

UNIVERSITAT AUTÒNOMA DE BARCELONA

The New EU Regulation 2015/757

A New Challenge for European Climate
Change Policy

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- Thank you.

*Our most basic common link is that we all inhabit this
small planet. We all breathe the same air. We all
cherish our children's future. And we are all mortal.*
- John F. Kennedy¹

¹ Commencement Address at American University Law Faculty, Washington D.C., June 10, 1963

ABSTRACT: Reducing CO₂ emissions from the shipping sector represent a challenge for the international community. The European Union has given a step forward with the adoption of Regulation 2015/757 establishing the obligation to all ships calling for an EU port to surrender detailed information regarding the CO₂ emissions for the entire voyage. Such an obligation may raise issues of jurisdictional overreach of European Law when ships come from beyond a member State's EEZ, and will overlap with the IMO regulatory task pursuant the Kyoto Protocol Art. 2.2 mandate. The aim of this essay is firstly to assess the current policy options to address the shipping emissions conundrum, review the existing regulatory framework at the international and community level and see how international actors interact with each other in the policymaking process. Secondly, Regulation 2015/757 and its application problems will be assessed, especially the jurisdictional concerns, to conclude that the active legislative role of the EU is desirable towards encouraging the IMO to reach a global agreement on CO₂ decisive reduction.

KEYWORDS: GHG, *emissions, maritime transport, CO₂, jurisdictional overreach, ports, climate change, European Union, IMO*

**THE NEW EU REGULATION 2015/757:
A NEW CHALLENGE FOR EUROPEAN CLIMATE CHANGE POLICY**

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Abbreviations

UNFCCC	United Nations Framework Convention on Climate Change
KP	Kyoto Protocol
COP	Conference of the Parties
IPCC	International Panel on Climate Change
UN	United Nations
IMO	International Maritime Organization
MEPC	Marine and Environment Protection Committee
MARPOL	Marine Pollution (Agreement)
ICAO	International Civil Aviation Organization
UNCED	United Nations Convention on Environment and Development
IMF	International Monetary Fund
OECD	Organization for Economic Cooperation and Development
EU	European Union
EFTA	European Free Trade Area
ECJ	European Court of Justice
EMSA	European Marine Safety Agency
WG	Working Group
UNCLOS	United Nations Convention on the Law of the Sea
TFEU	Treaty on the Functioning of the European Union
EMAS	Eco-Management and Audit Scheme
SPMS	State Ports and Merchant Shipping
CBDR	Common But Differentiated Responsibilities
NFT	No Favorable Treatment
INDC	Intended Nationally Determined Contribution
MRV	Monitoring Reporting and Verification
MBM	Market Based Measures
ETS	Emission Trading Scheme
EEZ	Economic Exclusive Zone
GT	Gross Tonnage
GHG	Greenhouse Gas
CO ₂	Carbon Dioxide
Nox	Nitrogen Oxides
Sox	Sulfur Oxides
PM	Particulated Matter

CFCs

Chlorofluorocarbons

I. Introduction

A. Current state of the matter

Climate change is a present issue in the international agenda. By means of instruments such as the UNFCCC and the KP as the current climate governance framework, GHG's from all sectors of most member States' industries have been regulated, except for those from aviation and shipping.

Excluded from the KP general provisions, maritime emissions were assigned to its sectoral organization, the IMO. Given the complexity of GHG emissions allocation from a moving source such as a vessel, there is currently no *national allocation*. Furthermore, the IMO regulatory task towards emissions reduction has not been *decisive*, focusing on energy efficiency operational measures, without any binding reduction objective for the shipping sector after almost 20 years of the KP's mandate.

In contrast with the IMO's regulatory slow pace, the EU has ambitious objectives dealing with GHG emission reduction in the short term. Although cooperation through IMO to address the emissions issue has been acknowledged, the EU has taken what seems to be a *regional approach* with the adoption of Regulation 2015/757/EU (the Regulation), intended to monitor, report and verify (MRV) the emissions of ships calling EU ports by assessing their energy efficiency. This assessment is essential towards the adoption of a *decisive* measure to counter ship sourced GHG emissions. However, it should have been taken by the IMO, following Art. 2.2 of the KP.

In this context, the aim of the present study is:

Part I, to identify the problem, and the possible solutions, proposed.

Part II will introduce the actors, the decision making processes, international instruments adopted, and the results obtained so far.

Part III and **Part IV** will analyze Regulation 757. This analysis will consist of a *twofold study*: *first*, the objectives, methodology and *immediate application issues* (subjects, implementation, and non-compliance) of the norm (Part III). *Second*, issues dealing with *jurisdiction* and *extraterritoriality* of the Regulation (Part Four).

This essay will allow, in light of the existent legislation and context, answering the following questions: what are the possible application problems arising from the enforcement of Regulation 2015/757? Up to what extent these problems imply a regulatory overreach of the EU?

B. Methodology

The materials to be used in the elaboration of this study will be international instruments governing climate change, European Union legislation, and other primary legal sources.

Interviews to persons from the public sector directly related to port activities such as the Harbor Master's Office and the Department of Environment of the Port of Barcelona; as well as opinions from former public authorities related to environment and climate change will also be an asset to this paper.

Circulars, memos, press notes, official position papers, among others of similar nature from official websites from the institutions of the aforementioned legislation, as well as information from *verifiers* and *maritime business companies* will also be evaluated, as they are the first affected parties by the Regulation.

Finally, and in order to better understand and integrate the information compiled, independent academic papers on the field will be essential to form a legal opinion answering the questions of this essay.

C. Emissions: The Problem

This part will cover the source of the emissions and the effects on the environment, justifying the need for regulatory measures.

1. Maritime Shipping Emissions²

Maritime shipping is the least pollutant mean of cargo transportation³. It is cost-effective and responsible for 80% of international exchanges⁴, being a key factor to world trade. Shipping carries a higher amount of tonnage by discharging fewer emissions to the atmosphere⁵. This is due to the *energy efficiency* in the usage of marine bunker fuels⁶, long distances covered, and large containing capacity of vessels⁷ compared to the limited capacity of other means, such as terrestrial transportation, or aviation.

However, shipping industry is responsible for 3% of the world's GHG emissions per year⁸. This amount equals –and in some cases far exceeds– the emissions generated by entire countries⁹. Moreover, growing at its current pace, this CO2 contribution may raise to 5% by 2050¹⁰.

2. Shipping Sector Grows, Emissions Increase

The *environmental consequences* of shipping are visible since the XXth Century with the improvement of engine technologies and the opening of artificial transoceanic passes such as the Panama Canal. These facts determined a growing

² IMO (2009), *Second GHG Study 2009*, MEPC, pp 3 (executive summary), and 151. This study refers to the *international shipping* emissions, as opposed to *domestic emissions*, since they are already covered by the States, following territorial criteria.

³ IMO, *Marine Environment*, retrieved: 16.04.16,
<<http://www.imo.org/en/OurWork/Environment/Pages/Default.aspx>>

⁴ [European Commission, COM \(2009\) 8, *Strategic Goals and Recommendations for the EU's Maritime Transport Policy until 2018*, pp1](#)

⁵ V i a n a Mar, et al., *Impact of Maritime Transport Emissions in the Air Quality of European Coastal Areas* (2014), Elsevier, pp1

⁶ [K o l l a m t h o d i Sujith, et al., *Support for the Impact Assessment of a Proposal to address Maritime Transport Greenhouse Gas Emissions* \(2013\), RICARDO AEA, pp25](#) Study prepared by the independent consultancy RICARDO AEA at the request of the Commission.

⁷ [J ä h n Carlos, *Efficiency of Maritime Transport*, \(post 2011\)](#)

⁸ Vid. Op. supr. [K o l l a m t h o d i Sujith, et al., pp21](#)

⁹ Union of Concerned Scientists, *Percentage of CO2 Emissions per Country*, (2014), retrieved: 16.04.16

<http://www.ucsusa.org/global_warming/science_and_impacts/science/each-countrys-share-of-co2.html#.Vx-yjXoauJE>

¹⁰ [European Commission, *Integrating Maritime Transport Emissions in the EU's Greenhouse Gas Reduction Policies* \(COM 2013/479\) pp3](#)

boom of commerce and shipping, bunker fuel consumption, and consequently, fuel oil discharges, with increasing atmospheric emissions¹¹.

Furthermore, economic growth due to a modern legal framework ensuring the safety of shipping and the promotion of world commerce, settled the foundations of *globalization*¹². The direct effect is a growing need for shipping and an increased fleet.

3. *Effects on the Environment and Human Health*

The combustion of marine fuels produces different kinds of pollutants; the most common are *nitrogen oxides* (NOx), *sulfur oxides* (SOx), *particulate matter* (imperceptible ash in suspension) and CO₂¹³. The combustion of all fossil fuels produces CO₂, cause of 20% of the GHGs¹⁴. This process feeds back through constant production of GHG emissions from many sources, being 5% of them aviation and the estimated 48 thousand merchant vessels¹⁵ sailing the oceans.

SOx, NOx, and particulate matter (PM) have a regional effect¹⁶, and in the case of the Port of Barcelona, their contribution is of 10% of the city's pollution and around 20% of the metropolitan area's¹⁷. Effects are visible in the short term, contributing to the acidification of soil¹⁸, rivers¹⁹, and human health. It is

¹¹ [Corbett James, Winebrake James, \(2008\) *The Impacts of Globalization on International Maritime Transport Activity*, OECD pp14](#)

¹² [UNCTAD, \(2013\) *Key Trends in International Transport and Implications for Development*, pp5](#)

¹³ [Vincen Ingrid, \(2012\) *Emissions from Ship Machinery, Greenship*, pp 21](#)

¹⁴ [Lacis Andrew, \(2010\) *CO2: The Thermostat that controls Earth's Temperature*, NASA, retrieved: 16.04.16 <\[http://www.giss.nasa.gov/research/briefs/lacis_01/\]\(http://www.giss.nasa.gov/research/briefs/lacis_01/\)>](#)

¹⁵ UNCTAD, (2015) *Merchant Fleet by Flag of Registration and by Type of Ship: annual 1980-2015*, UNCTADSTATs, retrieved: 16.04.16, <<http://unctadstat.unctad.org/wds/TableViewer/tableView.aspx>>

¹⁶ Vid. Op. supr., Viana, Mar, pp2

¹⁷ Port de Barcelona (2013), *Medi Atmosfèric*, retrieved: 16.04.16 <<http://www.portdebarcelona.cat/web/el-port/qualitat-de-l-aire>>

¹⁸ Air Quality, *Impact of Acid Rain on Soils*, retrieved: 16.04.16 <<http://www.air-quality.org.uk/16.php>>

¹⁹ Air Quality, *Fresh Water Acidification*, retrieved: 16.04.16 <<http://www.air-quality.org.uk/13.php>>

estimated that *only in the United States*, 200 000 early deaths annually are produced due to the poor quality of air²⁰.

It might appear that these emissions are almost imperceptible, accompanying the view of atmosphere as a *res nullius* without a framework preventing any hazardous effect. On the contrary, hard evidence proves that the atmosphere acts as a planetary *sink*²¹, where all anthropocentric discharges gather together generating a negative effect both in the short and long term.

This evidence shows that is time for global action, setting 2020-2030 as a deadline after which mitigation will be next to impossible²². Proposed courses of action will be covered on the next section.

D. The Solution: Alternatives to address the issue

1. Context and Policy Background

Alternatives have been discussed over the last decade in order to counter the rising levels of shipping GHGs. Decision makers at an international and regional level such as the IMO and the EU respectively have had an active role regarding policy options²³. However, it has not been possible to define any *concrete measures* as we will see in Part Two.

The considered policy options are²⁴: i) Compensatory fund; ii) Tax on carbon, and; iv) Maritime emission trading system. However, it must be stated that prior to the development of any policy, it is necessary to have *accurate data* on the fuel consumption and the energy efficiency of ships *separately*. For this reason, the

²⁰ C a i a z z o et al., (2013) *Air Pollution and Early Deaths in the US, Part I*, Massachusetts Institute of Technology, pp3. Combines the effects of different sectors, being road transport the first contributor.

²¹ [E d e n h o f e r Ottmar, et al., \(2013\) *The Atmosphere as a Global Commons, Challenges for International Cooperation and Governance*, Harvard Kennedy School for Governance, pp5](#)

²² Vid. Op. supr., Edenhofer et al. pp6.

²³ See also, IMO GHG Studies, 2000, 2009, 2014, and Communication from the Commission regarding the inclusion of maritime emissions on the EU's reduction plans.

²⁴ European Commission, (2011) *Second Meeting of the ECCP Working Group on Reducing Greenhouse Gas Emissions from Ships*, Climate Action, retrieved: 16.04.16
<http://ec.europa.eu/clima/events/articles/0036_en.htm>

EU has taken a step forward by adopting Regulation 757 to have this information and further to the policy debate.

As for the Commission's WG on shipping, the *principles*²⁵ guiding any policymaking should be: i) *Geographical scope*, giving the idea of the measure's reach, relevant to any *jurisdictional overreach* issues; ii) *Cap* sets a ceiling, representing not only a limit, but the *measure's reduction objective*; iii) *Stringency and avoidance* are determinant to the policy's goal: May it be too stringent; it will be avoided, or even discourage economic activity. On the other extreme, may it be too loose; the objective will not be achieved.

2. *Compensatory fund*

Establishes a fund, where all ships have the obligation to contribute according with the levy set by the policy²⁶. Such basis may be *bunker fuel consumption*, where the ship will have to pay according to the tons of fuel loaded. Ultimately, the funds collected will be used for capacity building, technological development, and transfers to developing countries to level unbalances when enforcing the implementing policy of the fund on their fleet²⁷.

Given these facts, controversy may arise as to who is the *third party* in control of the fund, a public or private entity, and typically, considering that it should be enforced in ports, a global agreement will be necessary for a good enforcement, which results to be time consuming.

3. *Collecting the Fund: Carbon Tax*

Defended by most, it has been suggested not only by pressure groups on the last COP in Paris, but also in a 2016 report by the IMF, and in 2015 by the OECD. As advanced, it would imply taxing *fuel consumption* of ships, being the levy

²⁵ [N e l i s e n, Dagmar et al., \(2011\), *EU Policies to Address Maritime Shipping Emissions*, Umweltbundesamt, Deutschland pp4](#)

²⁶ Vid. Op. supr., Kollamthodi et al. pp94

²⁷ See CE DELFT (2013), *Shipping report, Carbon Pricing for Shipping, the collection and handling of finances*; pp 9, and; OECD (2015) *Shipping and Climate Change, Where are we and which way forward?* Pp3,4

suggested by the IMF of 30\$ per ton of fuel consumed²⁸, with a *minimal* expected economic impact on the sector²⁹.

On the positive side, its *administrative simplicity* is praised³⁰, as in our opinion; it would work like a regular tax, most likely enforced by the Port Authority as any other *port obligation* of a vessel calling for an EU port. On the negative side, a global agreement will be needed, demanding *uniformity of application and enforcement* in all ports. Recalling the *avoidance* feature mentioned before, it would be easy for a ship just to avoid a port requiring such tax when refueling, thus leaving the measure pointless.

In conclusion, overcoming challenges such as international cooperation, and operational aspects of how and who will collect the tax before transferring them to the global *high authority*, might seem overwhelming. However, it would be the most effective measure keeping in mind its four effects: i) modification of fuel consumption patterns; ii) compensation of developing countries enforcing the tax policy; iii) allocate the funds for technology improvement, and; iv) last but not least, will drastically reduce the emissions, making possible to meet the effort of a *zero carbon emissions* by the end of the century.

4. Market Based Measures (MBMs)

This option sets an *emissions cap*, meaning that an overall emissions limit will be fixated and enforced³¹. Allowances are allocated to all the market *players* up to the limit –the cap- and must be surrendered when calling a port, according to the emitted CO2 per ship. The aim is to incent the shipping industry to use more efficient fuels, and improve operational techniques and technology³².

Assessed its features, the expected effect of an MBM will be for large companies to improve their technical performance in a *sustainable manner* assuming it as an

²⁸ IMF (2016), *After Paris, Fiscal macroeconomic, and financial implications of Climate Change*, pp28

²⁹ OECD (2015) *Shipping and Climate Change, Where are we and which way forward?* Pp4

³⁰ vid. op. supra, OECD (2015) *Shipping and Climate Change*, pp4

³¹ Vid. Op. supr, Kollamthodi et al., pp71

³² Vid. Op. supr, Kollamthodi et al., pp71

environmental fixed cost. For small companies, allows continuing *business as usual*, without a major market disruptive effect. Thus, interiorizing the perception of environmental protection by the private sector, by playing the rules of the market, instead classical command and control instruments.

In opinion of Dr. Josep Llebot³³, and in contrast with a tax on carbon, the priority of an MBM are not the emissions, but the economical and social cost of the measure, consequently having a slow paced result. Whereas a tax on carbon addresses the problem directly and represents the best way to interiorize the environmental costs of an operation and reconsider certain human activities.

E. Preliminary Conclusions of Part I

Having assessed the policies available, the issues on their implementation start to surface: agreement of States, policymakers, and stakeholders. Even if the most reasonable measure is a *tax on carbon* to decisively start to solve the shipping emissions problem, the dynamics between international actors is an important hindrance.

Consequently, before taking any new policy, in the next part we will see *the existing rules governing climate change*, if they are being enforced and most importantly, if they are efficient to solve the problem.

³³ See Annex II. Dr. Josep Enric Llebot is Professor of Physics at the UAB, and has been Secretary General of Environment at the Catalan Administration.

II. Regulatory Framework: Policy Makers and International Actors

In this part we will study the different actors participating in the policymaking process of *global climate governance* applied to maritime transportation, how they interact with each other, what relevant contributions have they done, and what are the major setbacks they may find.

A. Global level: The UNFCCC

1. Context

The UNFCCC is an *international Treaty* signed at the seat of the UN in New York in 1994 by 197 States, of which 165 have ratified the Convention³⁴, being Spain and the EU ratifying parties³⁵. Further to Art. 23, it entered into force on 21 March, 1994.

The UNFCCC starts at the 1992 UNCED, also called *Earth Summit*, which concluded with the *Rio Declaration, major environmental legal landmark*³⁶. At the closing session of the Earth Summit, the UNFCCC was open for signature along the Rio Declaration³⁷. The Summit served as an opportunity to focus on different environmental issues, one of them being climate change and increasingly hazardous levels of GHG.

The objective of the Convention is “the *stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous*

³⁴ UNFCCC, (2014) *First Steps to a Safer Future: Introducing the United Nations Framework Convention on Climate Change*, retrieved: 16.04.16

<http://unfccc.int/essential_background/convention/items/6036.php>

³⁵ UNFCCC, (2016) *Convention Status of Ratification*

<http://unfccc.int/essential_background/convention/status_of_ratification/items/2631.php>

³⁶ United Nations, (2016) *Audiovisual Library of International Law*, retrieved: 16.04.16

<<http://legal.un.org/avl/ha/dunche/dunche.html>>

³⁷ World Meteorological Organization, *United Nations Framework Convention on Climate Change*, retrieved: 16.04.16 <https://www.wmo.int/pages/themes/climate/international_unfccc.php>

anthropogenic interference with the climate system” (Art. 2). Even if too general, the implementation of this objective is to be achieved through the COPs, instrumental to the purposes of the Convention, and foreseen to produce more *detailed guidelines* and specific goals³⁸.

Party States do commit themselves to the creation of the so called *GHG inventories*, following IPCC guidelines (Art. 4.1.a), and to communicate the state of such inventories to the COP (Art. 12) as well as the measures taken to achieve the set goals.

Universally accepted principles of Environmental Law emerged from this Convention, such as the *common but differentiated responsibilities* (Art. 3.1³⁹), laying out the *enhanced responsibility* held by developed countries, being the ones discharging the most GHG emissions to the atmosphere. Further to this principle, one of the most important commitments for developed countries is to return to emission levels of 1990 (Art. 4.2.b)

Such differentiation is made by Annexes I (industrialized and developed countries including Spain and the EU); and II (OECD countries) of the Treaty. It also provides in Art. 4.1 c) the *cooperation with developing countries* “soft” obligation (the wording uses the term *shall*) towards capacity building. This could be related to Art. 6 b) ii) establishing the need to cooperate with developing countries on the exchange of trained scientific personnel.

In second term, we find the *precautionary principle* (Art. 3.3), especially relevant to this study, as it establishes the necessity of action towards an environmental hazard, even if scientific studies cannot unanimously prove the *causal chain*.⁴⁰

As advanced, Art. 7.2 provides that States must work together through yearly Conferences in order to set goals in order to achieve the purposes of the

³⁸ [United Nations, \(1992\) United Nations Framework Convention on Climate Change, Treaty, Art. 2, Objective](#)

³⁹ Vid. Op. supr., [United Nations, \(1992\) UNFCCC Treaty, Art. 3.1](#)

⁴⁰ Vid. Op. supr., [United Nations, \(1992\) UNFCCC Treaty, Art. 3.3](#)

Framework Convention⁴¹. For instance, COP 16 in Cancún set the 2° limit to global warming objective, and the establishment of the *Green Climate Fund*, designated to be the *operating entity of the financial mechanism of the convention*⁴².

2. The Kyoto Protocol (1997)⁴³

The main objective of the KP was essentially the same as the UNFCCC: decrease the GHG emissions from member States⁴⁴. However, it proposed the means to achieve this decrease –*namely introducing the concept of reporting and verification of Emissions and a Trading Scheme*⁴⁵ (Art. 17), set a precise target – to return to preindustrial levels of GHG emissions, under 2°C as set in the 2010 *Cancún Agreement*⁴⁶ – and established a *commitment period*, from 2008 to 2012⁴⁷. The most remarkable progress from that period was that States reduced overall 24% of the emissions, surpassing the initial objective of 4%⁴⁸. A new commitment period has been established from 2013 to 2020⁴⁹.

⁴¹ Herz Steffen, (2012) *Emissionshandel im Luftverkehr*, Institut für Wirtschaftsrecht, Universität Halle, pp24

⁴² UNFCCC, (2014) *Cancún Agreements*, retrieved: 16.04.16 <http://unfccc.int/meetings/cancun_nov_2010/items/6005.php>; and *Milestones on the Road to 2012: The Cancun Agreements*, retrieved: 16.04.16 <http://unfccc.int/key_steps/cancun_agreements/items/6132.php>; and UNFCCC, (2011) *Report on the Conference of the Parties on its Sixteenth Session, held in Cancun from the 29 November to the 10 December, 2010*, pp 3

⁴³ UNFCCC, (2014) *Kyoto Protocol*, retrieved: 16.04.16 <http://unfccc.int/kyoto_protocol/items/2830.php>

⁴⁴ Böhringer, Christoph, (post 2012) *The Kyoto Protocol, A Review and Perspectives*, Zentral Europäische Wirtschaftsforschung, Universität Mannheim, pp5

⁴⁵ UNFCCC, (1998) *Kyoto Protocol, International Instrument, Article 17*

⁴⁶ UNFCCC, (2014) *Milestones on the Road to 2012: The Cancun Agreements*, retrieved: 16.04.16 <http://unfccc.int/key_steps/cancun_agreements/items/6132.php>; UNFCCC, (2011) *Report on the Conference of the Parties on its Sixteenth Session, held in Cancun from the 29 November to the 10 December, 2010*, pp 3

⁴⁷ European Commission, (2015), *EU meets Kyoto Targets under the First Commitment Period 2008-2012*, Climate Action, retrieved: 16.04.16 <http://ec.europa.eu/clima/news/articles/news_2015111803_en.htm>

⁴⁸ Morel Romain, Shilov Igor; (2014) *Ex-post evaluation of the Kyoto Protocol: Four Key Lessons for the Paris Agreement*, Climate Report, pp5

⁴⁹ UNFCCC (2014) *Making those first steps count: An introduction to the Kyoto Protocol*, retrieved: 16.04.16 <http://unfccc.int/essential_background/kyoto_protocol/items/6034.php>

Concurring with Dr. Lleboto's assessment on the KP, one may think that it has not been entirely helpful to its purposes of reducing emissions. However, it introduced the best technical options to conduct verifications, calculate emissions, or make the inventory. The "how to". But above all, its most important achievement was to do so gathering the support of most of the international community, with the exception of the United States.

As for shipping emissions Art. 2 of the Protocol, is relevant since it sets out all the sectors of activity demanding a reduction of gases. However, aviation and maritime shipping were excluded. Notwithstanding this exclusion, Art. 2.2 of the KP establishes a *mandate* to the ICAO and the IMO to "...pursue limitation or reduction of greenhouse gases...".⁵⁰

To approach this issue, it is necessary to understand the *peculiar* regime of a vessel⁵¹. A ship may belong to an entity or a person of a certain nationality, and be *registered* in a convenient jurisdiction –most likely Panama or Liberia- in terms of technical requirements and labor issues. Managed by a company of different nationality from the *Flag* and from the proprietor's, the ship calls for different ports around the world abiding to the each of the port's regulations.

Now, as for the guiding principles of the UNFCCC: CO2 emissions are to be addressed guided by the CBDR⁵², meaning that the most pollutant countries have an enhanced responsibility. From this principle lies the obligation to prepare national inventories of GHG, allocated following the logic of *territoriality*. It is uncertain the way to proceed with a vessel considering the array of links it has: Flag, proprietor, fuelling port... The situation was that challenging that they didn't know how to advance, and initially didn't allocate those emissions.

The issue was assigned to the IMO, an organization guided by the principle of "no favorable treatment" (NFT) treating ships equally regardless of their flag, sparking

⁵⁰ [UNFCCC, \(2000\) *Historical Origins of the Kyoto Protocol: Article per Article Study*, pp27](#)

⁵¹ Strong Aaron, (2011) *Tackling Maritime Fuel Bunker Emissions*, Master Thesis, pp3

⁵² Doudnikoff Marjorie, (2015) *Réduire les Émissions du Transport Maritime : Les Politiques Publiques et leurs Impacts sur les Stratégies des Compagnies Maritimes de Lignes Régulières*, Thèse Doctorale, Université Paris-Est. Pp 115-117

a new challenge: finding a balance between CBDR and NFT. According to Van Leeuwen, this clash of regimes *is a mismatch, only bringing uncertainty and confusion as for policy making.*

3. Paris Agreements (2015)

In a general view, COP 21 at Paris has not live up to the expectations⁵³. From the aviation and maritime shipping point of view, the Conference still lacks direct address to this issue⁵⁴. It is relevant to point out that the United States is a signatory State to the Paris Agreement⁵⁵, but only under the condition to establish equally responsibilities for all States, and thus, deforming the *common but differentiated* principle⁵⁶.

As for the legal form, the Paris Agreement is a Treaty, open for signature on April 22nd 2016 till April 21st 2017, requiring at least 55 signatories representing 50% of global emissions. It is expected to enter into force in 2020⁵⁷. Interestingly, the only nations having ratified the agreement are insular territories threatened by rising sea levels, triggered by climate change.⁵⁸ The EU and Spain have signed, not yet ratified.

The agreement is *legally binding*, however the wording of important commitments such as the *intended national determined contributions* (national climate action plans to be presented every 5 years) leaves flexibility as to how the

⁵³ Outreach Magazine, (2015) *Does the Paris Agreements live up to the Expectations of the Next Generation?* Retrieved: 16.04.16 < [link](#) >

⁵⁴ IMO (2015) *IMO at the COP21*, retrieved: 16.04.16 < [link](#) > ; World Maritime News (2015), *COP21 Paris Remains Silent on Shipping and Aviation*, retrieved: 16.04.16 < [link](#) >

⁵⁵ TIME Magazine, (2015) *How the US became an Unlikely Hero at the Paris Climate Conference*, retrieved: 16.04.16 <<http://time.com/4140684/obama-paris-climate-talks/>>

⁵⁶ K e r r y John, (2015) *Remarks on COP21 and Action Beyond Paris*, US Department of State, retrieved 16.04.16 <<http://www.state.gov/secretary/remarks/2015/12/250502.htm>>

⁵⁷ European Commission (2016), *Paris Agreement*. Climate Action. Retrieved: 27.04.16 < http://ec.europa.eu/clima/policies/international/negotiations/paris/index_en.htm >

⁵⁸ United Nations (2016) *Paris Agreement*, Treaty Collection, retrieved: 27.04.16 <https://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-7-d&chapter=27&lang=en>

State will implement such plans⁵⁹. Furthermore, the INDCs are just mentioned, but not described in the body of the Treaty.

A reference to the precarious situation of aviation and maritime transport was going to be made by motion of the Commission⁶⁰, however it disappeared from the order of the day. The text was even drafted, but eventually no mention was made. The Commission was quite pressured by social sectors demanding to take action regarding to the exclusion of airlines representing *millions of concerned European citizens*⁶¹. Both ICAO and IMO were present at the Paris talks, but other than *studies*, no concrete measures were taken.

B. Sectoral level: IMO

1. The IMO

The International Maritime Organization is a UN *specialized organization*. Responsible for the security and regulation of international maritime⁶², it is composed of 170 member States. The most relevant organs are: the Assembly, the Marine Security Committee, the Marine Environment Protection Committee (MEPC), and the Legal Committee.⁶³

Decisions at the IMO are taken by qualified majority, and the implementation requires States' *unanimity*⁶⁴ to be effective. This decision process tends to make

⁵⁹ Umweltbundesamt (2016), *The Paris Agreement, Analysis, Assessment and Outlook*, BRDeutschland, pp17

⁶⁰ Airport Watch (2015) *The exclusion of International aviation and Shipping from Paris COP21 deal makes 2° close to Impossible*, retrieved: 16.04.16

< <http://www.airportwatch.org.uk/2015/12/the-exclusion-of-international-aviation-shipping-co2-from-paris-cop21-deal-makes-2c-limit-close-to-impossible/> >

⁶¹ Airport Watch (2015) *17 NGOs write to European Commission to get them to push for inclusion of Aviation and Shipping in Paris Agreement*, retrieved: 16.04.16

<<http://www.airportwatch.org.uk/2015/10/17-ngos-write-to-european-commission-to-get-them-to-push-for-inclusion-of-aviation-and-shipping-in-paris-agreement/>>

⁶² Printing Bureau, Macao, *Convention on the International Maritime Organization*, Treaty, Art. 1, retrieved: 16.04.16 <<http://bo.io.gov.mo/bo/i/92/16/out02.asp#eng>>

⁶³ IMO (2016) *Structure of IMO*, retrieved: 16.04.16 <<http://www.imo.org/en/About/Pages/Structure.aspx>>

⁶⁴ IMO (2016) *Frequently Asked Questions*, retrieved: 16.04.16 <<http://www.imo.org/en/About/Pages/FAQs.aspx>>

negotiations quite lengthy⁶⁵, and like it happened with the Annex VI of MARPOL, by the time a decision is taken, ratified, and has entered into force, it is time to update it again, thus making the process rather *inefficient*.⁶⁶

Important actors in the IMO decision making process are primarily States. Although other actors such as NGO's, and prominent professionals –or associations- from the shipping sector may give their opinion, the final decision and eventual *implementation*⁶⁷ rests in hands of member parties.

2. The MARPOL Agreement

The increase of industrial activity during the late 50's and 60's⁶⁸ caused an increase of maritime transportation⁶⁹, and of hazardous practices, such as the cleaning of tankers on high seas, discharging the polluted material into the sea, or discharges of oil/oily water from engine rooms⁷⁰. Such practices added to the shipwreck of the supertanker *Torrey Canyon* in 1967 at the south of England, raised environmental awareness leading stakeholders to negotiate an agreement at the IMO in 1973, the MARPOL Agreement⁷¹. It has been ratified by over 55% of its signatories⁷² with binding effects between its parties.

The MARPOL agreement –MARPOL stands for *marine pollution*- was initially thought to prevent oil related pollution and has gradually extended to other sources of pollution by means of its *Annexes*⁷³. It is important to point out that

⁶⁵ Vid. Op. supr., IMO (2016) *Frequently Asked Questions*

⁶⁶ Vid. Op. supr, Doudnikoff, Marjorie, Pp. 92

⁶⁷ Vid. Op. supr., IMO (2016) *Frequently Asked Questions*

⁶⁸ United Nations Commission on Environment and Development, (1987) *Brundtland Report: Our Common Future*, retrieved: 16.04.16 <<http://www.un-documents.net/ocf-08.htm>>

⁶⁹ Vid. Op. supr., Brundtland Report, pp4-7

⁷⁰ Gard Technologies, (1998), *Discharge of Oil Prohibited*, Marine Disposal Technology, retrieved: 16.04.16 <<http://www.gard.no/web/updates/content/52592/discharge-of-oil-prohibited>>

⁷¹ IMO (2016), *Oil Pollution Prevention*, retrieved: 16.04.16

<<http://www.imo.org/fr/OurWork/Environment/PollutionPrevention/OilPollution/Pages/Background.aspx>>

⁷² AMSA Australia Marine Security Agency (2015), *Protocol 1978 of Marpol 1973*, IMO Documentation, retrieved: 16.04.16 <<https://imo.amsa.gov.au/public/parties/marpol78.html>>

⁷³ OSCE (2008) *IMO Marine Environment Policy*, retrieved: 16.04.16

<<http://www.osce.org/eea/30453?download=true>>

being an international Treaty, each of its annexes has not been signed by the same parties –at least not at the same time-, and has not entered into force at the time of its initial signing.

The MARPOL Treaty comprises different pollution sources occurring with *occasion of maritime navigation*⁷⁴, and is applied to all vessels flying the flag of any State party of the agreement⁷⁵. The aforementioned annexes are: i) Annex I (enforcement in 1983), *oil discharges from ships*; ii) Annex II (e. in 1987), *noxious liquid substances*; iii) Annex III (e. in 1992), *substances in packaged form*; iv) Annex IV (e. in 2003), *sewage from ships*; v) Annex V (e. in 1988), *garbage from ships*, and; vi) Annex VI (e. in 2005), *prevention of air pollution from ships*.

Annexes I and II were negotiated with the main frame of MARPOL, and were mandatory for all the parties⁷⁶. The rest of the annexes were *optional*, and their entry into force took quite a long time to be ratified by the vast majority of States. This explains why annex IV entered into force before annex V: pollution by garbage from ships had a more unified and accepted criteria rather than disposal of sewage from ships.

3. *Annex VI: Prevention of Air Pollution from Ships*

Given the relevance to the purposes of this paper, Annex VI deserves a separated consideration. Focusing on control and limit of air pollution from ships, it was adopted in 1997 and entered into force in May 2005 after ratification by the States representing at least 50% of the world's shipping tonnage.⁷⁷

It was originated by the late 80's, following a Declaration of Ministers of Environment of Coastal States of the North Sea, concerned about general pollution from shipping at the region. Further to this Declaration, Norway made a

⁷⁴ Spain, Maritime Navigation Act, 14/2014 of July 24, Article 1

⁷⁵ [IMO, MARPOL Agreement, Article 3](#)

⁷⁶ Ibid 80

⁷⁷ Ibid 80, pp9

proposal in order to include the air pollution resulting from shipping activities in the MEPC's agenda at the IMO.⁷⁸

Adopted in 1997, it entered into force in 2005, being Spain a party to the agreement, but not the EU. Its objective was at first to control Nitrogen Oxides (NO_x), Sulfur Oxides-*heavy fuels* (SO_x), ozone layer depleting substances (chlorofluorocarbons or CFCs), and combustion of polychlorated substances on board of the ships⁷⁹. In 2010-11 Annex VI suffered modifications, inter alia, *tightening the cap* of sulfurs from 3,50% to 0,5%, effective January 2020.⁸⁰ By this sulfur cap reduction, we can see a mandatory, substantial measure.

As for countering hazardous GHG emissions, in 2011 technical measures were taken, adopting a new chapter 4 to Annex VI: i) *energy efficiency design* (mandatory only for new ships); *and ii) ship energy efficiency management* (for all ships)⁸¹. Chapter 4 of Annex VI does not intend to *achieve a specific objective* by reducing GHG emissions, but inserts a series of *technical measures* whose end result is lowering the emissions to a minimum by means of *energy management*, implying an *obligation of means* rather than a specific *result*. Chapter 4 of Annex VI entered into force in 2013 after ratification of the measure, being Spain also a party.

According IMO expectations, provided the application of the measures, emission reduction ranges 25% to 75% of current discharges.⁸²

Since 2003, through Resolution A.963(23) of the Assembly, the IMO has engaged in the challenge of countering GHG emissions acknowledging them as an *issue*

⁷⁸ Vid. Op. supr., Doudnikoff, Marjorie, pp 94

⁷⁹ Ibid 84

⁸⁰ IMO (2016) *Prevention of Air Pollution from Ships*, retrieved: 16.04.16 < [link](#) >

⁸¹ [Hughes Edmund, \(2013\) A New Chapter for MARPOL Annex VI, requirements of technical and operational measures to improve the energy efficiency of international shipping, Marine Environment Division, pp2-3](#)

⁸² [IMO \(2012\), International Shipping-facts and Figures- Information Resources on Trade, Safety, Security, Environment, Maritime Knowledge Center pp39](#)

for maritime shipping and thus, passing the task to the MEPC to identify specific regulatory mechanisms to lower GHG emissions⁸³.

Resolution A.963 (23) introduces different kinds of measures, like the aforementioned *technical/operational* efficiency management tools, and also *market based mechanisms*. In order to know the operational convenience of any emission reduction policy, a process of *monitoring* and *verification* of CO2 discharges from vessels is an essential first step.⁸⁴

Recapping what has been said, the main ideas as of IMO's efforts are first and foremost, studies on GHG from ships and their impact, and the most important steps taken have been *mandatory guidelines* on energy efficiency in 2011, which entered into force in 2013, and will affect the entire fleet in at least 10 years.

As mentioned before, one of IMO's flaws is that all ships are treated according the *no favor treatment* principle, clashing with UNFCCC's CBDR principle. In my opinion, its policymaking is not likely to work, as negotiations are lengthy and implementation takes years to reach the entire fleet.

Assigning control of aviation and shipping emissions to the sectoral organizations was flawed in origin. It is impossible to achieve a global agreement given all the conflicting interests. However not all is negative, mostly when two weeks ago a decision was taken at the seat of the IMO to design a monitoring, verifying and reporting emissions tool at a global level. This initiative comes 9 months after the European Union has unilaterally enacted one of its own.

C. Regional Level: The European Union

In this section we will see on what basis the EU takes action on climate change in the area of transportation, how it interacts with the IMO in the regulatory making process and what is the Union's framework on combating GHG emissions in general.

⁸³ Ibid 84

⁸⁴ [IMO, \(2003\) Resolution A. 963\(23\)](#)

1. Context

Having an *intermediate* position between member states and IMO dealing with maritime pollution⁸⁵, the EU has helped to harmonize and enact legislation towards the protection of the atmosphere in the region.

As for shipping, the EU legislates in such areas since it holds competence on *transportation*⁸⁶ (Art. 4 TFEU) and *climate change*⁸⁷ (Art. 191 TFEU), acting through the Commission's Directorate General for *Transportation* (separated from Energy in 2010), and for *Climate Action*, having representation at the IMO on behalf of the Commission.⁸⁸

In line with the second *commitment period* advanced in the previous Part, the EU focuses its regulatory efforts towards an ambitious reduction of emissions from all transportation sectors, including shipping⁸⁹ inside the framework set by the 2008 White Paper on Transportation, whose goal is to reduce emissions 20% less than the 2008 levels⁹⁰. It may be difficult in the shipping sector, as the mandate falls within the IMO scope.

The EU is not member of the IMO; the Commission holds representation only as an *observer*⁹¹. However, there are two different ways for the EU to *influence* IMO's regulatory task: *coordination* with member states⁹², all 28 members of the IMO⁹³, and *unilateral action*.

⁸⁵ N e n g Ye Liu, (2010) *The Relations between the EU and the IMO. An Analysis*, University of Ghent, Pp. 5

⁸⁶ European Commission, (2016), *FAQs on the Competences of the EU*, retrieved: 16.04.16 <<http://ec.europa.eu/citizens-initiative/public/competences/faq?lg=en>>

⁸⁷ [Client Earth \(2010\), *Justice for the Planet, The impact of the Lisbon Treaty on Climate Change Policies*, pp 6](#)

⁸⁸ Vid. Op. supr., Neng, Ye, pp4

⁸⁹ COM (2013) 479 Integrating Maritime Transportation in EU's GHG reduction policies

⁹⁰ European Commission (2008), *White Paper on Transport*, pp7

⁹¹ IMO, (2014) *International Governmental Organizations with Observer Status*, retrieved: 16.04.16 <<http://www.imo.org/en/About/Membership/Pages/IGOsWithObserverStatus.aspx>>

⁹² Vid. Op. supr., Doudnikoff, Marjorie, pp 85

⁹³ IMO table of all member states to 2015

Erika and Prestige incidents in 1999 and 2002⁹⁴ meant a point of inflexion for the EU towards taking more stringent measures to prevent marine pollution developing the most advanced marine security policy in the world⁹⁵. This contrasted IMO's lengthy policy implementation and the clash of interests from the shipping's private sector causing the *impatience* of relevant actors such as the US⁹⁶ and the EU, and consequently enacting regulation independently from the IMO, who *catches up* after the adoption of such regulations.⁹⁷ Sulfur content of bunker fuels are an example of these conflicts.

2. Air Quality Control

a) Sulfur Dioxide Emissions

Concern about protection of the atmosphere was present in the Commission as early as 1993 with the Directive 93/12/EC regarding the sulfur dioxide emissions from certain fuels.⁹⁸ In the shipping sector, Directive 1999/32/EC was enacted to adapt to the Directive 1993/12 in order to control sulfurs on fuels for vessels⁹⁹, and most importantly, to *align* with the –then- recently adopted and in course of ratification, Annex VI of MARPOL. At that moment legislative efforts were centered on sulfurs from heavy fuels, and CO₂ from the shipping industry was not yet part of the agenda.

In 2002 the Commission passed a communication to set a Strategy to Reduce Atmospheric Emissions from Seagoing Ships, further to relevant legislation regarding the same issue in other sectors and to the Kyoto Protocol¹⁰⁰. This Strategy lead to Directive 2005/33/CE, amending Directive 1999/32 with more

⁹⁴ [International Oil Spill Conference, \(post 2002\) *The Erika vs Prestige, Two Similar Accidents, Two Different Responses, The French Case*, pp1055-1061](#)

⁹⁵ Vid. Op. supr., Neng, Ye, pp2

⁹⁶ In 1990 the US unilaterally passed the *Oil Pollution Act* following the Exxon Valdez accident, and acting out of the IMO.

⁹⁷ Vid. Op. supr., Neng, Ye, pp14

⁹⁸ [Directive 93/12/EC](#) *Relating to the sulfur contents of certain fuels*

⁹⁹ Directive 99/32/EC relating to a reduction in the sulphur content of certain liquid fuels and amending Directive 93/12/EEC

¹⁰⁰ [COM 2002/0595 A European Union Strategy to Reduce Atmospheric Emissions from Seagoing Ships](#)

stringent provisions on the content of sulfurs for marine fuels than the regulation discussed at the IMO, illustrating a clear example of the EUs unilateral approach and capacity to *influence* the IMO deterring it to follow her way on the long term.¹⁰¹ Directive 2005/33 was again to be amended in 2012, being today's Directive 2012/33/EU.

As for this issue, and following the opinion of Mr. Joaquim Cortés¹⁰², although the Union can't legislate overlapping the IMO mandate, it happens in *key issues* such as sulfur content of bunker fuel, that the EU takes a step ahead of the IMO, to be followed short after. Concurring with this opinion, Capt Javier Valencia¹⁰³ gives the example of the *double hull* demand from the US for oil tankers after the Exxon Valdez accident. The US acted unilaterally, out of the IMO enacting its own legislation for ships calling for American ports.

b) Carbon Dioxide (CO2) Emissions

First efforts to reduce CO2 emissions date back to 1991 with the *Strategy of the Commission* setting objectives to be attained in order to reduce emissions, such as keeping the levels of 1990 by 2000 through a series of measures ranging from energy efficiency to fiscal initiatives.¹⁰⁴

Further to the KP mandate, the Union developed landmark initiatives such as the Emissions Trading System (ETS): “cornerstone of the European Union’s policy to combat climate change and its key tool for reducing industrial greenhouse gas emissions cost-effectively”¹⁰⁵. The ETS represents the largest international system for trading emissions allowances in the world¹⁰⁶ with successful results in its mission to reduce CO2 emissions from the industry.

¹⁰¹ Vid. Op. supr., Doudnikoff, Marjorie, pp102-106

¹⁰² See Annex IV. Joaquim Cortés is Manager of Environment at the Port of Barcelona

¹⁰³ See Annex III. Capt. Javier Valencia is Harbor Master of the Port of Barcelona.

¹⁰⁴ [European Commission, \(1991\) Strategy to Reduce CO2 emissions Pres Release](#)

¹⁰⁵ European Commission, (2016) *The EU Emissions Trading System*, Climate Action, retrieved: 16.04.16 <http://ec.europa.eu/clima/policies/ets/index_en.htm>

¹⁰⁶ Vid. Op. supr., The EU Emissions Trading System

The EU ETS is regulated by the Directive 2003/87/EC, and covers 45% of the EU's GHG emissions on the 28 member States' manufacturing plants. Maritime shipping was excluded and in a first moment so was aviation, recalling Art. 2.2 of the KP, that refers the issue to the IMO and the ICAO.

Nonetheless, and pursuant the EU's then *climate framework*, -the Sixth Environmental Action Program of 2002¹⁰⁷ and a communication of the European Parliament of the same year stressing the need to reduce atmospheric emissions from shipping¹⁰⁸ - maritime emissions were then part of the EU climate action agenda.

This aim was later implemented through Directive 2009/29/CE, which in recital 3 of the Preamble sets a due date to the IMO in order to reach an international agreement on CO2 emissions before December 31st, 2011. Otherwise, the Commission would draft a proposal to include maritime shipping emissions in its reduction objectives¹⁰⁹.

A brief consideration should be taken regarding aviation emissions. Directive 2008/101/EC *-today Regulation 421/2014-* had foreseen its inclusion in the EU ETS, and it was incorporated for a short time lapse. Directive 2008/101 intended to include *all* flights inside and outside *-landing in EU airports-* of the EU territory, but it raised doubts of its lawfulness since it also affected flights *outside of the EU territory*¹¹⁰. The Directive was challenged in the UK by Air Transport Association of America, and a preliminary ruling of the ECJ emptied the matter: the Directive was in perfect accordance with international Law¹¹¹. However,

¹⁰⁷ [European Commission, COM \(2001\)31 *Sixth Environmental Action Program*](#)

¹⁰⁸ COM 2002/0595 A European Union Strategy to Reduce Atmospheric Emissions from Seagoing Ships

¹⁰⁹ [Directive 2009/29/EC, Amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community Preamble, rec. 3](#)

¹¹⁰ Directive 2008/101/EC

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:008:0003:0021:en:PDF>

¹¹¹ European Court of Justice, case C366-10 Air Transport Association of America

<http://curia.europa.eu/juris/document/document.jsf?jsessionid=9ea7d0f130d5f6f055960a034a37ba6db73fbc7706f5.e34KaxiLc3eQc40LaxqMbN4OchmNe0?text=&docid=117193&pageIndex=0&doclang=EN&mode=lst&dir=&occ=first&part=1&cid=804302>

international pressure¹¹² forced the Commission to stop enforcing the Directive in its original terms, and limited its effects to EU *domestic* flights and the EFTA¹¹³.

It is relevant to mention the precedent of Directive 2008/101/EC since the legal issues it raised –core of this study- regarding jurisdiction and extraterritoriality of EU rules, will be reflected in any EU legislation concerning maritime transportation emissions control: either a future inclusion in the ETS, or the latest Monitoring and Verification of Emissions *Regulation*, 2015/757/EU.

D. Preliminary Conclusions of Part II

Identified the actors at the international scene on maritime CO2 emissions control and their interaction, we find on the negative side, due to conflicting interests and a slow policy implementing process IMO initiatives appears to be a step behind the EU's, who bids for decisively regulating increasing levels of GHG emissions, in this case from shipping, but with the aviation Directive we have seen an example of its level of determination.

As for the international legislation regulating GHG emissions from the shipping sector, it is almost *nonexistent*. This phenomenon is rather new to the legislative debate and still in phase of research. The few regulations such as the technical measures dictated by the IMO do not address the issue efficiently and according to the last IMO GHG study of 2014, at the current growing pace of maritime shipping, not even technical measures will suffice to mitigate the effects of increasing GHG emissions, expected to rise between 50% and 250% by the year 2050.

¹¹² US president Obama signed the European aviation emissions trading *Prohibition* Act, and it was followed by similar statements by Russian, Chinese, and Indian governments.

¹¹³ Stopping the clock decision

III. Regulation 2015/757 (I): Analysis and Outstanding Issues

In this part we will analyze Regulation 2015/757 (the Regulation) and the immediate issues arising from its enforcement. Scope of application, the object of monitoring, the process of reporting and verification and the enforcement will be assessed. Special mention will be made regarding *competence* intra EU Law.

A. EU Competence

Prior to the analysis, it is necessary to establish the legal justification behind the regulatory action of the EU in the field of Maritime Transportation and Climate Change.

1. Article 191 TFEU *legal basis for climate change policy*

Point 4 of numeral 1 guides the EU environmental action towards *the promotion of combating climate change*¹¹⁴. This explicit declaration covers EU policies both at the external and internal levels pursuant the protection of the environment, and combating climate change. This provision *enhances* the EU action allowing the Union to influence as an international actor decision making processes in order to reduce GHG emissions.

The *ordinary legislative procedure* is of application pursuant Art 192 TFEU¹¹⁵, in order to achieve the goals of Art 191.

2. Article 4 TFEU *Competence on Transportation and Environment*

Conferral of competence in the areas of Transportation and Environment is of *shared* nature. This means that legislation shall be taken by both the Union and the Member State. This last feature defines the *intensity* of the Union's involvement in the matter: a shared competence implies a *medium involvement*,

¹¹⁴ European Union, (2012) Consolidated Version of the Treaty on the Functioning of the European Union, Article 191

¹¹⁵ Vid. Op. supr., *Consolidated version of the TFEU*, Article 192

considering the full extent of exclusive competence and the marginal extent of a *supporting* one¹¹⁶.

It also enables the Union to engage in the elaboration of *preparatory documents* containing guidelines and objectives that pave the way for future legislative acts, such as the Regulation. Examples of such documents are the *Common Transport Policy (2000)*, and in applied to shipping, the *Green Paper on Maritime Policy (2006)*, among others¹¹⁷.

3. *Legislative Act chosen*

Regulation 2015/757 as its name depicts, is a *regulation*. This is of legal importance, considering that the legislative instrument chosen to regulate *environment* is ordinarily a *Directive*¹¹⁸, as it is a shared competence.

The main difference between both is that a *regulation unifies* criteria and a precise course of action around any given issue. This means that in all 28 member States, regardless of their legal culture, the Union imposes its rules, and the *means* to achieve an objective.

In contrast, a *Directive harmonizes* criteria, keeping in mind the differences in the legal culture of member States, establishing a common goal, which is to be achieved *regardless of the means* used by the States.

This situation portrays the apparent unanimity and accordance of the member states about this regulation. This accordance is confirmed by the fact that the *proportionality and subsidiary* assessment tool, Art. 5, Protocol 2 TFEU¹¹⁹, has not been called for, and this measure perfectly adapts to the concept of

¹¹⁶ [Eskema, \(post 2008\) *European transport policy analysis*, Pp 2](#)

¹¹⁷ For further documentation, see <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32009L0029>, Energy Package, and http://ec.europa.eu/clima/policies/strategies/2020/documentation_en.htm, Amending Directive 2003/87, includes reference to shipping and aviation.

¹¹⁸ Cfr. Part Two, the European Union

¹¹⁹ Vid. Op. supr., Consolidated version of the TFEU Article 69, see also Protocol 2. Tool used by national parliaments to assess the proportionality of any measure taken in observance of the conferral of a shared competence. Novelty of the Lisbon Treaty.

proportionality: its means are sufficient to achieve the desired results; and no other action from the member States would be in the condition to reach said results.

B. Objective

The primary objective is to establish a CO₂ monitoring tool, calculate the yearly emissions by focusing on data already collected by the ships¹²⁰ regarding energy efficiency and fuel consumption, via certified verifiers of the sector.

This will allow knowing with precision the degree of efficiency in the usage of fuels by vessels, and also enabling ship operators to manage their fuel consumption in a more efficient manner, as they will be the first ones to devise a monitoring plan and to have the data. The implementation of the MRV measure alone will help ship operators to a better usage of fuel and an immediate emission reduction of approximately 2%¹²¹.

Also, as for decision making organizations, they will be able to have an informed debate on what to do with an already existing *pilot* experience conducted by the EU. Long journeys start with a single step.

C. Subjects and Obligations¹²²

1. The ship/company

a) Before the Monitoring Year

The *legal obligation* of the vessel will be firstly to design a *monitoring plan* of what the emissions are expected to be. Secondly, have the plan *verified* to see that it is in line with the Regulation technical requirements.¹²³

¹²⁰ European Union, (2015), Regulation 2015/757, on the Monitoring, Reporting, and Verification of carbon dioxide emissions from maritime transport, and amending Directive 2009/16/EC, Recital 21

¹²¹ DNV GL Verifiers, (2015) Preparing for the MRV Regulation, pp2

¹²² European Commission, (2013) COM 2013/480, Proposal for a Regulation on MRV of carbon dioxide emissions from the maritime shipping, pp7, Flux Chart.

¹²³ Vid. Op. supr., Regulation 2015/757, Art. 4

b) During the Monitoring Year

Conduct the *reporting* of the emissions for the Monitoring Year. Once this reporting has taken place, in case the ship complies with the Regulation requirements, it must surrender the *verified* report of emissions to the Commission –the Agency established by it- and to the Flag State of the Ship¹²⁴.

In case requirements are not met, then the entity of the ship must revise them, but nothing is said of the *consequences* of not complying with the annual *plan* or with said *regulation's requirements*¹²⁵.

An obligation of *cooperation*¹²⁶ with the verifier is also established, by surrendering any necessary information in order to ease up its verifying task. (Art. 15)

2. Verifier¹²⁷

a) Before the Monitoring Year

On a second level, the obligation of the verifier will be that of *assessing* the monitoring plan established by the company. The assessment consists on checking that it meets the Regulation requirements. Shall the monitoring plan not meet such requirements, it must be redrafted¹²⁸.

b) After the Monitoring Year

Once the reporting has been conducted by the *company*, verifiers must *corroborate* it adjusts to the monitoring plan¹²⁹. If the report meets the own company's plan criteria, the next step will be verifying if the report has been sent

¹²⁴ Vid. Op. supr., Regulation 2015/757, Art. 10-12

¹²⁵ Vid. Op. supr., COM 2013/480, Proposal for a Regulation on MRV of carbon dioxide emissions from the maritime shipping

¹²⁶ Vid. Op. supr., Regulation 2015/757, Art. 15

¹²⁷ Vid. Op. supr., COM 2013/480, Proposal for a Regulation on MRV of carbon dioxide emissions from the maritime shipping, Flux Chart

¹²⁸ Vid. Op. supr., Regulation 2015/757, Art. 13.1

¹²⁹ Vid. Op. supr., Regulation 2015/757, Art. 13.2

to the Commission and the Flag State¹³⁰. In case of compliance, the verifier issues a *document of compliance*¹³¹, that will have to be surrendered when calling a EU port.

As stated in Art. 14, the verifier must undertake its tasks observing the principles of *bona fide* and impartiality as for the data collected, and in no case –quite logically- are the entity behind the ship and the verifier to be related.

3. *Public Authorities*

a) *Flag State and the Commission/Authority designated*

Receive the *verified report* from the vessel’s company when the reporting period has finished. Pursuant Art. 21, publish the information compiled of the last reporting period.

b) *Port State Authority*

The Port State Authority of the member states must check the *compliance document* previously issued by the verifier. This is an obligation of the vessel’s company. Non compliance gives place to *sanctions* by the Port State Authority¹³².

It is also expected from the Port State –according to Art. 19- to ensure compliance of the Regulation, that is, to ensure that the ships calling for one of its ports carries the compliance document (Art 18). Shall the ship be inspected –if necessary- for any reason not connected with the aim of this Regulation, the Port State must enforce compliance of Art. 18.

D. Scope of Application: Space, Time and Ships

1. *Geographic Scope*

As laid out in Art. 1, the geographical scope of application of the Regulation involves ships “arriving at, within, or departing from ports under jurisdiction of a

¹³⁰ Vid. Op. supr., Regulation 2015/757, Art. 11

¹³¹ Vid. Op. supr., Regulation 2015/757, Art. 18

¹³² Vid. Op. supr., Regulation 2015/757, Article 18-20

member State”. In other words, the *entire distance* is covered intra EU jurisdiction, but also the fraction of the journey *outside of the member State’s Economic Exclusive Zone (EEZ)*, that is, in *international waters*.

Art. 2 further explains the geographic scope by leaving clear that the CO2 reporting must take place *from the last port of call*, (incoming) to the port in the member State’s jurisdiction. The expression “from the last port of call” includes ports out of the EU jurisdiction. *Departing from* (outgoing) may also imply that part of the voyage takes place outside of EU jurisdiction.

2. Timeframe

As for the *monitoring period*, as advanced lines above, it takes place during a calendar year. If voyages take place for a year period in two different calendar years, the previous one will count¹³³.

The first monitoring period of the Regulation will start on January 1st, 2018¹³⁴, but obligations for the *companies* start much earlier:

- By 31st of August 2017, the monitoring plans must be ready and submitted to the verifying entities (Art. 6).
- 1st of January 2018, starting of the first monitoring period for the *per voyage* and *annual* monitoring (Art. 8).
- 31st of December 2018, end of the first monitoring period.
- 30th of April 2019, companies must have submitted by then the emissions report to the Commission (or the Authority designated, most likely the EMSA), and the Flag State. (Art. 11)
- 30th of June 2019, from this date onwards, the obligation to carry and surrender when requested the *compliance document* will be on effect. (Art. 18)

¹³³ Lloyd’s Register, (2015) European Union Regulation on MRV of carbon dioxide from Ships, A Lloyd’s Register Summary, pp2

¹³⁴ Vid. Op. supr., Regulation 2015/757, Art. 8

- Also on 30th of June 2019 and every 30th of June onwards, the Commission will make public the information specific to each ship regarding fuel consumption, CO2 emissions, and technical efficiency, among other parameters. (Art. 21)

There are *outstanding issues* to be covered by the Commission by the 31st of August 2017, which will be discussed advanced in this section.

3. Ships

The present Regulation will be applied to vessels, whose tonnage equals or exceeds 5000 GT¹³⁵. The ship's flag or activity is irrespective to the application of the Regulation, it will be applied either to *passenger* or *cargo* ships as long as they fall into the gross tonnage category. (Art. 1)

Considering the tonnage limit, it would be interesting to state that if 5000 tons and plus will be covered by Regulation 2015/757, the State should take responsibility of less than 5000 tons, but still contributing to GHG emissions.

However, three exceptions count: rudimentary ships not powered by carbon, governmental ships (military and government) and fishing ships are excluded from the Regulation's scope. (Art. 1.1)

CO2 emission verification will take place by assessing different parameters from the point of view of the *ship's functioning*. Date and port of departure as well as of arrival will be taken into account. In relation to this, the time spent on the sea, including the time in motion and at berth¹³⁶, the fuel consumed, the emissions consequently produced, and the nature of the cargo transported will also be covered. (Art. 9)

It is also a legal obligation (Art. 18) for the ship to carry always the *compliance document*, and to surrender it if requested by the enforcer.

¹³⁵ As set by the IMO International Convention on Tonnage Measurement of Ships, 1969

¹³⁶ Situation where the ship moors at the dock and safely floats on the water.

E. Enforcement and Non Compliance/Sanctions

1. Preliminary Considerations

Enforcement of the Regulation is assigned to the Port State Authority, as laid out in Recital 29 and Art. 20. Instruments to such enforcement are Directive 2009/16/EC, of Port State Control, which enables the inspection of ships, and the request of its *documents*; Directive 2009/21/EC, regarding compliance of Flag State requirements, when this Flag State is a *member State* of the Union; and member Port State's internal penalty regulations. In view of the lack of provisions in Regulation 2015/757 further to who is responsible for the enforcement and how the penalty regime will be enforced, it will be focused in light of Spanish port legislation.

The Regulation establishes also the *amendment* to Directive 2009/16/EC, in order to allow request of the *compliance document* by Port State Authorities through the conduction of an inspection, as set out by Art. 13 of the Directive 2009/16. The compliance document of Regulation 757 will be part of the documents listed on Annex IV. (Recital 29 of the Regulation)

2. Inspection Competence

In Spanish Law, the legal act setting the governing rules to allow an inspection of the ship on the terms established by the Regulation, is the *State Ports and Merchant Shipping Act*¹³⁷. Specifically Art 263¹³⁸, confirming the *inspection* of ships as one of the Spanish Ministry of Public Works¹³⁹, competences. And Art. 268¹⁴⁰, establishing the competence of the Port's *Harbor Master*¹⁴¹ a) governing the grant or denial of port entry and expulsion, and; f) governing the conduction of inspecting tasks.

¹³⁷ Spain, (2011) *Consolidated Version of the State Ports and Merchant Shipping Act* (Texto Refundido de la Ley de Puertos del Estado y Marina Mercante)

¹³⁸ Ibid 146, SPMS Act, Article 263

¹³⁹ In Spain, the Ministry of Public Works (*Ministerio de Fomento*) holds the competence for Maritime Administration of Ports of General Interest (such as Barcelona, or Tarragona)

¹⁴⁰ Ibid 146, SPMS Act, Article 268

¹⁴¹ Official Authority in charge of the Port's rules enforcement (*Capitán del Puerto*)

3. *Non Compliance/Sanctions*

Recital 31 of the Preamble and Art. 20 define non compliance in two senses: failure to obey the MRV Regulation, and *failure to comply with the monitoring requirements for two or more reporting periods*.

a) *Failure to Comply*

For the first case, the Regulation leaves the matter to the Port State's own legislation, establishing the obligation to "set up a system of penalties for failure to comply..." (Art. 20.1) From the wording of this provision, it is unclear as if it implies the creation of a new set of rules, or the use of the existing ones.

For legislative economy sake, in the Spanish case the aforementioned State Ports and Merchant Shipping Act already institutes rules governing the penalty framework for *non compliance* with an inspection. Art. 307 k) identifies such conduct as a *serious infringement*, penalized in Art. 312.2.b) with fines up to 180.000 Euros.

In order to assure the execution of the fine, the Public Administration holds the privilege of *compulsory execution*, ascertained both in Art. 318 of the State Ports and Merchant Shipping Act, and in the Public Administration Legal Framework and Common Administrative Proceeding Act, 30/92.

b) *Reoccurrence*

Failure to comply for two or more reporting periods has a different framework¹⁴². In this case the Regulation *mandates* that two or more *consecutive* failures to comply shall be punished with either the denial of entry into port or the expulsion from it by the Port State until the obligation of surrendering the *compliance document* is fulfilled.

¹⁴² Vid. Op. supr., Regulation 2015/757, Art. 20.3

Interestingly, the aforementioned State Ports and Merchant Shipping Act punishes reoccurrence in Art. 312.4 with the *sum of all consecutive fines*, and numeral 5 even foresees the *detention* of the vessel in Port.

Prima facie, and if no new regulation were to be created by Spain, this situation would fall into the scope of the Spanish SPMS Act, whose provisions could be considered more strict than the Regulation's: in case of reoccurrence, the *company* will have to pay a fine, and run the risk of having the ship detained. However, as said before, the punishment established by the Regulation is explicitly the expulsion from the Port (Art. 20.3), and *covertly* the *prohibition* from entering EU ports to all infractors.

F. Relevant legal Considerations

Although the Regulation is already in effect, there are a number of issues still pending of specific regulation by the Commission. The Regulation advances itself the resolution of these issues through *delegated acts* (Recital 35 of the Preamble and Art. 23). The most important matters have been laid out in the following study.

1. Templates¹⁴³

Templates are an essential instrument for the Regulation to work. They are the means by which verifiers will communicate with the Commission to render the reports on CO2 emissions. Very little has been said, even on the technical side, of what the contents of the templates will be. As for the *document of compliance*, for instance, basic information such as the Flag State, last Port of call, IMO number¹⁴⁴, among others have already been mentioned (Art. 17).

Templates are necessary for the monitoring plan (Art. 6), for the emissions report (Art. 12), and no less, to the verifier in order to prove compliance of having followed the verifying procedures (Art. 17).

¹⁴³ [European Commission \(2015\), *Expert Group on Cargo Carriers and Templates*](#)

¹⁴⁴ IMO (2016), *IMO Identification number schemes*, retrieved: 16.04.16

<<http://www.imo.org/en/OurWork/MSAS/Pages/IMO-identification-number-scheme.aspx>>

Recital 36 of the Preamble introduces that Templates will work in the context of an *automated system*, but once again the *how will it work* is delegated to the Commission through *Comitology* (Regulation 182/2011/EU)

2. Verifiers

Article 14 establishes *general principles* guiding the verifying tasks. However, there is no reference as to how the verifiers will be *accredited* but the referral to regulation 765/2008¹⁴⁵. Art. 4 of Regulation 765/2008 establishes that *each* member State shall appoint a national accreditation body, then the nomination will fall within the national scope of member States.

Nothing has been said in case the verifier makes a *mistake*, or the ship's company does not agree with the verifier's assessment, which may be a quite common situation. It is not known kinds of remedies are set for such a case. The most logical answer would be administrative remedies, followed by judicial, but the Regulation leaves it to the implementation acts to be taken by the Commission.

a) The EMAS Proposal

On this matter and in view of existing EU environmental legislation we consider that Regulation 1221/2009/EC¹⁴⁶ (the EMAS Regulation) would be applicable to the situation, as it may cover for the verifier process, as laid out on Chapter V of said regulation. Furthermore, pursuant Art 44 of EMAS, it would be integrated in the policies of the Union.

Comparing both systems, EMAS Regulation proves to be a more specific method for environmental policies, rather than 765/2008, that pursues *general situations*. Moreover, even if Regulation 2015/757 were not to be applied, the EMAS Regulation could be of application as it works on a *voluntary basis*.

¹⁴⁵ Regulation 765/2008, setting out the requirements for accreditation and market surveillance relating to the marketing of products and repealing Regulation (EEC) No 339/93

¹⁴⁶ Regulation 1221/2009/EC, on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS)

b) Regular Maritime Practice

According to the Barcelona Harbor Master's opinion, after the regular maritime practice, classifying societies –only 5 or 6- have a very good reputation in the sector regarding verification competences. In large part this reputation is due to a good knowledge of the maritime business and needs.

For this reason, he considers that classifying societies most likely will take the verifying responsibility within the scope of Regulation 2015/757.

3. Final Considerations: IMO global MRV

Very recently, the IMO's MEPC met in London to negotiate the establishment of a global MRV regulation, that intends to be *mandatory*, and articulated as an amendment to the MARPOL agreement¹⁴⁷. The sessions took place from the 18th to the 22nd of April, 2016 –day of the Earth¹⁴⁸ - and concluded with the decision of drafting such amendments and prepare a debate for their next MEPC meeting in order to instrument an agreement.

It is worth mentioning that part of the intended system keeps privacy *by default* of the ships when reporting information to the IMO¹⁴⁹, whereas Regulation 2015/757 initially mandates that reports must be made public by the Commission, and foresees privacy as an *exception*¹⁵⁰.

Be as it may, Regulation 2015/757 establishes in Recital 36 that it will *adapt* to any MRV regulation taken at a global scale by the IMO, and declares that it will serve as a *model of implementation*. Considering the time it takes for IMO

¹⁴⁷ IMO (2016), *Organization agrees mandatory system for collect ship's fuel consumption data*, MEPC 69, retrieved: 27.04.16 <<http://www.imo.org/en/MediaCentre/PressBriefings/Pages/11-data-collection-.aspx>>

¹⁴⁸ United Nations (2016), *International Mother Earth Day, April 22*, retrieved: 27.04.16, <<http://www.un.org/en/events/motherearthday/>>

¹⁴⁹ Vid. Op. supr., IMO to set mandatory system to collect fuel consumption data

¹⁵⁰ Vid. Op. supr. Regulation 2015/757, Article 21.3

resolutions to take *real* effect once ratified¹⁵¹, it is very likely that the EU MRV will start acting before any IMO measure.

G. Preliminary Conclusions of Part Three

The Commission has put an important effort on the adoption of this Regulation, reflecting the Union's intention to address shipping GHGs. However it must be stated that the Regulation is rather *incomplete*, giving the sensation that its ultimate objective, aside from emission considerations, was to pressure the IMO to act rapidly towards complying with the KP mandate. Perhaps the pressure did have an effect, but the lengthy process of implementation of IMO measures will make the complete implementation of the EU MRV Regulation necessary, and thus, the outstanding issues must be solved timely.

¹⁵¹ Cfr. Part Two, the IMO. IMO energy efficiency measures, for example, were taken in 2011, ratified and entered into force in 2013, and it is estimated that it will take 10 years to reach all the fleet due to a vessel's lifespan.

IV. Regulation 2015/757 (II): Extraterritorial Application

In Part Three, we have covered the most relevant features resulting from the application of the Regulation, one of them being the *geographical scope*. In this last section the lawfulness of the Regulation as for its *extraterritorial* application will be assessed. This study will take place in light of general Public International Law instruments, such as the United Nations Convention on the Law of the Sea (UNCLOS), the framework analyzed in Part Two, and the theory of *jurisdiction* and *extraterritoriality*, as well as case law relevant to the issue.

A. Jurisdiction and Extraterritoriality

1. The Territoriality Principle

Even if the obligation of surrendering the compliance document (Art. 18 of the Regulation) is enforced once calling an EU port, it must be considered that the monitoring and reporting of CO₂ emissions must take place during the entire voyage, starting at the last port of call. If this last port is an intra EU port, then the measure would be covered by general EU Law, given the general obligation of EU member States to obey and enforce it.

However, the problem comes when the last port of call is located extra EU territory, that is, out of its jurisdiction implying an infringement to the principle of territoriality¹⁵². This principle establishes the capacity of a State in order to enforce its regulation inside its territory, with the sole limit of a third State's sovereignty¹⁵³.

This allows us to construe that jurisdiction is linked to territory. It is possible, in certain cases to exercise jurisdiction beyond the territory, the so called extraterritorial jurisdiction. It would happen by means of prescriptive jurisdiction,

¹⁵² Ibid 44, Herz, Steffen *Emissionshandelssystem in Luftverkehr*, pp26, 27

¹⁵³ K ö n n i g Doris, M o r g e n s t e r n Lutz, (2009) *CO₂ Emissionen aus dem Schiffsverkehr*, Bucerius Law School, Hamburg, pp8

defined as a connection between the State willing to assert jurisdiction, with the specific case –reporting CO2 gases- beyond the State’s borders¹⁵⁴.

2. *Theory of Jurisdiction*

Further to the preceding point, although the State is bound to assert its jurisdiction inside of its borders, international case law grants that not only it is possible, but desirable that a State asserts jurisdiction beyond its limits. In the ruling of the *SS Lotus* in 1927¹⁵⁵, the International Court of Justice admitted that it would not be convenient to understand the limits of the State in order to exercise its jurisdiction outside of its borders as a general prohibition. On the contrary, it admits that in some cases it might apply, and it would be restricted only by prohibitive rules¹⁵⁶. This takes us to the known principle: what is not forbidden is permitted.

Considering such ruling, it would be possible to ascertain jurisdiction from the EU when enforcing the provisions of Regulation 2015/757 regarding geographic scope. On the negative side, it is also true that States not agreeing through a previous international instrument¹⁵⁷ are not bound by EU rules directly. However, there is a possibility to obtain compliance from a third State vessel: through the State’s right to deny or grant access to its ports.

3. *Port State Jurisdiction*

Port administration by official authorities may be one of the most clear exerts of sovereignty and jurisdiction by a State. Port jurisdiction is defined by the capacity of the State to regulate and enforce rules in order to grant access to its ports¹⁵⁸. In

¹⁵⁴ Ibid 44, Herz, Steffen *Emissionshandelssystem in Luftverkehr*, pp26, 27

¹⁵⁵ *SS Lotus*, France v. Turkey 1927, as cited by Heering Moniek, (2012) *Legality of a future EU Emission Trading Scheme for Shipping*

¹⁵⁶ As cited by BRDeutschland, (2010) *Integration of the Maritime Transport into the European Emissions Trading System*, Umweltbundesamt, pp82

¹⁵⁷ Heering Moniek, (2012) *Legality of a future EU Emission Trading Scheme for Shipping*, pp 35

¹⁵⁸ Heering Moniek, (2012) *Legality of a future EU Emission Trading Scheme for Shipping*, pp36

consequence, the powers held by the Port State are those of opening or closing its ports to incoming or outgoing ships¹⁵⁹.

The port state may discretionally, with the purpose of protecting the environment or the safety of maritime navigation, make use of its right of closing the port by expelling a vessel or denying entrance to a ship¹⁶⁰. Sole restraint to this apparently unlimited power lies on the possible infringement of multilateral agreements signed by the Port State¹⁶¹. Given this dichotomy, we can conclude that access to port is a privilege –it is an exertion of sovereignty–, rather than a right, however nuanced by Treaties and international customary law.

Furthermore, the European Court of Justice (ECJ), on its ruling of December 2011 on the case 366/2010 of Air Transportation Association of America v. Secretary of State for Energy and Climate Change (case 366/10) states as one of the key arguments of the case that any aircraft landing on a EU airport was bound by EU rules, adjusting the case to the territoriality principle. This rule applied to the enforcement of the Regulation, implies that any ship calling for an EU port, must abide and surrender the document of compliance. Moreover, in exercise of its freedom of calling a port, the vessel –the entity behind it- automatically submits to the port's legal framework¹⁶².

4. *Jurisdiction under UNCLOS*

The United Nations Convention on the Law of the Sea (UNCLOS) was signed at Montego Bay in 1982. Spain and the EU are member States of the Convention.

¹⁵⁹ Molenaar 2007a, as cited by BRDeutschland, (2010) *Integration of the Maritime Transport into the European Emissions Trading System*, Umweltsbundesamt, pp82

¹⁶⁰ Cfr. Part Three, enforcement/sanctions

¹⁶¹ Johnson (2004) as cited by BRDeutschland, (2010) *Integration of the Maritime Transport into the European Emissions Trading System*, Umweltsbundesamt, pp82

¹⁶² McDougal M.S & Burke, as cited by Heerings, Moniek, pp36

UNCLOS is also known as the constitution of the oceans¹⁶³, establishing a legal framework for subjects and situations occurring at the seas.

Further to this framework, we will present the most important features regarding the application of the Regulation in light of UNCLOS provisions:

a) Maritime Limits of the States' Jurisdiction

As aforementioned, states hold competence and assert jurisdiction within their territory. Coastal states have some extent of jurisdiction over the adjacent waters. Full jurisdiction over territorial waters, whereas only the right of economic exploitation on the Economic Exclusive Zone, and no jurisdiction at all at the high seas. This implies that enforcement of the territorial scope of the Regulation may be conflictive, as the State holds no jurisdiction on the high seas.

b) Flag State Principle

Under this principle, the State of the flag flown by the vessel holds jurisdiction when it is on the high seas. This explains the fact that the ship is always legally covered no matter where it is located: at the state of the flag, under foreign jurisdiction, or at the high seas. When at territorial waters, then the Coastal State may assert jurisdiction, with the sole limit of the EEZ. This explains the conflict arising if the Regulation is enforced regarding the full extent of the voyage, when this has taken place outside of EU jurisdiction.

c) Right to innocent passage

As stated by Ringbom¹⁶⁴, ships merely passing through the maritime zones of the EU will not be covered. Innocent passage means the mere act of pass through the waters of a coastal State without calling a port. Since the context of a passage is

¹⁶³ H e e r m e l i n g Claudia, et al., (2015) *Sailing into a dilemma: An Economic and Legal Analysis of an EU Trading Scheme for Maritime Emissions*, Transportation Research, Elsevier, pp42

¹⁶⁴ R i n g b o m Henrik, (2011) *Global Problem – Regional Solution? International law Reflections on EU CO2 Emission Trading Scheme for Ships*, The International Journal of Marine and Coastal Law, Martinus Njuhoff Publishers, pp619

brief and does not intend to moor or use port services, it could be concluded that innocent passage will not be affected by the Regulation.

Once assessed the enforcement of the Regulation according to recent judgments, jurisdiction theory, and the Law of the Sea, we will finally assess the *justification* for taking action.

B. Justification of the EU measures

1. Nature of Kyoto Protocol's Art 2.2 Mandate

Almost 20 years have passed after the Kyoto Protocol was signed. Most experts agree that very little has been done ever since, and even less in the shipping and aviation sector. Although the IMO has conducted great efforts in order to regulate GHG from ships at a global level, in 19 years these efforts are limited to three –lengthy- GHG studies, resolutions from the Assembly recommending the regulation of such gases, and mandatory *guidelines*, of a technical nature and establishing no limit to maritime emissions¹⁶⁵.

Art. 2.2 of the Kyoto Protocol establishes a mandate for the signatories of the Protocol, to *cooperate through* the ICAO and the IMO. From the wording of the provision, those organizations are not the *sole* and ultimate instrument to comply with the KP in the aviation and shipping sector. It cannot be inferred the existence of a *prohibition* to act out of the IMO and ICAO, rather an obligation of cooperation in good faith. Given the situation that the cooperation hasn't worked as it should, is it fair that an economic block, in better shape to regulate and implement, takes regional action creating momentum to go further in the global level.

Further to this, *opinion* of Advocate General Juliane Kokott¹⁶⁶ on the case 366/10 backs this thesis by saying that if it was the international community's intention to establish an *exclusive* mandate to the ICAO –and by extension the IMO-, States

¹⁶⁵ Cfr. Part Two, the IMO

¹⁶⁶ European Court of Justice, (2010) *Opinion of Advocate General Kokott, on case C366/2010, The Air Transportation Association of America and Others*, para 177, 182

would have said so in the wording of the provision. Finally, and following a similar line of reasoning, there is no *conferral of competence* from the States to the ICAO and IMO, but a mere *understanding* and cooperation in good faith. The practical consequence would be that better prepared States would use their capacity to fulfill the Kyoto Protocol's objectives.

2. *CBDR Principle*

This principle establishes same responsibilities for all nations of the world, but enhances those of developed countries in regard with developing countries¹⁶⁷. In the case of the EU, in the Impact Assessment document for the Regulation, the Commission refers to advances and reduction in CO2 emissions as of now, however need for shipping will grow in the upcoming years, placing the EU among the highest emitters of CO2 in terms of maritime transportation¹⁶⁸. This offers a clear example of the need for a *differentiated* approach given the different causes of the problem, but with the same global effect.

Moreover, the EU has admitted indirectly the importance of this principle in the past. Preparing for the Copenhagen COP in 2009, the Commission issued a communication calling for a global effort on combating CO2 emissions except for the least developed countries, being the smallest source of CO2 emissions¹⁶⁹.

3. *Similar Protection of a Good of the Commons: Poulsen v. Diva Navigation*

Regulation 3094/86¹⁷⁰, as early as 1986 already foresaw the protection of a good of the commons. In the case of *Poulsen v. Diva Navigation*¹⁷¹ in 1992, the ECJ assessed Art. 6 of that Regulation, which compelled fishermen to return to the

¹⁶⁷ Cfr. Part Two, the UNFCCC

¹⁶⁸ European Commission, SWD(2013)237 *Impact assessment, Accompanying the document Proposal for a Regulation on MRV of carbon dioxide emissions from maritime shipping*, pp6

¹⁶⁹ [European Commission, COM \(2009\) 39 Towards a Comprehensive Climate Agreement in Copenhagen pp5](#)

¹⁷⁰ European Union, (1986) Council Regulation 3082/86 *Providing for certain fishery resources technical measures*. Art. 6

¹⁷¹ European Court of Justice, (1990) *Poulsen v. Diva Navigation*

ocean whatever fish stocks captured in certain protected areas. The controversial issue¹⁷² in this case was that the ship was registered in Panama, rather than in the EU, and as a foreign flag vessel, it was not to be affected by an EU regulation, for actions that took place outside of the EU jurisdiction.

It is important to mention that the EU is member of the Convention for the Conservation of the Salmon in the North Atlantic Ocean¹⁷³. Indeed, being part of such an instrument gives more force to the Union's legislative extraterritorial reach, however it must be acknowledged that in part, the spirit of the rule was the same of Regulation 2015/757, the protection of a good of the commons.

C. Preliminary Conclusions of Part Four

It is difficult to positively assess the powers of the EU when enforcing the Regulation beyond its boundaries. As for the ECJ ruling in case 366/10, the fact that a ship calls an EU port would be enough to indisputably apply the EU framework to the ship. In contrast, a generally accepted international instrument like the UNCLOS clearly establishes the areas where coastal states may exercise jurisdiction. Among the two positions, the most *doctrinally peaceful* appears be that of the UNCLOS.

¹⁷² De B e e r e Gert, R y n g a e r t Cedric, (2011) *The ECJ Judgment in Air Transport Association of America And the International Legal Context of the EU's Climate Change Policy*, European Foreign Affairs Review, pp 406

¹⁷³ Vid. Op. supr., De Beere, Ryngaert pp408

V. Conclusion

Identified the problem of shipping emissions, legislation has been enacted addressing the issue with more or less accuracy. In light of the legislation studied, and the dynamics of the relations between policymakers, the following concerns have been identified, i) impossibility of reaching an effective global agreement; ii) clash of principles between the UNFCCC and the IMO; iii) lack of conferral of competence from the States to the IMO; iv) implementation improvements of Regulation 2015/757, and; v) Extraterritorial overreach of the Regulation 2015/757.

1. The first problem that surfaces is the lack of capability to reach a global agreement. Throughout the paper we have seen this problem repeating itself with global policies to address emissions, with IMO instruments, and it confirms itself with the latest Paris Agreement. The lack of commitment, conflicting interests and consequent disparity of views will project itself over any instrument or piece of legislation and flaw any attempt to resolve the issue at an international level.
2. In my opinion this has happened with the Kyoto Protocol regarding shipping emissions. From a political climate point of view, the solution seemed reasonable: as for the transnational nature of the legal regime of a vessel, the best fitted entity to regulate shipping emissions should be the IMO.
3. From a legal point of view however, such mandate suffers from a crippling flaw in origin: the UNFCCC is guided by the CBDR principle, acknowledging an enhanced responsibility for large contributors of emissions. In contrast, the IMO is guided by the no favorable treatment principle, giving a same treatment to all vessels, regardless of their Flag State.
4. Moreover, regarding the Flag State, the IMO's argument to support the no favorable treatment principle is that most of the fleet is registered in developing countries. This is truth, and stands a rigorous legal reasoning. However, in light of the economic data offered in this essay, it must be recalled that over 40% of the world fleet and 39% of the cargo is controlled by developed States.
5. In view of the aforementioned, and regarding the regulatory task taken by the IMO, which in 20 years has produced three -lengthy- GHG Studies and

guidelines towards energy efficiency of ships, not setting any limit to emissions in a decisive manner, complying with the Kyoto Protocol mandate, we must conclude that any regulatory attempt will risk to be contradictory, ineffective, and not timely, as the IMO –a technical organ- does what it can inside of a flawed mandate.

6. Indeed, we must recall as well the nature of the IMO mandate, which in my view calls for a bona fide cooperation through the IMO, rather than an exclusive mandate. Not implying any conferral of competence from the ratifying States of the Kyoto Protocol to the IMO, it is possible and desirable that policymakers committed to climate change such as the EU take a step ahead and lead by example, mostly when its task may serve as an example and incentive to the IMO's regulatory efforts.
7. As for the new Regulation 2015/757, the EU confirms its commitment to climate change policies in the region, although it raises legal concerns of two sorts: i) implementation improvements, and; ii) extraterritorial overreach.
8. Recalling the pending verifier's appointment method in detail, and inspiring in already existing and enacted EU legislation, we suggest the use of Regulation 1221/2009/EC on the voluntary participation in an eco-management audit scheme (EMAS Regulation). Since Regulation 2015/757 is an environmental policy, the application of the EMAS Regulation would be an exercise of legislative economy, serve the aim of Regulation 2015/757 as per the verifier appointment, and would integrate EMAS into other policies and instruments of the Community, as laid out by Art. 44 of the EMAS Regulation.
9. Regarding the initial questions of this essay, the Commission has proven to be reasonably efficient and the pending issues of the Regulation will be solved timely, and we wish to stress our suggestion on Recital 8 for that matter.
10. However, as for the second question, the new Regulation is not likely to withstand a validity test outside of member state's waters, and will be most probably bound to be challenged like Directive 2008/101. Extensive interpretation of the nexus, if not covered by a general Treaty is not likely to have the same effects as in ECJ's ruling *Diva Navigation*.

11. Further to this consequence, the atomization of jurisdiction will carry as an outcome an increased uncertainty and international friction between economic blocks, as every important actor will assert jurisdiction. Then, even if necessary, the new Regulation will not serve for its original objective. Rather, as Recital 34 of the Regulation states, will serve as a model of implementation for the IMO, confirming one of the central ideas of this study: when the EU takes the first step, the IMO follows.

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Annexes II, III, and IV

Annexes II, III, and IV contain interviews to relevant persons with broad experience in the subject treated.

The interviews have been conducted in Catalan and Spanish, have been summarized, and transcribed in the same language.

Resum de l'entrevista amb el Dr. Josep Enric Llebot, Catedràtic de Física a l'UAB, ex-Secretari General de Medi Ambient

Sobre el Protocol de Kyoto

En termes d'emissions, és veritat que alguna cosa s'ha aconseguit, però en termes de poder aconseguir un acord polític és on de veritat s'ha avançat bastant. No és fàcil arribar a un acord polític internacional, al menys s'ha aconseguit això.

És a dir, en termes d'emissions la reducció ha estat menys del que hauria de ser, ara bé, en termes de know how, de saber com verificar, com calcular, com fer inventari, i sobre tot, tenir un acord global en aquest sentit, sí que s'ha aconseguit molt. Per això tot i que la reducció d'emissions sigui poc significativa, és millor tenir aquest Protocol que no tenir-ne.

Sobre les mesures per a reduir emissions

Mesures de mercat no tenen com a objectiu reduir les emissions, lo que volen es aconseguir es que la reducció que es fixin es facin amb el preu menys elevat. No es una eina que serveixi per a reduir emissions, sinó per a traslladar el menor cost social i econòmic a les empreses.

Es el moment de negociar l'aviació i el transport marítim?

Després de 20 anys del Protocol, és necessari de gestionar, perquè després de 20 anys hi ha una cosa que es objectivable que son les emissions que a l'atmosfera. Això s'ha de gestionar. Lo que no pot ser es que les coses vagin descontrolades, a força de necessitat a la llarga se imposarà una taxa o impost mundial al carbó. El problema s imposa si es fa unilateralment, si això no es comú, llavors sí que pot donar problemes de competitivitat.

Resumen de la entrevista al Capitán Marítimo de Barcelona, Cap. Javier Valencia

Sobre las actividades de inspección en el Puerto de Barcelona

Me refiere que se rigen por el Anexo VI del convenio MARPOL. A todas las naves se les exige el *Certificado IATP*, en el que manifiestan todas las máquinas que tiene de combustión, lo que emite, y certifica que lo que cumple con respecto a los parámetros de emisiones. Pero todo esto en lo referido a óxidos nitrosos, azufre... con el CO2 todavía no se han establecido obligaciones.

Para que se limite el CO2 como los óxidos en el futuro se requiere un estudio preciso claro y objetivo de lo que se emite. El documento IATP asegura que cumple con MARPOL respecto de las emisiones estándar.

En el combustible hay una reglamentación nueva referente al SOx. El buque en puerto no puede quemar un combustible de un contenido x de azufre, ni en la mar.

Sobre las inspecciones (en comparación con el documento IATP)

Si no lo tiene, le pueden detener o poner deficiencias. Se comprueba el combustible de abordó. Todo se hace en base al *memorando de París*, el París MoU. Por esa norma se inspeccionan los buques que llegan a nuestros puertos. Se mira según prioridades, según el armador, tipo de buque se les va a inspeccionar.

Se solicitan los documentos y certificados expedidos por su bandera. Y si el inspector de la capitánía sospecha que no está correcto, procede a comprobar y demostrar cosas.

Esas inspecciones lo que pueden llevar es a que corrija las deficiencias.

Sobre la Reincidencia

No se puede volver a los puertos de la región MoU, es decir todos los Estados europeos y Canadá. Se procede al *banning*: se avisa a los consignatarios que ese barco no puede volver a ninguno de los puertos.

Sobre lo que determina la inspección a un buque

Hay buques que son imprescindibles inspeccionar. Influyen muchas cosas. Cuando hay prioridad 1 que es máxima se tiene que inspeccionar.

Interesan la edad del buque, armador, sociedad de clasificación, deficiencias anteriores, tiempo sin inspeccionar... es como un algoritmo que calcula el factor de riesgo, incluso la bandera: gris, negra o blanca.

Anualmente la lista cambia, y Panamá tiene una grandísima flota ha hecho un gran esfuerzo para mejorar la calidad y el control de los buques. Liberia también ha mejorado, pero la clave está en las listas.

Sobre la aplicación del Reglamento 2015/757 fuera de la ZEE en alta mar

La clave del acuerdo está en la OMI, donde están todos, porque hay que incluir a todos, y para que se pongan de acuerdo tiene que haber un tonelaje de flota para que estén de acuerdo y suscribir el convenio. Es una posición de poder porque concentran gran parte de la flota.

Caso que recuerda:

EEUU y la reglamentación de buques de doble casco. El OMI iba atrás, la UE un poco también y EEUU acabó actuando unilateralmente. Al ser países de gran tráfico marítimo se acabó imponiendo.

Sobre los medios a su disposición para realizar las inspecciones

las inspecciones vienen determinadas por supranacional. La formación de los inspectores es de la EMSA, es muy uniforme

Opinión sobre el reciente acuerdo de MRV global de la OMI

Esto tardará tiempo. Comparado con el *water ballast management*, puede tardar, no todos los países (tonelaje de la flota mundial) estarán dispuestos, mover a todos los países es bastante complicado.

Sobre las verificadoras

Las sociedades de clasificación es probable que intenten ser acreditadas porque tienen mucho conocimiento del mundo marítimo. A otras empresas les cuesta mucho más.

Las sociedades de clasificación están de por medio, muchas banderas delegan en las sociedades de clasificación las tareas de control. Hay una lista importante de sociedades, pero buenas, y reconocidas, son muy pocas, 5 o 6. Se puede uno fiar de lo que certifican, pero la mayoría pueden presentar deficiencias.

Las sociedades de clasificación están muy íntimamente involucradas, por el conocimiento del mundo marítimo que tienen desde hace muchos años, sus reglamentos, etc. Las reglas de seguridad van por delante, son las empresas que seguro acabarán entrando como verificadoras.

Entrevista amb el Sr. Joaquim Cortés, Gerent de Medi Ambient al Port de Barcelona

Sobre les maneres de controlar les emissions de CO2 de les operacions portuàries

El plantejament del sector marítim és el mateix que el dels altres sectors, ara estem en etapa d'inventari. Cal conèixer les emissions dels vaixells bé, i una forma d'acreditar les emissions a nivell tècnic és a través de tenir detalls sobre la crema de combustible, i de forma acreditada, amb els rebuts de carburant.

Sobre la qualitat del carburant a les descàrregues de CO2

La qualitat no té cap incidència, sempre s'oxidarà la mateixa quantitat de carboni correlativament al carburant cremat, es qüestió de quantitat, no de qualitat, la qualitat si incideix, potser molt poc.

Ja si es tracta d'emissions no de CO2 llavors depèn de la zona, si és mar obert, es pot fer servir combustible menys refinat.

Sobre les mesures per part del port de manera autònoma per fomentar la reducció de CO2

Hi ha l'estratègia de CO2, amb dos propostes, l'Ecocalculadora, que amb base en el carburant fa un càlcul aproximat de les emissions des de el port de sortida fins al de destí. I després està Zero Carbó, que calcula el carboni del contenidor des de que entra fins que se'l porten. També es cert que els vaixells lliuren un certificat d'eficiència energètica quan arriben al port. I l'última és la bonificació del 5% sobre les taxes portuàries als vaixells que contaminen menys, però s'està acabant de tramitar internament.

Sobre l'iniciativa reguladora de l'UE amb el Reglament 2015/757

Si la IMO no fa una cosa, la UE no pot fer res. Lo que pot fer és anticipar-se una mica. Per exemple, al tema del contingut de sofre al carburant sí que es va

anticipat i va disposar un contingut més baix que el que proposava l'OMI, però al poc temps l'OMI va adoptar la mateixa graduació de l'UE, que es començarà a fer efectiu a partir de 2020. Llavors sí que és cert que l'UE marca l'iniciativa i té una certa influència.

Sobre les iniciatives d'us d'energies alternatives al port

S'ha intentat fer alguna cosa amb energia eòlica, però no s'ha pogut, hi ha la servitud aèria de l'aeroport, i han dit que no. Després, el Mediterrani transporta poca energia, i pel que fa a la fotovoltaica, tampoc perquè surt més car donat l'impost a la generació d'energia solar.