters and American ports. Provision 27 of the *Jones Act* which covers short sea shipping, stipulates that all goods transported by sea between American ports must be done on ships flying the American flag and built in the United States, belonging to American citizens with crews consisting of US citizens and permanent residents in the United States.

In addition, the Commission has the option of using Trade Defence Instruments to fight unfair practices by third countries, namely social and environmental, which distort competition at the global level.

2. A set of social rights adopted for seafarers

Social rights enjoyed by seafarers in the EU are mainly the result of transpositions of international law (ILO, IMO). By these transpositions, the EU has attempted to harmonise and increase protection and rights of seafarers. It should however be recalled that the issue of social dumping within the sector was largely neglected under the Barroso Commission (2004-2014). Over that period, the Directorate-General for Employment of the Commission even refused to recognise the very existence of this phenomenon. Since then, the Juncker Commission has taken into account distortions between Member States in the area of social law in maritime transport and has begun discussions on this subject.

Without detailing all the provisions governing living and working conditions within the EU, mention may be made of:

- the 2009/13/EC directive, which implements the agreement signed by the European Community Shipowners' Association (ECSA) and the European Transport Workers' Federation (ETF) regarding the ILO MLC 2006. This directive establishes sectoral social dialogue for seafarers;
- directive 2012/35/EU concerns the minimal level of training for seafarers. This directive provides that training of seafarers and the issuing of qualifications to them shall be governed by the 1978 STCW (Standards of Training, Certification and Watchkeeping) convention of the IMO (applicable since 1984 and amended in 2010 in Manilla);
- directive 2013/38/EU which modifies directive 2009/16/EC bearing on control by the State port, further aligns the text with the MLC 2006;
- directive 2015/1794/EU modifies five prior directives so that all seafarers may be integrated into the fields of information and consultation of workers, work councils, collective redundancies, the transfer of businesses and the insolvency of the employer by all States.
- directive 2013/54/EU which completes integration of the MLC 2006 into European law with the adoption of provisions relating to certain responsibilities of the flag State.

Despite this relatively comprehensive and generally protective legal framework, the situation is patchy within the EU, especially because several major provisions of the MLC 2006, including standards on wages, workforce, social security (health insurance, pensions, etc.), are not yet transposed into European law. Moreover, there is big difference in the way texts already adopted are applied by Member States and controls and inspections are insufficient, thus creating major distortions within the EU.

Some countries of the EU, having ratified MLC 2006 and transposed all aforementioned directives, apply them unequally, which favours social dumping within the EU. In addition, the European corpus described is considered by unions, including the ETF, as the minimal basis and is in no way a genuine employment policy which is lacking in this field.

3. The EU, a pioneer in terms of environmental standards

Like European social law for seafarers, environmental standards on maritime transport are also mainly derived from transpositions of international law (IMO). Environmental standards since 2009 have focused on the reduction of emissions and pollution of European waters by ships:

- the so-called "Sulphur" directive 2012/33/EU provides that, as of 1st January 2015, cargo ships circulating in the Channel, in the North Sea and Baltic Sea, can no longer use fuel containing more than 0.1% sulphur. These seas are in a SECA (Sulphur Emissions Control Area), in compliance with the MARPOL Convention;
- regulation 2015/757 bearing on the surveillance, declaration and verification of CO₂ emissions in the maritime transport sector is designed to enable the Commission, in connection with ongoing negotiations at IMO, to re-examine the community system in the case of international agreements;
- directive 2016/802/EU on the reduction of sulphur content of certain liquid fuels;
- a joint communication of the Commission's Directorate-General for Maritime Affairs and Fisheries (DG MARE) and the European External Action Service (EEAS, reporting to the High Representative for Foreign Affairs and Security Policy) relating to the governance of the oceans of 11 November 2016 wants to reinforce the coordination of European actions on the international level (protection of coastlines, management of seabeds, regulation of fisheries, scientific knowledge, etc.).

D. Maritime security issues and the European Maritime Safety Agency

1. A legal base consisting of maritime safety and security

The maritime security policy is an integral part of the maritime transport policy by protecting the sea, the marine environment and coastal regions but also passengers and crew members⁶. Maritime transport being global, the IMO sets

⁶ Chapter VI, article 91 §1 c) and article 100 §2 of the TFEU.

uniform international standards which the EU rapidly integrates into community law to guarantee uniform application in all Member States. These provisions cover seafarers' training, on board equipment, security of passenger ships, port State control and approved organisations to conduct the inspection and visit ships (classification companies).

The sinking of the Titanic in 1912 triggered discussions on maritime safety. Then a succession of catastrophes (the Torrey Canyon in 1967, the Boehlen in 1976, the Amoco Cadiz in 1978, etc.) sparked awareness of the impact of maritime transport on the environment and therefore the necessity of taking it into account in safety policies. Afterwards, the wrecks of the Erika (1999) and Prestige (2002) oil tankers pushed the EU to reinforce safety norms in the field of maritime transport.

The "Erika I" legislative package

Adopted on 21 March 2000, it aims to:

- ban from all ports of the Union all ships aged more than 15 years having been immobilised more than twice in the course of the two previous years, on the basis of a "blacklist" published by the European Commission and updated every six months. Moreover controls on all ships must be reinforced according to the age of the ship;
- better supervise the activities of classification companies by setting up a more restrictive and more harmonised framework. These companies are the only ones to really control the state of the structure of ships;
- replace single hull ships by double hull tankers according to a timetable identical to that of the United States (2005, 2010, 2015 according to the tonnage).

These three pieces of legislation apply not only to oil tankers but, in the case of the first two proposals, to all ships transporting dangerous or pollutant substances.

The "Erika II" legislative package

Adopted in the wake of the first "Erika package", on 6 December 2000, its aim was to implement longer term measures such as reinforcing surveillance of traffic in European waters, making the reporting of any vessel proceeding towards a port of Member State mandatory (at least 24 hours in advance), imposing that any vessel calling at a European port be equipped with a transponder (Automatic Identification System) to improve identification and monitoring of ships along European coasts⁷.

This legislative package forces Member States to set up a Voyage Data Recorder system for merchant ships — a sort of black box similar to those found on aircraft — and establish an information exchange system on vessels transporting hazardous

⁷ France responds to this through the Spationav project.

goods (SafeSeaNet system)⁸. Its implementation was entrusted to the EMSA which has an advisory, assessment and control capacity.

Finally, this package also includes provisions, regarding seafarers working on board merchant ships flying the flag of Member States, such as training supervision and certificate issuance.

The 'Erika III' legislative package

Adopted on 11 March 2010, it forbids access to EU ports of "sub-standard" vessels and sets up better compensation for victims of disasters. Since 2011, port States must inspect all vessels calling at port or mooring offshore, according to risk criteria. Regularly "sub-standard" vessels may be permanently banned from entering European waters. Safety audits must be conducted on all fleets of European countries. "Erika III" forces the largest vessels to take out insurance to cover damage to people in the event of an accident⁹.

Negotiations of this first package, which lasted two years, however did not allow real progress on certain points and the amounts of compensation paid to victims of pollution were capped, limiting the principle of "polluter-payer".

Security measures implemented after September 11th 2001

Regarding security on board ship and in port facilities, the terrorist attacks of September 11th 2001 led to the adoption in 2002 of the International Ship and Port Security Facility code. Regulation (EC) No. 725/2004 was intended to ensure uniform interpretation and implementation of these IMO decisions. The Union's maritime security strategy was launched via the adoption by the Council on 24 June 2014, of a political and strategic act to deal effectively and comprehensively with the challenges of maritime security through the use of all relevant instruments on the international, European and national levels.

2. The European Maritime Security Agency (EMSA)

The EMSA, the operational agency of the European Commission, was set up in 2002; its headquarters are in Lisbon. Its remit is to improve marine safety and security through prevention, detection and response to pollution through its technical expertise and operational assistance.

The EMSA supplies maritime authorities with detailed real-time information on what is happening at sea to help them effectively implement maritime policies through different tools such as SafeSeaNet and CleanSeaNet. It thus offers services in tune with the requirements of maritime authorities throughout Europe: notification

⁸ France set up the Trafic 2000 system in October 2004.

⁹ Since 2016.

of vessels, satellite observation, integrated maritime information system, pollution control, monitoring and analysis of state Port controls.

It also conducts various types of controls: it inspects classification companies recognised in EU countries, evaluates the maritime education and certification systems in non-EU countries, checks that vessels calling at EU ports are properly inspected and assesses national maritime traffic control systems. In addition, the EMSA ensures the consistency of maritime accident investigations throughout the EU.

It also conducts operational tasks such as the availability of ships in the case of oil spills to Member States of the EU and satellite detection of marine pollution.

The agency plays a central role in the promotion of best practices within the EU but also neighbouring countries. It trains a body of inspectors and operations to support the various national authorities. Required to respond to a broad range of maritime security- and safety-related issues from a technical, scientific or regulatory point of view, it has in-depth expertise in its field, which is recognised on the European and international level. The EMSA conducts in-depth surveys for the Commission on the effective implementation of various regulations and the effectiveness of their provisions. It facilitates technical cooperation between the authorities of Member States of the Commission.

The EMSA therefore plays a central role and coordinates its work and missions with the various European agencies. It offers shared services to other agencies working in the maritime sector (Frontex, the European Fisheries Control Agency, etc.) and is also in charge of monitoring emerging problems and new challenges such as container loss, cyber security, automation of vessels, mega-ships, etc.

Several people heard by the ESEC indicated however that the means allocated to the EMSA are not commensurate with its remit.

II. THE INTERNATIONAL LEGAL FRAMEWORK OF MARITIME TRANSPORT

A. The International Maritime Organization (IMO):

1. Presentation and operation

The IMO or International Maritime Organization is a specialised agency of the United Nations set up on 17 March 1958. Its headquarters are in London. Since May 1982, it has replaced the International Maritime Consultative Organization (IMCO).

Opinion

This change allowed it to assert its position as an organisation specialised in maritime affairs. It brings together 172 Member States and 3 associate Member States (Hong Kong, Macao and the Faroe Islands), whereas 65 inter-governmental organisations (including the EU and the International Organization for Standardization, ISO) have observer status and 76 non-governmental organisations (lobbies and industrialists in the maritime sector, as well as eight environmental NGOs) have a consultative role. Member States annually contribute to the budget of the IMO on the basis of declared tonnage of the merchant fleet of each State. However, the amount of contributions does not affect voting rights. Each country has one vote.

The main mission of the IMO is to make maritime transport safer, more responsible, effective and sustainable. In concrete terms, the aim of the IMO is to draw up international standards in the field of maritime safety and security and in the field of environment protection. It also designs “flexible law” instruments and facilitates the implementation of conventions adopted for uniform and universal application. It is important to note that the IMO marginally deals with social law issues.

The IMO, organised into committees — including the MEPC which is currently working on the reduction of CO₂ emissions in maritime transport (see below) —, takes its decisions through the consensus of all party States and rarely resorts to voting, as the adoption of agreements and other texts by vote is not well perceived.

The major IMO conventions include:

- The International Convention for the Safety of Life at Sea, 1974 , as amended (SOLAS 74)¹⁰;
- the International Convention for the Prevention of Pollution from Ships, 1973, and the 1978 and 1997 Protocols relating thereto (MARPOL);
- The International STCW Convention of 1978 on standards of training, certification and watchkeeping for seafarers, including Amendments of 1995 and the Manilla Amendments of 2010.

These three conventions apply to 99% of international maritime transports in terms of tonnage.

The IMO is a standards-setting organisation but it does not have enforcement powers and has no means to do so. Only States having signed up to IMO conventions can enforce these international standards.

2. The state of operating forces

The IMO brings together states with necessarily divergent interests. The 10 States wielding most weight during negotiations within the Organisation are either flag States with a large fleet (UK, China, Japan) or members such as Singapore, Malta, Panama, Liberia, Hong Kong, Marshall Islands or the Philippines engaged in free registration of ships, better known under the term “flag of convenience” (see terminology appendix).

¹⁰ The very first version of the Solas Convention was adopted in 1914 in response to the sinking of the Titanic.

The United States and Member States of the EU such as Germany, Denmark, Greece and France but also the Russian Federation, Norway and the Republic of Korea are also considered as influential.

More specifically regarding environmental issues, within this very heterogeneous group with very different ambitions, the state of the forces present practically identically reproduces that of the Paris Climate Conference (COP21):

- the EU is clearly the most active and committed in this sense, with France acting as a driving force;
- the so-called "G77" group with Brazil in the front line calling for respect for the principles of "joint but differentiated responsibility" and "respective capabilities", a position already upheld during the COP21;
- small island States, very sensitive and responsive to the issues of the fight against climate change and in favour of progress in this field;
- China which now shows determination on environmental issues;
- the United States, whose position with the new Trump administration, generates uncertainties and whose commitment should in all likelihood be questioned.

An example of the weight of party States according to their tonnage: the "tacit acceptance" procedure.

To avoid a stalemate in the general negotiation of complex conventions, the IMO has opted to work by amending texts. This so-called "tacit acceptance" amendment procedure reveals the weight of member States within the Organisation according to the tonnage of their fleet on the global level and also aims to speed up the adoption of conventions. It was namely implemented for the revision of the Solas Convention in 1974 as, until then, amendments only came into force after their acceptance by a percentage of contracting States, usually by two-thirds. With this "tacit acceptance" procedure, an amendment is adopted "unless the amendment is objected to by more than one third of Contracting Governments, or Contracting Governments owning not less than 50 per cent of the world's gross merchant tonnage^(A)".

(A) see Website of the International Maritime Organization, "Amendments":
<http://www.imo.org/fr/About/Conventions/Pages/Home.aspx>

The interests of professionals in the maritime sector are strongly represented and weigh on negotiations. The most powerful include:

- the World Shipping Council;
- the International Chamber of Shipping;

- the Baltic and International Maritime Council, the largest international maritime association;
- the Cruise Lines International Association.

To counter them, unions or environmental NGOs do not have the same level of resources and have less impact.

3. The Convention on ballast water

In maritime transport, "ballast" refers to large tanks usually located in ships' double hulls (for the most recent) which hold large quantities of water, "ballast water"; they play a stabilising role to balance the ship or correct its trim in the event of listing or rolling of cargo. They also ensure that the ship is sufficiently sunk into the water for efficient operation of the propeller. Deballasting of these tanks raises environmental problems by dispersing certain living species in part of the globe's waters and discharging them into another, which can become invasive and destroy the discharge area¹¹. The development of maritime transport and the growth of the volume of traffic during the past decades has increased the probability of invasive species being discharged. Another consequence linked to this phenomenon is the introduction of diseases affecting marine species, especially oysters, which can cause pathologies when eaten.

International level

The international convention for the control and management of ballast water and sediments of ships (also called the "BWM Convention") was adopted by the IMO in February 2004. This convention provides that, in an initial phase, ships must exchange more than 95% of their water out at sea. In a second phase, the ships must be fitted with a ballast water treatment system.

The Convention will not take effect until 8 September 2017, i.e. 12 months after ratification by 30 Member States of the IMO, which should represent 35% of the global fleet of merchant ships. The paradox of this Convention is that barely ratified, it will probably need to be changed. The whole maritime community (States and professional associations) is convinced of the urgent need to modify its content to make it really enforceable and fully effective from an environmental point of view¹².

¹¹ http://www.armateursdefrance.org/uploads/decryption_document21.pdf

¹² For several years, the IMO, following a long test process, has approved a large number of ballast water treatment systems. Unfortunately, it appeared that test protocols could not guarantee operation compliant with regulations, in all conditions. In this context, a shipowner having fitted an approved system and used it in compliance with the manufacturer's recommendations, may nevertheless be penalised during an inspection by the Port state. Aware of these difficulties, the IMO has undertaken work to modify the approval rules covering these systems, which are not yet finalised.

European level

For the first time, Directive no. 2000/59/EC introduces provisions concerning port reception facilities for ships' operating waste and cargo residues. Regulation (EU) no. 2013/1257 bearing on the recycling of ships and modifying regulation (EC) no. 1013/2006 and directive 2009/16/EC puts into application the provisions of the International Convention of 2004 on ballast water management on the European level. Its provisions are therefore applied to all Member States of the EU. However, only a dozen or so European countries ratified the 2004 International Convention.

National level

Article L218-83 of the Environment Code provides that ships entering French territorial or domestic waters are required, if they come from a zone outside the international short sea shipping area or a zone specifically designated by the competent authority, to:

- produce ship's logs that they have exchanged more than 95% of their ballast water in international waters or have biologically neutralised ballast waters and product sediments produced using on-board equipment approved by the relevant administrative authority in terms of its technical and environmental efficiency;
- certify that the ship's characteristics and conditions of the stopover shall not lead to "deballasting" inside French territorial or domestic waters.

France was one of the first countries to have ratified the 2004 International Convention and is making progress in the treatment of ballast waters. However, these are mainly local initiatives, which is also the case elsewhere in Europe. Ports are not often equipped to discharge ballast water in installations provided for that purpose.

4. The Convention on bunker oil

The international convention on civil liability for damage caused by bunker oil pollution was adopted on 23 March 2001 by the IMO with the aim of guaranteeing suitable, rapid and effective compensation to victims of damages due to fuel discharges. It took effect on 21 November 2008.

This Convention fills a significant gap in the international regulation of marine pollution liability. It makes for improved victim protection, in keeping with the 1982 Montego Bay Convention on the Law of the Sea. The Bunker convention states that the shipowner, with some exceptions, is liable for any pollution damage caused by bunker oil.

The provisions include the obligation for the shipowner with a gross tonnage greater than 1,000 registered in a signatory State, to take out insurance or other financial security to cover its liability for pollution. The EU council authorised Member States to ratify this convention in 2002.

B. The International Oil Pollution Compensation Funds (IOPC)

The IOPC funds are mandated to pay compensation to victims in the case of claims exceeding the level of compensation paid by the owner of the ship involved in the incident. These funds result from the provisions of three aforementioned conventions and have a separate status from the IMO. The cap on these funds was raised to respond to major pollution: since 1st November 2003, it amounts to 203 million in special drawing rights (SDRs) i.e. 250 million euros. A supplementary fund to substantially increase this cap to 750 million of SDRs i.e. almost 920 million euros, has also been implemented. The protocol establishing this supplementary fund, ratified by France, came into force on 3 March 2005.

C. The International Labor Organization (ILO) and the 2006 Maritime Labour Convention

Since its inception, the ILO has adopted international standards for seafarers. In 2006, the 94th maritime session of the International Labour Conference adopted the Maritime Labour Convention, MLC 2006). This Convention brings together practically all standards bearing on seafarers adopted until that point by the ILO, in one single text. Enforceable as of 20 August 2013, it establishes a minimum base which nevertheless protects standards of seafarers' living and working conditions. 81 States have ratified the Convention and it should be noted that:

- as previously mentioned, the ETF, European Transport Workers' Federation, and the ECSA, European Community Shipowners' Association, reached a sectoral agreement allowing the transposition of this Convention into European Law as of 2009 (Directive 2009/13);
- the United States, as is the case for most ILO conventions, have not ratified this text;
- in contrast, countries known for their activities as flags of convenience such as Singapore, Panama, Liberia, Hong Kong, Marshall Islands and the Philippines, have ratified it. This raises the question of the effective implementation of the Convention and the controls to be applied.

The ILO has also had another fundamental standard for seafarers adopted: the revised Convention of 2003 (no. 185) on the identification of seafarers, which proposes a new identity document for seafarers designed to increase maritime security while facilitating permissions ashore and professional travel of sailors.

D. International initiatives

1. Memorandums of Understanding (MOUs)

To effectively respond to the lack of control by certain flag States over their ships, in particular by flags of convenience, the role of the port State has gradually emerged with the ratification of the Montego Bay Convention of 1982 on the law of the sea. In particular, Memorandums of Understanding (MOUs), firstly in Paris, created legal inroads on the control of ships by the port State.

The Memorandum of Understanding of Paris on Port State Control, more commonly known as the Paris Memorandum, is an international agreement signed in 1982 between 14 maritime nations which now comprises 27.

All the maritime Member States of the EU¹³ as well as Canada, Russia, Iceland and Norway are parties to this MOU. Moreover, the control system of the EU by the port State, which relies on the pre-existing structure of the MOU, is defined in directive 2009/16/EC (as modified) which refounds and reinforces previous EU legislation in this field, applicable since 1995¹⁴.

The Memorandum is not designed to set standards (it produces no laws or regulations). Through coordinated and consistent monitoring of compliance with international conventions enacted by the IMO or the ILO, it should uphold three objectives:

- safety of life at sea;
- the prevention of marine pollution by ships (accidents, waste at sea, oil spills, etc.);
- respect of living and working conditions of seafarers on board ships.

Its field of competence is limited to the inspection of foreign ships calling at the ports of signatory countries.

It provides for inspections to check that ships comply with the provisions of various international conventions applicable in the maritime field.

Supported by the Commission and the operational expertise of the EMSA, the Paris Memorandum offers various tools, including the Thétis database which records all the data of controls and allows inspectors of the port State to quantify the risk of the various ships coming into port as well as the level of performance of

¹³ The EU is not a party as such but the following countries are party to the Paris Memorandum: France, Germany, Belgium, Bulgaria, Cyprus, Croatia, Denmark, Spain, Estonia, Finland, Greece, Ireland, Italy, Latvia, Lithuania, Malta, Netherlands, Poland, Portugal, Romania, United Kingdom, Slovenia and Sweden

¹⁴ As part of the third legislative Package on maritime safety, directive 95/21/EC of 19 June 1995 was repealed by the amending directive of 23 April 2009 to guarantee more effective and more frequent inspections through new supervision mechanisms depending on the risk profile. The European Commission, following the wrecks of the *Erica* oil tanker in 1999 and of the *Prestige* oil tanker in 2002, set up the EMSA, dedicated to maritime safety and entrusted it with some of the control of ships in the ports of EU countries (see Part I.).

classification companies and flags, through online calculators featured on the Memorandum's website.

The Paris Memorandum committee also produces a certain number of reports that are used to assess the number of controls, detentions, shortcomings per ship, company, flag and classification company. It also annually publishes white, grey and black lists of flags in connection with inspections in European waters.

The Paris Memorandum accompanied the creation of equivalent agreements elsewhere in the world:

- the Tokyo Memorandum (Asia Pacific);
- the Indian Ocean MOU;
- the Mediterranean Memorandum;
- the Acuerdo de Viña del Mar (Latin America);
- the Caribbean Memorandum;
- the Abidjan MOU;
- the Black Sea MOU;
- the Riyadh MOU.

The two most important besides Paris are Tokyo and Viña del Mar.

The Paris Memorandum proceeds each year with 3-month reinforced inspection campaigns in areas where a high number of failures has been observed. These campaigns are combined with normal inspections and can be rolled out at the same time as other memorandums of understanding, especially Tokyo which is closely connected with the Paris Memorandum.

2. The control of greenhouse-gas (GHG) emissions

Total emissions of carbon dioxide (CO_2) linked to European maritime transport activities have been estimated at around 180 million tonnes for 2010. This figure is expected to rise in view of the expansion of demand for maritime transport. The European Commission, in a 2013 report, estimates that these emissions could reach 223 million tonnes of CO_2 in 2030. At the same time, according to the IMO, there are several operational and technical measures that would significantly reduce energy consumption and CO_2 emissions in this sector compared to these forecasts. However, a general transition policy is necessary. Insofar as fossil fuels will remain dominant, improvements in efficiency, which remain important, will not be sufficient to reverse the sector's emissions curve¹⁵.

¹⁵ Third IMO GHG study 2014.

European level

Before considering any legislative initiatives in terms of cutting CO₂ emissions of maritime transport, the European Commission through regulation no. 757 of 29 April 2015, has provided for a Monitoring, Reporting and Verification, (MRV) system. It has the following characteristics:

- it creates a legal framework at the EU level to collect and publish verified annual data relating to CO₂ emissions of all large ships (with more than 5,000 gross tonnage) calling at EU ports, regardless of where they are registered. Only a few ships such as warships, naval auxiliaries and a certain number of very specialised vessels are exempted;
- shipowners will be required to monitor and report the verified quantities of CO₂ discharged by their ships on an annual basis. They will also need to supply certain other information such as data to determine the energy efficiency of ships;
- a compliance document issued by an independent inspector must be kept on board ships and checked by inspections conducted by the authorities of Member States.

The implementation schedule is as follows: on 30 August 2017, shipowners submit to an approved inspector the monitoring procedures and methods for each ship; then from 1st January 2018, steering and collection of emission data transmitted to the approved inspector; from 2019, transmission to the Commission of a detailed annual report for each ship, but also presence on board of the ship of a compliance document issued by the approved inspector.

The European Commission considers that this MRV system is a prerequisite for holding discussions in Europe and on the international level on reduction objectives applicable to the sector.

International level

Parallel to the strategy of the European Commission, the implementation of an MRV system is under discussion within the IMO. In April 2015, the MEPC agreed to force ships to register and communicate data on their fuel consumption. The 70th session of the MEPC in October 2016, approved a roadmap for the elaboration of a general IMO strategy on the reduction of GHG emissions generated by ships. This roadmap also targets the adoption of an initial strategy to reduce GHG emissions in 2018. It also takes into account the process aiming to improve the energy efficiency of ships, the first stage of which concerns the collection of data on fuel consumption. This alignment paves the way to the adoption of a revised strategy in 2023 comprising other short-, medium- and long-term measures and implementation schedules.

Opinion

Differences between two systems

Despite these similarities, both approaches diverge:

- the European system collects more data and these data are public whereas on the global level, data are anonymous. Moreover, the IMO produces an annual report on the basis of these data;
- the MRV system of the IMO will come into force in March 2018 and data collected as of 2019. On the contrary, the European system should start in January 2018.

In its presentation 10) of Regulation 2015/757, the Commission considers that “public access to the emissions data will contribute to removing market barriers that prevent the uptake of many cost-negative measures which would reduce GHG emissions from maritime transport”. This does not seem to be the direction taken by the IMO.

The Commission has however provided a clause that specifies that the European MRV system must align with the global system. There will be discussions within the European parliament and the Council so that the EU may give its opinion on the solidity of the global system, while avoiding the overlaying of the two systems. The European Commission considers that to keep a level playing field, (i.e. the same restrictive — and sometimes costly — rules for shipowners applicable to all), it would be preferable to have a data collection system organised on the international level.

3. Emissions Control Areas, ECA

ECAs are maritime areas where strict controls of merchant ships have been established by the IMO to minimise emissions of air pollutants:

- sulphur oxides (SOx) with Sulphur Emissions Control Areas (SECA). Sulphur oxides are respiratory irritants and also the main cause of the acidification of the oceans;
- nitrogen oxides (NOx) with Nitrogen Emissions Control Areas (NECA). NOx are both harmful to health (lung disease) and to the environment (acid rain and eutrophication of water systems).

Within the ECA, on-board incineration and emissions of volatile organic compounds (fine particles) by ships are also controlled. According to the third IMO survey¹⁶, over the period 2007-2012, maritime transport generated 20.9 million tonnes of NOx and 11.3 million tonnes of SOx per year on average. NOxs and SOxs play an indirect role in the formation of tropospheric ozone and indirect warming of aerosols on the regional level.

¹⁶ See the IMO website: <http://www.imo.org/fr/OurWork/Environment/PollutionPrevention/AirPollution/Pages/Greenhouse-Gas-Studies-2014.aspx>

Global level

Adopted in 1997, Appendix VI "Prevention of Air Pollution from Ships" of the Marpol convention that entered into force in 2005, lays down the rules of the first emission control areas undergoing stricter controls for SOx and NOx emissions. Appendix VI of the Marpol Convention was revised in July 2010 and introduced even more stringent emission limits.

Since 2011, four ECAs exist around the world:

- the Baltic Sea and North Sea areas for sulphur emissions;
- the areas of North America (covering the areas off the coast of the United States and Canada) and Caribbean maritime area of the United States (surrounding Puerto Rico and the American Virgin Islands) for SOx and NOx emissions and particles.

Since 1st January 2015, the sulphur rate tolerated for fuel in ships in ECAs fell to 0.1% compared to 1% previously. The 0.1% limit only concerned ships staying for more than two hours in EU ports¹⁷.

Table 1 Evolution of the limits of sulphur for marine fuel on the IMO and EU level¹⁸

Initial IMO limit	4.5%
General IMO level, 1 st January 2012	3.5%
Initial ECA limit	1.5%
EU limit for passenger ships outside ECA	1.5%
ECA IMO limit 1 st July 2010	1%
General IMO level for 2020	0.5%
EU limit outside ECA, for 2020	0.5%
ECA IMO limit 1 st January 2015	0.1%
EU limit for ships at dock, 1 st January 2010	0.1%
EU limit for road fuel	0.001%

European level

In application of the "sulphur" directive (directive 2012/33), ships' sulphur emissions are limited to 0.1% in a maritime zone covering Northern Europe from the English Channel to the Baltic Sea. To comply with this new European regulation, shipping companies have faced additional costs (new fuel, filters) between 2.6 and

¹⁷ See Directive 2012/33 article 4 c.

¹⁸ Source: <https://www.cma-cgm.fr/ebusiness/tarifs/reglementation-soufre>.

11 billion euros¹⁹. In addition, the only fuel with a sulphur content that does not exceed 0.1% is a marine diesel, which is more expensive than a low sulphur heavy fuel containing 1%.

The impact of this directive remains limited as in other areas, including the Mediterranean, the rates are rarely or not at all regulated and can reach 4%. By 2020, sulphur emissions should be limited worldwide to 0.5% compliant to ongoing negotiations at the IMO. These works are not supported by developing countries which widely use sea freight to transport raw materials that fuel their growth. They are therefore attempting to push back the deadline to 2025²⁰.

The SECA covering the English Channel, the North Sea and the Baltic, has every chance of also becoming the NECA. A request was filed at the 70th MEPC of the IMO, during which it was also decided to generalise the maximum threshold of 0.5% of sulphur outside SECA zones. Until that point, only the special American emission area had been both SECA and NECA. Contrary to sulphur which has limits imposed on existing ships, the thresholds scheduled in a NECA only apply to new ships. But the application spectrum is much broader as NOx is also produced by diesel engines, including working vessels such as tugs, fishing boats or yachts. Thresholds of emissions to which motorists are subjected are called Tier II in non-regulated areas and Tier III in a NECA. To date, unless alternative fuel is used, the Tier III standard is only immediately accessible after reinforcement of post-treatment of exhaust fumes such as a selective catalytic system using a urea solution. If adopted in 2017, the European NECA would apply to ships after 1st January 2021, i.e. five years after the United States which have applied it since 1st January 2016.

France in particular would like to set up a SECA/NECA in the Western Mediterranean, a proposal debated at the Mediterranean Conference on 23 February 2017.

III. THE MAIN ISSUES IN TERMS OF SUSTAINABLE DEVELOPMENT

A. The redistribution of the European transport network to uphold the principle of social cohesion

The 2009/2018 European maritime transport strategy defined the objective of completing the single market and developing short sea shipping by creating a European maritime transport area without borders. This maritime area would facilitate the development of motorways of the sea and also intermodality and interconnection with the hinterland while creating a more competitive transport sector, respectful of

¹⁹ "Les nouvelles règles sur les carburants maritimes pourraient coûter des milliards d'euros", 21 August 2012, euractiv.fr website: <http://www.euractiv.fr/section/transport/news/les-nouvelles-regles-sur-les-carburants-maritimes-pourraient-couter-des-milliards-d-euros/>

²⁰ Aline Robert, "La directive soufre bouleverse le fret maritime en Europe du Nord", Friday 6 March 2015, euractiv.fr website: <http://www.euractiv.fr/section/developpement-durable/news/la-directive-soufre-bouleverse-le-fret-maritime-en-europe-du-nord/>

international commitments on sustainable development. However, from this point of view, the strategy, which is expressed in concrete terms by maritime routes of the trans-European transport network (TEN-T), is a failure. As the map below highlights, the TEN-T project, supported by a budget of 26.250 billion euros for the period covering 2014 to 2020, and which should be completed in 2030, is concentrated on the economic heart of Europe. It covers some major European routes — mainly road — and takes the form of an incomplete territorial mesh, without a sufficiently strong strategy to interweave transport means or support modal shift and above all does not comply with the principle of territorial cohesion supposed to be guaranteed by the TFEU.

1. The Trans-European Transport Network TEN-T, see computer graphics)

The TEN-T is an EU development programme for transport infrastructure, decided by the European Parliament and the Council. It is part of the common transport policy. It aims to facilitate the development of exchanges by complete interoperability of the various existing networks and allow the creation of a genuine single market, an increase in the proportion of green transport means and speeding up of the territorial integration of "new" member countries of the Union.

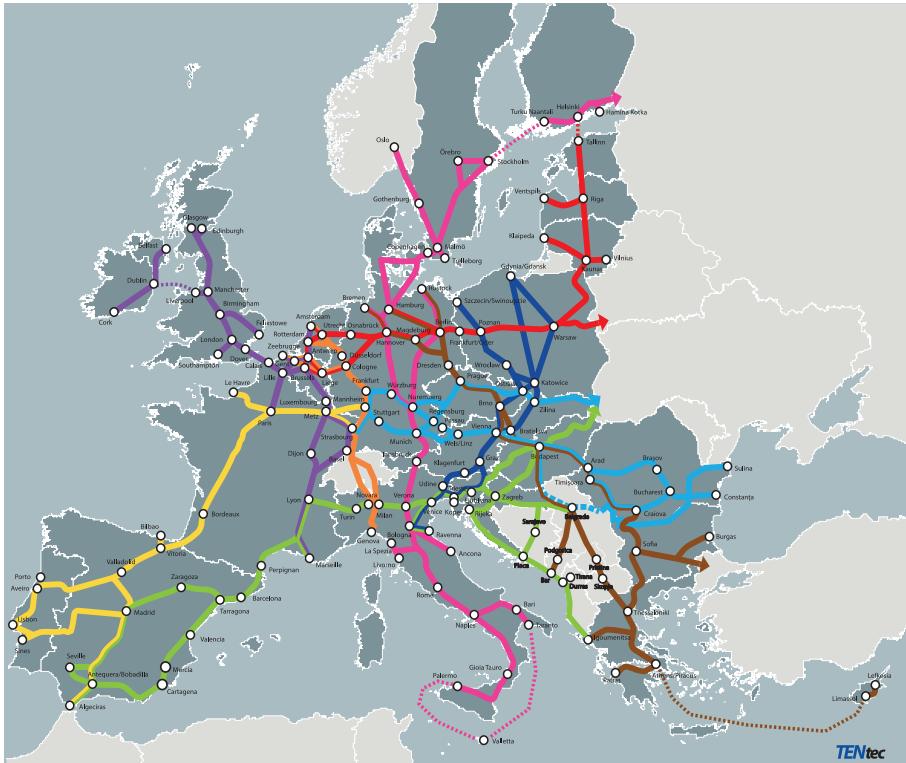
The initial orientations of the programme were adopted in 1996 then revised several times with, in June 2001, the European Commission's White Paper called "the European transport policy for 2010/time to decide", which highlights the concept of motorways of the sea. In April 2014, a list of 30 priority projects was drawn up, representing an overall investment of 225 billion euros by 2020. They can receive up to 20% European funding.

For the deployment of motorways of the sea, a maritime component of the TEN-T, the EU has a two-pronged approach: firstly with the improvement of existing maritime links and the creation of new routes, then relevant port infrastructure is improved to facilitate access to services (creation of new docks to increase reception capacity, creation of a dedicated terminal, etc.).

TEN-T projects are generated by the executive agency of the Trans-European transport network (TEN-TEA) created for this purpose by the European Commission in October 2006.

In the European maritime transport strategy 2009/2018, the determination to continue development of the motorway of the sea network has been reasserted.

Computer graphics The Trans-European Transport Network



2. The Connecting Europe Facility (CEF), a financial instrument supporting European transport policy

The Connecting Europe Facility (CEF) has a legal basis: Regulation (EU) no. 1316 of 11 December 2013. It aims to create EU funding to speed up investment in transport, telecommunications, energy infrastructure projects to stimulate economic growth. In the field of transport, nine central corridors have been defined and receive CEF priority funding: Baltic/Adriatic; North Sea/Baltic; Mediterranean; Eastern Europe / Eastern Mediterranean; Scandinavia – Mediterranean; Rhine/ Alps; Atlantic; North Sea/ Mediterranean; Rhine/Danube.

The multi-annual budget for 2014-2020 of the CEF amounts to 33.2 billion euros. Of this sum, 26.2 billion euros are dedicated to the transport sector, almost 1 million euros to telecommunications and almost 6 billion euros to energy²¹. Of these 26 billion euros, 11.3 billion euros are dedicated to projects in countries eligible for the Cohesion Fund. The subsidy rate for work in ports is now uniform and amounts to 20%.

²¹ See European Commission, http://eur-lex.europa.eu/summary/FR/URISERV:3207_2

In comparison, the rate is 40% for cross-border rail projects. Considering that ports are inherently cross-border infrastructures, one can raise the issue of why the rate for port works is not aligned on that of rail infrastructure and therefore on the 40% rate.

An assessment report of the CEF shall be presented to the European Parliament and Member States of the EU by 31 December 2017 at the latest.

3. Motorways of the sea, an unfinished programme designed to promote modal shift and intermodality in Europe

Intermodality and modal shift are “combined transport” solutions that will be used to transport goods on a route by taking at least two transport modes without changing vehicle or loading unit (trailer or container). Initial and/or terminal journeys are made by road, main journeys by rail, river or sea (short sea shipping). More specifically, intermodality refers to all transport solutions offering an alternative to the “all-road” solution: rail freight, road and maritime transport. The aim is to favour all types of freight transport that can replace roads. With the motorways of the sea, a project that emerged in 2001, the EU wanted to support modal shift (replacing road by sea) but also intermodality (facilitate the use of several means of transport for the same journey) which involves reinforcing interconnections between road and port infrastructure. The EU has significant advantages for developing maritime transport as an alternative to road transport with 23 Member States having access to seaforts.

It should also be pointed out that the main objective of modal shift towards maritime is to decongest road traffic; roads are the dominant transport means in the EU, with 44%²²; this concentration causes considerable congestion on certain sections of European roads, with about 10% of the European network saturated every day.

The environmental impact argument, lower for maritime per tonne of transported goods with around 15.45 g of CO₂/t.km as opposed to 98.301 g/t/km for road transport²³, needs to be put into perspective. GHG emissions and atmospheric pollutants of maritime transport are not negligible. Contrary to road transport emissions included in the Paris Agreement, the trajectory of maritime transport emissions is increasing given the absence of determined measures to reduce them.

Support of modal shift in favour of maritime transport took the form of the European Marco Polo I programme (2003-2006, budget 115 million euros) followed by Marco Polo II (2007-2013, budget worth 450 million euros). Although the main objective was environmental (reduction of emissions caused by automotive transport), this policy also aimed to promote competitive alternative solutions to road transport by reducing it on major saturated roads and improving communications with European peripheral regions and thus improving the transport network.

²² Road transport represents around 43.9% (tonnes/km), short sea shipping; 37.6%, rail transport 10.9% and transport by inland waterways; 3.8% (Source: European Commission, 2012).

²³ Gram per tonne transported per kilometre. Source: European Commission, 1999.

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Finally, the search for efficiency from one end of the transport chain to the other is one of the characteristics of the motorway of the sea concept. The idea is to propose a frequent, regular, fast and reliable service between two ports at an attractive price compared to its road equivalent. Motorways of the sea are mainly dedicated to international freight transport within the EU and neighbouring States.

In early 2017, 86% of the total budget of the CEF for the period 2014-2020 had already been committed and 95% of these sums dedicated to nine major European corridors in four regions, mentioned above. In fact, there are grey areas outside corridors, like the Atlantic seaboard and the Western Mediterranean as well as peripheries that are not integrated. The motorways of the sea project, designed as a means of decongesting road networks, is a failure insofar as it has reinforced maritime routes already used and has not developed new ones. This is particularly the case in France. In addition, the project does not include a complete overview of the logistics chain taking into account high volume goods processing centres in the major hinterland of ports and therefore economic and employment areas at each end of the maritime link. This development model implies strong and anticipated intermodality and the development of the "unaccompanied" container, i.e. the unaccompanied, unmanned container which may use any means of transport, indifferently. The "unaccompanied" culture is well developed in Northern Europe but not in Southern Europe where road crews prevail.

The revision of the TEN-T, and therefore of motorways of the sea, and its detailed implementation plan (DIP)²⁴, is scheduled for 2023.

4. The recommendations: Reviewing the redistribution of the TEN-T for 2023 to guarantee territorial cohesion in Europe.

For the ESEC, it is essential that the next revision of the TEN-T scheduled for 2023 includes the need to open up peripheral regions. In France, West-East connections and the Atlantic seaboard are excluded from the current outline. In general, this tool must be diversified to become a territorial cohesion instrument within the EU and not a tool that validates and funds existing and already sustainable routes.

In parallel, this involves budgetary redeployment with a complete review of criteria for the allocation of CEF funds, and therefore projects ultimately selected by the Commission. Consequently it is the responsibility of the Member States to submit projects, and that of the Commission which selects them according to initial programme objectives (modernisation of the European transport network, decongestion of road networks, integration of Central and Eastern European and Baltic Countries).

²⁴ see <https://ec.europa.eu/inea/sites/inea/files/motorways-of-the-sea-dip-june-2016.pdf>

The revision of the CEF, planned for 2020, must be the opportunity to take stock of progress made and set new priorities.

Our Assembly believes that a new programme of European aid in favour of maritime transport, replacing the Marco Polo programme stopped in 2013, should be set up. The approach would consist in introducing European aids on environmental criteria to support the request, i.e. granted to the shipper — so that it will use maritime transport instead of road transport — and not the offer, which consisted, as part of Marco Polo, in helping shipowners. It would also be useful to think about the economic model of permanent maritime routes with precise ports of call and very regular rotations, to guarantee a minimum hold on the outbound and return journey, certainly thanks to "unaccompanied" containers.

It is also essential to review other existing financial instruments such as the "eurovignette" which apply to road transport and are not restrictive enough in terms of "signposting" revenues. They are not allocated to the funding of modal shift as should be the case. It is therefore necessary to review the "eurovignette directive"²⁵. It also seems relevant for Member States to find inspiration in the Italian model. With the introduction of the Mare Bonus tax, the Italian authorities set up a financial instrument to support the modal shift in favour of maritime transport. However, France sent out a particularly negative signal by abandoning the ecotax in 2014.

The ESEC believes that it is necessary for the EU to financially support projects linked to modal shift in favour of the maritime sector, like the agreement signed in November 2016 between the EIB and Société Générale to fund sustainable maritime transport projects²⁶. The Junker fund and the EIB need to intervene to facilitate private investment. To do so, the EU must promote development, particularly in southern countries, of "unaccompanied" containers alone, making the modal shift towards maritime simpler and more effective.

Finally, as for all rail infrastructure, the rate of subsidies for works in ports could be raised from 20 to 40%.

For the ESEC, the EU must be able to use commercial defence instruments to combat unfair practices of third countries which distort competition at the global level.

²⁵ <http://eur-lex.europa.eu/legal-content/FR/TXT/HTML/?uri=URISERV:l24045b&from=FR>.

²⁶ "Fully in line with the objectives of the COP22, Ambroise Fayolle, vice-president of the European Investment Bank (EIB), and Frédéric Surdon, global head of asset finance at Société Générale CIB today [8 November 2016] signed a framework agreement guaranteeing a total sum of 150 million euros to support shipbuilding projects promoting sustainable transport and environmental protection...", EIB blog, www.eib.org.

B. The guarantee of a high level of qualification and training of seafarers in the EU and the fight against social dumping

1. Progress report

As previously explained, the European maritime transport strategy relies on the opening of markets within a framework of fair competition and high social and environmental standards, accompanied by economic growth in the sector. Despite the crisis, its weight remains high: 1% of European GDP with 145 billion euros; 640,000 direct jobs of which 220,000 are European sailors; two out of the three leading shipowners in the world are European (Maersk, CMA-CGM) and of the 90% of goods transported by sea worldwide, 70% are in the EU. And yet this rather good economic health of the sector is not expressed on the job market and, since 2009, the number of European sailors has constantly fallen, whereas living and working conditions of seafarers, despite progress previously mentioned in terms of European Law, have not significantly improved.

On the social level, it is mainly the Maritime Labour Convention of the ILO of 2006 (MLC 2006) that lays down the rules on the international level. It completes the normative base that the IMO adopted in maritime safety with SOLAS conventions on the safety of life at sea, STCW on maritime training and MARPOL on the prevention of marine pollution. The MLC has been transposed in European Law, namely by directive 2009/13/EC and came into application on 20 August 2013. It establishes a minimal base of standards which opens the way to better protection of seafarers in terms of living and working conditions, fair employment and social protection (social security, pensions, etc.).

A steadily falling job market

Despite this protective framework, competition between all the States and stakeholders in the sectors is global but also intra-community, at the expense of the social dimension. For the Commission, the solution firstly lies in better training and qualification of EU seafarers, training them systematically in the issues of sustainable development and technological innovation. Today, seafarers need to adapt to automation and to the growing complexity of tasks and the EU can reclaim a certain leadership in this area which is a major issue.

However, the level of qualification of seafarers does not guarantee that they will find jobs in European fleets. Moreover, the current maritime transport policy, based on strong competition and non-harmonised regulations, favours the lowest bidders, in particular on the social level. We should bear in mind that 40% of the world's fleet belongs to European shipowners. However, they employ only 40% of EU nationals and mainly resort to cheap labour from third countries, including ships flying the flag of Member States of the EU.

The job market in the European maritime sector is also characterised by the ageing of seafarers, the increase in the number of sailors from third countries and the low percentage of women in crews. Although equality is generally guaranteed in terms of wages and advancement for women seafarers, their presence in maritime careers remains marginal, except in Sweden, Finland and Denmark, countries that provide a positive work environment.

As far as training is concerned, we should note that in France the situation is contrasted with an internationally-recognised Ecole Nationale Supérieure Maritime, open to digital technologies and the latest innovations, but whose teaching is also flawed (use of less qualified temporary teachers, insufficient English teaching), mainly through lack of resources.

Finally, the Member States of the EU are attached to the notion of a "strategic fleet" which consists in guaranteeing a minimal number of ships and sailors working under the national flag in different maritime sectors to ensure sufficient critical mass for its sustainability and which therefore requires that the EU has a sufficient number of qualified sailors.

The issue consists in finding the right balance between necessary competitiveness and the need to create more qualified or very qualified jobs for European seafarers. There are several levers but a determined training policy is required and above all measures to encourage job creation in the maritime sector, as the appeal of the profession is not only to blame.

Strong intra-community competition

Short sea shipping links are highly internationalised. Within the EU, this results in a growing reduction of EU-registered ships, a permanent reduction in the number of jobs and a decline in the level of skills.

For intra-European transport, it is important to at least ensure equal treatment of maritime workers. The activities generating the most jobs like regular passenger services and ferry transport (crews of 300 people on a ferry as opposed to 20 on the largest container ships), must be protected as they are also exposed to competition from stakeholders using cheaper labour. These protective measures imply reviewing the systematic opening of all maritime services to all stakeholders regardless of their flag, without demanding the creation of jobs in the EU in exchange, regardless of the type of maritime link (national service, between Member States, permanent maritime links, etc.).

Moreover, some maritime service activities (service ships in the first instance) are a major issue in terms of development and expertise for European stakeholders requiring very high qualifications and skills. It is a high value-added issue for Europe, with strongly developing sectors such as renewable marine energies which could upgrade the whole sector.

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Insufficiently and unequally applied body of law

The EU has implemented a regulatory framework that covers a large proportion of the MLC 2006, in particular through directive 2009/13/EC, but it is a minimal base of social standards. Some States like France have gone much further to bring it into line with their own national legislation. Furthermore, not all of the MLC has been transposed in European law. Some major provisions such as recruitment and placement, wages, work force, social security (medical insurance, pensions, etc.) have no common application framework on the European level or are partially covered by other directives. Finally, the level of application and implementation varies from one country to another. This lack of harmonisation is expressed by social dumping observed on the European and international levels. Some States have established the legal obligation of a minimum crew threshold required for the fleet²⁷ under the national flag but this legislation does not exist in all European states.

To remedy this and reinforce working conditions for international maritime traffic, it is necessary to raise the standard to the European level. This will firstly require a state-of-play of the application of directive 2009/13/EC by the Member States, by continuing work with the unions but also a toughening of controls entrusted to a sufficiently sized body of well-trained inspectors.

Working conditions that do not comply with safety criteria and patchy controls

As mentioned above, the maritime sector has evolved according to the accidents and disasters it has endured. Today, the international body of rules concerning safety and environment protection is very broad and covers most situations. But the social pillar is still not the priority. However, it is accepted that most accidents are caused by human failure. It is reasonable to assume that the race to cut maritime transport costs incurs a reduction of the size of crews on ships, a work overload for each member, namely for officers of the watch, greater fatigue for sailors, especially if they embark for several months, and, therefore, a diminished ability to react to hazards.

Rules, in terms of resting and working time and on the work force issue, enacted by the IMO and the ILO in favour of seafarers, are complex and sometimes difficult to implement. Security issues (appropriate controls and procedures in ports, on goods, on ships, terrorist threats at sea) pose a new type of constraint and a new workload on crews. These constraints are not necessarily taken into account in the establishment of working and resting time of the work force. For inspectors, it remains difficult to detect and prove that infringements of the rules have been committed and that the crew is no longer in a fit state to ensure the ship's safety. On some ships, certified software allows each sailor to enter their working and resting hours each day. In practice, in the case of a sailor from Asia or a developing country, they will not take the risk of being removed from the ship if they declare too many hours on this software

²⁷ Like, for example, in France.

A survey conducted recently by France regarding working and resting conditions, on international short sea shippers and presented to working subgroups of the IMO in 2015, clearly shows that officers of the watch, of whom there are two on small boats, are required to work to non-stop and intensive operating and navigation plans. This situation leads to regular non-compliance of working time regulations.

It is urgent to provide concrete solutions to this state of affairs, put humans at the centre of concerns and develop a genuine sea safety culture.

2. Recommendations: Introduction of employment-friendly measures by promoting quality training and fighting *social dumping*

For the European Commission, 2017 is the year of maritime transport. A real political determination must emerge to reinforce the fight against social dumping and improve the situation of maritime employment in Europe. France is aware of this delay and is pushing forward an initiative to drive the European social agenda.

Precise and reliable training and employment statistics in the European maritime sector

The ESEC believes that it is imperative to feedback all information regarding training centres and qualifications, main outlets and difficulties encountered, State by State, but also quantify the employment market for each sector and type of activity by precisely identifying research and innovation centres. Without this information, it will be impossible to establish an adapted and consistent training and employment policy.

Promoting training

The ESEC proposes to develop a quality training policy in line with the future issues of innovation and sustainable development and create a European network of naval schools in conjunction with specialised universities and research centres.

Our Assembly is also in favour of adopting an "Erasmus Sea Programme".

Promoting an ambitious sea employment policy

The ESEC advocates increasing and improving the employment of seafarers who are EU nationals. This involves:

- facilitating investment in areas with high added-value in terms of jobs and skills;
- conditioning the granting of public aid on European shipowners complying with social and environmental criteria;

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- favouring employment of sailors under European conditions and guaranteeing fair working conditions. In this context, it is urgent to set up a base of common ambitious social provisions, as recommended by the ESEC in its opinion of December 2016 "The construction of a Europe of social rights" (Rapporteurs Mrs Emelyn Weber and Mr Etienne Caniard). The aim is to set up a barrier-free European area not only based on the facilitation of traffic and administrative simplification but also an area without social dumping with upgraded, harmonised social standards. The ESEC is in fact in favour of launching discussions on the notion of "community waters" i.e. a maritime area without borders within which common social rules would be applied.
- authorising, in the maritime service sector, State grants and certain arrangements that are considered to distort fair competition to fight social and fiscal dumping in countries outside the EU.

In general, it is essential that constraints applied on European shipowners and their vessels do not distort competition and cause the exodus of jobs outside the EU. That is why the ESEC believes that it is indispensable for the EU and Member States to debate the fight against social dumping and flags of convenience on the global level.

To fight social dumping and upgrade standards

The ESEC considers that it is necessary to:

- reinforce social employment conditions in maritime transport by implementing the provisions of the MLC 2006 not yet covered by European legislation (recruitment and placement, wages, workforce, social security including medical insurance and coverage of occupational accidents as well as the pension system). The aim here is to take stock of the application of directives 2009/13/EC, in association with Member States, then continue work with the unions;
- include seafarers in ongoing discussions to set up a European base of social rights;
- on the initiative of unions, implement the amendments of the MLC adopted in 2014 by the ILO in EU law (directive 2009/13/EC).

To guarantee working conditions

The ESEC recommends:

- reinforce resources, tools and controls on working and resting conditions on board by prioritising the issue of working and resting hours as well as assessing crews' level of fatigue;
- resuming work on the professional identity card for seafarers. Discussions are still ongoing on this. It would simplify visa applications and the inspection work of labour administrations;
- conducting a survey on well-being and health in the workplace of seafarers to improve their health coverage and pensions;

- making regulations evolve on the workforce of vessels in line with minimal resting times, taking into account the various criteria (size of vessel, type of activity, frequency of stopovers, etc.).

C. The dismantling of European ships: controlling and limiting the abuses observed

1. A widely relocated sector that violates human rights and respect for the environment

Between 1,000 and 1,300 merchant vessels are dismantled each year, two-thirds of which are European²⁸. Most dismantling sites are located in Southern Asia which comprises 95% of the deconstruction sector²⁹ mainly in India (80%), Pakistan and Bangladesh. With the delivery of new ships ordered before the 2008 crisis, maritime transport is experiencing an overcapacity crisis, which cuts prices, and shipowners are no longer able to make their ships profitable. This situation has concentrated shipping and the dismantling of the most inefficient vessels, even recent and still capable of transporting cargo for another 15 to 20 years, to recover the price of metal. In addition, the extension of the Panama Canal in June 2016 made some of the ships designed specifically to enter the narrow locks of the old canal obsolete and led to their dismantling. In 2006, the "average age" of container ships was around 28 years whereas in the second half of 2016, this average dropped to 20 years. In 2016, 27% of global tonnage was scrapped, a percentage that was double that of 2015. The relocation of dismantling sites for merchant ships in developing countries has consequences on the rights of workers and on environment protection.

In the category of deconstruction facilities for large steel vessels, only large State ships are dismantled in Europe. Other merchant vessels are dismantled in Asia. There are several sites in Europe representing many stakeholders and companies specialising in recycling. According to European shipowners, the cost differential between European and Asian sites is huge, around 6 to 7 million euros on average per vessel. Owing to standards and labour costs, the European cost is around 2 million euros whereas it pays 4 to 5 million euros to sell the ship in Asia. The steel used to make ships is not of good quality and this recycling is very limited in Europe whereas there is strong demand in Asia. To support development of a European steel hull dismantling sector, precise cost/benefit analysis integrating various externalities is needed.

²⁸ Unless otherwise indicated, the data presented in this section come from a survey by the London firm, Clarksons, the Robin des Bois association and the European Commission.

²⁹ Topp Decide company, December 2015.

Devastating effects on the sanitary and environmental levels

More than 70% of ships at the end of their life are simply stranded on the beaches of India, Pakistan and Bangladesh ("beaching" technique) without regard for minimum safety and environmental standards, causing many accidents with serious repercussions. Large areas of protected mangrove are destroyed to make room for ships that destroy the water ecosystem, reducing the livelihoods of local communities based on fishing. On the beaches of Southern Asia³⁰, seasonal workers, often without an official work contract, are employed on shipwrecks containing a multitude of toxic substances (asbestos; lead, polychlorinated biphenyls (PCBs, heavy metals, etc.) without benefiting from any protection. The European Commission believes that with the dismantling of ships from the EU, 40,000 to 1.3 million tonnes of toxic substances (including 3,000 asbestos tonnes) are exported every year to Southern Asia. This constant exposure to toxic substances and fumes is the cause of many diseases, including cancer. Other harmful substances³¹ have been found on sites and in workers' homes located in the vicinity. Average life expectancy of a worker in a recycling site in Southern Asia is estimated at 40 years.

Finally, the muddy sand and quicksand of tidal beaches cannot support lifting and safety equipment. Causes of death in shipyards in Southern Asia include explosions, fire, suffocation and accidents caused by extremely heavy steel beams and plates that cause fatal accidents.

A sector more often characterised by unacceptable labour conditions

Among the most shocking working conditions observed on Southern Asia dismantling sites, are deplorable living and working conditions (substandard housing, insufficient resting time, unacceptable health conditions with exposure to hazardous materials described above, lack of medical care, etc.) but also employment of children under 15 in Bangladesh (20% of the active population), paltry wages of less than 2 euros a day and the practically systematic use of seasonal labour. No contracts are signed on demolition sites, against the will of the workers. In event of an accident, when a ship is sold for demolition, the site becomes its owner and the shipowner is legally released of its liability. A worker involved in an accident will probably receive neither compensation nor refunding of medical expenses. Finally, unions are forbidden in shipyards in Bangladesh. In most cases, the maritime industry is not held responsible for violations of human rights and the pollution caused by ship deconstruction practices.

³⁰ Beaches of Alang in India or Chittagong in Bangladesh.

³¹ Asbestos dust, lead and organotins, like organic tributyltin (TBT), an extremely toxic form of tin used in anti-fouling paint, organic polychlorated compounds (PCBs), by-products of combustion such as polycyclic aromatic hydrocarbons (PAHs), dioxins and furans.

An insufficient response from the international community

The ILO described the dismantling of ships as "one of the most dangerous professions" in the world. In March 2004, during its 289th session, it unanimously voted on a set of criteria governing the elimination and recycling of ships³². These criteria recommend a national framework defining the responsibilities of employers and regulating authorities in countries hosting dismantling sites as well as general workers' rights in these sites. Furthermore, they include recommendations for safe ship demolition operations including the management of hazardous substances, protective and prevention measures for workers against dangers and suggestions for a training programme focusing on skills.

In parallel, as a solution to the social and environmental problems caused by "wild" dismantling of ships, on 15 May 2009, the IMO adopted the International Hong Kong Convention on the dismantling of end-of-life ships. The objective is to "eliminate accidents, bodily harm and other damageable effects of the recycling of ships on human health and on the environment and reinforcing safety of ships, protection of human health and of the environment for the whole operational lifetime of a ship". The responsibility is therefore double: that of the flag State and that of the dismantling State. However, this Convention fails to establish the responsibility of the owner of the polluting ship. In addition, it is widely criticised as it is judged to be less protective than the Basel Convention which governs the transportation and recycling of "hazardous" waste³³.

As the Hong Kong Convention is not always enforced³⁴, the EU wanted to speed up the implementation of measures and adopted regulation 1257 of 20 November 2013 on ship recycling. This regulation includes parts of the Convention, in particular the necessity to establish an inventory of hazardous products before dismantling ships (article 5). It applies to ships flying the flag of a Member State. It excludes warships and "ships with a gross tonnage of less than 500". Yet it is not because a ship is small that it does not contain pollutants (see recent sinking of the Danish Maersk off Ile de Sein). The inventory of hazardous materials should be compulsory regardless of the size of the ship. The regulation has been in effect since 31 December 2014 regarding the inventory of hazardous materials of ships to be recycled. However, neither the Hong Kong Convention nor its European transposition forbid "beaching" which is at the heart of the problem.

³² "Health and safety in shipwrecks: Directives for Asian countries and Turkey".

³³ Ships can be considered as such or requalified, before their dismantling, as "waste", in which case the Basel Convention is applied as it is "hazardous waste". Moreover, ships to be dismantled are sometimes sold by their owners via dummy companies established in tax havens, which breaks the link between the original owner and the dismantled ship.

³⁴ On 6 February 2017, 5 States ratified it. France was the first State to sign this convention (19 November 2009) and the 3rd State to ratify it on 3 July 2014.

Despite this body of law, only two Member States (France and Belgium) have ratified the Hong Kong Convention and most ships flying a European flag are still dismantled in Asia, without regard for workers' working conditions and without complying with environmental standards.

Europe, despite this context, has a determined policy through regulation 1257 of 20 November 2013 which aims "to minimise accidents, injuries and other adverse effects on human health and the environment caused by ship recycling (...) and ensure the proper management of hazardous materials on ships". It meets opposition from shipowners as it is only applied within the EU and will push old ships to be registered under third country flags. A report by the European parliament in late 2016 also shows the major European advances to better support ship recycling: It proposes a recycling licence system, paid annually by shipowners and paid back when the ship is dismantled in a certified site. However the EU faces quite strong opposition from European shipowners who prefer the international approach *via* the IMO so as not to increase legislative distortions, therefore practices and distortions of competition between the EU and third countries.

2. Recommendations: Achieving reliable certification of dismantling sites

Communicating and informing about social and environmental damages linked to dismantling

To fight abuses in compliance with working conditions and environmental protection of dismantling sites, the ESEC firstly considers that the international community, *via* the IMO and the ILO, must lay down rules to improve information on actual living and working conditions in dismantling sites. The authorities of each relevant country, private stakeholders (shipowners), CSOs and, more widely the general public, will be better informed. The aim is to communicate about the issue of dismantling ships flying a European flag to regularly provide information about living and working conditions in "problematic" sites already identified and damage caused to the environment in order to create mobilisation and/or educate civil society on this issue.

It is also necessary to organise transparency on this subject on the European and global levels and make information accessible which enables this activity to be monitored while taking into account the entire chain, from deflagging to the deconstruction sites.

Acting for a better international and European legal framework

At the same time, the ESEC calls for broad ratification of the Hong Kong Convention of the IMO, only so far ratified by Panama, Norway, the Congo, France and Belgium, to open the way for better control of the “recycling” of vessels on the global level.

On the European level, our Assembly advocates the finalisation and completion of European legislation on the recycling of vessels, in particular, with the recycling licence project proposed by the Parliament. It supports the idea of a directive that would more specifically focus on the certification of dismantling sites. To make it reliable, the EU must conduct audit and control missions *in situ*, i.e. in third countries hosting ship recycling.

Developing a European ship dismantling sector

As already mentioned in its opinion “Which means and which governance for sustainable management of the oceans?”(Rapporteur: Mrs Catherine Chabaud), the ESEC is in favour of setting a European ship dismantling sector. This option would allow the EU and other Member States to better supervise and control dismantling practices and give shipowners more visibility on the chain of responsibilities. This sector in its own right could be used for global benchmarking.

Owing to its higher cost for shipowners, the ESEC declares itself in favour of financially supporting the implementation of a genuine European dismantling sector which will help strengthen current sites and secure their jobs, which implies setting up a real European programme, backed by the Juncker Plan to favour private investments in this sector.

In the long term, the aim, in this sector, will be to develop extended responsibility of the sector’s industrialists on the basis of what has been achieved in other sectors with the extended responsibility of the producer (ERP) for the treatment of waste in particular, therefore to internalise the cost of the ship through to its dismantling. In practice, groups of industrialists in maritime transport (shipyards, shippers, shipowners, etc.) may join forces to define approaches and contribution systems to facilitate a more virtuous dismantling of ships.

The introduction of this European sector that upholds social and environmental criteria will participate in the emergence of a European sustainable development label for maritime transport of which recycling would be one of the components.

D. Taking into account the environmental impact of the sector

1. Emissions of maritime transport

Due to its dependence on fossil fuels and because it is the sector where emissions are the least controlled, the maritime transport significantly contributes to climate change and air pollution. Currently, around 50,000 ships with a gross tonnage of more than 1,000 travel the seas of the globe³⁵. However, it is currently the cleanest transport mode per tonne transported, with five times less CO₂ emissions than road transport and thirteen times less than air transport³⁶.

By mainly using heavy fuel oil (HFO), a residue of oil distillation, for its propulsion, maritime transport generates CO₂ emissions, SOx, NOx, fine particles and soot.

These emissions have complex direct and indirect effects on climate change and are devastating for public health. In Europe, air pollution by maritime transport is said to be responsible for around 60,000 premature deaths per year³⁷.

Although their impact on air quality and the climate can diverge, measures to be taken converge as they mainly aim to develop new fuels but above all make headway in terms of motorisation (combustion mode) and propulsion of ships. The latter two points (combustion and propulsion modes) determine the type of substances discharged.

The impact of maritime transport on climate

Even though the proportion of CO₂ emissions due to the global maritime transport sector is lower in terms of absolute value than the road or air sector, its environmental impact is constantly growing. According to estimates, this industry discharges about one billion tonnes of CO₂ per year, i.e. less than 3% of global emissions (estimated at 36 billion tonnes³⁸). The increase was 66% between 1990 and 2012³⁹. In 2050, if nothing is done, these emissions could strongly increase by 50% to 250% depending on the different scenarios taking into account a set of factors (stability of standards and constraints imposed on vessels, the development of the market per type of vessel, the evolution of the share of liquefied natural gas — LNG — as fuel, continued efficiency efforts on ships). In addition, maritime transport is forecast to strongly increase by 2050.

³⁵ French shipowners.

³⁶ Surfrider Foundation Europe.

³⁷ According to joint research by FNE and the German NGO Naturschutzbund (NABU) and a study published in June 2015 by the German University of Rostock and a Munich research centre.

³⁸ These figures come from the IMO: "Third IMO GHG study 2014"

³⁹ COP21 website.

The International Transport Forum (ITF) estimates that CO₂ emissions by maritime transport should be reduced by 400,000 million tonnes by 2050 to contain global warming to between 1.5 and 2 C°⁴⁰.

GHGs and discharged products have various effects on global warming and interact with each other. The quality and quantity of emissions depend on the type of ship and engine, the fuel, manoeuvres and speed (in port, in territorial waters, on the high seas).

CO₂ and soot have a positive radiative forcing on the climate whereas SOx have a cooling effect due to interaction with the clouds and the reflection of the sun's rays. NOx have a warming effect through the production of ozone and a cooling effect through the destruction of methane. The impact of soot on the climate is not sufficiently documented today. They warm the air while remaining in suspension and settle in some regions on snow and ice, which could accelerate melting.

The use of LNG as fuel, which remains marginal today, also leads to CO₂ emissions. Transportation of this product causes the leakage of methane, a powerful GHG.

Current scientific work^(A) indicates that cooling dominates. But this is only true for the short term. In fact, sulphates persist in the atmosphere for several days to several weeks. They fall onto the ground in acid rain and in particles and soot whereas the life span of CO₂ is approximately 100 years, which means that it will build up in the atmosphere, contrary to SOx.

(A) FNE.

A constant drop in SOx emissions and particles is forecast in the coming years due to the implementation of appendix VI of the MARPOL convention bearing on the sulphur content of fuel. Negative forcing will therefore be reduced and speed up global warming even more.

The intergovernmental panel on climate change (IPCC) in its 5 WG3 report on mitigation⁴¹, stresses that given the current transport context, the implementation of alternatives is difficult and the total potential of mitigation uncertain. Yet innovative measures regarding new ships (hull design, new engines, new fuel, etc.), maintenance or improvement (anti-fouling paint, scrubber, selective catalytic reduction) as well as operational measures (speed limit, better road planning, etc.) could potentially reduce the consumption of fuel and CO₂ emissions by 43% per tonne-kilometre between 2007 and 2020, and up to 60% in 2050⁴² for international maritime transport.

⁴⁰ FNE.

⁴¹ Edenhoder et al, 2014

⁴² IPCC report, AR5 WGIII, Ralph, Sims et al

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Many of these measures have already been adopted by the sector and the IMO, especially since the application of amendments to appendix VI of the MARPOL convention in 2013 to reduce emissions linked to the Energy Efficiency Design Index and the Ship Energy Efficiency Management Plan.

The first and most simple measure is the speed limit (slow steaming) which was tested on a large scale between 2006 and 2012 due to the sharp increase in fuel prices: a 10% reduction in speed leads to a 19% reduction in consumption⁴³ and therefore in corresponding emissions.

The IMO has also worked through to the 62th MEPC on market-based measures. The aim was firstly to provide incentives for the maritime industry to reduce fuel consumption by investing in more fuel-efficient ships, in technologies improving efficiency and in operational measures; secondly, to compensate growing maritime emissions in other sectors. The tools studied ranged from simple taxation to fund-raising, from Emission Trading Schemes (ETS) to investment aid. This work is currently on standby.

The European Commission believes that a certain number of barriers hamper the improvement potential at the international level, primarily the lack of reliable and precise data on these emissions. However it considers that incentives are poorly managed, as the shipper benefits from ship's efficiency gains through fuel consumption, whereas the shipowner needs to invest. Yet investors, without reliable data on economic benefits are not naturally attracted by energy efficiency solutions.

The European MRV system is a first response needed to raise the first barrier — the absence of reliable and precise data on ships, their movements and emissions. But, as noted in the IMO's 2013 report⁴⁴, it will be necessary to go beyond efficiency measures to generally reduce maritime transport emissions.

The international route is preferred by professionals, States and the various institutions to avoid competition distortions. At the 70th session of the MEPC in October 2016, a certain number of provisions were taken to draw up a roadmap on the global strategy of the IMO regarding the reduction of GHG emissions in three points:

- recording and supplying data on fuel consumption;
- analysing these data;
- taking reduction decisions on this basis.

⁴³ "The impact of international shipping on European air quality and climate forcing", European Environment Agency, Technical report N0 4/2013

⁴⁴ "Third IMO GHG study 2014"

On this subject, some shipowners defend the idea of a cross-the-board fuel tax. At the IMO, several countries share this approach whereas developing countries such as Brazil differ and want the “joint but differentiated responsibility” that prevailed at the Paris Agreement. They export low value-added raw materials and would therefore be penalised by a fuel tax compared to developed countries exporting manufactured or processed products. To move forward on this subject, some stakeholders in the IMO work groups propose to set up a State “sensitivity” indicator on maritime transport and provide for partial or total refunding of the tax. Moreover, all funds collected through this tax would fund the sector’s energy transition.

Other atmospheric pollutants (sulphur, nitrogen, soot and fine particles)

As previously mentioned, maritime transport mainly uses HFO, a fuel that is 3,500 times more polluting than diesel and petrol⁴⁵ and consisting of petroleum residues. Its sulphur content is more than 3,000 times higher than fuel used for road transport.

In terms of health, soot is considered carcinogenic, SOx cause respiratory diseases, NOx can cause death by replacing oxygen in the blood and fine particles and volatile organic compounds are harmful on the respiratory level.

However, to respond to international SOx emission constraints, most ships sailing in the Northern Hemisphere use a double fuel bunker: HFO is used on the high seas, the other fuel containing much less sulphur is used in ECAs and EU ports since the application in 2015 of directive 2012/33/EC imposing a maximum sulphur rate of 0.1% when a vessel is docked. In recent years, pollution has therefore fallen in ports and territorial waters. Yet, due to the presence of major maritime routes in the vicinity, pollution still affects coastal towns and the hinterland.

Research by the University of Rostock and the German Helmholzzentrum environmental research centre in Munich (June 2015) has demonstrated the link between exhaust fumes of merchant ships and several cardiovascular and respiratory diseases. Every year in Europe, these emissions by maritime transport cause almost 60,000 premature deaths and cost health services 58 billion euros. The two pollutants considered to be the most harmful to health are SOx and NOx. Combustion of these two pollutants speed up the formation of fine and ultra-fine particles⁴⁶. Once inhaled, they can damage the respiratory tracts. Finally, this research highlights that sulphur emissions of the 20 largest international container ships are equivalent to those of the whole global car fleet.

⁴⁵ FNE-NABU.

⁴⁶ Ultra-fine particles refer to all air-borne solid components of microscopic size. Fine particles are pollutants sized between 10 and 2.5 microns (0.01 and 0.0025 millimetres). Ultra-fine particles measure less than 100 nanometres i.e. 0.01 microns or 0.0001 millimetres. The smaller the size of these particles, the more they infiltrate deep into organisms and build up, causing major health problems.

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NOx discharged by maritime transport represent between 17 and 31% of all global emissions. One single cargo ship pollutes as much as 50,000 land vehicles. Furthermore, once docked in ports, ships cause air pollution with peaks of 500,000 particles per cm³ in port terminals, on board ferries and cruise ships, whereas air pollution will not exceed 5000 p/cm³ in a nearby public park. The issue is therefore not only one-off pollution peaks at sea or at dock when ships arrive and depart but also atmospheric pollution affecting the residents of urban areas comprising ports as well as seafarers and passengers.

Several NGOs⁴⁷ have assessed the air pollution of a port city like Marseilles in 2015 and 2016. In the city centre, pollution reaches 5,000 p/cm³. In residential areas next to the port, the air was 20 times more polluted and on board the ships even more as the air is 70 times more polluted.

The residents of coastal regions are therefore twice as likely to be exposed to the pollutants discharged by maritime transport. However, the hinterland, up to several hundred kilometres inland, is also affected⁴⁸. It should also be noted that seafarers are the most affected by these emissions as they are permanently exposed to them at work. It is urgent to conduct a study on this subject.

At the initiative of Monaco, France, Morocco, with the support of Spain, Italy and most probably Algeria and Tunisia, a project on the intercontinental SECA/NECA zone on the western Mediterranean is currently being negotiated. France will launch an impact study that should assess different factors like traffic, emissions, impacts including impact on land (the precise procedure is defined in appendix VI of the MARPOL Convention). Then, if neighbouring countries agree, the project will be submitted for the approval of the IMO.

Moreover, article 18 of directive 2016/802/EU stipulates that "the penalties determined shall be effective, proportionate and dissuasive and may include fines calculated in such a way as to ensure that the fines at least deprive those responsible of the economic benefits derived from the infringement of the national provisions as referred to in the first paragraph and that those fines gradually increase for repeated infringements". But they are not harmonised at the EU level as criminal law is a sovereign jurisdiction. Some penalties are far from dissuasive — 800 euros for Poland or the Baltic Countries compared to 200,000 euros and up to one year's imprisonment in France

The main problem remains the application of the legislation: as controls of emissions often fall under the responsibility of national authorities, they barely exist today and proof provided by drones fitted with sensors must be considered as receivable by the legal authorities.

⁴⁷ FNE, FNE PACA and NABU.

⁴⁸ Long Beach Public Health Surveillance Services in the District of Los Angeles in the United States believe that populations living next to the port experience levels of asthma, cardiovascular disease and depression that are 3% higher than the average experienced by other residents in the city.

The European maritime transport strategy 2009/2018 had provided for the introduction of a bonus-malus system in port duty rates. Excessively polluting shipowners would thus be encouraged to invest to make their ship more respectful of the environment and of human health. It should be noted that this measure is not always put into application but left to ports' initiative.

2. The best known types of pollution and impacts caused by ships

Oil spills, accidental pollution affecting biodiversity

An oil spill is an industrial and ecological disaster that is caused by accidental or voluntary leakage in a coastal zone of an oil slick that escapes from a ship damaged at sea. This oil slick then drifts to the coast under the effect of tides, winds or currents.

Since the sinking of the Erika in 1999 on the French coasts, more than 700 oil spills have been identified worldwide. They have a short-, medium- and long-term impact on plant and animal life. Oil firstly affects the whole food chain in the marine environment by destroying whole species over a wide area. Fertility declines and genetic abnormalities increase. Birds are often mired in oil and die of suffocation if they are not rescued quickly.

They also have a harsh impact on the economic system of the affected region. Coastal areas become inaccessible, making all industrial and commercial activity difficult. There is then a transfer of tourist and fishing then commercial activities.

In the EU, maritime transport legislation was toughened following the sinking of the Erika in 1999. The EU reinforced controls, monitoring of ships, notification of positioning and the obligation of double hulls for oil tankers (packages: "Erika 1", "Erika 2" and "Erika 3" between 2000 and 2009, see above) led to a strong reduction in oil spills.

Deliberate pollution that remains: degassing and deballasting

It must be recalled that degassing designates the ventilation and evacuation of gas produced by hydrocarbons in a ship's tanks: these harmful gases must be eliminated to allow humans to penetrate into the tanks. By extension, degassing also designates liquid discharges of hydrocarbons. Deballasting designates the unloading of a ship's ballast water, residues of liquid cargo and operating residues.

These actions are regulated and should ultimately be performed in port facilities. However, to avoid paying the cost, some ships empty the content of their tanks and bunkers directly into the seas and oceans.

WWF, the environment protection association estimated that there were 1.5 million tonnes of oil discharged in the Mediterranean sea alone through illegal degassing and deballasting (or the equivalent of 20 "Prestige" or "Erika" wrecks per year).

Substances discharged into the seas are ballast water, hydrocarbons, heavy metals and chemical products that are harmful for the marine and coastal ecosystems. As seen in the statement of facts, the deballasting of ships has another negative effect on the environment: discharged water as well as pollutants, contains exogenous species that can proliferate and break down or even destroy local marine ecosystems. The Convention on ballast water BWM will come into force on 8 September 2017. Most companies, in particular European ones, have already anticipated and prepared this application. All new ships will be fitted with treatment systems.

According to the civil protection and environment unit of the European Commission, between 500 and 1,000 pollutions by degassing occur every year in the Channel, North Sea and the Baltic Sea, and between 1,000 and 1,500 in the Mediterranean⁴⁹.

Checks are carried out on maritime routes to prevent this behaviour but this illegal degassing often occurs at night, making it difficult to gather evidence. Only 1% of polluters are taken to court and controls remain inadequate. Furthermore, certain ports do not offer adequate facilities, which encourages even more illegal degassing.

An effort is therefore needed to accentuate controls at sea, especially overseas, and exemplary penalties need to be set up to discourage polluters. In Europe, legislation concerning sea pollution is specific to each State. The sum of fines is therefore variable. In France, the cap on fines has quadrupled since the sinking of the Erika and has now reached 610,000 euros.

Furthermore, no surveillance and detection means are deployed in French overseas territories, which is nevertheless essential in view of the scale of the Exclusive Economic Zone (EEZ) of French overseas territories. The State's intervention on site is currently limited to territorial waters, i.e. 12 nautical miles, which is insufficient. Several States have extended the possibility of intervention to the whole EEZ i.e. 200 nautical miles.

The MARPOL convention limits degassing at sea and bans it next to coasts and in most European seas. Treatment sites must comply with European Seveso I and II directives: obtaining an operating permit and complying with environmental law (pollutant discharge, GHGs) covered by European directives 2000/76/EC and 2008/98/EC (principle of the polluter pays and the producer's responsibility).

In terms of direct monitoring of discharges, new satellite tracking systems are very useful. Photos are already accepted as proof of crime as well as the use of infra-red cameras allowing night surveillance. Ships' captains should also be able to obtain contradictory evidence, in particular through samples taken.

Members of the European Parliament have voted in a directive imposing that all ships be fitted within five years with a black box, otherwise they will be refused entry

⁴⁹ Degassing represents less visible pollution, more important than that caused by oil spills but much less spectacular: 1 million tonnes of oil are discharged annually, i.e. 6 times more than oil disasters.

to EU ports. This system, using a probe system, identifies the quantity and type of liquids discharged by every ship.

Operational pollution (grey and black water, waste) to be reduced

In recent decades, maritime transport has been forced to make greater efforts to eradicate the immersion of waste and other pollutants at sea.

The commissioning of giant cruise ships that can transport more than 5,000 passengers and more than 1,000 crew members increases environmental risks as these ships generate enormous quantities of waste water and waste in addition to atmospheric pollution. Cruise ships are coming increasingly under fire for their environmental impact.

Directive 2000/59/EC on port installations receiving operating waste of ships and cargo residues ("IPR directive") aligns the EU on the standards set out by the MARPOL convention.

Receiving port installations must be adapted to ships' needs, easy to use, process all types of flows at a non-dissuasive price. Management of this waste must then comply with framework directive 2008/98/EC on waste. The competent authorities draw up waste reception and treatment plans for each port, control their implementation and assess them regularly. Waste covers "all waste including residual water and residues other than cargo residues that are produced during the operation of a ship and are the subject of appendices I, IV and V of Marpol 73/78, as well as waste linked to the cargo as defined in directives for implementation of appendix V of Marpol 73/78".

Ship's captains calling at an EU port must deposit all operational waste in a port reception facilities before leaving the port. Regarding residual water that can be rejected at sea according to certain conditions of the MARPOL convention, the Commission considers that in view of the general objective of the directive to reduce waste discharges and protect the marine environment, the general obligation to dispose of waste correctly must be applied.

Residual water includes black water (ships' organic waste) and grey water (cleaning and washing up water). Black water rejected directly into the sea can cause damage to the environment but also to health, by the development of bacteria and the spread of viruses.

Grey water is "run-off" water resulting from washing dishes, showers and the ship itself in general. It is wrongly considered to be the least polluting even though it contains various non-biodegradable chemical products. It is actually much more damaging for the environment than black water. Grey water contains soaps and/or detergents containing surfactants (which disperse fats into the water). This grey water is liable to generate inhibitions and necroses on plants and can modify animal behaviour.

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The most harmful water for the environment is bilge water, oily residues (or ballast, see above) which contain organic polluting substances and heavy metals that build up in the environment without being eliminated.

The discharge of waste water from recreational craft is controlled by increasingly strict regulations and the obligations imposed on recently built boats will be generalised to all boats in the years to come.

In 2016, the Commission issued an evaluation report (REFIT)⁵⁰ of the IPR directive (2000/59). Here are a few points of analysis:

- There are considerable differences between ports and regions in terms of interpreting and applying the requirement for mandatory disposal of waste, especially residue water, but also in terms of cost recovery systems and provisions on inspections. There is still considerable discrepancy between Member States;
- the circulation and use of information *via* the prior waste notification system between the different national or European authorities are insufficient and prevent effective supervision and control of application. It should be noted that transmission of the notification *via* the one-stop-shop has become mandatory since June 2015, which should reduce red tape;
- for a large number of small ports, the elaboration and evaluation of reception and waste treatment plans are a problem;
- legislation on sea and land waste is not the same, which leads to inconsistencies and complexities on the administrative level. Likewise, the fields of competence of national and local authorities lead to different approaches between States;
- the directive has a major flaw as it omits to treat residues of exhaust fume treatment systems to reduce sulphur content of emissions (appendix VI MARPOL). States must fully comply with the objectives of directive 2012/33/EU.

Finally, data is missing on the volumes of waste discharged into the sea. Alternative indicators have been used to evaluate the discharging of refuse and oil spills. However, these indications cover potential discharges and do not assess the contribution of ships to the generation of marine waste compared to land-based sources and do not give a precise estimate of waste discharges, which leads to a potential overestimation. This uncertainty on results is linked to the partiality of data currently collected.

⁵⁰ Report to the European Parliament Commission and to the Council "Evaluation, under the REFIT programme, of Directive 2000/59/EC on port reception facilities for ship-generated waste and cargo residues".

Other impacts on the environment

Among other impacts, it is necessary to mention the presence of passenger ships in certain very sensitive marine ecosystems, like the Arctic, Antarctic or coral reefs.

Acoustic pollution from maritime traffic, which has steadily increased for more than forty years, reduces the communication capacities of cetaceans, their food supply and reproduction capacity, while increasing their stress and energy expenditure. Collisions between merchant ships and large cetaceans are considered as the leading cause of death for several sensitive populations of whales and sperm whales in many parts of the world and in particular in the Mediterranean⁵¹.

3. Innovation, a strong issue for preservation of the environment, but also on the social and economic levels

As seen earlier, much remains to be done to improve vessel efficiency. In 2011, the IMO adopted technical and operational measures, in particular the nominal energy yield index applied to new ships built since 2013 and the ship's energy yield management plan applicable to the global fleet to limit the expected increase in GHG emissions. These measures favour innovation, technical improvements on motorisations, on the ship's different equipment, on new hull and hull coating designs, but also on the development of a number of operational measures to improve the ship's energy efficiency and its impact on the environment. The industry has set itself a 20% efficiency gain goal in 2020 and 50% in 2050⁵². In parallel, some European shipowners, French in particular, are already investing in the transition and want to move towards a European responsible maritime transport label to pull the sector upwards without waiting for future international rules.

Yet despite the high potential to reduce fuel consumption through energy efficacy and efficiency measures, up to 55% according to the Commission, the use of innovative processes — whether “new fuels” or propulsion modes founded on renewable energies (wind, water propulsion) — represents the preferred option to reduce the sector's emissions. The integration of renewable energy (sun, wind, fuel cell) to operate ships is seriously considered, including all consumption of auxiliary energy which can represent a large share of a ship's consumption for docked ships. To reach general reduction objectives, it will surely be necessary to use breakthrough technology. There are studies and reports on these issues and on the means to achieve the objectives⁵³.

⁵¹ Gambaiani D., et al. (2010) “Impact du trafic maritime sur les cétacés” (Impact of maritime traffic on cetaceans). Summary of knowledge on the impact of maritime traffic (study conducted by the GIS3M for Pelagos France).

⁵² “*Hybrid sailing to reduce the use of fossil fuels in the maritime transportation sector*”, Bonduelle et al, ECEEE 2015 SUMMER STUDY.

⁵³ <http://www.nsrsail.eu/wp-content/uploads/2015/12/Roadmap-SAIL-Transport-WEB-Bonduelle-WP4.pdf>

The most promising European and French projects include that of the French McPhy Energy company, established in 2008 in the Drôme, specialised in hydrogen storage in solid form, which announced the signature of a contract with the Italian company, Fincantieri, one of the world leaders in shipbuilding, to design hydrogen storage tanks for ships and offering an alternative to fossil fuels. Other initiatives based on the use of cleaner fuels, biofuels in particular, and hybrid electric propulsion systems, are being investigated.

Support for innovation is in fact a major issue for sustainable development:

- on the social level, as it implies a high level of qualification for seafarers, who need to be trained in new digital technology but also need to be aware of the different environmental impacts and issues in their professional activity,
- on the economic level as the aim is to develop new sectors within the EU with the creation of excellence clusters tied to the sector's training centres.

4. Recommendations: adopting more environmentally-friendly means of propulsion and fuel

The main issue lies in the propulsion mode of ships and fuel, as the different types of emissions are inseparable (GHGs, soot, SOx and NOx and fine particles).

On GHG emissions and other climate pollutants

The ESEC considers that it is essential to:

- bring the two information-collection systems closer together through operational regulation as of 2018 for Europe and as of 2019 for the IMO to rapidly gain access to reliable and precise data on ships, their movements and their emissions, on the European and global levels. The SafeSeaNet network could be the entry point for this system for Europe;
- reinforce research on the climatic impact of maritime transport and in particular the regional impact of soot;
- monitor the work of the Marine Environment Protection Committee (MEPC) of the IMO on the strategy to reduce GHG emissions of marine transport, in particular on the content of the "initial strategy" which must be launched between now and 2019 and on the implementation conditions of a fuel tax;
- support the position of the European parliament favourable to taking into account emissions of the maritime sector in the *European Trading Scheme*;
- impose a speed limit on vessels in community waters, depending on their type and activities.

On other emissions (sulphur, nitrogen),

The ESEC recommends:

- continuing with the introduction of ECA zones (SECA and NECA) in particular in the Mediterranean while ensuring, on the European level, the application of effective, proportionate and dissuasive penalties;
- moving towards a ban on heavy fuel, given vessels' motorisation. It is also necessary to put pressure on suppliers of marine fuel so that products are clean and less polluting;
- developing electric dock connections based on the example of what works in the EU or in the United States.

On the other impacts of maritime transport

The ESEC calls for:

- regarding vessels' waste reception facilities, the harmonisation of systems between Member States and them to be made effective in terms of the "zero-waste zero-emission" long-term goal. The collection of accurate data is central as is information exchange with other authorities. Moreover, each Member state needs to better coordinate and assess its waste reception and treatment plans for each port, in effective coordination with the various stakeholders;
- the problem of residues of exhaust fume purifying systems to be solved as they are not yet within the scope of directive 2000/59 on port reception facilities;
- European port facilities to be provided with treatment units for vessels' waste water. The funding of this type of programme, like other measures proposed, falls within the scope of authorised State aids (without notification obligation) as it contributes to the greening of the industry, or is liable to be supported by the Juncker Plan.

To reduce risks on marine mammals, the ESEC proposes:

- following the recommendations of the MEPC on the strategy to reduce the acoustic pollution of merchant maritime transport and its impact on the marine environment (MEPC. 1/Circ.833) and promoting at the IMO recognition of the Pelagos Sanctuary as a "particularly vulnerable maritime zone".
- running training for sailors with bridge duties, a module on the prevention of ship/cetacean collisions;
- promoting a European regulation project to broaden French commitment in terms of obligations to install collaborative embedded systems to prevent collisions between ships and cetaceans.

On innovation, a major issue at the European level

The ESEC considers that it is necessary to:

- perform an inventory of research on ship propulsion. There are many uncoordinated initiatives in Europe. This state of play is needed for the whole public and private effort of the sea and coastal domain for France, as part of the national sea and coast strategy;
- promote innovative processes to reduce or even eliminate emissions;
- support research and development investments (design of ships, energy efficiency, wind support, hydrogen);
- promote initiatives by European shipowners on the labelling of maritime transport on the basis of sustainable development criteria (GHGs, CSR). It is necessary to take stock of the existing situation and establish, in consultation with all stakeholders in the sector (shipowners, environmental defence NGOs, unions and employers' organisations, etc.) the criteria of this label;
- communicate and inform consumers about the total CSR footprint of the final product, including transport;
- structure and strengthen the network of excellence clusters especially around wind support, in liaison with the sector's training centres to ensure a high level of European professional qualification and to develop synergies.
- in order to favour innovation, scrap under-performing ships by specifying deadlines.

E. Security and safety issues

Maritime safety has evolved tremendously in tune with marine disasters around the world. The different conventions, including that of the United Nations Convention on the Law of the Sea (UNCLOS) and of the ILO, cover most of the safety and security fields. As a result, the States having ratified them have clear responsibilities for port, coastal or flag State. They should set up compliance inspections on ships, according to the different responsibilities and situations specified in texts. These inspections can be delegated to national or international organisations and agencies which now must be certified.

As a reminder, the main standards cover the field of saving human lives (SOLAS convention), the training of seafarers (SCTW Convention), environmental protection (MARPOL convention) and social conditions governing the work and lives of seafarers (MLC 2006).

On the European level, these conventions are covered by directives that provide the application framework for these standards.

1. An effective control organisation within the EU

According to fields of responsibility, controls always concern the shipowners and shippers involved in the responsibility chain and more broadly the flag State (certification of ships and registration in the log) and classification companies, the port State (compliance with ships and crews) and the coastal State.

On the European level, but also in other organisations such as the Paris Memorandum, controls are carried out on the implementation of standards by the States and the quality of classification companies as well as the quality of training organisations.

The national authorities and/or certification companies conduct ship inspections mainly on the basis of the ISM code of the IMO which groups together different international standards for safe management and operation of ships as well as pollution prevention.

The main inspection campaigns are done for the port State and within the EU according to the recommendations of the Paris Memorandum.

To have more efficient inspection campaigns, a ship risk level (high, normal, low) is drawn up on the following criteria: type of ship, age of ship, flag category (white, grey or black), controlling organisation, the performance of the company, number of shortcomings in 36 months, number of detentions in 36 months. The frequency of inspections depends on the risk profile: every 6 months for the high profile, every 12 months for normal, every 36 months for low.

The inspection points mainly cover: the general condition of the ship, various documents and certificates, maps and their corrections, sailors' qualifications, sailors' activity sheets, living and hygiene conditions, emergency, communications systems, engine rooms with maintenance software, documents, the state of the machines, anti-pollution systems.

Depending on the type and number of shortcomings and according to the recommendations of the Paris Memorandum, inspectors can decide to immobilise the ship until its repair, its detention or exclusion from EU ports for a determined period or even definitively after two or three recurrences. The main objective of an immobilisation or detention is to prevent a ship that is not safe from returning to sea and not to financially penalise the shipowner and shipper.

The EU has set up a very comprehensive and demanding regulatory framework to eliminate ships not satisfying safety standards from EU waters. This framework has been up and running for several years and is extremely dissuasive for shipowners and shippers who disregard the high probability of inspection and risks of the immobilisation or detention of ships. More than 15,000 inspections are conducted annually in Europe. The percentage of ships detained has risen from 5.4% to 3.3% between 2006 and 2014 and has remained stable since. The total number of international transport ships is more than 50,000 units. France annually inspects around 1,200 ships, except in 2016 where a reduction in attendance was observed, for more than 5,600 stopovers by ships.

2. Evaluations

In 2016, the Paris Memorandum proceeded with a campaign of tougher inspections on the implementation of the MLC 2006 coming into force in 2013 to check that minimal standards of working and living conditions of seafarers have been effectively set up on ships. France chaired the working group implementing this inspection. The results will be published very soon, at the next Memorandum committee.

The EMSA has also undertaken a horizontal analysis to cover the implementation of directive 2009/16/EC, with inspection cycles between March 2012 and April 2016 in the different States, 22 Member States and two European economic zones. This evaluation is very comprehensive and covers all of the provisions of the directive and procedures set out by the Paris Memorandum. It covers five main areas:

- organisation of the inspection system by the port State;
- general commitments (transposition);
- the inspection cycle in respect of port State control;
- personnel and logistics;
- implementation of penalties.

It is however reserved for internal use of the Commission. The EMSA analysis identified a certain number of best practices as well as shortcomings. The best practices include:

- completion of a higher number of inspections than the required quota;
- reporting by a person other than the inspector, guaranteeing quality follow-up;
- the organisation of inspector visits in pairs comprising an engineer and a sailor;
- the advanced use of available tools;
- follow-up of proposed training.

As far as observations and shortcomings are concerned, the main finding is that there is strong variability in the application of the recommendations of the directive between Member States whereas each year, the Paris Memorandum informs about

differences and observations to promote continuous improvements. More precisely, over the four-year analysis of inspections, the largest differences are connected to general commitments on how the most important recommendations of the directive are factored in nationally, but also the inspection cycle in respect of the port State.

In addition, for the main shortcomings observed, the following was observed:

- non-compliance with the number of annual controls (50% of States);
- poor management of resources with inadequate distribution of inspectors throughout the regions and deficient management of their working time;
- incorrect/false qualification in the centralised database, missed inspections;
- prior notification which is not always transmitted and the absence of penalties or non-application of sanctions;
- a considerable percentage of incomplete extensive inspections;
- non-harmonised inspection procedures liable to lead to competition distortions between ports;
- incomplete application of detention criteria;
- insufficient continuing training of inspectors;
- excessively approximate recording of data into the THETIS database, especially arrival and departure dates, which has an impact on the distribution of efforts between countries.

One could consider that the main objective, which was to prevent hazardous ships or vessels at risk from going to sea, has been achieved. However, even though the general level of information is satisfactory, the lack of harmonisation in the implementation of inspections across the EU is obvious.

3. A will to increase harmonisation but insufficient transparency

In the field of safety and security, the Commission intends to maintain efforts as there is room for progress and grey areas in the system, some of which can lead to competition distortions. A certain number of elements are available in the different reports or tools of the EMSA and the Memorandum.

However, horizontal analyses of the EMSA which measure whether national policies (transposition, means, organisation of inspection authorities) are in line with the Commission's objectives, are only accessible to the relevant national authorities. Furthermore, data for each State are not available, making a comparison impossible and preventing continuous improvement State by State. Comparative elements between port States and/or flag States would be of greater interest as it has been repeatedly stressed that competition distortion should be avoided, especially between ports and that disparities in terms of penalties can also vary considerably. Furthermore, through the analysis of causes of these different approaches between States, discussions can be enriched and depart from commonplace ideas.

Evaluation and measurement work of the Commission should be transparent and accessible, especially as directive 2009/16/EC stipulates that the publication of information can be an effective weapon to discourage shippers from using these "substandard" ships and encourage owners to take corrective measures. Likewise, if a Member State seems to be particularly lax on maritime safety and security issues, notification to all European institutions, its peers and the public will push it to make progress in this area.

The current situation does not allow CSOs to play their role and support the Commission to improve safety and security.

4. The coast guard function

In its interim report, the Commission considered upgrading the role of the EMSA so that it may support national authorities responsible for coast guard functions. In 2015, it published a communication on a regulation proposal then adopted regulation 1625 on 24 September 2016.

The aim of this regulation is to improve cooperation between the national bodies and agencies which ensure coast guard functions, in particular in the areas of operational surveillance and the sharing of data which are the basis of all these functions. The relevant agencies are the Border and Coast Guard Agency (FRONTEX), the European Fisheries Control Agency (EFCA) and the EMSA, and the application of this regulation is a genuine issue in the Union's maritime safety strategy.

For the Commission, "currently, more than 300 civilian and military authorities in the Member States cover the coast guard functions in a wide range of areas such as maritime safety and security, search and rescue operations, border control, fisheries control, customs control, general application of the law and environment protection".

The primary aim is to increase synergies between the different departments of the relevant agencies to offer national authorities in charge of the coast guard function effective and cost-effective versatile services.

The EMSA, in cooperation with FRONTEX and the EFCA must support national authorities performing coast guard functions at the national, EU and, where applicable, international levels, by:

- pooling, merging and analysing information available in ships' reporting systems and other information systems hosted by or accessible to these agencies;
- providing surveillance and communications services based on cutting-edge technologies, including spatial and ground infrastructure and sensors mounted on all types of platforms;
- reinforcing and sharing capacities by planning and implementing versatile operations such as the pooling of resources to establish best practices;

- reinforcing information exchange and cooperation regarding coast guard functions, including by analysing operational challenges and emerging risks in the maritime field.

These emerging risks include the issue of authorities' ability to deal with accidents involving mega-ships, which is already topical. The recent examples of the Costa Concordia and MOL Confort wrecks have brought into question sea rescue procedures and have encouraged research into new means of action.

The task is immense especially since at the State level, this coast guard function can be shared by several agencies with sometimes complex coordination. In France, a large proportion of this function is covered by the Navy followed by Customs and the Maritime Affairs Directorate. The model is very variable, depending on the country.

The question of the adequacy of means and resources of the EMSA with all its missions is raised. The risk is that it becomes increasingly committed to these new priority issues for the EU but with the same means and that its service level on maritime safety will thereby be reduced.

5. The issue of container loss

The quantitative increase in the transport of goods by sea, the strong development of containerisation and massification of ships has led to new safety and pollution risks expressed by container loss at sea or wrecking of container ships. Approximately 180 million containers⁵⁴ are transported annual throughout the world's oceans.

The size of the ships has been adapted to transport an increasing number of containers: from a few 8,000 TEUs (twenty-foot equivalents) in the years 2000 to more than 20,000 TEUs today. In practical terms, containers are stacked on the ship's deck with automatic or semi-automatic fastening systems, according to a precise loading plan which depends on the information given by the shipper for each box, in particular, their weight.

During incidents at sea, a ship can lose a few units to several hundred boxes, often without declaration or justification despite an obligation to do so. Initial studies have been conducted by the Surfrider Foundation Europe NGO using partial and relatively inaccessible data. They show that at least 10,000 containers are lost annually in the world, of which about 2,000 in European waters. But these figures seem strongly underestimated. Between 2011 and 2013, the IMO identified 2,683 "declared" containers lost on average per year. Every year, around 122 ships are wrecked transporting more than 300 containers.

The resulting risks are numerous and variable. In 1993, a container of detonators was lost at sea and resulted in beaches being closed in France on the Atlantic coast for several months owing to the significant risk to beach users. Container loss also creates risks for navigation safety for small service and fishing boats and yachts but also for the marine environment, especially as the containers lost can contain toxic, flammable

⁵⁴ "Review of maritime transport 2016", UNCTAD.

or explosive substances. There are also risks for the ship itself: loss of stability and imbalance which can jeopardise its operability at sea.

For several years, environment protection NGOs have been active on this subject. Despite international rules and standards, the reality is quite different. The Robin des Bois NGO has filed a complaint against the Danish company, Maersk, which it accuses of having minimised the loss of its containers by failing to mention 520⁵⁵. After the loss of a lot of 45 containers by the same company in the Bay of Biscay, Surfrider asked the IMO and the EU to review existing legal frameworks to better prevent this type of incident. One of the directions considered is to establish a general traceability system throughout the logistic chain. The association has also asked to adapt rescue equipment in coastal rescue centres to allow rapid and optimal tracking intervention and recovery of containers. Furthermore, the issue of the legal status of containers lost at sea must be clarified to define the responsibility chain in case of accident and pollution.

On the international level, the Convention for Safe Containers (CSC) of 1972 was designed to maintain a high degree of safety of human life in transport and handling of containers and to facilitate international transport by containers by establishing standard international rules, applicable to all means of transport. Among other things, it sets out rules for testing, inspecting, certifying and maintaining containers. The owner of the container must ensure its maintenance while subjecting it to regular checks. Moreover, the MARPOL convention (1973) forces the ship's captain to report any damages and incidents affecting ships and therefore container losses. One can cast doubt on its effective implementation as there is no standard framework for this type of declaration and, therefore, no collection of shared data.

According to the analysis of the Cargo Incident Notification System organisation created by five of the world's largest maritime companies, in 2015, 32% of incidents involving containers were due to poor reporting, 27% to incorrect stowing and packing (including the state of the container) and 17% to incorrect packaging⁵⁶, which can lead to errors in the scheduling of the load and stacking of containers and therefore increase risks of loss at sea.

Following different accidents, and namely MSC Napoli in 2007, the World Shipping Council and the International Chamber of Shipping set out best practices for secured management of containers. But these guidelines were not mandatory. After several years of discussion, the IMO has adopted amendments to the SOLAS convention appendix VI in November 2014 to make verification of the weight of containers and goods mandatory and to communicate it to the ship's captain and port intermediaries via shipping documents, before establishing a ship's load and therefore loading plan.

⁵⁵ The Svenborg Maersk container ship had initially announced a loss of 70 containers off Brittany but 517 boxes were actually lost at sea during the Ulla storm. This figure was communicated after the inspection of the Danish ship, during her stopover in Malaga. The prefecture assures that 85% of these containers probably sank immediately (they were empty and not waterproof) but this nevertheless means that close to 80 containers went adrift. The prefecture explains that twelve containers were identified by overflights and are currently being recovered "at the expense and risk of the Maersk company".

⁵⁶ www.cinsnet.com/resources/analytics-2015/

This provision came into force in July 2016. Without precise knowledge of the weight of the containers, the ship can be overloaded, its stability and structural integrity compromised and container loss facilitated.

However, it should be recalled that shippers — and small companies in particular — and ports do not necessarily have the required equipment. It is necessary to be vigilant as to the application of this new provision.

On the community level, directive 2002/59/EC defines notification rules regarding hazardous or polluting materials on board ships (HazMat), in compliance with the different international codes. This information must be given, among other things, to the different authorities in good time and place, so that they may anticipate any accidents. This information is now available through the SafeSeaNet network and must be correct and accurate, for loading and handling but also in the case of accident. However, in the case of container loss, it is unlikely that information about the dangerous nature of goods will be accessible and shared.

In view of the different accidents in recent years, it is possible to believe that the system is perfectible. It is urgent to go further and improve the existing regulatory framework.

6. Recommendations: reinforcing the harmonisation of practices within the EU, reasserting the European Maritime Safety Agency and improving the management of container loss

The safety and security issue has a strong impact on the other pillars of maritime transport. The Commission always considers it as a priority. The year of maritime transport should be the opportunity to take things further.

Strengthening port State controls

For the ESEC, the main issue is the lack of harmonisation in the implementation of directive 2009/16 on port State controls. The Commission needs to find levers to make this issue becomes a priority for all States. One of the two of them consists in opening detailed evaluation information by each State to civil society. These assessments also need to be systematically transmitted to the ad hoc commissions of European and national Parliaments, the European Economic and Social Committee (EESC) and other relevant organisations.

Particular note should be taken of the following points: avoid competition distortions between European ports; take better account of the social dimension in inspections carried out in particular regarding the ability to analyse crews' state of fatigue; also work on the harmonisation of sanctions procedures and the level of penalties.

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The ESEC asks to ensure that safety and security conditions on board vessels are guaranteed, in particular for passenger ships.

Striving towards a better operation of the EMSA

The ESEC considers that it is necessary to:

- better share knowledge and know-how of the EMSA with third countries through regional "IMO" partnerships (in the Mediterranean, etc.);
- secure but also strengthen the Agency's resources with respect to its central role in security and safety, to the need to go further in the field of inspecting seafarers' living conditions, the issues of emerging risks connected to the role it should/could have in ultra-peripheral regions and in the support of third countries, and its new mission based on the coast guard function.

Treating the issue of container loss

The ESEC recommends:

- assessing, first and foremost, the relevance and adaptation of the European and international regulatory framework in the container loss issue, which requires the effective implementation of existing provisions relating to this subject. Special care needs to be taken in the implementation of the provision governing the verification of container loss before loading and its notification of the various stakeholders. The total weight tolerance of the ship must be limited to 2% of it and the shipper should be liable for any false declarations concerning weight or the content.
- conducting, in parallel, a precise evaluation on the European level of the risks and impacts linked to the loss of containers, namely in terms of their life cycle and possible obsolescence, the analysis of the cause of container losses being paramount to provide appropriate answers. The consequences on inspection procedures by the port State should be deducted;
- setting up real container traceability throughout the logistics chain in relation to mandatory notifications of the transport of hazardous goods imposed on the various stakeholders. Likewise, the different stakeholders must be able to guarantee effective collection and dissemination of data on lost containers;
- clarifying the legal status of the container lost at sea and strengthening rules regarding liability.

F. Maritime transport: a fragile balance between stakeholders with diverging interests, a lack of transparency and insufficiently associated civil society

One can consider, on first view, that there is no real governance of maritime transport.

For each of the previously presented issues, there is a constant factor: the practical absence of transparency, as CSOs and the public, or sometimes the main stakeholders have no access to relevant data. Progressing towards greater transparency is therefore the bottom line before considering better governance of maritime issues.

1. Maritime transport governance issues at the global level: the necessary search for consensus between the parties which often take contradictory positions

As mentioned above, maritime transport standards on the global level are established within the IMO which brings together stakeholders with divergent positions on the environment for example, both within States and groups of States represented and among the NGOs sitting on it. It should be recalled that professionals in the sector are widely represented and listened to, which is not the case of environmental defence organisations.

Some Member States of the EU including France work to ensure that issues on reducing the impact of maritime transport on the environment are treated and, in this context, try to forge partnerships with States sensitive to these issues like small island States and to reverse the position of reluctant countries (G77 including Brazil) or whose position is evolving (China).

Besides the work of States, debates at the IMO are also influenced by professional lobbies (shipowners, shipbuilders, etc.) representing private interests, the International Transport Workers' Federation (ITF) and advocacy associations, the latter categories having fewer means to bear down on discussions. At the IMO there is therefore a plurality of stakeholders with divergent interests and a work method — consensus — which considerably slows down the adoption of conventions.

Finally, works conducted within the IMO are not well known to the public either for the sake of discretion, as party States insist that certain data remain confidential, or due to a lack of communication.

2. European governance: an excessively sector-based approach and neglected social dimension

On the European level, although environmental questions or those linked to innovation achieve a consensus among Member States, it is the social dimension of the sector which is still largely neglected and measures favourable to employment are still patchy. Finally, maritime transport is envisaged by the European Commission as an issue linked to transport that comes under DG MOVE and is not yet a sector requiring an integrated approach, looking at all the issues linked to sustainable development.

The plurality of stakeholders in the European maritime issue (the Commission's Directorates-General Mobility and Transport, Maritime Affairs and Fisheries, European Maritime Safety Agency, Frontex agency, etc.) has in fact created a certain confusion as to the various attributions of each of these structures and does not solve the issue of transversality for lack of general coordination. The question of ultra-peripheral regions deserves special attention because, depending on the case, applicable regulations are either community or regionally based.

In addition, if progress has been achieved, the social dimension of maritime transport still remains largely neglected and, as with the IMO, the European Commission does not show sufficient transparency in terms of maritime security and safety in particular.

3. Recommendations: greater transparency to bring maritime transport more in line with sustainable development issues

The ESEC has identified two major directions: improving communication to and information of civil society and moving towards greater transparency; ensuring better coordination between the different institutional stakeholders.

Towards increased transparency

The ESEC advocates that European institutions and agencies which intervene in the maritime transport field (DG MOVE, EMSA, etc.) cooperate more with CSOs, make the different reports available — especially horizontal analyses by the EMSA — and involve civil society in follow-up committees in charge of assessing and controlling the implementation of applicable legislation.

Access to data concerns all stakeholders, institutions and agencies to assess the effectiveness of controls and measure differences between Member States of the EU but also between industrialists on the subject of data relating to vessels' emissions and polluting waste.

The ESEC also recommends setting up public reporting on maritime transport activities in the EU zones to itemise the activity, number of employees, their working conditions and environmental impacts of those activities.

In general, our Assembly believes that it is indispensable to support workers' rights and environmental advocacy and defence action targeting the EU and IMO and ensure that they are involved in works to re-establish the balance with respect to the representation of private lobbies (shipowners and industrialists).

Guaranteeing better coordination of the different institutional stakeholders.

The ESEC considers that to do so, efforts need to be made to achieve better European coordination between member States then with the Commission, to elaborate a common position while avoiding the "European fortress" effect talking with one voice to the IMO which is relatively counter-productive in working group discussions. In this context, it is imperative that the EU deploys means to be sufficiently well represented at the IMO.

Moreover, better cooperation between maritime transport stakeholders (private, public stakeholders, universities, NGOs) helps improve transparency but also build a more solid position.

More generally, the ESEC insists on the importance of European solidarity with respect to the different international conventions and therefore supports the Commission's efforts to promote the ratification and effective application of all international conventions in particular on social standards and working conditions of seafarers, on environmental protection like the Hong Kong Convention on dismantling with respect to Member States but also neighbouring countries or partners.

The ESEC requests that Member States and the Commission address the issue of flags of convenience, often linked to very aggressive tax systems. They are usually considered as tax havens.

Conclusion

The three pillars of sustainable economic, social and environmental development are obviously the three strands around which the EU must redefine its maritime transport strategy so that it may be consistent with international commitments taken in this area. Territorial cohesion, innovation, high social standards and reduction of the impact on the environment are consequently paths to follow. With the integrated cross-cutting approach that now prevails in the area and that our Assembly has lengthily described in its opinion "French international cooperation policy within the framework sustainable development 2030 agenda 2030" of October 2016 (Rapporteur: Mr Philippe Jahshan), the European Commission needs to propose a new vision combining economic, social and environmental issues.

As this opinion shows, the social dimension has been neglected for too long amidst a context of free competition and the search for competitiveness whereas environmental issues are still struggling to create firm commitments in this sector, both on the European and International levels.

Our Assembly is aware that the EU cannot alone modify all global practices and that this process may be counter-productive given that it may accentuate distortions of competition between the EU, a high standard zone, and third countries that have little regard for such standards. The international route remains essential, in particular the IMO, a body in which France and the EU can forge effective alliances to make real progress in the three sustainable development pillars. The EU needs to offer free access to data so that civil society organisations may play their part and help practices and governance evolve.

The emergence of a European model based on standards and virtuous practices, like the recommendations made in this opinion for a European ship dismantling sector, must, as in the case within the IMO, act as a driving force for other countries to adopt high standards.

Moreover, other issues not exposed in this opinion as not directly linked to sustainable development issues and EU climate commitments, are of major interest to the future of European maritime transport. This applies to all issues linked to the terrorist risk and piracy. Maritime migrations raise other questions that have not been asked. Others also relate to subjects that are not moving forward like ecological damage on the international level.

Finally, some subjects deserve to be studied and explored like the issue of "community waters", the sharing of competence between the Commission and Member States on the issue of controls linked or not to the strengthening of EMSA's role.

APPENDICES

DECLARATIONS/VOTE

OPINION

ESEC'S OPINION



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