



MARIUS

SCANDINAVIAN INSTITUTE OF MARITIME LAW

Anne Fougner Helseth

Rocking the Boat

The Question of Jurisdiction for applying
the European Emissions Trading System
to International Shipping

Rocking the Boat

The Question of Jurisdiction for applying the
European Emissions Trading System to
International Shipping

Anne Fougner Helseth



Marlus nr. 480
Sjørettsfondet
Nordisk institutt for sjørett
Universitetet i Oslo

© Sjørettsfondet, 2017

ISSN: 0332-7868

Sjørettsfondet
University of Oslo
Scandinavian Institute of Maritime Law
P.O. box 6706 St. Olavs plass 5
N-0130 Oslo
Norway

Phone: 22 85 96 00
E-post: sjorett-adm@jus.uio.no
Internet: www.jus.uio.no/nifs

Editor: Professor dr. juris Trond Solvang –
e-mail: trond.solvang@jus.uio.no

For subscription and single-copy sale, please see Den norske bokbyen
– The Norwegian Booktown
Internet: <http://bokbyen.no/en/shop/>
E-mail: post@bokbyen.no

Print: 07 Media AS

Preface

With the ongoing revision of the EU Emissions Trading System, the European Parliament has adopted an amendment that will include emissions from maritime transport in the system. If it makes it through the current trilogues, the proposed shipping scheme would cover all journeys between, to and from EU ports.

This thesis aims to determine whether the EU has jurisdiction to oblige vessels flagged in foreign countries to acquire and surrender quotas under the EU ETS based on their entire journeys to and from EU ports, as proposed by Parliament. The thesis was submitted in fulfillment of the LLM program in Maritime Law in at the University of Oslo in December 2016. At the time, the shipping proposal was but one of many tabled in the parliamentary Committee responsible. In February 2017 however, the amendment was adopted in plenary, so that it is now part of the Parliament's proposal for a revised ETS directive.

While the thesis has been updated to include the 2017 developments, the original conclusion is left standing. This is despite the fact that the adopted amendment could be said to be slightly more radical than the one first tabled and discussed in the thesis. In the first version of the amendment, the shipping ETS was to be discontinued instantly if global regulation came into place. The newly adopted amendment similarly conditions a shipping ETS on lacking global regulation. If such regulation is adopted after the entry into force of the shipping scheme, the latter will not automatically cease, but rather be reviewed by the Commission with the aim of ensuring alignment with such regulation. Establishing jurisdiction for this scheme could therefore be said to entail an even more forceful “rocking of the boat” than when the thesis was first written.

Anne Fougner Helseth

Innhold

PREFACE.....	3
1 INTRODUCTION.....	7
1.1 The research problem and its topicality.....	7
1.2 Refining the research problem.....	9
1.2.1 The term “international shipping”.....	9
1.2.2 Other delimitations.....	9
1.3 Structure and scope.....	10
2 REGULATORY FRAMEWORK.....	11
2.1 UNFCCC and the Kyoto Protocol.....	11
2.2 The Paris Agreement.....	14
2.3 LOSC and MARPOL.....	16
2.4 MEPC efforts and the hampering CBDR/NMFT divide.....	18
2.5 A case for comparison: ICAO.....	20
2.6 EU climate policy and regulation.....	21
3 THE PROPOSED SCHEME.....	23
3.1 The current EU ETS – how it works.....	23
3.2 The proposed EU ETS revision – main differences.....	24
3.3 The case for an EU ETS for shipping.....	24
3.4 The amendments adopted by Parliament.....	25
4 EXTRATERRITORIALITY OF THE PROPOSED ETS/FUND SCHEME COVERING INTERNATIONAL SHIPPING.....	27
4.1 Territoriality as the basis of jurisdiction.....	27
4.2 Territoriality under the law of the sea.....	28
4.3 Defining extraterritoriality.....	29
4.4 The C-366/10 extraterritoriality definition.....	30
4.5 Territorial scope of the proposed shipping scheme.....	33
4.5.1 Port state jurisdiction: static features v. operational conduct... 35	
4.5.2 Territorial scope of the MRV Regulation.....	37
5 JUSTIFICATIONS FOR AN ETS/FUND SCHEME COVERING INTERNATIONAL SHIPPING.....	38
5.1 LOSC provisions on environmental port state jurisdiction.....	38
5.2 Extraterritorial port state jurisdiction under LOSC.....	39

5.3	Customary international law justification for extraterritorial prescriptive jurisdiction	41
5.4	The causality knot	42
5.5	The scientific background.....	43
	5.5.1 Observed consequences of climate change	43
	5.5.2 Expected future effects	44
5.6	The objective territoriality principle and the effects doctrine.....	44
	5.6.1 The case for a reasonableness test	46
	5.6.2 Assessing the reasonableness.....	47
5.7	The universality principle.....	55
5.8	The protective principle	57
	5.8.1 Invoking the principle under a preventive approach.....	57
	5.8.2 Invoking the principle under a (global) security perspective.....	58
5.9	Conclusion	60
TABLE OF REFERENCE.....		63
	Books and articles	63
	Case law.....	65
	Legislation	66
	Miscellaneous	67
	Online articles.....	68
	Reports and resolutions.....	69
	Statements and press releases	70

1 Introduction

1.1 The research problem and its topicality

With the entry into force of the Paris Agreement last year, the outlook has suddenly changed for those who feared that the world would answer the increasing threat of climate change with something close to a regulatory vacuum. While the agreement is the first where all states commit to combating climate change on fairly equal footing, it is silent on two industries uneasily regulated by each state; international aviation and shipping.

Under the Kyoto Protocol, the regulation of these industries is explicitly singled out and referred to the respective specialized UN industry agencies.¹ The International Civil Aviation Organization (ICAO) came around to adopting a global market based scheme for offsetting emission growth in October 2016,² but no such mechanism is in place for the maritime transport industry. After a committee session in the International Maritime Organization (IMO) just weeks after the ICAO assembly, it is clear that IMO will for now restrict climate related measures to a mandatory fuel data collection system. In 2023, a strategy on short- mid- and long term emission reduction measures will be released, but the sector has not committed to including quantified emission reduction targets in this strategy.³

The energy efficiency of maritime transport compared to any other mode of transport is frequently emphasized. According to the IMO, the global shipping fleet carries around 90 % of the world's trade whilst contributing to about 2.2 % of the world's total CO₂ emissions.⁴ While these numbers are certainly impressive, a 2015 study from the European Parliament found that if the maritime transport sector is left unregulated,

¹ Kyoto Protocol, Art. 2(2)

² ICAO Resolution A39-3 (2016)

³ IMO Press Briefing 28 (2016)

⁴ IMO Third GHG Study 2014 (2015) at iii

this share could increase to 17 % by 2050.⁵ The European Commission envisions a 86 % increase in European Union (EU) related CO₂ emissions from vessels by 2050 compared to 1990-levels.⁶ These scenarios correspond poorly with the objective of the Paris Agreement as well as the EU's own reduction targets.

With the establishment of a globally agreed "fair share" for shipping a long way down the road, a recurring question is whether the EU might take steps to regulate what is the only industry not covered by EU's current emissions reduction target.⁷ Claiming to be a dedicated proponent for a global solution, the EU has so far acted accordingly. With the ongoing revision of the EU Emission Trading System (EU ETS), the European Parliament has however proposed an amendment that includes emissions from maritime transport in the system. The proposed scheme would cover all journeys between, to and from EU ports.

When aviation was introduced into the EU ETS with a similar scope in 2011, this caused international furore. After an ill-received preliminary ruling by the Court of Justice of the European Union (CJEU) denying the extraterritorial application of the Directive,⁸ the inclusion of flights between EU and third country aerodromes was put at standstill, awaiting the global market based mechanism (MBM) adopted in ICAO last October. Following the MBM adoption, the union decided to prolong this stopping of the clock for an indefinite time.

Anything but consensus reigns as regards the question of EU jurisdiction for imposing the EU ETS on aircrafts registered in non-EU countries, with CO₂ emitted beyond EU jurisdiction also counting in the calculation of allowances. This legal labyrinth is unlikely to be any more easily navigable in the case of maritime transport. Here, the largely customary law of the sea would however provide a slightly different starting point, with port state jurisdiction as a particularly relevant legal

⁵ EU PE 569.964 (2015) at 28

⁶ COM (2013) 479 at 2

⁷ See, eg., Hermeling, Klement, Koesler, Köhler, and Klement (2015); Kremlis (2010); Ringbom (2011)

⁸ For a detailed analysis of the jurisdictional questions in this case, please refer to Voigt (2012)

institution. In this thesis, both the relevant provisions in the United Nations Convention on the Law of the Sea (LOSC) as well as general international law principles of jurisdiction will be discussed in the aim of answering the following research problem:

Can the EU assert jurisdiction to oblige vessels flagged in foreign countries to acquire and surrender quotas under the EU ETS based on their entire journeys between EU ports and third-country ports?

1.2 Refining the research problem

1.2.1 The term “international shipping”

As regards the terminology applied in this thesis, acronyms and other peculiarities will be explained when encountered. Already in this introduction it is however deemed useful to define a term that will be used throughout the thesis; “international shipping”. While the term “maritime transport” has been applied so far for the sake of clarity, the more generic, but also more common term “shipping” will be used to describe maritime transport in the following. *International* shipping, in its turn, is defined by the IMO as “shipping between ports of different countries, as opposed to *domestic shipping*.”⁹ In the title of this thesis and of Chapter 5, the term is used to describe shipping between EU ports and ports in the territory of non-member states.

1.2.2 Other delimitations

Jurisdiction for extraterritorially imposed climate regulation is a field of both high relevance and high complexity and controversy. In this thesis, no room is therefore found for the preceding discussion concerning the legality of the EU ETS for shipping as a unilateral measure in the context of EU’s duty to cooperate under international law.¹⁰ As briefly as possible,

⁹ IMO Third GHG Study 2014 (2015) at xi. IMO explicitly stresses that “This is consistent with IPCC 2006 Guidelines.”

¹⁰ This duty was highlighted in the *MOX Plant* case, as described by Tanaka (2015) at 278.

it is submitted here that this discussion, while methodologically justified, will not lead to and through such challenging legal terrains as the question of extraterritorial jurisdiction. With the EU's pronounced and demonstrated preference for solid global regulation of maritime emissions through the competent international organization, resorting to unilateral measures in lieu of such a solution is not a step it takes great efforts to justify under international law.

The limited space also hinders this thesis from going through all multilateral treaties that might affect port state jurisdiction in relation to foreign ships. This excludes exploring whether a unilaterally imposed economic requirement for ships calling at EU ports could prove uneasily reconcilable with key principles of international trade law agreements under the umbrella of the World Trade Organization.¹¹

1.3 Structure and scope

This thesis aims to determine whether the EU has jurisdiction to include shipping in the EU ETS in the way proposed by Parliament.

To this end, it is necessary first to place the measure in the relevant regulatory framework. With several new developments in a field that has previously been accused of foot-dragging, Chapter 2 pays attention both to the United Nations climate change regime, to sector-specific regulation under the auspices of the International Maritime Organization in accordance with the architecture of LOSC, and to the EU's role in this.

The proposed inclusion of shipping in the EU ETS is presented in Chapter 3. Chapter 4 seeks to answer whether the obligations imposed with this proposal – whose territorial scope is similar to that of the EU MRV Regulation – do in fact amount to extraterritorial legislation. Valid legal arguments can be presented to each end, and the Court's arguments in the aviation case are summarily accounted for. The way these resonate with the law of the sea concept of port state jurisdiction is equally assessed. After demonstrating that territorial enforcement jurisdiction does

¹¹ For an introduction to this problem, please refer to Ringbom (2011) at 633. On how international emissions trading as such relates to WTO law, see Voigt (2008)

not equal extraterritorial prescriptive jurisdiction, it is concluded that the proposal has extraterritorial reach.

In Chapter 5, different bases for justifying this reach are discussed. Attention is first paid to the possibility that the Paris Agreement could be considered international regulation enforceable by the port state under certain environmental provisions in LOSC. This is not determined to be the case today. While not explicitly providing basis for extraterritorial environmental jurisdiction, LOSC is however not found to limit extraterritorial environmental port state jurisdiction to instances where this is positively provided for in the convention. Instead, extraterritorial port state jurisdiction can be valid if basis is found in the jurisdiction principles of public international law.

Consequently, these principles are discussed in light of the different interests involved. Here, the Paris Agreement is revisited as possibly witnessing a stronger global recognition both of the climate threat and of the shared responsibility for addressing it. This is one of the elements in the reasonableness test applied in order to determine if any of the principles can provide basis for EU jurisdiction to oblige vessels flagged in foreign countries to acquire and surrender quotas under the EU ETS based on their entire journeys to and from EU ports.

2 Regulatory framework

2.1 UNFCCC and the Kyoto Protocol

Establishing a global framework for preventing dangerous anthropogenic interference with the climate system is obviously not done in an instant. When the United Nations Framework Convention on Climate Change (UNFCCC) was adopted with the overall objective of such prevention in 1992, this was after tedious deliberations where one of many challenges consisted in moving away from the sectoral approach traditionally

employed in international environmental regulation.¹² The complex and global character of the climate change question, where greenhouse gas emitting activities have practically been synonymous with states' economic growth, instead called for putting the pressure on the states themselves, whose policies on core fields were deeply entwined with the challenge at hand.¹³

In keeping with this reasoning, pressure was first and foremost put on the developed countries assumed to bear a greater historic responsibility. All parties to the Convention – i.e. 195 states as well as the EU, commit, *inter alia*, to develop national emission inventories.¹⁴ These inventories should account for all domestic greenhouse gas emissions, including emissions from domestic maritime transport. Concrete climate change mitigation policy and measures relating to the reported emissions is however only required from the Annex I parties.¹⁵ These developed countries also commit to reporting on the measures and the progress made towards the goal of returning to 1990 emission levels.¹⁶

The move from a sectoral to a state based approach, where only a segment of the states had concrete mitigating commitments, made it hard to channel the responsibility for reducing emissions from international shipping and aviation. In international shipping, the emission sources move between two or more countries, often via areas beyond national jurisdiction. The sources, i.e. the vessels, might even be flagged in a third country or operated by third country nationals. Suffice to say, this does not easily fit into the emission reporting obligations imposed on Annex I countries in the UNFCCC. Parties are therefore instructed under the IPCC guidelines for reporting to report such emissions separately, and exclude them from national totals “as far as possible.”¹⁷

¹² Birnie, Boyle, and Redgwell (2009), at 356

¹³ *L.c.*

¹⁴ UNFCCC Art. 4(1) and Art. 12

¹⁵ UNFCCC Art. 4(2)(a)

¹⁶ UNFCCC Art. 4(2)(b)

¹⁷ IPCC Guidelines (2006), at 3.1.1

Nothing in the UNFCCC does however suggest that the drafters intended for the substantial international branch of the maritime sector to “go free” of global greenhouse gas reduction efforts in the long run. Instead, the broad overall objective in Art. 2 UNFCCC, as well as the generic definition of emissions in Art. 1(4), leaves little doubt as to the necessity to target every factor contributing to increase the risk of dangerous anthropogenic interference with the climate system. In Art. 3(3), enshrining the precautionary principle, it is stated that the precautionary measures of all parties should “comprise all economic sectors.”

When the first quantified emission reduction obligations were imposed with the Kyoto Protocol in 1997, the maritime sector was however singled out along with the aviation sector. The protocol covers greenhouse gas emissions in the period from 2008 to 2012, by the end of which Annex I parties were to reduce their emissions, including domestic shipping and aviation emissions, by at least 5 percent compared to 1990 levels. With the Doha Amendment to the Kyoto Protocol in 2012, the parties still on board agreed on a second commitment period ending in 2020, by which they have to reduce emissions by at least 18 percent below 1990 levels – if the amendment enters into force.¹⁸

The emission reduction and limitation commitments of the Annex I countries under the Kyoto Protocol do not relate to emissions from international shipping and aviation. Instead, the parties shall “pursue limitation or reduction of emissions of greenhouse gases (...) from aviation and marine bunker fuels, working through (...) the International Civil Aviation Organization and the International Maritime Organization, respectively.”¹⁹ The implications of this explicit delegation has been a matter of some confusion. Does it give IMO exclusive competence on international maritime emissions? Is the UNFCCC regime then left without any leverage to ensure that international shipping emissions are reduced?

While the IMO is of this opinion, the ensuing activity within the UNFCCC framework suggests that the IMO and ICAO mandate to

¹⁸ Doha Amendment Art. 1(c)

¹⁹ Kyoto Protocol Art. 2(2)

develop mitigation policies is not exclusive.²⁰ The Bali Action Plan in 2007 provided the Ad Hoc Working Group on Long-term Cooperative Action (AWG-LCA) with an opening for approaching the shipping sector under the UNFCCC regime, but efforts in the AWG-LCA to pursue the topic did not result in any outcome before the group terminated its work in 2012.²¹

The situation as of now is therefore that emissions from international shipping are not targeted by specific international rules adopted under the UNFCCC regime. Instead, the question lies on the table of the IMO. As will be seen, some progress has been made here, but substantial steps are yet to be taken. A question which therefore remains relevant is that of possibilities and leverage under the UNFCCC regime to take action in order to regulate international shipping emissions, should the IMO fail to do the same. That is a question whose answer may change with the recent entry into force of the Paris Agreement.

2.2 The Paris Agreement

A long-awaited international agreement under the UNFCCC regime, the Paris Agreement entered into force November 4th 2016, less than a year after it was first adopted. Despite quick fulfilment of the first threshold, the world at large was taken by surprise by the Agreement's rapid entry into force following the accession of major emitters with a very varied climate policy profile such as the USA, China, India and lastly the EU. The EU ratification tipped the emission count beyond the 55 % of the total global total decided as the second threshold.²²

Building upon the UNFCCC, the Paris Agreement focuses on *global* emissions and a *global* temperature target, reflected in the bottom-up approach requiring *all* Parties to settle “nationally determined contribu-

²⁰ This is also supported in literature, see Voigt (2012) and Martinez Romera (2016) at 2017

²¹ Shi (2016), at 124

²² The climate change stand of the Trump administration and its possible implications for global regulation of the climate threat will not be commented in this thesis, so as to avoid complete speculation.

tions” (NDCs) which are both to be as progressive as possible and to be improved every fifth year.²³ This is presented as a new path diverging from the Kyoto Protocol emphasis on quantified emission reduction targets for developed countries only. The collective approach is also concretely manifest in the Art. 14 provision on a global stock take, which is to be conducted in order to assess “the collective progress towards achieving the purpose of this Agreement and its long-term goals.”

When the references to shipping and aviation disappeared from the Agreement just days before it was signed,²⁴ disappointment flourished amongst those who regarded IMO and ICAO’s efforts too weak and were hoping for the UNFCCC to step in and take charge – for instance by introducing MBMs.²⁵ By some, the lacking shipping and aviation provision has been presented as “a further, if not final, step in the consolidation of ICAO and IMO as the multilateral forums for the regulation of international aviation and maritime transport emissions.”²⁶

But that is not the only manner in which to interpret the lacking delegation. Committing to hold “the increase in the global average temperature to well below 2 °C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels,” the parties to the Paris Agreement “aim to reach global peaking of greenhouse gas emissions as soon as possible”.²⁷ The envisioned steep increase in global shipping emissions, with a forecasted growth by between 50 % and 250 % within 2050,²⁸ would contradict this, and it is therefore in each party’s interest to avoid unregulated growth of these emissions. Bearing the holistic and solution oriented approach of the Paris Agreement in mind, its lacking delegation could be laid out to entail that the UNFCCC regime is no longer potentially constrained

²³ Paris Agreement Arts. 3 and 4

²⁴ Martinez Romera (2016) at 219

²⁵ Doelle (2016)

²⁶ Martinez Romera (2016) at 224

²⁷ Paris Agreement Art. 2(1)(a)

²⁸ IMO Third GHG Study 2014 (2015) at iii

from adopting regulation for the reduction of greenhouse gas emissions from aviation and shipping.

With this backdrop, great anticipation is tied to the process of developing the detailed rules for the implementation of the Paris Agreement, including the reporting norms. Unlike the case of the Kyoto Protocol, the COP decision accompanying the Paris Agreement does not appoint the IPCC guidelines as the proper reporting methodology for emission estimation and reporting. With the Paris Agreement, it is therefore not completely given that fuel consumption in international shipping should still be reported separately. Instead, reporting norms for shipping remains an open question until guidance for the NDC reporting is adopted in 2018. With that, it is not yet settled whether member state can for instance choose to count international shipping emission reduction resulting from national initiatives in their NDCs, or whether emissions from international shipping could count in the global stocktake.

2.3 LOSC and MARPOL

Often referred to as the “constitution of the oceans”, the United Nations Convention on the Law of the Sea (LOSC) both establishes a legal and institutional framework for, and comprehensively covers issues within, the field of international law of the sea.

Owing to the inherent global character of the world oceans, the law of the sea is one of the international law fields in which a strong body of customary rules evolved the earliest.²⁹ The codification efforts through the 20th century were marked by jurisdictional questions and the antagonistic relationship between the three principles governing the law of the sea; the principle of freedom, the principle of sovereignty and the principle of the common heritage of mankind³⁰ – a relationship which is also highly relevant for the regulation of greenhouse gas emissions from ships today.

²⁹ Tanaka (2015), at 20

³⁰ Principles described in Tanaka (2015), at 16

Today, LOSC's status as the most important instrument in the law of the sea is "beyond serious argument".³¹ It largely reflects customary law, and as such also binds the decreasing number of non-party states – a group which notably includes the USA. The EU is party to the convention.

Under LOSC, states are obliged to take measures to prevent, reduce and control pollution of the marine environment.³² In this context, marine pollution is defined as the "indirect introduction of substances or energy into the marine environment, including estuaries, which results or is likely to result in such deleterious effects as harm to living resources and marine life."³³ There is no mention of greenhouse gas emissions or climate change anywhere in LOSC.

It is not given that a substance such as CO₂, whose potential polluting factor in relation to the marine environment is dependent on it building up in the atmosphere first, fits within the marine pollution definition. The deleterious effects CO₂ accumulation has on the oceans is however established. By absorbing extra heat trapped in the atmosphere, the oceans have warmed, with glaciers and ice melting, sea levels rising at a speed unsurpassed the last millenniums, and marine species' circulation patterns and productivity changing.³⁴ The oceans are suffering acidification as the CO₂ amounts drawn from the atmosphere become large enough to alter the pH balance,³⁵ with concurrent reduced calcification rates. Combined with high temperatures, this will eventually erode coral structures, which again affects other species, photosynthesis and oxygen exchange.³⁶ All these phenomenon are only expected to pick up in the future, setting the world on track to much greater detriments.³⁷ With this knowledge, the broad LOSC definition of marine pollution must include anthropogenic CO₂ emissions under a good faith interpretation

³¹ Tanaka (2015), at. 38

³² LOSC Art. 194(2), see also Art. 192

³³ LOSC Art. 1(1)(4)

³⁴ Rothwell, Oude Elferink, Scott, and Stephens (2015) at 778

³⁵ Tanaka (2015), at 324

³⁶ Rothwell et al. (2015) at 781–782

³⁷ *Ibid.* at 779–782

in line with the Vienna Convention of the Law of Treaties Art. 31(1), codifying customary law.³⁸

The states' obligation to prevent, reduce and control pollution of the marine environment under LOSC varies depending on what "role" the state is playing in relation to the pollution. A distinctive feature of the convention on the whole is the differentiation between flag states, port states and coastal states. The rights and duties of these states depend on the maritime zone in question as well as the activity performed. Generally, flag state enforcement of international regulation is sought ensured by port state control of each vessel's compliance with the rules. The extent to which the LOSC provisions on marine pollution open up for port state regulation of airborne pollution from foreign-flagged vessels in different maritime zones will be discussed in Chapter 5.

Common for several of the marine pollution provisions in LOSC is diverse references to generally accepted international regulations and agreements. In the case of vessel-source pollution, including the airborne kind, a good place to start in order to find such rules is the global convention for marine pollution, MARPOL. Along with several other international instruments, MARPOL is adopted and amended under the auspices of the IMO, which is tasked with global regulation of a variety of questions related to the shipping industry. It is by amending MARPOL that the IMO, through its Marine Environment Protection Committee (MEPC), has sought to follow up on the delegation in the Kyoto Protocol.

2.4 MEPC efforts and the hampering CBDR/NMFT divide

Ever since greenhouse gas reduction was put on the agenda at the IMO, efforts here have been hampered by a form of North-South divide. Several solutions for MBMs have been put forward by a variety of member states and observers, but disagreement regarding which principles should guide their design has efficiently precluded developing these solutions further.³⁹

³⁸ Ibid. at 783

³⁹ See for instance MEPC 69/21 (2016), at 7.5.6

While non-annex parties to the UNFCCC insist that the principle of common but differentiated responsibilities (CBDR) must also be true in the maritime world, the Annex I-countries point to the IMO approach of no more favourable treatment (NMFT). NMFT is an industry-endorsed principle of equal treatment for all ships regardless of which country they are flagged in. Explicitly formulated in several IMO-enacted regulations, this principle is however thought to conflict with the CBDR principle running through the UNFCCC regime, which assigns greater responsibility and commitments to the developed countries.

It is the traditional IMO approach of NMFT that seems to have prevailed when MEPC got around to adopting its first concrete measures for climate change mitigation in 2011. By amending Annex VI to MARPOL, MEPC adopted two measures constituting the first global and legally binding regulation of greenhouse gas emissions for ships; an Energy Efficiency Design Index (EEDI) and a Ship Energy Efficiency Management Plan (SEEMP).⁴⁰ The EEDI scheme applies to new ships only, requiring them to meet a minimum energy efficiency level, while all ships are required to have a SEEMP on board to help manage the ship's environmental performance. Celebrated by the industry as the world's first sector-wide mandatory energy-efficiency measure, EEDI and SEMP has also been criticized as hardly contributing emission reductions beyond what would have resulted from the technological developments regardless.

In the wake of the Paris Agreement, the year 2016 however brought some MEPC steps in a direction that seems more parallel to where the UNFCCC regime is headed. At its 70th session in October 2016, MEPC came around to adopting mandatory requirements for ships to record and report their fuel consumption, an agreed-upon first step in a three-step process where considering the need for further reduction measures constitutes the third step.⁴¹

Potentially more significantly, "MEPC 70" also approved a roadmap for developing a "Comprehensive IMO strategy on reduction of GHG

⁴⁰ MEPC 203(62) (2011)

⁴¹ IMO Press Briefing 28 (2016)

emissions from ships”.⁴² Under this roadmap, MEPC will release an interim strategy for addressing greenhouse gas pollution from ships in 2018, followed by a final strategy five years later. The 2023 strategy will include a timeline of short-, mid-, and long-term measures. The roadmap does however not commit the sector to set any quantified emission reduction targets for greenhouse gas reductions, neither now nor in 2023. This is a blow to the IMO members and observers who argued for starting the process of defining a “fair share” and developing a MBM *in parallel* with the three-step approach. Patience might thus be diminishing amid the most eager stakeholders – the EU being amongst the more vocal of them.

2.5 A case for comparison: ICAO

Tasked with the exact same chore as IMO under the Kyoto Protocol, only related to the other major mode of international transport, i.e. aviation, ICAO also struggles with an industry position on equal treatment standing against the CBDR principle.⁴³

In October 2016 however, the ICAO Plenary Session adopted a Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).⁴⁴ A global MBM, CORSIA requires the international civil aviation sector to offset emission growth beyond the 2019/2020 average baselines, by acquiring units representing emission reductions achieved through carbon negative projects.

The offsetting scheme is divided into three phases, and does not become mandatory for all states until the third phase commences in 2036.⁴⁵ While much enthusiasm ensued this long-awaited agreement, its shortcomings have not gone unnoticed. Objections have also been brought forward during discussions in the EU, where a decision had to be made about whether or not flights to or from the union should be covered by

⁴² Ibid.

⁴³ See Voigt (2012) at 479

⁴⁴ ICAO Resolution A39-3 (2016)

⁴⁵ Some exceptions are in place for certain vulnerable states such as landlocked developing countries, as well as states with very low levels of international aviation activity.

the EU Emission Trading System, now that a global MBM is in place for international aviation.

February this year, the Commission proposed to review the scope of the EU ETS in the wake of CORSIA.⁴⁶ Its suggestion is to exclude flights between EU airports and third-state airports from the ETS indefinitely. In their proposals for a revised ETS scheme, the Parliament and the Council of the European Union open for the Commission altering the obligations for airlines flying to or from EU aerodromes in the wake of CORSIA.⁴⁷ In the proposal to continue with the current geographic scope of the EU ETS for aviation, covering flights between EU aerodromes only, the Commission also declares its intention to further assess the EU ETS in relation to CORSIA once there is greater clarity on the implementation of the latter. It is stressed that this will include taking “due account of the EU’s commitment to reduce domestic economy-wide greenhouse gas emissions by at least 40% by 2030 compared to 1990 levels.»⁴⁸ The future of the extraterritorial aspects of the EU ETS for aviation is thus not yet settled. The legal controversy surrounding the extraterritoriality question will be described further in Chapter 4.

2.6 EU climate policy and regulation

Counting the prevention of dangerous climate change amongst its key priorities, the EU combines financial support and regulation in the pursuit of achieving its progressively ambitious, albeit non-binding, climate targets for 2020 and 2030, supposed to culminate in a 80–95 % reduction by 2050. A mechanism which combines the financial and regulatory approach, and is trumpeted as the cornerstone of EU climate policy, is the EU’s emissions trading system – the first and largest regional emissions trading scheme in the world.

EU environmental law has evolved into so comprehensive a field that a proper introduction cannot fit within the realms of this thesis. For the

⁴⁶ COM Press Release 17-189

⁴⁷ P8_TA-PROV(2017)0035, Amendment 30 and 2015/0148 (COD), at 41

⁴⁸ COM Press Release 17-189

purpose of discussing the proposed EU ETS for shipping, it is relevant to have in mind the guiding principles in EU environmental law, found in Art. 191(2) TFEU. According to this article, EU environmental policy shall aim at a high level of protection and be based on the precautionary principle, on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay.

The aim of EU environmental policy, found in para. 1 of the same article, is to preserve, protect and improve the quality of the environment, protect human health, ensure prudent and rational utilization of natural resources and promote measures at international level to deal with regional or worldwide environmental problems, and in particular to combat climate change. It is thus not only domestically, i.e. within the member states, that the EU approach to the challenge of climate change is guided by the EU environmental principles. The EU is also an active player in the global climate change mitigation arena.

While insisting on its preference for strong global agreements, the EU has also instituted several own climate measures in the absence of such – including measures with impact outside of the EU. The above-mentioned aviation case is one example, and its consequences in the international arena will be discussed below in Chapter 4.

The EU is also an observer in the IMO. Working to facilitate the implementation of IMO measures by its member states, the EU even has a hand in expediting the adoption of such measures at IMO and influencing their final form. For instance, it was the union which first adopted monitoring, reporting and verifying requirements for emissions from large ships using EU ports (the MRV system), with a 2018 deadline to allow the IMO to act.⁴⁹ As we have seen, a mandatory global MRV system, requiring ships to record and report their fuel consumption, was indeed adopted at MEPC 70, with a view to entry into force in 2018.

With the chance of the EU losing patience at the lack of tangible progress on an MBM in IMO, the ongoing revision of the EU ETS could

⁴⁹ MRV shipping regulation preamble para. 39 and Art. 1

provide an opening for following the precedent from aviation and including shipping in the scheme.

3 The proposed scheme

3.1 The current EU ETS – how it works

The EU ETS is an MBM for emission limitation and reduction which follows the cap and trade principle. Established by Directive 2003/87/EC and amended by three directives since, the system sets a cap on the amount of greenhouse gases emitted by the companies covered. Following each year, these companies are obliged to surrender allowances covering all their emissions, and are fined if they fail to do so. The emissions cap is gradually reduced so as to make total emissions fall.

Initially the companies either receive or buy their emission allowances under the cap. Following allocation either for free or by auction, companies are free to trade allowances with one another as needed, and to buy a restricted amount of international credits generated through the clean development mechanism and the joint implementation scheme set up under the Kyoto Protocol. Spare allowances not sold can be kept to cover future emissions.

The system is now in its third phase, where a EU-wide cap is set on emissions of CO₂, N₂O and perfluorocarbons from specific sectors. These are sectors whose emissions are both significant and fairly suitable for measuring, reporting and verification. Generally, participation is mandatory for the companies in these sectors, but exemptions are in place for certain smaller installations. The default allowance method today is auctioning. Phase 3 lasts until the end of 2020, after which it will be superseded by the revised emissions trading system now in the works amongst EU lawmakers.

3.2 The proposed EU ETS revision – main differences

For phase 4 of the EU ETS, a legislative proposal has been presented by the Commission to revise the system, to which both the Parliament and the Council of the European Union have adopted their negotiating positions.⁵⁰ The process takes form of an ordinary legislative procedure, where the Council co-legislates with the Parliament, with the Commission also playing an important role. After the first reading, the stage is now set for trilogues, with a view to agreeing on a final text. Phase 4 will run from 2021 to 2030, the year by which the EU is obliged under both its 2030 target and its first NDC to the Paris Agreement to reduce its greenhouse gas emissions by at least 40 % compared to 1990 levels.

In order to achieve this, the Commission proposes to speed up the rate of emissions allowance cuts from the current 1.74 % decline annually and to an annual 2.2 % decline. This proposal is supported in the adopted negotiating positions of both the Parliament and the Council. Other than these increased emission cuts, the main differences compared to today's scheme consist in new measures to fund low-carbon innovation and modernisation of the energy sector, and to address the risk of carbon leakage. The Commission has not proposed any inclusion of shipping, but in its amended proposal for a directive, the Parliament in February 2017 voted for including the industry in the scheme.

3.3 The case for an EU ETS for shipping

The possibility that the EU could include shipping in the ETS has been the subject of several legal reports and articles since long before the plenary vote in Parliament. In 2013, the European Commission issued a strategy for progressively integrating maritime emissions into the EU's greenhouse gas reduction policies.⁵¹

The strategy outlines three steps to be taken, where the first step consists in the implementation of a MRV system.⁵² As we have seen, this

⁵⁰ See P8_TA-PROV(2017)0035 and 2015/0148 (COD) respectively.

⁵¹ See eg Hermeling et al. (2015); Kremlin (2010); Ringbom (2011)

⁵² COM (2013) 479

will come into being in 2018. Building on the data produced with this system, the next step is to establish reduction targets for the maritime transport sector. Following this, the Commission envisions further steps, including MBMs.⁵³

The impact assessment carried out in the context of the strategy identifies three MBM designs as the most promising options to address maritime greenhouse gas emissions; a contribution based compensation fund in combination with a complementary instrument, a target based compensation fund based on establishing a unique target for each ship covered by the regulation, or an emissions trading system in line with the current EU ETS.⁵⁴

The compensation fund is only expected to be effective if the complementary instrument set up is perceived less attractive by the ships so that they voluntarily opt for the fund. The fund would thereby in practice be the primary instrument. The EU ETS is suggested as an appropriate complementary instrument both in the Impact assessment and the Integration strategy. If the EU opts for this solution, ship operators will on paper be obliged to surrender allowances as provided by the ETS rules. In order to ease the administrative burden, they will however have the opportunity to voluntarily opt out and instead pay a contribution into a compensation fund. The contribution will be based on the emissions reported through the MRV system in the foregoing year.

3.4 The amendments adopted by Parliament

The EU ETS revision proposal adopted by Parliament includes two amendments embodying a solution where a contribution based compensation fund is paired with the EU ETS as a complimentary instrument. We are thus faced with a concrete, Parliament-backed proposal as to how an EU ETS for shipping could be designed legislatively. In recent years, speculations concerning the possibility that the EU should enact such a scheme has picked up concurrently with the lacking progress on estab-

⁵³ Ibid, at 5

⁵⁴ COM (2013) 479, at 8

lishing a global MBM at the IMO.⁵⁵ The design of the scheme has however been a subject of mere speculation.

While such speculation is not infinitely put to rest with the adopted amendments, their parliamentary backing makes them worth taking a closer look at. This is especially true in light of the fact that they are to apply, in the same manner as the with aviation before the suspension of its reach, to emissions from vessels arriving at, within or departing from ports under the jurisdiction of a EU member state. By also covering the leg of the journey occurring outside of EU territory, the proposed design for an EU ETS for shipping touches upon some delicate international law questions connected to jurisdiction.

The two amendments constituting this proposal would serve to incorporate emissions from maritime transport in the revised EU ETS, and set up a Maritime Climate Fund as an opt-out mechanism, in line with the 2013 assessment.⁵⁶ Concretely, a new chapter on the Maritime Sector is inserted into the amended directive, numbered Chapter IIa and entitled “Inclusion of shipping in the absence of progress at international level.” In the first article here, Art. 3ga, it is decided that:

As from 2021, in the absence of a comparable system operating under the IMO, CO₂ emissions emitted in Union ports and during voyages to and from Union ports of call, shall be accounted for through the system set out in this Chapter, to be operational from 2023.

The reasoning behind the inclusion is laid out in an amendment to the recital, numbered recital 2c.

In Chapter IIa, Art. 3gb determines the scope of the scheme and reads as follows:

By 1 January 2023, the provisions of this Chapter shall apply to the allocation and issue of allowances in respect of CO₂ emissions from ships within, arriving at or departing from ports under the

⁵⁵ See eg Hermeling et al. (2015); Kremlis (2010); Ringbom (2011)

⁵⁶ P8_TA-PROV(2017)003, Amendment 5 and Amendment 36

jurisdiction of a Member State in accordance with the provisions laid down in Regulation (EU) 2015/757. Articles 12 and 16 shall apply to maritime activities in the same manner as to other activities.

The provision that follows serves to appoint the Commission to set the total quantity of allowances and the method of allocation through auctioning. The Maritime Climate Fund established in Art. 3gd will be responsible for administering the rendering of allowances on behalf of its contributors. 20 % of the revenues generated from the auctioning of allowances to the fund are to be used through the fund to improve energy efficiency and support investments in innovative technologies to reduce CO2 emissions in the maritime sector.⁵⁷

The counting of emissions from legs of the journey occurring outside of EU territory makes jurisdiction for the proposed design a disputed matter, to put it modestly.

4 Extraterritoriality of the proposed ETS/ fund scheme covering international shipping

4.1 Territoriality as the basis of jurisdiction

The territorial principle is the indisputable starting point for asserting jurisdiction, which in its turn is defined as concerning essentially “the extent of each state’s right to regulate conduct or the consequence of events”.⁵⁸ The term in the words of Staker “describes the limits of the legal competence of a State or other regulatory authority (such as the

⁵⁷ P8_TA-PROV(2017)003, Amendment 36, Art. 3gc

⁵⁸ Oppenheim, Jennings, and Watts (1992) at 456

European Community) to make, apply, and enforce rules of conduct upon persons.”⁵⁹

4.2 Common to all types of jurisdiction (prescriptive, enforcement and judicial) is that in drawing the limits of the state’s powers, it seems natural to follow the already existing national borders surrounding the state territory. It is regarded obvious that a foreigner visiting a state is bound by that state’s criminal law while staying within these borders. States are also largely free to impose other obligations on their foreign visitors, subject to treaty commitments and the duty to respect basic human rights.⁶⁰ As will be seen below, this right is also admitted a port state in relation to foreign vessels calling at its port. Territoriality under the law of the sea

While most of the solid ground on Earth is subject to the sovereignty of states, the opposite is true for the oceans, covering more than 70 percent of the Earth’s surface.⁶¹ Here, territoriality only functions as an “extension” of the land territory, leaving about two thirds of the ocean’s surface, the high seas, beyond the reach of national jurisdiction.

In the internal waters, i.e. the waters between the geographic coastline and the plotted baselines, the coastal state enjoys full jurisdiction, and is only obliged to give access to ships in distress.⁶² In the territorial sea, stretching 12 nautical miles (nmi) out from the baselines, the starting point is full jurisdiction for the coastal states, but vessels enjoy a right to

⁵⁹ Staker (2014) at 309

⁶⁰ Ibid, at 316

⁶¹ NOAA (2016)

⁶² Art. 8 LOSC

innocent passage.⁶³ Criminal jurisdiction can only be established over foreign ships in the territorial sea if certain criteria are fulfilled.⁶⁴ Jurisdiction is more limited in the adjacent zone,⁶⁵ stretching out a further 12 nmi seawards. In the exclusive economic zone, stretching 200 nmi from the baselines, jurisdiction is restricted to matters related to the state's sovereign rights.⁶⁶

In short, jurisdiction in the different maritime zones is “regulated in a complex yet subtle matter, providing an interesting contrast to the rather absolutist approach to questions concerning sovereignty and jurisdiction which still hold sway in other areas of international law.”⁶⁷ One of the law of the sea particularities embodying this complexity is the construction of port state jurisdiction (PSJ). As we have seen, no state generally enjoys absolute jurisdiction over any zone other than the internal waters, which includes the ports. The jurisdiction enjoyed in the ports is absolute enough to also provide basis for establishing requirements for access to the ports.

As pointed out by Ryngaert and Ringbom, “the exercise of PSJ over foreign-flagged vessels often has effects outside the port, or even aims to regulate activities beyond national jurisdiction”,⁶⁸ triggering the question of whether PSJ is territorial or extraterritorial. In general, they conclude, “most assertions of PSJ can formally be justified under a broad construction of the territoriality principle”.⁶⁹ The question in this chapter is whether this is also the case for the proposed shipping scheme.

⁶³ Art. 17 LOSC. This right is wider in international straits, where there is a full right to transit cf. Art 37 LOSC, so that submarines can for instance sail beneath the surface.

⁶⁴ Art. 27 LOSC

⁶⁵ Art. 33 LOSC

⁶⁶ Art. 56 LOSC

⁶⁷ Staker (2014) at 651

⁶⁸ Ibid. at 380

⁶⁹ L.c.

4.3 Defining extraterritoriality

On the face of it, the term “extraterritorial” appears to describe a rather straightforward concept; anything “extra” to the territory of a given state, e.g. outside of it.

Extraterritorial jurisdiction can be defined as “the legal ability of a state to exercise authority over actors and activities beyond its boundaries”.⁷⁰ International case law does however demonstrate that the distinction between territorial and extraterritorial jurisdiction is drawn very differently by different states. The divide is so large that one state construing territoriality broadly could end up asserting jurisdiction regarded bluntly extraterritorial by other states.

The nature of extraterritorial jurisdiction is equally controversial. Is this extension of authority inherently provided for in international law and only subject to specific rules prohibiting it, or is it rather an exception that can only be derived from permissive rules?

In the *Lotus Case*, The Permanent Court of International Justice declared states free to extend their prescriptive jurisdiction so long as this is not explicitly prohibited by international law. This view has been criticized, and Staker argues based on state practice that “The best view is that there needs to be some clear connecting factor, of a kind whose use is approved by international law, between the regulating state and the conduct that it seeks to regulate.”⁷¹ This school also seems to have been followed by the CJEU when considering the legality of the international aspects of the EU ETS for aviation in *C-366/10*.

With this backdrop, the approach where extraterritorial jurisdiction is only lawful if provided for by international law principles or treaty provisions, will also be employed in the following discussion.

⁷⁰ Voigt (2012) at 496

⁷¹ Staker (2014) at 315

4.4 The C-366/10 extraterritoriality definition

In C-366/10, the exercise of distinguishing between territorial and extraterritorial jurisdiction was approached by the CJEU in a manner which raised the eyebrows of several legal scholars.

With Directive 2008/101/EC, aviation had been included in the EU ETS, with airlines obliged to acquire and surrender emission allowances calculated on a per-mile basis. This duty applied to all flights landing in or departing from aerodromes under the jurisdiction of a EU member state. The calculation was done on the basis of the entire flight, including the section outside EU airspace. In a chorus so unison it was «unheard of in climate politics», global players ranging from Russia via China, Japan and India and to USA, amongst several other states, deemed this “a violation of the cardinal principle of state sovereignty”.⁷²

In 2009, US and Canadian airlines and airline associations challenged the UK legislation implementing the Directive before the High Court of Justice of England and Wales, claiming that the Directive infringes, *inter alia*, certain principles of customary international law. The High Court referred the question of the validity of the Directive to the Court of Justice of the European Union (CJEU). The Court’s preliminary ruling was issued December 21 2011, just days before aviation activities was to finally be integrated into the EU ETS on January 1st 2012.

Both Advocate General Juliane Kokott and the Grand Chamber of the Court concluded that the Directive applied domestically, *i.e.* within the territory of the EU states only. Even if controversial, their line of reasoning would not have been too hard to follow by jurists had the Advocate General and the Court not also presented other arguments apparently pointing in separate directions. Most confusingly, they both argue for the existence of a link between climate change and the EU.⁷³ As pointed out by Voigt, the establishment of such a link is only necessary to justify extraterritorial jurisdiction.⁷⁴ While the legal logic of these

⁷² Voigt (2012) at 476

⁷³ ATA and others, Opinion para. 149 and 154, Judgement para. 129

⁷⁴ Voigt (2012) at 490–491 and 494

diverging points can be (and indeed has been) discussed at length, the arguments towards the territoriality of the Directive are the most relevant for this chapter. A recap of them is therefore presented, as a backdrop for the assessment of the extraterritoriality of the proposed EU ETS for shipping.

Advocate General Kokott categorically concluded that the ETS Directive 2008/101 did not contain any extraterritorial provisions.⁷⁵ The reasons presented related both to the obligations under the Directive, and to whom the Directive applied.

As regards obligations under the Directive, she argued that the Directive does not oblige the airlines to conduct any specific activities in the airspace outside of the EU – such as flying certain routes or complying with fuel consumption limits. Admitting that the taking account of events occurring in airspace outside of the EU “might indirectly give airlines an incentive to conduct themselves in a particular way when flying over the high seas or on the territory of third countries”⁷⁶, for instance by emitting less, she all the same denied the existence of a “concrete rule regarding their conduct within airspace outside the European Union.”⁷⁷ In this, the Advocate General also pointed to the custom in for instance tax and anti-trust law of taking into account circumstances occurring in other jurisdictions.⁷⁸

Her argument also evolved around the application of the Directive, in that the EU only exercises sovereignty over aircrafts arriving at or departing from EU aerodromes, and not over any aircraft crossing EU (or non-EU) airspace.⁷⁹ Implicitly; if you voluntarily choose to make use of an EU aerodrome, you willingly submit yourself to the EU ETS.

The Court equally stressed how the “Directive is not intended to apply as such to international flights flying over the territory of the Member States of the European Union or of third States when such flights do not

⁷⁵ ATA and others, Opinion para. 145

⁷⁶ Ref *ibid.* para. 147

⁷⁷ L.c.

⁷⁸ *Ibid.* para. 148

⁷⁹ ATA and others, Opinion para 156

arrive at or depart from an aerodrome situated in the territory of a Member State.”⁸⁰ This point, of the duty being activated only by the carrier’s choosing to operate routes to and from the EU, is reiterated.⁸¹ This line of reasoning bears some resemblance to that surrounding PSJ in the law of the sea, as will be discussed further below.

Like the Advocate General, the Court seems not to regard the EU ETS effects beyond EU borders as a concrete rule, i.e. a prescriptive requirement, even though it offers no argument to this end. Instead, the EU’s unlimited jurisdiction over aircrafts in its own territory is also reiterated.⁸²

It seems that both the Advocate General and the Court’s reasoning towards the Directive’s domestic application only can be laid out as follows:

- 1) The Directive does not as such regulate and affect concrete conduct occurring beyond EU territory. Hence, it is not a concrete rule, and so the EU is not exercising any extraterritorial prescriptive jurisdiction.
- 2) The Directive is only applied to flights calling at EU aerodromes, and the EU here (i.e. on its own territory) has undisputed jurisdiction to both legislate and enforce.

4.5 Territorial scope of the proposed shipping scheme

If drawing a line between extraterritorial and domestic legislation was a challenge in the case of an EU ETS for aviation, the challenge is no smaller when it comes to the proposed shipping scheme.

By the reference to the MRV regulation, the EU ETS is to apply to “ships above 5 000 gross tonnage in respect of CO₂ emissions released during their voyages from their last port of call to a port of call under

⁸⁰ ATA and others, Judgement para. 117

⁸¹ Ibid. para 127

⁸² Ibid. para 124

the jurisdiction of a Member State to their next port of call, as well as within ports of call under the jurisdiction of a member state.”⁸³

Ship operators are to calculate CO₂ emissions using the following formula:

Fuel consumption x emission factor⁸⁴

“Fuel consumption” refers to actual fuel consumption for each voyage, which can be calculated using either of four enumerated methods, or a verified combination of these. They all entail measuring the full amount of emissions between two calls at ports where at least one is under EU jurisdiction, and while at berth in a port under EU jurisdiction (both these intervals are referred to as “periods”).

It follows that, in instances where a ship calls at a non-EU port prior to or following an EU port call, CO₂ emitted outside of the territory of the EU will be included in the calculation. This is true both for CO₂ emitted beyond national jurisdiction – in the adjacent zone, the exclusive economic zone and on the high seas, as well as CO₂ emitted in the jurisdictional zones of non-EU states – i.e. in their territorial and internal waters.¹⁵ On the face of it, the Parliament’s proposed inclusion of shipping in the revised ETS thereby constitutes legislation with an extraterritorial scope, as the new directive would also cover events occurring outside of EU territory. If one is to follow the “extraterritorial implications” reasoning in *Case C-366/10* however, one could argue that the proposed shipping scheme does not entail extraterritorial legislation because of two things:

- 1) 1) It does not as such regulate and affect *concrete conduct* occurring beyond EU territory, so the EU is not exercising any extraterritorial prescriptive jurisdiction.
- 2) 2) It is only applied to ships calling at EU ports, and the EU here has undisputed jurisdiction to both legislate and enforce.

With respect to argument one, it is true also for the proposed shipping scheme that this does not per se force ships to change conduct, for instance

⁸³ MRV shipping regulation Art. 2(1). Some primitive and non-commercial ships are excluded, mainly ships that are not primarily used for transport, cf. Art 2(2).

⁸⁴ *Ibid*, Annex I, Part A

by speeding down to emit less. As with aviation, it is very possible that the amendment might give ships and incentive to (for instance) emit less. But giving incentives is not the same as regulating emissions, and the point could be made that the counting of emissions beyond EU territory is simply a technical requirement. The extra-territorial elements of the proposed application primarily relate to its scope of time, while the actual obligation during this time frame is miniscule for the ships.

All valid measuring methods under the MRV regulation however entail some form of activity either during the whole journey (period), or at both its beginning and its end. The first method combines periodic stocktakes with the quantity and type of fuel as defined on the Bunker Fuel Delivery Note.⁸⁵ Under the second method, fuel tank readings of all tanks on boards is to be carried out daily at sea, plus each time the ship is bunkering or de-bunkering.⁸⁶ The third method is based on measured fuel flows on-board during the period, conducted via flow meters linked to all relevant CO₂ emission sources.⁸⁷ The fourth method opens for direct CO₂ emission measurements during the period.⁸⁸ Both measuring and tank reading must fall within the ordinary meaning of the term activity. For journeys to or from the EU, this then includes activities in third state ports and also possibly in foreign territorial and internal waters and on the high seas – automated or manual. The penalties for failing to comply with the ETS obligations also impede on the possibility to define the extraterritorial obligations as a calculation model or technical condition.

When it comes to the CJEU's arguments built around how the ETS is only applied to airline operators choosing to use EU aerodromes, these are certainly interesting to apply to the world of international maritime transport in light of PSJ. Here, the right for the port state to impose requirements on ships entering its ports is codified in LOSC.⁸⁹ As will

⁸⁵ MRV regulation, Annex I, part B(1)

⁸⁶ *Ibid.*, Annex I, part B(2)

⁸⁷ *Ibid.* Annex I, part B(3)

⁸⁸ *Ibid.* Annex I, part B(4)

⁸⁹ Described below in Chapter 5

be seen below, it is far from given that the right to impose and enforce port entry conditions also includes a right to apply an extraterritorial reach to these conditions.

4.5.1 Port state jurisdiction: static features v. operational conduct

For the purpose of determining the geographical limits of PSJ, it is worth distinguishing between two categories of regulatory measures: those targeting the static features of the ship and those which relate to more “operational” matters.⁹⁰

Requirements on static features will typically concern the construction, equipment, design and manning of the ship. While highly invasive for the vessel, PSJ over this is also the easiest to justify under international law because a ship in breach is doomed to be in violation also in the internal waters of the legislator, where the latter as we have seen enjoys absolute jurisdiction. Consequently, PSJ over static features of the ship are generally acceptable, even if this most often will be decisive for the static features of the specific ship also outside of the internal waters.

Ringbom paints a picture of a less settled situation as regards the other category; regulation pertaining to more operational activities.⁹¹ This is the category relevant for the MRV regulation as well as the proposed shipping scheme. In contrast to regulation over “static” features, regulation concerning operational pollution does not for practical reasons restrict the vessel outside the ports. If this is to apply extraterritorially, this therefore has to be explicitly formulated in the legislation.

Ringbom points out that arguing for a state’s right to impose port entry conditions of any category and territorial reach is in line with the reasoning that “ships remain free to ignore the port State’s rules by not calling at one of its ports.”⁹² Such an interpretation seems to fit along the lines of the reasoning of the Advocate General and Court in the aviation case, where the Directive’s reach was deemed to be domestic partly

⁹⁰ Ringbom (2011) at 621

⁹¹ Ringbom (2011) at 625

⁹² L.c.

because it only applied to aircrafts choosing to use EU aerodromes, and not any aircraft crossing EU or non-EU airspace.

Ryngaert and Ringbom are however acutely aware of a problem connected to port entry conditions; the best way of enforcing them is by denying access to port.⁹³ As Molenaar argued, such denial of access is merely withdrawal of a benefit which the vessel is not entitled to under international law; that of access to foreign ports. Enforcement measures like fines, on the other hand, are purely punitive and therefore more difficult to justify as regards port entry condition.⁹⁴ This hampers the practical justification of the shipping EU ETS as a port entry condition, as the scheme includes fines as a penalty measure.

While the Advocate General and Court stop short after having concluded that the voluntary use of EU aerodromes makes for voluntary submission to EU rules, Ringbom also recognizes that these rules have to be lawfully adopted in the first place. The aviation ruling has been criticised over the apparent confusal of *enforcement* jurisdiction *on* state territory and *prescriptive* jurisdiction *beyond* state territory.⁹⁵ In his assessment of an EU ETS for ships, Ringbom points out that “the circumstance that the enforcement takes place in the port or internal waters, does not do away with the need to find a justification of the rule in terms of prescriptive jurisdiction.”⁹⁶ In the case of the proposed shipping scheme, the legislation as we have seen pertains to conduct beyond EU territory.

Possible ways of territorializing the scheme could consist in prosecuting breaches on basis of the vessel’s failure to produce accurate reports *in port* on emissions *outside* of EU maritime zones.⁹⁷ This is however not how the proposed EU ETS for shipping is designed. In the adopted amendment, it is specified that the EU ETS Directive Art. 12 and 16 (which as to the aspects relevant here remain unchanged in the Com-

⁹³ C. Ryngaert and Ringbom (2016) at 385

⁹⁴ Molenaar (2007) at 229

⁹⁵ See for instance Voigt (2012); Hartmann (2013)

⁹⁶ Ringbom (2011) at 626

⁹⁷ See C. Ryngaert and Ringbom (2016) on the MRV regulation, footnote 9

mission's and the Parliament's revision proposals) "shall apply to maritime activities in the same manner as to other activities."⁹⁸ Accordingly, sanctions are not exclusively issued for reporting infringements.

4.5.2 Territorial scope of the MRV Regulation

In this context, it can be worth pointing to the few legal analyses mentioning the MRV regulation in relation to PSJ. Here, sanctions including expulsion are in place, and these naturally relate to information infringements only. Acknowledging that this regulation "considers 'conduct' that occurred beyond European waters: i.e., extraterritorial conduct"⁹⁹ and extends "an ongoing requirement on operators to collect information during periods where a vessel is beyond the maritime zone of any EU Member State",¹⁰⁰ the authors refrain from labelling the regulation itself extraterritorial.

One contributor goes as far in the other direction as to lay out the Regulation as an example of how PSJ "may address conduct of a ship beyond the port State's maritime zones by exercising only territorial, and not extra-territorial, jurisdiction".¹⁰¹ Discussing the possibility if the regulation being followed by more intrusive measures such as an ETS for shipping, he however decides that this in its turn "may well contain a substantial element of port state jurisdiction."¹⁰² It seems then that the fact that the extraterritorially collected information in the case of the ETS will be used as basis for calculating financial obligations, is suited to make this a more concrete extraterritorial rule than the MRV regulation.

It can thus be concluded that the new EU ETS would in fact regulate conduct extraterritorially if amended as proposed by Parliament. Having established this, what needs to be examined next is whether this extra-

⁹⁸ P8_TA-PROV(2017)003, Amendment 36, Art. 3gb

⁹⁹ Coelho (2015) at 281

¹⁰⁰ Marten (2016) at 488

¹⁰¹ Churchill (2016) at 464

¹⁰² L.c.

territorial scope could be justified, either by treaty or under the general international law of jurisdiction.

5 Justifications for an ETS/fund scheme covering international shipping

5.1 LOSC provisions on environmental port state jurisdiction

Only one out of the three articles on (respectively) airborne, land-based and vessel source pollution in LOSC pays special attention to the port state in relation to airborne pollution from vessels. In Art. 211 on pollution from vessels, para. 3 opens a possibility for states to “establish particular requirements for the prevention, reduction and control of pollution of the marine environment as a condition for the entry of foreign vessels into their port or internal waters”.¹⁵ Art. 211(3) does however not address the question of a possible extraterritorial reach of such jurisdiction.

This lacking suggestion of limitation may be interpreted to mean exactly that; no limitation is suggested. The same is true for the general clause on port state control in LOSC Art. 25(2). However, not limiting PSJ to the port is not the same as justifying extraterritorial PSJ. Overall, LOSC offers limited explicit support for PSJ relating to activities outside the state’s territorial waters.¹⁰³ A provision which could theoretically be relevant is Art. 211(5), which opens a possibility for coastal states to adopt and enforce pollution laws giving effect to generally accepted international rules and standards in respect of their EEZs. Even if it should provide the EU with a jurisdictional basis for the scheme in the EEZ of EU states, this would not have any practical effect as the proposed scheme will also apply outside of the EEZ.

¹⁰³ Ringbom (2011) at 623

5.2 Extraterritorial port state jurisdiction under LOSC

Amongst the enforcement provisions in the LOSC environmental chapter, there is however one provision explicitly providing the port state with full extraterritorial environmental jurisdiction. Art. 218 provides jurisdiction for port state enforcement (and imminently also prescriptive jurisdiction)¹⁰⁴ for any discharge beyond (and within) the state's EEZ "in violation of applicable rules and standards established through the competent international organization or general diplomatic conference."

A first question then is whether CO₂ emissions can be defined as "discharge". The term is not defined in LOSC. A linguistic interpretation may lead in the direction of the ridding of more tangible substances such as oil, and the international discharge rules imposed in MARPOL today do not cover CO₂ emissions. But that does not entirely rule out the possibility of defining CO₂ emissions as discharge, which is defined in the Oxford dictionaries as "The action of discharging a liquid, gas, or other substance."¹⁰⁵

Even if discharge should also include CO₂ emissions, for Art. 218 to be of relevance for the proposed shipping scheme there would need to exist an "applicable international rule" "established through the competent international organization" clear enough for the EU to enforce. With its massive adoption and broad ratification, the Paris Agreement constitutes generally accepted international regulation. While a LOSC referral to the competent international organization (in singular) generally alludes to the IMO, one could argue that the picture is different as regards CO₂ emissions, and that the COP is the more obvious competent organization in this question – particularly in the light of the lacking IMO delegation in the Paris Agreement and its implications as discussed in Chapter 2.

The decisive element then must be whether the Agreement contains applicable rules clear enough to be enforced. In this context, it can be argued that the Agreement regulates shipping and aviation emissions

¹⁰⁴ Churchill (2016) at 463

¹⁰⁵ English Oxford Living Dictionaries (2016)

more unconditionally and precisely than the Kyoto Protocol, as it does not refer these questions to ICAO and IMO, and it obliges all states to submit NDCs. There are however two obvious problems connected to these NDCs in relation to LOSC Art. 218; their content, the targets, are not legally binding themselves, and do not cover international shipping emissions. Therefore, the Paris Agreement as it stands today cannot be said to provide any concrete, unconditional “discharge” or emission rules sufficiently precise and relevant to justify the proposed shipping scheme. This picture might however change, especially if ambitious targets should achieve some sort of normative character¹⁰⁶ and if the reporting methodology should open for including international shipping emissions in some way.

When Art. 218 cannot today justify the extraterritorial reach of the proposed shipping scheme, the existence of the same provision becomes a subject of interpretation. Does the fact that LOSC contains one provision on extraterritorial environmental port state enforcement mean that any extraterritorial environmental port state enforcement is conditional upon explicit jurisdictional basis in the LOSC, and will be illegal in the lack of positive provisions? This would not be an illogical *a contrario* inference, as pointed out by Ringbom, who however argues that such an approach “does not sufficiently consider the broad jurisdiction of port States to regulate access to the port”.¹⁰⁷

While specific justification for extraterritorial port state jurisdiction over CO₂ emissions from vessels cannot be found in LOSC, “very little, if anything” in the convention indicates that port entry conditions can only relate to “static” and not “operational” requirements.¹⁰⁸ In other words, as of today LOSC neither specifically authorizes extraterritorial environmental jurisdiction in a form that would cover the proposed shipping scheme, nor denies it. To examine if there exists any justification for port state imposed operational requirements with extraterritorial reach, we must therefore turn to the principles of jurisdiction solidified in custom-

¹⁰⁶ See Voigt (2016)

¹⁰⁷ Ringbom (2011) at 625

¹⁰⁸ L.c.

ary international law. This is also in line with the LOSC preamble, in which the parties affirm that “matters not regulated by this Convention will continue to be governed by the rules and principles of general international law.”

5.3 Customary international law justification for extraterritorial prescriptive jurisdiction

While it is widely acknowledged that a bouquet of jurisdictional principles exist in international law, a question whose answer varies hugely is which principles actually constitute customary principles, and what their scope is. All other jurisdiction principles than the territoriality principle and the personality principle (and to some extent even these) are marred by the controversy surrounding them.

This divide also surfaces in the inconsistent terminology on the field, where some principles go under several different names. In a try at categorizing, the principles relevant to the proposed EU shipping scheme can be boiled down to the objective territorial principle, the effects doctrine, the universality principle and the protective principle. The objective territorial principle allows for jurisdiction over acts partially committed in the state of the legislator. Under the effects doctrine, states can legislate over matters having effects within their territory, even if none of the act actually occurred here. The universality principle, as the name implies, provides universal jurisdiction over a restricted set of crimes deemed atrocious enough to justify this. The protective principle can be applied to assert jurisdiction over matters which threaten the vital interest of the state.

In this chapter, each of these principles will be considered in order to decide whether the extraterritorial jurisdiction of the EU could be based on either.

5.4 The causality knot

This assessment of relevant jurisdictional principles quickly runs into an obstacle regrettably well-known to climate lawyers. The problem is

this: while the domestic effects of climate change is certainly a phenomenon of pressing urgency, the cause and effect question remains sensationally hard to ascertain – especially if paired with an intent criteria. Just by itself, the exercise of establishing a direct link between concrete emission activities and local climate impacts is exasperating enough, given, *inter alia*, that emissions accumulate globally, that each contribution to this is in itself non-essential, and that the reaction of the climate system to the accumulation is both sluggish (at least until a tipping point) and unpredictable.

5.5 The scientific background

In the midst of this chaos, science is practically as agreed as science can be on the crucial points. For the evaluation of the different jurisdictional principles in this thesis, it is assumed that the IPCC's current reports are well-founded. Based on "Over 9200 scientific publications, a large suite of observational datasets from all regions of the world and over 2 million gigabytes of numerical data from climate model simulations"¹⁰⁹, IPCC's assessment results in the conclusion that "Warming of the climate system is unequivocal"¹¹⁰ and that "Human influence on the climate system is clear."¹¹¹ That this anthropogenic influence is in fact the dominant cause of the observed warming is regarded "extremely likely".¹¹²

5.5.1 Observed consequences of climate change

As to observed effects of the changes in the climate system, these are most keenly felt in the natural systems. IPCC determines with high confidence that many species both on land and in water "have shifted their geographic ranges, seasonal activities, migration patterns, abundances and species interactions in response to ongoing climate change."¹¹³

¹⁰⁹ IPCC (2013) at 1

¹¹⁰ IPCC report 2013 The Physical Science Basic, at 4

¹¹¹ *Ibid*, at 15

¹¹² *Ibid*. at 17

¹¹³ IPCC report 2014 Impacts, adaptation and vulnerability, at 4

It is established with equal certainty that climate change impacts on regions and crops worldwide are predominantly negative.

In the years that have gone by since the issuing of the report, the climatic developments have little but underpinned the warnings. 2016 ended up as the warmest year to ever have been recorded.¹¹⁴ The last record was set the year before, which again beat the year before. In Sibir last summer, an outbreak of anthrax was reported after the long-dormant bacteria became alive when permafrost melted due to soaring temperatures.¹¹⁵ Extreme heatwaves and heavy rain storms occur four to five times more often than before.¹¹⁶ In the first month of 2017, the extent of sea ice covering the Arctic ocean averaged at the lowest January levels recorded in 38 year of satellite surveillance.¹¹⁷

5.5.2 Expected future effects

Expected future effects of climate change include severely increased sea-levels, lengthened frost-free seasons, changed precipitation patterns, more extreme weather events such as draughts, heat waves and hurricanes, and the melting of the Arctic.¹¹⁸ In short, with the words of the IPCC:

“Continued emission of greenhouse gases will cause further warming and long-lasting changes in all components of the climate system, increasing the likelihood of severe, pervasive and irreversible impacts for people and ecosystems.”¹¹⁹

It is against this backdrop that the different bases for jurisdiction for proposed shipping scheme must be assessed. In this, it should be retained from Chapter 4 that while *enforcement jurisdiction on EU territory* is undisputed, rules can only be lawfully enforced if they are adopted

¹¹⁴ NASA (2017)

¹¹⁵ Guarino (2008)

¹¹⁶ Fischer and Knutti (2015)

¹¹⁷ Danmarks Meteorologiske Institut (2017)

¹¹⁸ NASA (2016), and Lord (2012) at 24

¹¹⁹ IPCC report 2014 Synthesis report, at 8

lawfully in the first place. The discussion therefore exclusively relates to bases for exercising *prescriptive jurisdiction* outside of EU territory.

5.6 The objective territoriality principle and the effects doctrine

Objective territorial jurisdiction enables a state to legislate over an incident initiated outside of the state's territory, but completed within.¹²⁰ A simple example often used to describe the scenario is the one where a gunman shoots across a state border and hits a resident in the neighbouring country, which then has jurisdiction over the crime.¹²¹ The before-mentioned Lotus case is another example, where the French vessel *Lotus*, in colliding with a Turkish ship, completed its act literally within the Turkish ship and thus within Turkish jurisdiction.¹²² Telling for the state of flux in the area is the fact that Lotus is by some scholars rather regarded as an example for the effects doctrine.

The effects doctrine takes the extension from the objective territorial principle further, in that it does not condition the state's jurisdiction on any physical act occurring in its territory.¹²³ Initially a product of US anti-trust law introduced in the Alcoa case,¹²⁴ this principle "reached what is perhaps its fullest expression"¹²⁵ in the Uranium Antitrust litigation surfacing in *Rio Tinto Zinc Corp v Westinghouse Electric Corp*. Here, the only jurisdictional link for applying US antitrust law to a cartel solely comprising non-US companies was the intended "effect" of the cartel upon USA. This assertion gave rise to strong protests among other states. Laws and decisions appearing to base jurisdiction on this doctrine have however

¹²⁰ This quasi-territorial nature justifies treating the principle as one of several possibly justifying extraterritorial jurisdiction, even if terminologically, this may seem counterintuitive.

¹²¹ Akehurst (1972–1973) at 152

¹²² Staker (2014), at 317

¹²³ Ibid. at 318

¹²⁴ L.c.

¹²⁵ L.c.

been adopted by several other countries in the decades following the ruling.¹²⁶

In the analyses of the aviation ruling, several scholars lay out (one of) the argument(s) presented by the Advocate General and the court as being founded in the effects doctrine. While the effects doctrine has been broached both in relation to the aviation case and other intrastate pollution cases, Ellis makes a case for instead relying on the principle of objective territoriality in pollution cases.¹²⁷ A more well-established and less disputed jurisdictional principle than the effects doctrine, the principle of objective territoriality also frees the extraterritorial legislator from the intent and causation criteria of the doctrine. Under the effects doctrine, jurisdiction can largely only be established over acts which both are intended to cause and do cause effects within the legislator's territory.¹²⁸ The basic criteria for a state claiming jurisdiction under the objective territoriality principle, on its hand, is that the state "must prove that a constituent element of the offence occurred in its territory."¹²⁹

In the case of ships travelling to and from the EU, the act, i.e. emitting, is quite detectably committed both beyond and *on* EU territory during the same journey. This constituent element will presumably more often than not be smaller than the part committed beyond EU territory, as EU territorial waters only stretch 12 nmi beyond the baselines. It does however constitute a clear enough element to justify further assessing the objective territoriality principle as a topical potential justification for the extraterritorial reach of the scheme. As will be seen, the activity taking place on EU territory (and not just the effect possibly occurring here) can also be relevant in relation to the effects doctrine. This is because, in deciding whether EU can actually assert jurisdiction under either of these related principles, it is necessary to consider the reasonableness of the measure, in light of all different factors of the matter.

¹²⁶ Staker (2014) at 318

¹²⁷ Ellis (2012)

¹²⁸ Staker (2014) at 318

¹²⁹ Akehurst ((1972–1973)) at 152

5.6.1 The case for a reasonableness test

In addition to the confusion connected to the existence of, and distinction between, the different jurisdiction principles, tools for considering whether these principles apply to a given fact are also in high demand. Resort is therefore not seldom had to the Third restatement of foreign relations law of the United States.¹³⁰ While certainly not a customary international law rule, and only possibly a principle of international law, the test is supported in one of the few modern monographs on jurisdiction.¹³¹ In his assessment of an ETS for shipping, Ringbom equally embraces the test, pointing out that a general requirement for reasonableness is also widely supported by the legal scholars who settle for a more generic single jurisdictional principle of a substantial and genuine connection.¹³²

The reasonableness test will therefore be applied as a useful tool in this evaluation of the potential jurisdictional bases for an extraterritorial shipping scheme. In the Restatement, it is stipulated that even when basis for prescriptive jurisdiction is present, such jurisdiction cannot be exercised when this would be unreasonable. Interestingly in the light of the discussion in Chapter 4, the reasonableness assessment is presented as necessary to apply to jurisdiction based on any principle – including territoriality. If this is followed, which is suggested by Ryngaert and Ringbom in order to limit “the over-inclusiveness of the territoriality principle on which PSJ is traditionally based”,¹³³ the assessment of the legality of the proposed shipping scheme could very possibly amount in the same conclusion whether one views its reach territorial under a broad construction of PSJ, or extraterritorial.

5.6.2 Assessing the reasonableness

It is in this reasonableness assessment that the share of the act committed in the EU could come into play. In the Restatement, concrete factors

¹³⁰ American Law (1987) Section 403

¹³¹ Cedric Ryngaert (2015) at 185

¹³² Ringbom (2011) at 631

¹³³ C. Ryngaert and Ringbom (2016) at 388

relevant to determine the reasonableness of the exercise of jurisdiction are listed. They include, “where appropriate”:

- (a) the link of the activity to the territory of the regulating state;
- (b) the connections between the regulating state and the person principally responsible for the activity;
- (c) the character of the activity, the importance of regulation to the regulating state, the extent to which other states regulate such activities, and the degree to which the desirability of such regulation is generally accepted;
- (d) the existence of justified expectations that might be protected or hurt by the regulation;
- (e) the importance of the regulation to the international political, legal, or economic system;
- (f) the extent to which the regulation is consistent with the traditions of the international system;
- (g) the extent to which another state may have an interest in regulating the activity; and
- (h) the likelihood of conflict with regulation by another state.¹³⁴

5.6.2.1 The link of the activity to EU territory

The evaluation of the territorial link includes “the extent to which the activity takes place within the territory, or has substantial, direct and foreseeable effect upon or in the territory”. Here, it can be said that the modest activity committed within EU territory does not entail the strongest link. And while a warming climate will increasingly be manifest in all corners of the globe, the direct effects of each journey covered by the proposed shipping scheme will be very hard to trace to EU territory. The very emissions occurring in EU territory on journeys to and from the EU will not by themselves lead to climate change. As can be

¹³⁴ American Law (1987)

repeated endlessly by those potentially liable for climate change, hardly any actor emits enough to singlehandedly cause the warming of the troposphere.

But even if the extent to which the activity takes place within EU territory is not substantial, it is definitely existent. It is submitted here that this modest, but concrete, objective territorial link sets the stage differently for the assessment of the activity's *effect* upon EU territory. The emissions occurring during journeys to and from EU ports are linked to EU territory *both* by partially taking place there and by contributing to a phenomenon with effects there (and anywhere).

Climate change emissions in general will have substantial and foreseeable effect globally, and thus also in the EU. While the indirectness of the effect in relation to a region makes justification under the effects doctrine a tougher exercise, the objective territorial principle has an advantage in that the actual act is the decisive factor. Combined, the two semi-strong territorial links connected to respectively activity and effects could amount to a sufficient territorial link under the objective territorial principle.

Under the effects doctrine on its hand, there is no getting around the intent criteria. And to assert each ship owner's intent to cause concrete and preferably currently occurring climate change consequences in the EU, directly (or at least not insignificantly) relatable to their exact emissions, would entail quite the stretch. This distance could however be shortened by applying a preventive approach to the effects doctrine. Voigt points out when discussing the effects doctrine in relation to the aviation judgement that "In environmental laws and regulation, prevention of environmental harm is often the main objective, rather than dealing with the harm itself."

This preventive approach was assumed by Canada when introducing the Arctic Water Pollution Prevention Act in 1970. Although disputed at first, Canada's (and any other coastal state's) right to exercise environmental jurisdiction over ice-covered adjacent waters outside its territorial limits was within a few years accepted and included in LOSC at its adoption in 1982. Hartmann lays out this inclusion as showing that states "need

not always await the result of potential environmental harm”.¹³⁵ In the Southern Bluefin Tuna cases, the “precautionary principle was used to lower the standard of proof in situations where the complexity of facts leads to a degree of uncertainty.”¹³⁶

Undeniably, it is nearly impossible to establish a direct link between each ship operator’s emission and actual effects in EU territory today – let alone an intention to cause these effects. This could however change if the precautionary principle is applied and the requirement is not an actual effect, but the risk of such effect. With today’s vast scientific evidence of global effects of climate change and the predicted worsening of the same, emitters can difficultly deny to know what risk they put the world in by contributing to accumulating greenhouse gas concentrations in the atmosphere. Therefore, a preventive take on the effects doctrine could also prove a topical justification of the proposed extraterritorial EU ETS for shipping. As with the objective territorial principle, the assessment of this also of course hinges on other factors relevant for the reasonableness criteria. This will be discussed in the following.

5.6.2.2 The connection between the ship operator and the EU

As for the connection between EU and the ship operator responsible for the activity, it can be postulated that the latter has a concrete link to the EU in that it chooses to call at an EU port. This line of reasoning resonates with the concept of PSJ and the correspondent arguments in the aviation case.

5.6.2.3 The character of the activity, the importance of the EU ETS to the EU, the extent to which other states regulate international shipping emissions, and the degree to which the desirability of such regulation is

¹³⁵ Hartmann (2013) para 5.3

¹³⁶ Voigt (2016) at 489

generally accepted

The activity regulated, maritime transport, is undeniable of great significance to the economy, both globally and domestically. Shipping is definitely not an activity viewed as inherently bad. As we have seen discussed above and as will also be discussed in relation to the point below, it can be questioned to what extent the transport activity itself is in fact regulated.

Either way, we have observed how climate regulation is held to be extremely important by the regulator, the EU. However, the fact that no other states regulate shipping emissions could speak against the reasonableness of doing this. One could present both the Paris Agreement and the IMO GHG reduction roadmap as tokens of how regulation of GHG emissions from all sectors including ships is generally desired. That is however not synonymous with the desirability of the actual, regional scheme proposed being generally accepted.

5.6.2.4 The existence of justified expectations that might be protected or hurt by the EU ETS, the extent to which the EU ETS is consistent with the traditions of the international system, and the importance of the EU ETS to the international political, legal, or economic system

Under LOSC, the freedom of the high seas and the rights to peaceful transit are fundamental rules, and any expectation that these rules will be respected is justified. The question is whether the proposed scheme actually hurts these expectations. In the discussion of the nature of the reporting rules, it was concluded that they do constitute regulation, although not a kind that places noteworthy restrictions on the conduct of those responsible. In this context it is meaningful to consider the proposed scheme's consistency with principles of general international law, such as sovereign equity, proportionality and the prohibition of discrimination or of abuse of rights. Here it is necessary to take into account both the graveness of

the climate threat and the importance of economic growth, which shipping is closely connected to. These are undoubtedly both weighty factors.

As regards the concrete scheme proposed for shipping, it can be argued that the measures instituted by the EU to combat climate change will not substantially impinge on the continuation of economic growth. The relative modesty of the obligations imposed extraterritorially has something to say for the question of proportionality and abuse of rights.

With the proposed shipping scheme, ship owners would have a possibility to opt out of a potentially administratively burdensome obligation. The financial obligation would however remain approximately the same.

With the cap gradually being reduced with an assumed increased demand of each allowance and thereby also price, it cannot be ruled out that the financial burden imposed on those covered by the system might indeed become more substantial than it has been in the past. Chances also increase that ship owners may indeed be forced to change behaviour in order to comply with their ETS obligations.

At the same time, it can be reiterated that with the entry into force of the Paris Agreement, the expressed global support for climate change mitigation is unprecedentedly strong. The existential dimension of the climate threat is widely recognized. Indeed, the article containing the ultimate objective of the Paris Agreement includes the term “the threat of climate change”, an expression that is not found in UNFCCC or the Kyoto Protocol.

The EU ETS aims to contribute to reaching the Paris target of strengthening the global response to the threat of climate change, – a purpose which is more solidly supported than ever. A legal assessment of the shipping measure in light of the purpose served must therefore amount in the conclusion that it is not in conflict with the traditions of the international system.

5.6.2.5 The extent to which another state may have an interest in regulating the activity

When it comes to other states’ interest in regulating the matter, any state in the world can be regarded to have as keen an interest in preventing

climate change as the EU countries. A range of nations, such as small island developing states and the least developed countries under more extreme weather conditions, could even be deemed to have a more pressing interest in this than the EU. This group also includes countries where a significant amount of the world's ships are flagged, such as the Marshall Island. Cases of competing jurisdiction between EU and a flag state who has a bigger interest are therefore probable.

It could be argued that this is not likely to cause problems because the EU measure is adopted with the objective of protecting this exact interest. The twist of the EU ETS is that it pursues an objective that can be said to be as much in the interest of the subject, i.e. the flag state and other coastal states, as of the legislator. To the extent that the EU ETS will in fact contribute to mitigating climate change, this is even more in the interest of the states most profoundly affected by climate change than it is in the interest of the EU.

If any state has jurisdiction over acts contributing to climate change because mitigating this is in any state's interest, this however quickly makes for universal jurisdiction. While the principle of universality will be discussed below, Akehurst suggests applying the 'primary effects' approach as a "better means of keeping the jurisdiction of States within reasonable bounds". Under the primary effects approach, "jurisdiction can be claimed only by the State where the primary effect is felt."¹³⁷ This places extraterritorial climate change measures in a deadlock; as the most inherently global challenge ever faced by modern society, climate change is an issue whose effects will be felt by all. Few can therefore invoke a primary interest in regulating emissions.

Akehurst explicitly mentions atmospheric pollution as an example of an issue where the "constituent element criteria" set up in relation to the effects doctrine would produce absurd results. It is the claim of this thesis however that such absurdity is avoided in the case of the EU ETS, where the constituent element is not the emissions accumulating across borders, but instead being actively emitted on each side of the border. With this qualification, the possibility for absurd situations where any

¹³⁷ Akehurst ((1972–1973)) at 154

state can legislate over anything anywhere is reduced. That does however not leave the “primary interest” test irrelevant. After all, even in cases where constituent elements of an act are committed in different states, a conflict can arise if both regulate the matter.

5.6.2.6 The likelihood of conflict with regulation by another state

The likelihood of the shipping obligation conflicting with regulation by flag states or other coastal states is, as of today, small, given that there is no global regulation in place for shipping emissions, and that to the knowledge of this author, no state has therefore instituted CO₂ emission reduction measures aimed at vessels in their registries or in their maritime zones. The proposed ETS design is also conditioned on lacking global targets, and contains a clause on reviewal with the aim of alignment should an international agreement on such targets be reached.¹³⁸

In the event that an international agreement on global measures to reduce greenhouse gas emissions from maritime transport is reached, the Commission shall review this Directive and shall, if appropriate, propose amendments in order to ensure alignment with that international agreement.

In the situation that could be widespread if the amendment entered into force today, where a flag state, despite possibly having the strongest link to the issue, does not regulate it, the concept of subsidiarity could be of importance. Suggested by Ryngaert, this concept entails that a state not assuming jurisdictional responsibility loses the right to protest against other states stepping in and doing so.¹³⁹

In light of the timely objections that can be made regarding the potential for self-serving interpretations and abuse of the multifaceted reasonableness assessment, Ryngaert suggests to restrict invoking of subsidiary jurisdiction to cases where this is in the interest of the international

¹³⁸ P8_TA-PROV(2017)0035, Amendment 36, Art. 3ge

¹³⁹ Cedric Ryngaert (2015) at 231

community. For this principle to be meaningful, a criteria will have to be that this interest is clearly expressed and that the existence of jurisdictional responsibility to protect it is globally accepted.

With the Paris Agreement, it is clearer than ever that most states recognize the necessity of assuming jurisdictional responsibility for climate change. Amongst other things, all parties commit to pursuing domestic measures in order to achieve the objective of the NDCs (Art. 4.2). With the entry into force of the Agreement, such measures should be put in place immediately. Depending on the reporting methods agreed on, this could entail measures regarding maritime transport emissions in e.g. territorial waters.

As we have seen, effectively achieving the “well below 2 degrees” target can hardly be done without regulating international shipping emissions. If the reporting norms are not changed and these emissions remain outside each state’s quantified emission reduction obligations, the principle of subsidiarity would be highly relevant for the proposed shipping measure. This is especially true in light of the timeframe established for tackling shipping emissions in IMO, where no measures will be in place until long after the entry into force of the revised EU ETS. When applying the principle of subsidiarity to the proposed scheme for shipping, the extraterritorial reach of the EU legislation proves less problematic.

In short, in light of the combination of a territorial link between the EU and parts of the activity regulated, as well as a widely recognized and expressed interest and obligation for all states to prevent climate change, and the lacking measures to this end in the field of international shipping, the objective territorial principle or the effects doctrine could both provide sufficient jurisdictional basis for the EU ETS for shipping. As regards the latter principle, it would be necessary to apply a preventive approach.

5.7 The universality principle

The rationale behind the universality principle is that it covers crimes so heinous that every state has an interest in their repression. These include

genocide, crimes against humanity and serious war crimes. Staker does however point out that this explanation sits uneasy with another crime that has been covered by universal jurisdiction for centuries; that of piracy.¹⁴⁰

As piracy does not always include crude use of powers or particularly heinous acts, the universality principle seems to cover two categories of crimes; those that are irrefutably heinous and those that are serious, and might otherwise go unpunished.¹⁴¹ The latter is the case for piracy, because pirates can evade jurisdiction by seizing ships on the high seas or within the waters of states unwilling to try the matter. In light of this, Staker suggests that the universality principle could be extended to justify jurisdiction also over other serious crimes committed in places beyond national jurisdiction.¹⁴² This approach is for instance adopted by the US as regards certain acts committed in Antarctica by or against a US citizen.

“Serious crimes that might otherwise go unpunished” sounds suspiciously coinciding with any climate activist’s take on substantial and unregulated greenhouse gas emissions. Indeed, the term “ecocide” has been coined by some environmentalists, concurrent with the release of an increasing amount of data on reverse and irreversible climate change consequences. When looking at the damages envisioned for different scenarios where emissions are not reduced, one could certainly make the point that contributing to climate change constitutes serious wrongdoing. The claim that “ecocide” belongs in the universal jurisdiction category today however appears premature.

But if one accepts Staker’s postulate that the universal jurisdiction category covers both crimes that are irrefutably heinous and serious crimes which take place beyond national jurisdiction and might therefore go unpunished, the door is far from closed for courts, national or international, willing to make a try at easing climate change contributions into this category. Here too, the Paris Agreement could provide a way of

¹⁴⁰ Staker (2014) at 322

¹⁴¹ Staker (2014) at 322

¹⁴² Ibid

demonstrating stronger global recognition both of the climate threat and of the shared responsibility for addressing it.

In her study of extraterritorial port state jurisdiction for the protection of global commons such as the oceans, Kopela argues that it is not necessary to resort to universal jurisdiction as a basis for this, because a state exercising jurisdiction to protect the global commons, has a nexus to the situation regulated. This is because any damage to the global commons “has direct effect not only upon the interests of the international community, but also upon the state itself.”¹⁴³ The whole point of universal jurisdiction, on the other hand, is that it can be exercised by states lacking any nexus to the situation. Therefore, Kopela argues, «The effects doctrine could form the basis for the extraterritorial jurisdiction by a (port) state in cases of protection of global commons.»¹⁴⁴ This leaves us back at the conclusion reached above in 5.5.

5.8 The protective principle

The protective principle springs from each state’s right to preserve itself. It allows the state to exercise jurisdiction over non-nationals committing acts which threaten vital interests of the state, even if these acts are committed outside the state’s territory.¹⁴⁵ While the protective principle as such is a widely recognized basis for jurisdiction, its application to specific matters has caused international furore. Just as much as states agree on the right to protect vital interests, just about as much do they disagree on which interests are in fact vital.¹⁴⁶

This has been fully demonstrated in relation to threats against the environment,¹⁴⁷ for instance with the introduction of the Arctic Water Pollution Prevention Act mentioned above, when Canada evoked the protective principle in its defense, labeling danger to the environment

¹⁴³ Kopela (2016) at 127

¹⁴⁴ Kopela (2016) at 107

¹⁴⁵ Staker (2014) at 321

¹⁴⁶ Hartmann (2013) at 208

¹⁴⁷ Ibid at 209

of a state “a threat to its security”.¹⁴⁸ As seen, this is laid out as an example of how jurisdiction can be assumed before actual harm has arisen. A preventive approach to the security principle is also supported in literature.¹⁴⁹ However, such an approach is not EU’s only possibility for invoking the principle.

5.8.1 Invoking the principle under a preventive approach

The EU states have yet to experience climate consequences threatening the security of the nations. This is a more pressing scenario to other states and peoples, where small island developing states are amongst the most obvious examples. Micronesia when addressing COP 15 stated that “we know that our continued existence is totally at risk.”¹⁵⁰ Bigger nations on land are also threatened; in the 2015 “Pakistan case”, the Lahore High Court ruled that “Climate Change is a defining challenge of our time and has led to dramatic alterations in our planet’s climate system. For Pakistan, these climatic variations have primarily resulted in heavy floods and droughts, raising serious concerns regarding water and food security.”¹⁵¹

While the threat is not equally urgent as regards effects in the territory of EU member states, it can be argued that in a longer perspective, it is not far from equally serious. Brunnee et al points to main long term consequences such as floods, draughts, loss of biodiversity and threats to human health, as well as damage to economic sectors like forestry, agriculture and tourism.¹⁵²

5.8.2 Invoking the principle under a (global)

¹⁴⁸ L.c.

¹⁴⁹ Cedric Ryngaert (2015) at 114

¹⁵⁰ Lord (2012) at 26

¹⁵¹ Wentz (2015)

¹⁵² Lord (2012) at 358

security perspective

In addition, and perhaps more significantly for jurisdiction today; to the extent that climate change constitutes a threat to international peace and security, it will also be a threat to the peace and security of the EU.

One needs not go further back than to the recent migrant crisis in Europe to obtain proof of this. With conflicts and worsened livelihoods in the Middle East and Africa prompting a steep increase in immigration into the EU, reports were had of civil unrest and kneeling infrastructure as well as terrorists infiltrating the stream of people arriving. In fact, this security challenge has itself been tied to climate changes to some extent. In a study released in 2015, scientists claimed that human influences on the climate system was implicated in Syrian conflict, in that climate change contributed to the drought lasting from 2007 to 2010, which in its turn contributed to the conflict.¹⁵³ The reception of this report was mixed. Regardless, the link between climate change, resource scarcity and militant groups threatening national security was also drawn by several African defence minister at a summit ahead of COP21.¹⁵⁴

As regards the security impact of climate change in general, EU leaders have prioritized climate security in several speeches and documents, including the 2015 Council conclusions on climate policy:

“Climate change, as underlined by the latest scientific findings by the Intergovernmental Panel on Climate Change (IPCC), is a decisive global challenge which, if not urgently managed, will put at risk not only the environment but also world economic prosperity, poverty reduction, sustainable development and, more broadly, peace, stability and security.”¹⁵⁵

The US is another nation to address the national security implications of climate change. In the current National Security Strategy, the White house categorises both present day direct effects on US territory and

¹⁵³ Colin, Shahrzad, Mark, Richard, and Yochanan (2015)

¹⁵⁴ Bryant (2015)

¹⁵⁵ Council of the EU Press Release 602/15

world security implications such as refugee flows and resource conflicts as a threat to the USA.¹⁵⁶

The UN Security Council has not adopted any resolutions on climate change as a security threat. The topic has been addressed in conjunction with meetings in UN foras a number of times, but this has resulted in little more than the adoption of a General Assembly climate security resolution.¹⁵⁷ The G7 countries in 2015 determined that climate change poses “a threat to the environment, to global security and economic prosperity”¹⁵⁸ concluding that “Without adequate mitigation and adaptation efforts, the impacts of rising temperatures and changing precipitation patterns heighten the risk of instability and conflict.”¹⁵⁹ The Communiqué was issued in the context of an independent report request by the G7, concluding that:

Climate change will stress our economic, social, and political systems. Where institutions and governments are unable to manage the stress or absorb the shocks of a changing climate, the risks to the stability of states and societies will increase.¹⁶⁰

It transpires that climate change could be emerging as a threat to the global peace and security and thereby indirectly a threat to any nation. The fact EU states are very much states in a globalized world, and that they are therefore themselves threatened by severe threats to world security, is beyond questioning. This could make the protective principle a topical basis for jurisdiction as regards the proposed shipping scheme, even if does not look like the direct effects of climate change will be most harshly felt on EU territory in the immediate future.

¹⁵⁶ White house (2015)

¹⁵⁷ Tänzler (2015)

¹⁵⁸ G7 Communiqué on Climate and Security (2015)

¹⁵⁹ G7 Foreign Ministers' Meeting Communiqué (2015)

¹⁶⁰ A new climate for peace (2015)

5.9 Conclusion

A recurring dilemma in the assessment of the reasonableness of an EU ETS for shipping with an extraterritorial reach is the uniquely universal dimension of the climate change threat. The fact that all states are, and will increasingly be, affected by the warming of the troposphere, makes it hard to establish a primary interest in the issue. Asserting jurisdiction despite this is equally hard to do without risking to water down any relevant jurisdictional principle.

In the case of emissions from international shipping, a “tragedy of the commons” scenario is therefore imminent, where the states wishing to regulate the matter beyond their borders are refrained from doing so even if the relevant flag and coastal states fail to do the same – despite both parties having committed to combat climate change.

An equally problematic situation, both legally and politically, arises if one lays out the global interest in climate change mitigation to allow for any extraterritorial regulation of the matter.

This thesis settles on a third way of looking at the universality of the climate change threat; admitting each and every state an interest in regulating this due to direct and indirect effects in their territory, while conditioning extraterritorial regulation of the issue both on a further territorial link to the activity regulated, and on the lack of competing regulation equally probable to achieve the widely recognized aim of combatting climate change. This qualification goes a little further than Ryngaert’s global welfare oriented subsidiarity criteria, in that some degree of territorial activity is also required.

Assessed in this context, the exercise of asserting jurisdiction for an EU ETS for shipping in 2023 has several factors speaking to its advantage. In short, in a try at summarising the discussions above:

- The legally expressed global support for combatting climate change has never been sounder.
- EU is affected by climate change both physically on its territory (to a fairly modest, albeit increasing extent), and, more indirectly but also

perhaps more pressingly, by climate change consequences threatening the international security.

- The extraterritorial jurisdiction introduced with the amendment only relates to journeys partially taking place within EU territory, so the EU also has a concrete territorial link to the specific activity sessions it seeks to regulate.

- The likeliness of international regulation of shipping emissions by 2021 (which is the deadline for a comparable system operating under the IMO set in the Parliament amendment), or even before entering 2023 (which is when the proposed scheme will take effect as per the same amendment), is minimal.

- In the lack of international regulation, the likeliness of unilateral regulation is equally minimal.

- The proposed regulation itself contains a clause according to which it will only enter into effect if a global scheme is not in place by 2021. Another clause ensures reviewal with the aim of ensuring alignment with such global regulation should it be adopted later.

In the assessment of the respective topical jurisdictional principles above, it was concluded that both the objective territorial principle, the effects doctrine and the protective principle could provide basis for jurisdiction for the shipping ETS. For the latter two, a preventive approach would have to be instituted (and/or a global security focus, in the case of the protective principle).

With the above recap of how the most crucial points in the reasonableness assessment turn out for the EU ETS, it is worth arguing that the EU could in fact claim jurisdiction to apply its ETS to journeys to and from EU ports – also when this includes taking account of CO₂ emitted in the maritime zones beyond EU territory.

Regardless of whether this is sought based on the objective territorial principle, the effects doctrine or the protective principle, it is clear that its establishment cannot be achieved without pushing some limits.

In light of the discussion above, it is the claim of this thesis that such stretching of climate jurisdiction further than there might be precedent for is not as problematic as one may fear. By “rocking the boat” like this,

the EU would after all assume responsibility for a problem that a vast majority of the world's states committed to solving with the Paris Agreement. As we have seen, unregulated growth in shipping emissions is likely to undermine the Agreement's objectives, and prospects of global regulation are modest at the moment.

The proposed shipping ETS would not alone be enough to hinder this growth. In this context, it can however be remembered how ICAO came around to adopting an MBM in the wake of the EU ETS extension in the field, and how IMO decided on a mandatory MRV system just in time to avoid being "bypassed" by the EU. In light of this, it should not be ruled out that the rocking of the boat which the adoption of the amendments would entail, might even stir up some action in the field of a global MBM for shipping.

Table of reference

Books and articles

- Akehurst, M. ((1972–1973)). Jurisdiction in International Law.
British Year Book of International Law 46, 145–258.
- American Law, I. (1987). *Restatement of the law, third: foreign relations law of the United States : 1 : §§ 1-488* (Rev. and enl. ed. Vol. 1).
St. Paul, Minn: American Law Institute Publishers.
- Birnie, P. W., Boyle, A. E., & Redgwell, C. (2009). *International law & the environment* (3rd ed. ed.). Oxford: Oxford University Press.
- Churchill, R. (2016). Port State Jurisdiction Relating to the Safety of Shipping and Pollution from Ships-What Degree of Extraterritoriality? *Int. J. Mar. Coast. Law*, 3, 442–469.
doi:10.1163/15718085-12341409
- Coelho, N. F. (2015). Extraterritoriality from the Port: EU's approach to jurisdiction over ship-source pollution.

- Colin, P. K., Shahrzad, M., Mark, A. C., Richard, S., & Yochanan, K. (2015). Climate change in the Fertile Crescent and implications of the recent Syrian drought. *Proceedings of the National Academy of Sciences*, 112(11), 3241. doi:10.1073/pnas.1421533112
- Ellis, J. (2012). Extraterritorial Exercise of Jurisdiction for Environmental Protection: Addressing Fairness Concerns. *Leiden Journal of International Law*, 25(2), 397-414. doi:10.1017/S0922156512000106
- Fischer, E. M., & Knutti, R. (2015). Anthropogenic contribution to global occurrence of heavy-precipitation and high-temperature extremes. *Nature Climate Change*, 5(6), 560–564. doi:10.1038/nclimate2617
- Hartmann, J. (2013). A battle for the skies: Applying the European Emissions Trading System to international aviation. *Nordic journal of international law*, 82, 187–220.
- Hermeling, C., Klement, J. H., Koesler, S., Köhler, J., & Klement, D. (2015). Sailing into a dilemma: An economic and legal analysis of an EU trading scheme for maritime emissions: An economic and legal analysis of an EU trading scheme for maritime emissions. *Transportation Research Part A*, 78, 34–53. doi:10.1016/j.tra.2015.04.021
- Kopela, S. (2016). Port-State Jurisdiction, Extraterritoriality, and the Protection of Global Commons. *Ocean Development & International Law*, 47(2), 89–130. doi:10.1080/00908320.2016.1159083
- Kremlis, M. (2010). The inclusion of the shipping industry in the EU ETS.(European Union Emissions Trading Scheme). *European Energy and Environmental Law Review*, 19(3), 145.
- Lord, R. (2012). *Climate change liability : transnational law and practice*. Cambridge: Cambridge University Press.
- Marten, B. (2016). Port state jurisdiction over vessel information: territoriality, extra-territoriality and the future of shipping regulation.(Port State Jurisdiction: Challenges and Potential). *International Journal of Marine and Coastal Law*, 31(3), 470–498.

- Martinez Romera, B. (2016). The Paris Agreement and the Regulation of International Bunker Fuels. *Review of European, Comparative & International Environmental Law*, 25(2), 215–227. doi:10.1111/reel.12170
- Molenaar, E. J. (2007). Port State Jurisdiction: Toward Comprehensive, Mandatory and Global Coverage. *Ocean Development & International Law*, 38(1–2), 225–257. doi:10.1080/00908320601071520
- Oppenheim, L. F. L., Jennings, R., & Watts, A. (1992). *Oppenheim's international law : 1 : Peace Introduction and part 1* (9th ed. edited by Robert Jennings and Arthur Watts. ed. Vol. 1). Harlow: Longman.
- Ringbom, H. (2011). Global Problem—Regional Solution? International Law Reflections on an EU CO2 Emissions Trading Scheme for Ships. *The International Journal of Marine and Coastal Law*, 26(4), 613–641. doi:10.1163/157180811X598709
- Rothwell, D., Oude Elferink, A., Scott, K., & Stephens, T. (2015). *Warming Waters and Souring Seas*: Oxford University Press.
- Ryngaert, C. (2015). *Jurisdiction in International Law*
- Ryngaert, C., & Ringbom, H. (2016). Introduction: Port State Jurisdiction: Challenges and Potential. *Int. J. Mar. Coast. Law*, 3, 379–394. doi:10.1163/15718085-12341405
- Staker, C. (2014). Jurisdiction. In M. D. Evans (Ed.), *International law* (4th ed. ed.). Oxford: Oxford University Press.
- Tanaka, Y. (2015). *The international law of the sea* (2nd ed. ed.). Cambridge: Cambridge University Press.
- Voigt, C. (2008). WTO Law and International Emissions Trading: Is there Potential for Conflict? *CCLR – Carbon and Climate Law Review*(1), 13.

Voigt, C. (2012). Up in the Air: Aviation, the EU Emissions Trading Scheme and the Question of Jurisdiction. *Cambridge yearbook of European legal studies*, 14(1), 475–506.
doi:10.5235/152888712805580336

Voigt, C. (2016). Climate Change and Damages. In C. Carlarne, K. Grey, & R. Tarasofsky (Eds.), *Oxford Handbook of International Climate Change Law* (pp. 464–494): Oxford University Press.

Case law

Case C-366/10. The Air Transport Association of America, American Airlines, Inc., Continental Airlines, Inc., United Airlines, Inc. (ATA and others) v. The Secretary of State for Energy and Climate Change Reference. Opinion by the Advocate General. ECLI:EU:C:2011:864

Case C-366/10. The Air Transport Association of America, American Airlines, Inc., Continental Airlines, Inc., United Airlines, Inc. (ATA and others) v. The Secretary of State for Energy and Climate Change Reference. Preliminary ruling by the Grand Chamber. ECLI:EU:C:2011:864

The MOX Plant Case (Ireland v. United Kingdom), Provisional Measures, ITLOS Case No. 10 (2001)

Southern Bluefin Tuna Cases. New Zealand V. Japan; Australia V. Japan. Provisional Measures, *ITLOS Case No 3*, (1999)

Rio Tinto Zinc Corp v Westinghouse Electric Corp 1 All ER 434 (HL) (1978)

United States v Aluminium Co of America, 148 F.2d 416 (1945)

PCIJ, SS “Lotus”, PCIJ Rep Series A, No. 10 (1927)

Legislation

Paris Agreement, Oct. 5 2016

Directive 2008/101/EC Amending Directive 2003/87/EC so as to include aviation activities in the scheme for greenhouse gas emission allowance trading within the Community, Nov. 19 2015

Regulation 2015/757/EC Monitoring, reporting and verification of carbon dioxide emissions from maritime transport, and amending Directive 2009/16/EC, May 19 2015

Directive 2003/87/EC Establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC, April 29 2015

Doha Amendment to the Kyoto Protocol, Dec. 8 2012

Treaty on the Functioning of the European Union, Dec. 13 2007

Kyoto Protocol to the United Nations Framework Convention on Climate Change, Dec. 11 1997

United Nations Framework Convention on Climate Change, May 9 1992

United Nations Convention on the Law of the Sea, Dec. 10 1982

International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978, Feb. 17 1978

Vienna Convention on the Law of Treaties, May 23 1969

Miscellaneous

2006 IPCC Guidelines for National Greenhouse Gas Inventories, 2006

COM (2013) 479. Final Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Integrating maritime transport emissions in the EU's greenhouse gas reduction policies. June 28 2013

2015/0148 (COD). Proposal for a Directive of the European Parliament and of the Council amending Directive 2003/87/EC to enhance cost-effective emission reductions and low-carbon investments.

Retrieved at:

<http://data.consilium.europa.eu/doc/document/ST-6841-2017-INIT/en/pdf>

English Oxford Living Dictionaries (2016). Definition of discharge in English. Retrieved at:

<https://en.oxforddictionaries.com/definition/discharge>

IPCC Climate change report 2013. Questions and answers. Retrieved at:

http://www.ipcc.ch/report/ar5/wg1/docs/WG1AR5_Questions.pdf

P8_TA-PROV(2017)003. Amendments adopted by the European Parliament on 15 February 2017 on the proposal for a directive of the European Parliament and of the Council amending Directive 2003/87/EC to enhance cost-effective emission reductions and low-carbon investments (COM(2015)0337 – C8-0190/2015 – 2015/0148(COD))1. Retrieved at:

<http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+TA+P8-TA-2017-0035+0+DOC+PDF+V0//EN>

Online articles

Bryant, E. (2015) In Paris, top officials warn climate change poses major security threat. Retrieved at:

<http://www.dw.com/en/in-paris-top-officials-warn-climate-change-poses-major-security-threat/a-18784110>

European Commission (2016). Revision for phase 4 (2021–2030).

Retrieved at:

http://ec.europa.eu/clima/policies/ets/revision_en

Danmarks Meteorologiske Institut (2017). Havisareal på den nordlige halvkugle. Retrieved at: <http://ocean.dmi.dk/arctic/icecover.php>

Doelle, M. (2016). GHG Emissions from International Shipping and Aviation: Status after Paris? Retrieved at:

<https://blogs.dal.ca/melaw/2016/07/05/ghg-emissions-from-international-shipping-and-aviation-status-after-paris/>

- Guarino, B. (2008) Anthrax sickens 13 in western Siberia, and a thawed-out reindeer corpse may be to blame. Retrieved at: <https://www.washingtonpost.com/news/morning-mix/wp/2016/07/28/anthrax-sickens-13-in-western-siberia-and-a-thawed-out-reindeer-corpse-may-be-to-blame/>
- NASA (2016). The consequences of climate change. Retrieved at: <http://climate.nasa.gov/effects/>
- National Oceanic and Atmospheric Administration, U.S Department of Commerce (2016). There is only ONE global ocean. Retrieved at: <http://www.noaa.gov/oceans-coasts>
- Siegmund, H. (2016). ICAO Curbs Greenhouse Gas Emission in Aviation. Retrieved at: <http://www.cargoforwarder.eu/2016/10/07/icao-curbs-greenhouse-gas-emission-in-aviation/>
- Smith, T. (2015). Shipping and aviation are climate change's main culprits – but they were nowhere to be seen at Paris. Retrieved at: <http://www.independent.co.uk/voices/shipping-and-aviation-are-climate-changes-main-culprits-yet-they-where-nowhere-to-be-seen-at-paris-a6775126.html>
- Tänzler, D. (2015). Oops, They Did It Again! Climate Change in the UN Security Council. Retrieved at: <https://www.climate-diplomacy.org/news/oops-they-did-it-again-climate-change-security-council>
- Voigt, C. (2016) On the Paris Agreement's Imminent Entry Into Force (Part II of II). Retrieved at: <http://www.ejiltalk.org/on-the-paris-agreements-imminent-entering-into-force-what-are-the-consequences-of-the-paris-agreements-entering-into-force-part-ii/>
- Wentz, J. (2015) Lahore High Court Orders Pakistan to Act on Climate Change. Retrieved at: <http://blogs.law.columbia.edu/climatechange/2015/09/26/lahore-high-court-orders-pakistan-to-act-on-climate-change/>

World Maritime News (unknown author) (2016). Shipping to Join 2030 Emissions Target via ETS Climate Fund? Retrieved at: <http://worldmaritimeneeds.com/archives/201235/shipping-to-join-2030-emissions-target-via-ets-climate-fund/>

Reports and resolutions

European Parliamentary Research Service Briefing PE 579.092:
Post-2020 reform of the EU Emissions Trading System, March 2016

European Parliament Study for the ENVI Committee PE 569.964:
Emission Reduction Targets for International Aviation and Shipping, Nov. 2015

ICAO Resolution A39-3, Consolidated statement of continuing ICAO policies and practices related to environmental protection – Global Market-based Measure (MBM) scheme, Oct. 6 2016

IPCC. Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, Summary for policy makers

IPCC. Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, Summary for policy makers

MEPC 69/21. Report of the Marine Environment Protection Committee on its sixty-ninth Session, May 13 2016, Summary for policy makers

MEPC Resolution 203.62. Amendments to the Annex of the Protocol of 1997 to amend the International convention for the prevention of pollution from ships, 1973, as modified by the Protocol of 1978 relating thereto. July 15 2011.

Parker, M. (ed.) A new climate for peace – Taking action on Climate and Fragility Risks. An independent report commissioned by the G7 members (2015)

Third IMO GHG Study 2014, Executive Summary and Final Report (2015)

UNFCCC Decision 1/CP.13. Bali Action Plan (2007)

UNFCCC Decision 1/CP.21 Adoption of the Paris Agreement (2015)

White House National Security Strategy (2015)

Statements and press releases

Council of the EU Press Release 602 (2015). Council conclusions on climate diplomacy. Retrieved at:
<http://www.consilium.europa.eu/en/press/press-releases/2015/07/20-fac-climate-diplomacy-conclusions/>

European Commission Statement 189 (2017). The EU tackles growing aviation emissions. Retrieved at:
http://europa.eu/rapid/press-release_IP-17-189_en.htm

G7 Statement (2015). G7 Communique on Climate and Security: Reaffirms Support for Paris Success. Retrieved at:
<http://newsroom.unfccc.int/unfccc-newsroom/g7-communique-on-climate-and-security/>

IMO Press Briefing 28 (2016). New requirements for international shipping as UN body continues to address greenhouse gas emissions. Retrieved at:
<http://www.imo.org/en/MediaCentre/PressBriefings/Pages/28-MEPC-data-collection--.aspx>

NASA Release 6 (2017). NASA, NOAA Data Show 2016 Warmest Year on Record Globally. Retrieved at:
<https://www.nasa.gov/press-release/nasa-noaa-data-show-2016-warmest-year-on-record-globally>

THE SCANDINAVIAN INSTITUTE OF MARITIME LAW is a part of the University of Oslo and hosts the faculty's Centre for European Law. It is also a part of the cooperation between Denmark, Finland, Iceland, Norway and Sweden through the Nordic Council of Ministers. The Institute offers one master programme and several graduate courses.

The core research areas of the Institute are maritime and other transport law as well as petroleum and energy law, but the members of the Institute also engage in teaching and research in general commercial law.

In MARIUS, issued at irregular intervals, articles are published in the Nordic languages or English.

ISSN: 0332-7868

