

The International Ice Patrol

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“Determinism ... is one of the great alibis, pleaded by those who cannot or do not wish to face the fact of human responsibility” (*Isaiah Berlin*, *Historical Inevitability* – Oxford, Oxford University Press, 1954, 77)

I. The Sinking of the Unsinkable

41°43,57'N 49°56,49'W – April 14, 1912, 11:40 p.m. ship's time: More than a century has elapsed, and three generations have passed, since the fatal collision of the *RMS Titanic* with an iceberg in the area of the Grand Banks of Newfoundland.¹ Still, up to the present day, the sinking of the unsinkable² remains deeply engraved on the collective memory of mankind as a whole and, hardly surprising, is very much alive in particular in those countries on the shores of the North Atlantic Ocean directly affected by this unprecedented tragedy, in which more than 1.500 lives per-

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1 About 375 miles (600 kilometers) south of Newfoundland.

2 When it was built, the *Titanic* was the largest moving human-made object in the world. It had many brand-new technical features, such as the subdivision into 16 primary (watertight) compartments divided by 15 bulkheads which extended well above the waterline. Eleven vertically closing watertight doors could seal off the compartments in the event of an emergency (for details: *Hutchings/de Kerbrech*, *RMS Titanic 1909–12 (Olympic Class): Owners' Workshop Manual*. Sparkford, Yeovil, 2011, 44). However, although the ship was built with a double bottom, it had not a double hull and not all of its watertight bulkheads were going all the way to the top of the hull. These omissions eventually doomed the ship.

ished.³ Yet, beyond the surface of the immediate worldwide shock and outrage at the huge loss of lives, along with the bustling activities of a charitable, bureaucratic and inquisitorial nature, the disaster had a number of deeper and more far-reaching implications, too.



Fig. 1: No definitive positive identification being possible, the iceberg on the picture taken by the chief steward of the German Ocean liner SS Prinz Adalbert on the morning of April 15, 1912 is the most likely candidate for the one to have been hit by the Titanic the night before.

First and foremost, there was a deep feeling that man's technological hubris ("God himself could not sink this ship"⁴), cheered by a great number of influential 19th century optimist and unswerving supporters of scientific progress, among them in a prominent place *Jules Verne*,⁵ had all of

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- 3 However, deadly encounters with sea ice had been frequent in the 19th and early 20th century, the greatest death toll (approximately 265) probably having been claimed by the sinking on May 11, 1833 of the *Lady of the Lake* from Belfast, bound to Québec Ville about 250 miles east of Cape St. Francis, Newfoundland. Between 1882 and 1890, at least 14 commercial and passenger vessels were lost and 40 seriously damaged due to ice, the large number of whaling and fishing vessels lost or damaged by ice remaining uncounted.
 - 4 A popular tableau of the Titanic Saga attributes this statement to a deck steward in response to a respective question by a Titanic survivor, *Sylvia Caldwell* (1883-1965), on the departure in Southampton. A 1910 publicity brochure of the White Star Line did indeed expressly state that "these two wonderful vessels [the twin ships Olympic and Titanic] are designed to be unsinkable". The shipping company later insisted that a small but crucial difference to exist between "designed for" and "is" – pettifoggery at its best!
 - 5 Admittedly, as more recent research – in particular in the aftermath of the publication in 1994 of *Verne's* early romance *Paris au XXe siècle* (1863) – has highlighted (e.g. contributions in: *Smyth* (ed.), *Jules Vernes – Narratives of Modernity*, Liverpool, 2000, in particular, *Capitano*, "'L'Ici-bas' and 'l'Au-delà' ... but Not as they Knew it. Realism, Utopianism and Science Fiction in the Novels of Jules Verne, p. 60 – and *Evans/ Miller*, *Jules Verne, Misunderstood Visionary*, *Scientific American* 1997, 92), *Verne* was obviously "a key commentator on the anguishes of modernity" (*Smyth*, *ibid.*, 2), too ("le pessimisme est donc présent dans le début de son œuvre", editor of *Paris au XXe siècle*, Paris, 1994, 6). However, his author's pessimistic side not catching the mood of the time, *Verne's* publisher *Hetzel*, eager not to jeopardize the literary (and commercial) success of "Cinq semaines en ballon"

a sudden hit an iceberg and – even if not yet literally sinking – one of the great narratives of modernity, namely the conception (or deception) of a society built on what was technically possible, had at least suffered a first serious blow, before soon after definitely drowning in the blood-soaked trenches of World War I.

Apart from its well-known multifaceted cultural legacy,⁶ the titanic disaster has also left some remarkable footprints on the landscape of international law. Albeit still very much alive today, this legacy is relatively unknown even within the community of international lawyers – at least beyond a very small circle of specialists. It is the modest purpose and intent of this paper to shed some light on the historical background and present reality of a very specific element of the legal regime governing the safety of shipping in the North West Atlantic Ocean, a subject hitherto virtually uncharted, at least from a legal perspective.

II. A Maritime Disaster and its Follow-Up: Many Questions – Few Answers

Almost as soon as the waves of the North Atlantic closed over the stern of RMS Titanic, two major inquiries into the causes of its sinking, and of possible lessons to be drawn to prevent a recurrence, were scheduled on both sides of the Atlantic Ocean: On April 19, that is just four days after the tragedy, a subcommittee of the U.S. Senate's Commerce Committee, established by US Senate (Simple) Resolution 283 of April 17,⁷ held its first session at the Waldorf-Astoria Hotel in New York. And hardly two

(1863), managed to prevent publication of this book, and so Verne was perceived by his contemporaries (solely) as a fervent believer in progress by technology.

6 Mention may be made here only of the *Maritime Museum of the Atlantic* (Halifax/ Nova Scotia), displaying many items recovered from the sea just a few days after the disaster, and the *Titanic Belfast*, opened in 2012, on the site of the former Harland & Wolff shipyard in the city's Titanic Quarter where the RMS Titanic was built. (see also contributions in: *Bergfelder/Street* (eds.), *The Titanic in myth and memory: representations in visual and literary culture*, London, 2004).

7 Although neither requiring the approval of the other house nor the signature of the President, a simple resolution did not have the force of law, it nonetheless produced a number of important legal effects, since it gave the subcommittee the legal power to obtain the people needed to be sworn, to create and to serve summons, and to testimony or affidavits.

weeks later, on May 2, the British Wreck Commissioner, acting on behalf of the British Board of Trade, opened its hearings in London “into the circumstances attending the loss of the steamship ‘Titanic’”. Reports on the investigations were presented on May 28 1912 and on July 30 of that same year, respectively.⁸

It is probably correct to assume that the main reason for the surprisingly speedy reaction of authorities to the tragedy was massive pressure of public opinion, possibly culminating in a public letter by *Lawrence Beesley*, a Cambridge Scholar and Titanic survivor,⁹ to *The Times*, in which it was imperatively called for “that something must be done to awaken public opinion to safeguard ocean travel in the future.”¹⁰ Why were there so few lifeboats?¹¹ Why was there no emergency preparation at all? Why did Titanic proceed into the icefield at full speed? – this is to name but some key issues in both, the heated public debate as well as the official inquiries into the Titanic sinking.

8 The U.S. Report (Senate Document 933, 62nd Congress, 2nd session, Washington Government Printing office 1912, available also online: <http://www.senate.gov/artandhistory/history/resources/pdf/TitanicReport.pdf> (accessed January 14, 2017)) summarizes 1145 pages of testimony and affidavits; the respective British report was published as Command Paper Cd. 6352 in House of Commons Parliamentary Papers, 1912 - 1913. Complete transcripts of both, the US and British inquiries (minutes of the hearings, reports ...) are available under <http://www.titanicinquiry.org> (accessed January 14, 2017).

9 1877-1967. Scholar of Gonville and Gaius College, Cambridge U.K.

10 *Beesley*, *The loss of the SS. Titanic. Its Story and its Lessons*, Boston/New York, 1912, 216 (the letter is printed, *ibid.* at 217-219 and makes rather precise suggestions to this effect: “First, that no vessel should be allowed to leave a British port without sufficient boat and other accommodation to allow each passenger and member of the crew a seat [...]. Second, that [...] each passenger should go through boat drill in company with the crew assigned to his boat. Third, that each passenger boat engaged in the Transatlantic service should be instructed to slow down to a few knots when in the iceberg region, and should be fitted with an efficient searchlight.” (*ibid.*, 219).

11 According to the findings of the US Commission: “The Titanic was provided with 14 lifeboats, of capacity for 65 persons each, or 910 persons; 2 emergency sea boats, of capacity for 35 persons each, or 70 persons; four collapsible boats, of capacity for 49 persons each, or 196 persons. Total lifeboat capacity, 1,176.” (Final Report, 4). Thus, for more than half of the people aboard, there was not even a theoretical chance of survival.

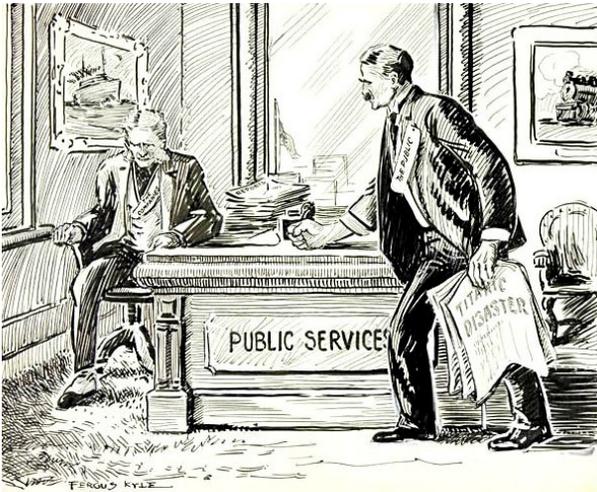


Fig. 2: Kyle, Fergus, 1876-1941: The Margin of Safety is Too Narrow! (Original Cartoon – April 1912) – (Library and Archives Canada, Acc. No. 1993-173-107)

Whereas public outrage was initially directed against shipping companies only,¹² it soon became clear that the true order of the day was the need for enhanced and, possibly, combined state action by legislation. Leaving responsibility of safety at sea essentially to the shipping industry and certain national inspecting and regulating bodies with limited authority alone,¹³ had proved its inadequacy and there was little trust and hope that this would turn to the better in the foreseeable future. Even if, to a certain extent, characterized by an oligopolistic structure,¹⁴ North Atlantic passenger shipping in the early 20th century was in fact a high-competition mar-

12 Emblematic the cartoon in figure 2, depicting a man representing "the public" with a copy of a newspaper with the headline "TITANIC DISASTER" pounding his fist on a "PUBLIC SERVICES" desk belonging to a man representing "the companies".

13 In fact, one of the key findings of the U.S. Report consisted in a harsh criticism *vis-à-vis* the British Board of Trade, "to whose laxity of regulation and hasty inspection the world is largely indebted for this awful tragedy" – as one commentator put it (*Ward, The Rough Guide to the Titanic*, London, 2012, 153).

14 See for details *Keeling, Transatlantic Shipping Cartels and Migration Between Europe and America 1880-1914*, Essays in Economic and Business History 1999, 195.

ket.¹⁵ Covering high fixed costs (of both capital and operations), in particular during cyclical downturns in the migration flow, was thus top priority for shipping companies, not safety.

This is not to say that shipping companies did not care about safety on board at all¹⁶ or that governments were in total ignorance of this issue¹⁷ – quite on the contrary. However, there was a striking contrast between the official philosophy of “Safety First”, virtually all shipping companies had pledged to (including the owners of the Titanic, the White Star Line) on the one hand, and actual seafaring practices, characterized by a high degree of complacency (to say the least¹⁸), on the other. In this respect it may only be recalled that, in full conformity with the relevant (British) regulations in force at the time,¹⁹ during her construction the Titanic had had the projected number of 48 lifeboats reduced to merely 16, as it was

15 The market share of the “Big Four” (North German Lloyd, Hamburg American, Cunard and White Star) amounted to a maximum of 60%, see *Keeling*, *The Business of Transatlantic Migration between Europe and the United States, 1900-1914*, Cronos, Zürich, 2012, 28, 97 (data for Steerage Passengers to Ellis Island, 1900-1913) and in 1912 to a mere 50% (*Keeling*, *Essays in Economic and Business History* 1999, 2).

16 “Safety” was indeed a most relevant marketing factor and within weeks of the disaster every major North Atlantic shipping line had revised its newspaper ads to include promises that every voyage would provide lifeboats for all passengers and crew aboard.

17 As *Williams* has rightly pointed out for the case of Great Britain, since the mid-19th century already, safety of life was indeed “a major feature of state involvement with merchant shipping”, *State Regulation of Merchant Shipping, 1839-1914: The Bulk Carrying Trades*, in: *Scholl* (ed.), *Merchants and Mariners: Selected Maritime Writings of David M. Williams*, St. John’s, 2000, 127 (see *infra* III.).

18 The intellectual climate of the time, marked by its supreme confidence in technological progress and in men’s mastery of nature, may well have contributed to these fatal misjudgments by shipbuilders, owners and crew-members alike.

19 Official Transcript of the United States Senate Hearings: “Senator PERKINS. She was fully equipped in accordance with the requirements of the British Board of Trade? – Mr. FRANKLIN [vice president in the United States of the International Mercantile Marine Co.]. She was equipped in excess of the requirements of the law of the British Board of Trade – Senator PERKINS. And that is based upon the British law, of course? – Mr. FRANKLIN. That is based upon the British law, of course.” (196) – “Mr. ISMAY [general manager of the International Mercantile Marine Co., survivor] [...] Our ships all now conform to the Board of Trade regulations, without putting the additional boats on. – Senator SMITH. I understand that. But you evidently do not regard the regulation of the British Board of Trade

thought that a greater number would ruin the lines of the ship and might eventually reduce the walking space for passengers, which, on their part, might be frightened by seeing that many. Thus, although strongly critical of a number of established seafaring practices and its handling in the catastrophe at stake, under the yardstick of existing maritime law, neither the American nor the British report could establish any kind of legally relevant negligence, not to speak of civil or criminal liability, neither on the part of the shipbuilders or the owners nor of any crew member, including Captain *Edward Smith*, who perished in the tragedy. It was obviously high “time to get busy”, as the cartoon in figure 3 suggests, to take a somewhat firmer grip on the business of steamship magnates.²⁰ And it was thought that the suitable means to do so were (new) navigational laws. The very first recommendation of the 1912 U.S. Report was unequivocal on this point, too: “The committee finds that this accident clearly indicates the necessity of additional legislation to secure safety of life at sea.”²¹



Fig. 3. Fisher, St. Louis Republic via Marshall Everett, Story of the Wreck of the Titanic (1912)

as sufficient to protect the lives of your passengers? – Mr. ISMAY. Not after our unfortunate experience, sir; that is so.” (959).

20 It was in particular *Ismay*, chairman and managing director of the White Star Line, who became subject of scathing criticism, both in the American and British Press. Unlike most other passengers and crew, *Ismay* managed to save his life in the Titanic disaster. Resigning a year later, his reputation never really recovered.

21 The U.S. Report (Senate Document 933, 62nd Congress, 2nd session), Washington Government Printing office 1912, 18.

III. *Atlantic Shipping in the 19th Century: Islands of Order Amidst a Sea of Lawlessness*

At the time of the tragic loss of the Titanic in the icy North Atlantic Ocean, safety at sea was certainly neither a blank spot on the map of legal scholarship nor was it a complete alien to positive law. Indeed, at the turn of the century there was no lack of explicit and rather prophetic warnings that “[q]uand un sinistre se produit, des nombreuses vies humaines sont menacées” given that “les grands paquebots sont devenus des villes flottantes et ... transportent parfois ... jusqu’à 2.500 personnes.”²²

However, the body of hard-law on the subject in force in 1912 did not only suffer from its (still) highly rudimentary character and its fragmentation into various national legislations.²³ Rather, what added to the complex and somewhat opaque legal regime of maritime safety was the existence in a sort of legal limbo of a whole bunch of “complementary” non-state rules, originating in a variety of different “rule-making sources”, comprising *inter alia* time-honored traditions, more or less voluntary commitments of (passenger) shipping companies²⁴ and finally, in the second half of the 19th century, a number of codification projects initiated and promoted by private associations, such as the International Law Associa-

22 *Autran*, *Les Tentatives Récentes d’Unification du Droit maritime et le Congrès de Bruxelles de 1905*, *Blätter für Vergleichende Rechtswissenschaft und Volkswirtschaftslehre* 1906, 11-17. Explicit reference is made here to “La Lorraine” (France), le “Deutschland” (Germany)” and the “Lucania” (Great Britain) with 11.168, 16.703 and 18.450 (gross register) tonnage, respectively. For comparative purposes it may be recalled that the respective figure for the Titanic amounted to 46.328 tonnage. Highly instructive on the revolutionary developments in transatlantic shipping from the 1820s onwards, both from a technological as well as from a perspective of social and cultural history: *Fox*, *Transatlantic: Samuel Cunard, Isambard Brunel, and the Great Atlantic Steamships*, New York, 2003.

23 On the whole series of (British) legislation regulating the carriage of emigrants and originating in the 1803 Passenger Vessels Act, see in detail *MacDonagh*, *A pattern of government growth, 1800-1860: the Passenger Acts and their enforcement*, London, 1961. For an overview of relevant French legislation: *Borde*, *The French State and Safety at Sea: Co-operation and Conventions, 1839-1914*, in: *Starkey/Hahn-Pedersen* (ed.), *Bridging Troubled Waters, Conflict and Co-operation in the North Sea Region since 1550*, Esbjerg 2005, 199.

24 On the North Atlantic Track Agreement see *infra* IV.

tion (ILA)²⁵ and the Comité Maritime International (CMI).²⁶ The exact scope and extent of the legally binding force *stricto sensu* of these rules, in many cases intimately related to, and occasionally hardly discernible from rules of an undisputable hard-law nature, was indeed everything but clear.²⁷ In fact, contemporary observers, such as *F.C. Autran*, co-founder (in 1885) and Director of the influential *Revue internationale du droit maritime* (1885-1923), deeply deplored – and justifiably so – the inconsistencies between the universal needs and the narrow limits of (positive) maritime law: “La nécessité de l’unification du droit maritime résulte de la nature même des choses. La mer qui divise les peuples, a dit un penseur anglais, les réunit en même temps. Elle est en effet le lien entre les continents comme elle en est la séparation.”²⁸

At the turn of the 20th century already there was indeed ample awareness in scientific circles and among maritime practitioners alike that there existed an urgent, yet imperative need for unified rules for safety at sea. Contemporary observers deplored, and were entirely right so, that this le-

25 In the early 1880s already proposals were put before the ILA to codify the whole body of maritime (international) law, which eventually resulted in 1890 in an agreement of general average. Instructive the remarks by *MacArthur* on the History of the so-called York-Antwerp rules and the (then present) need of their revision [Report of the Fourteenth Conference/Liverpool, August 26th - 29th, 1890, 46ff], where tribute is paid in particular to the “valuable work” of the Association’s late Vice-President, Ernest Emil Wendt (notably his seminal “Papers on Maritime Legislation”, 3rd ed., London, 1888).

26 With its distinctive policy-influencing objectives, the CMI – founded in 1897 by a number of national associations of maritime law – can rightly be described as “an early example of an NGO” (*Palmer*, *Leaders and Followers: The Development of International Maritime Policy in the Nineteenth Century*, *International Journal of Maritime History* XVIII 2005, 306). The impact of the CMI on law-making in this field can simply not be overestimated, since, until the 1970s most international conventions concerning maritime trade and commerce originated in the work of this private organization of maritime lawyers (for a detailed account on the history and work of this non-governmental not-for-profit international organization, still today based in Antwerp, see: *Lila/van den Bosch*, *Le Comité Maritime International/The International Maritime Committee 1889-1972* <http://www.comitemaritime.org/Uploads/History/LILAR-VAN%20DEN%20BOSCH-Le%20Comit%C3%A9%20Maritime%20International.pdf> (accessed January 14, 2017)).

27 For interesting (contemporary) insights into the role of “private” international law making in the late 19th/early 20th century: *Root*, *The Function of Private Codification in International Law*, *American Journal of International Law* 1911, 577.

28 *Autran*, *Blätter für Vergleichende Rechtswissenschaft und Volkswirtschaftslehre* 1906, 11.

gal domain did indeed bear much resemblance to a “tour de Babel” in which “la plus extreme confusion régnait”.²⁹ Further, unanimity prevailed that (legislative) measures to be agreed upon should be of both, a remedial (life-boats and life-preservers, water-tight compartments etc...) and a preventive nature (fog-signals, true compasses, rate of sailing, lookout, and lanes etc...)³⁰

However, the implementation of a whole bunch of respective legislative projects, forwarded and promoted in international fora, such as the 1889 Washington International Maritime Conference,³¹ proved extremely difficult. This was so in particular (but not solely) because of delaying tactics, or at times even of open resistance, on the part of Great Britain, unwilling to cede (or even only to share) its century-long leadership in maritime matters in general, and in respective rule-making processes in particular. The established and hitherto virtually unchallenged, but by the late 1800s no longer tenable British practice of setting out its own national regulations – on safety at sea and on a whole range of other maritime matters – and inviting others to accept them or not, was simply irreconcilable both with the rise of other maritime powers (in particular the United States) and with any kind of internationalist approach.³² A second obstacle which had to be overcome while attempting regulation regarding navigation on the high seas in general, and the imposition of respective “Rules of the Road” in particular,³³ was the century-old perception of the existence of a quasi-inalienable and unlimited freedom of navigation on the (high) seas, deeply anchored in classical international law writings,³⁴ at the very end of the

29 *Autran*, *Blätter für Vergleichende Rechtswissenschaft* 1906, 11, 15.

30 Enumeration of measures borrowed from *Maury*, *Steam-Lanes Across the Atlantic* (re-edition), Washington, 1873, 5.

31 See “Final Act of the International Marine Conference held at Washington, Oct. 16 to Dec. 31”, 1889, *AJIL* 1911, Supplement: Official Documents, 42.

32 Highly instructive on the whole issue (with further references) *Palmer*, *International Journal of Maritime History* XVIII 2005, 306.

33 For a concise account of the development of this particular set of rules, initially basically of British origin: *Kempf*, *Two hundred years of the Collision Regulations*, *The Journal of Navigation* 1976, 341.

34 Reference may only be made here to the classical work on the subject “par excellence”: *Grotius*, *Mare Liberum* (The Free Sea), Leiden, 1609. Indeed, few works have caused arguments of such global extent and striking longevity.

“long 19th century”³⁵ still very much alive in the mind of academics and decision-makers alike.

IV. Routing System in the North Atlantic Revisited

One of these early, in modern parlance “soft law” rules regarding preventive measures to enhance safety at sea (in contrast to those rules that rather look to affording relief after the occurrence of an accident), was the so-called North Atlantic Track agreement,³⁶ entered into, at the instigation of the U.S. Navy Hydrographic Office, in 1898 by the five principal transatlantic steamship companies of the day. Although participation raised considerably in the following decades, this “agreement” was and remained in essence a private, voluntary undertaking with limited effect: Still in 1960, when routing in the North Atlantic finally became subject of a SOLAS Regulation, coverage of the understanding amounted to a mere 25 companies.³⁷ The pivotal intellectual mentor of this very first recorded routing measure (a system of one way steam lanes) had been U.S. naval officer *M.F. Maury* (1806-1873).³⁸ Triggered by another of the great 19th century maritime disasters, the October 1854 collision in thick fog of the U.S. Mail steamer *Arctic* and the French steamer *Vesta* about 50 miles to the east of Cape Race on the southern tip of Newfoundland's Avalon Peninsula,³⁹ this pioneer hydrographer and one of the founders of oceanography had already, almost half a century before, in his monumental 1855 “Sailings Directions” put forth the proposal of “Steam-Lanes Across the At-

35 Term and concept (meaning the period between the years 1789 and 1914) coined by the British historian *Eric Hobsbawn* (in: *The age of revolution 1789-1848*, London and elsewhere, 1962).

36 The (scarce) literature on the issue includes in particular *Beattie*, *Routing at Sea* (1857-1977), *The Journal of Navigation* 1978, 167-202 (174-176) and, on more recent developments regarding the 1898 agreement: *Traizet*, *Naviroutes and the North Atlantic*, *The Journal of Navigation* 1962, 23.

37 It may be recalled that neither the owners of the “*Andrea Doria*” nor those of the “*Stockholm*”, in July 1956 south of Nantucket Island on the North Atlantic Route the protagonists of one of history’s great maritime disasters, were parties to the 1898 understanding.

38 On the life and work of this remarkable personality see *Lewis*, *Matthew Fontaine Maury. The Pathfinder of the Seas*, Annapolis, 1927.

39 With a loss of more than 300 lives (for details: *Flayhart*, *Perils of the Atlantic: Steamship Disasters, 1850 to the Present*, New York, Norton, 2003, 19 et seq.).

lantic”⁴⁰ – explicitly pointing to the danger of collision in the North Atlantic because of fog, high travel density, and annual incursions of icebergs.

Although the time was not yet ripe for an immediate implementation of this most sensible plan, *Maury’s* proposal did not fall into oblivion. In the preface of the 1872 re-edition of his “Steam-Lanes”, published under the auspices of the U.S. Hydrographical Office, it is explicitly acknowledged that “it [the steam lane system] seems appropriate at the present time, when the ocean-steamers between the United States and Europe are so numerous and still on the increase” and it was further emphasized that

“[t]he adoption of these or some similar prescribed routes for the passages to and from Europe would must assuredly give greater security to life and property and reduce the dangers of this navigation to those which may be encountered on less frequented routes.”⁴¹

40 Sailing Directions, vol. II, 71-80.

41 Commodore *Wyman* (Hydrographer in the Bureau of Navigation), *Steam-Lanes Across the Atlantic*, re-edition, Washington, 1873, foreword.

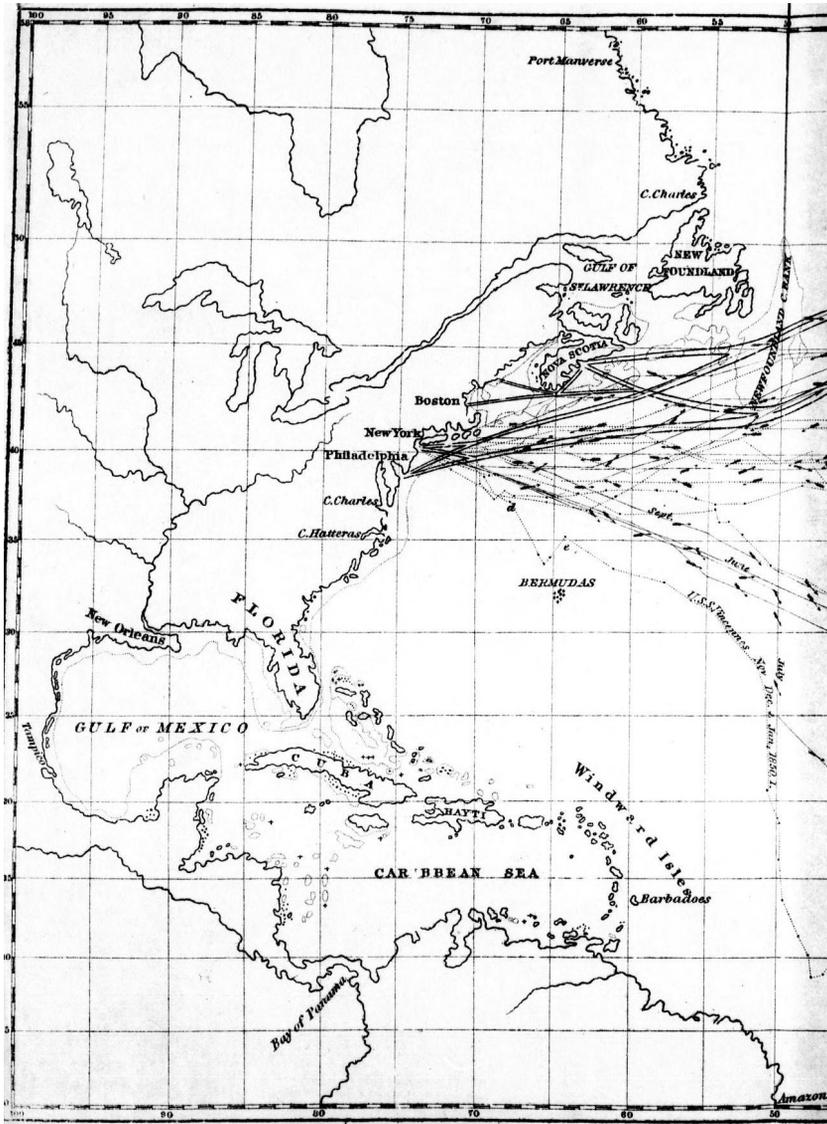


Fig. 4: Maury's "Steam Lanes Across the Atlantic", 1873 ed., plate II (detail)

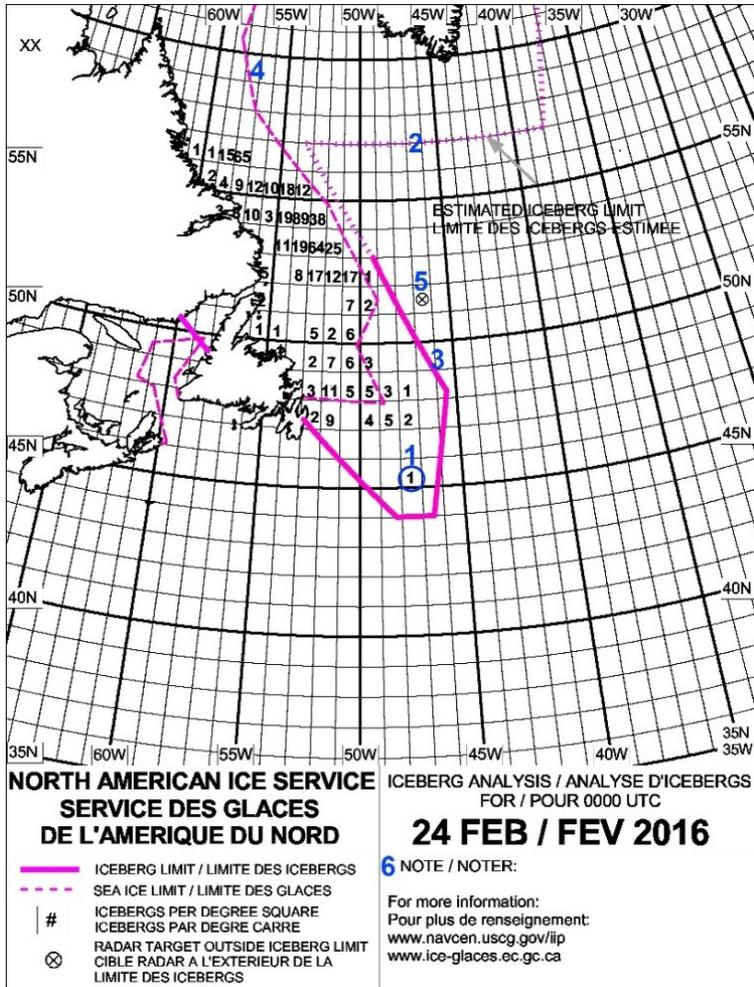


Fig. 5: Canadian Ice Service (CIS) - www.ec.gc.ca

Hence, from its very beginnings in the mid-1850s, one of the main objectives of any routing system in the North Atlantic was the minimization, if not elimination, of navigational risks resulting from sea ice in general,⁴² and in the avoidance of iceberg collisions in particular.⁴³ In this respect, the much frequented lanes that run near the Grand Banks of Newfoundland have always been a particularly high danger zone.⁴⁴ However, since the limits of ice fields and bergs vary considerably, in location as well as in season, a routing system alone is by its very nature – at least to a considerable degree – a rather inflexible instrument. Although, as early as 1875 already,⁴⁵ efforts were made to adopt the system of steamship lanes as promptly and as far as possible to the current ice situation, “a vessel might [nonetheless] sail on a course that was clear at the time of her departure, but encounter ice which has drifted into her path before she reached the Grand Banks.”⁴⁶ The 1912 loss of the Titanic is obviously the best proof for the correctness of this assumption.

42 Cf. for a meticulous account *Danton*, the Theory and Practice of Seamanship, 11th ed., Routledge, 1996, 105 et seq. (Chapter V: Ice).

43 For an account of the (older) literature regarding the region at stake and mirroring the enormous amount of research done on the subject (a total of 1135 entries): *Howard* (ed.), Icebergs. A bibliography relevant to eastern Canadian waters, Environmental Studies Revolving Funds Report No. 030, Ottawa, 1986.

44 For meticulous and up-to date (daily) information of ice conditions in (Canadian) East Coast waters south of 60° N see: https://www.ec.gc.ca/glaces-ice/default.asp?lang=En&n=B6C654BB-1#daily_iceberg (Government of Canada - Environment and Climate Change) (accessed 14 January 2017). For respective information regarding the waters around Greenland: <http://www.dmi.dk/en/groenland/hav/ice-charts> (accessed January 14, 2017).

45 In this year, the Cunard Line adopted an “evasive routing system” of tracks for different seasons, see *Beattie*, The Journal of Navigation 1978, 175.

46 Treasury Department, US Coast Guard – International Ice Observation and Ice Patrol Service in the North Atlantic Ocean from February to August 1914 (Bulletin No. 3 – Washington Government Printing Office 1915, 3).

STEAMER ROUTES CHANGED.

Transatlantic Liners to Run a Degree South of Last Year's Course.

By Marconi Transatlantic Wireless Telegraph to The New York Times.

LONDON, Jan. 8.—The White Star line announces that it has been decided by all the British and Continental steamship lines which are parties to the North Atlantic track agreement of November, 1898, to adopt the following tracks on and after Jan. 15:

Westbound—Steer from Fastnet or Bishop Rock on a great circle course to cross the meridian 47 degrees west longitude in latitude 41 degrees north, thence to the port of destination.

Eastbound—Steer as per regulation from port of departure, but to cross longitude 47 degrees west in latitude 40 degrees north, thence by a great circle course to Fastnet or Bishop Rock.

These tracks will be adhered to until such time as it is thought that conditions warrant consideration of further change.

The effect of this decision, which was reached after consultation between the British and Continental lines, and conference with the Hydrographic Office, will be for both westbound and eastbound vessels to cross longitude 47 degrees west one degree, or about 60 miles further south than in the early months last year before the loss of the Titanic.

The distance to be covered, which, between Land's End and New York, is roughly 3,000 miles, is thus very slightly increased.

Fig. 6: New York Times. January 9, 1913. p. 4.

In the wake of this tragedy, and under considerable pressure on the part of the US Hydrographic Office,⁴⁷ the shifting southwards of Transatlantic Routes on a regular basis was immediately enhanced, at least until “conditions warrant consideration of further change.”⁴⁸ This caveat served to protect, to the extent possible, the economic interests of shipping companies. As a matter of principle, ship-owners were disinclined to an alteration of routing (except when the ice was actually in the northern tracks), since evasive routing to the south inevitably led to an increase of the dis-

47 The respective spring 1922 adaptation was indeed explicitly described as having been implemented “under the advisory instructions (*sic!*) send out by the hydrographic office” (Atlantic Liners Shift Lines Southwards to Escape Bergs, The Evening Independent, April 10, 1922, 20).

48 Steamer Routes Changed, New York Times. January 9, 1913. p. 4 (see figure 6).

tance to be covered.⁴⁹ No wonder, therefore, that an alternative, entirely new and in particular no costs involving measure of a preventive nature to enhance safety at sea in ice danger zones met with the unanimous approval of the interested shipping companies. Responding to an urgent public demand in the immediate aftermath of the sinking of the Titanic to patrol the ice zone in order to allow for a prompt warning to passing vessels of the extent and limits of danger during the ice season, the US Navy Department promptly detached, as an *ad hoc* measure, the cruisers *Chester* and *Birmingham* to patrol the Grand Banks in search of icebergs.

This purely unilateral and rather improvised emergency measure taken by the United States without any discernible involvement neither of legislative bodies in the US nor of Canadian authorities⁵⁰ proved highly successful. Given the remarkable number of icebergs⁵¹ spotted in the immediate geographical and temporal context of the Titanic disaster, it may well be assumed that in 1912 a quite impressive number reached unusual southern latitudes. However, no further incident occurred – not least due to the vigilance of the provisional “ice patrol”.

49 The difference was not really significant – taking (by way of example) the cruising speed of the Titanic – the loss of time would amount to merely around 2 hours.

50 However, the author would like to make the disclaimer that he was not able to make an in-depth research of relevant archival material. It can thus not be answered with certainty whether or not and if so, in which manner, any (informal) consent was possibly given to the operation on the part of Canada.

51 The old saying “just the tip of the iceberg” to mean something may be far more than its appearance, is quite true. Icebergs (comprehensive information in: *Canadian Ice Service* (ed.), Manual of ICE (MANICE, last revised June 2005, <https://www.ec.gc.ca/glaces-ice/default.asp?lang=En&n=2CE448E2-1> (accessed January 14, 2017)) show indeed only about 1/8 of themselves above the water surface. What may look massive on the surface is thus far more so underneath.

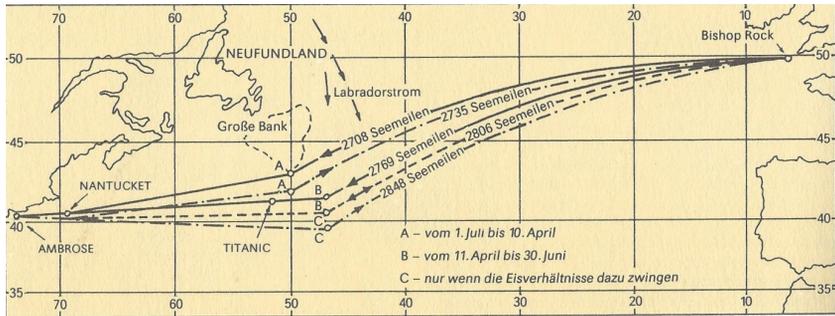


Fig. 7: Steamship lanes on the North Atlantic - with (approximate) location of the Titanic sinking (W. Althof, *Passagiere an Bord*, VEB Hinstorff Verlag Rostock 1988)

V. The Titanic Disaster: A Cataclysmic Event for Safety of Life at Sea Regulations

These early 1912/1913 US Ice Observation and Ice Patrol Services still operated in legally largely uncharted waters, as did a similar 1913 mission conducted upon the initiative and under the auspices of the British Government. At the time one of the very rare examples of some sort of public-private partnership, the dispatch of the British steam trawler *Scotia* was co-financed by the British Board of Trade on the one hand and the various British steamship companies operating trans-Atlantic lines on the other. However, as early as 1913 already, on the international plane, too, cooperation on an informal basis developed between the American and British naval units engaged in the operation, both in gathering relevant information (in particular regarding the location, the physical properties of the ice and its drift, erosion and melting) and in disseminating ice information to passing vessels. Indeed, it was highly understandable that the public uproar on both sides of the Atlantic in the immediate aftermath of the sinking of the Titanic made the US Government to initially pursue a very generous approach regarding its dissemination policy: “Ice information will be given at any time to any ship with which the patrol vessel can communicate”.⁵² Further, relevant information was also, “at the request of that

52 Office of the Secretary, Treasury Department (March 29, 1913), Instructions of the Commanding Officers of Revenue Cutters [Seneca and Miami] on Ice Patrol, 1913, Instruction No. 5 d; Bulletin No. 1, Washington Government Printing Office

institution”,⁵³ promptly cabled by the Hydrographic Office to foreign governmental institutions, such as the *Deutsche Seewarte*. At the heyday of European pre-war crises (Morocco, Balkan Wars) and at the eve of the Great War, this un-politicized, non-bureaucratic exchange of information, even if only of a technical character, was indeed anything but self-evident and an encouraging sign of mutual trust and cooperation in international relation.



Fig. 8: Los Angeles Times, January 21, 1914, at 1 (and 4)

However, in particular due to the enormous costs involved in the operation, this *modus operandi* could be but of a provisional nature. Indeed, at the International Conference on the Safety of Life at Sea convened in London on November 12, 1913, indubitably a direct and most fortunate “by-product” of the Titanic disaster,⁵⁴ the subject of patrolling the ice regions was thoroughly discussed. The final break-through, with the signing on

1913, at 4 (available under: <http://www.navcen.uscg.gov/?pageName=IIPAnnualReports> (accessed January 14, 2017)).

53 Bulletin No. 3, Washington Government Printing Office 1915, at 6 (available under: <http://www.navcen.uscg.gov/?pageName=IIPAnnualReports> (accessed January 14, 2017)).

54 The fine-print word “Titanic” preceding the bold-print title “Ice Patrol of Ocean” (figure 8) bears once again witness of the pivotal and omnipresent importance of the 1912 maritime catastrophe for all subsequent measures taken to enhance security at sea.

January 20, 1914 of the (first) Safety of Life at Sea (SOLAS) Convention,⁵⁵ came rather unexpectedly. After decades of futile negotiations, it is therefore probably correct to assume that

“[t]he degree of international cooperation required to produce such an unprecedented document was truly remarkable and probably could not have been achieved during this period without the catalyst provided by this [the Titanic] incident.”⁵⁶

The opening address to the Conference, attended by representatives from a total of 19 States, including all major maritime powers of the time, was unambiguously clear in this respect, too:

“La terrible catastrophe du “Titanic”, à laquelle cette Conférence doit, on peut le dire, son origine, a donné matière à réfléchir au monde civilisée, et fait comprendre que trop de confiance – confiance partagée par tous d’ailleurs – avait été accordée aux plans de construction des grands navires moderne auxquels sont confiées de milliers de vies humaines.»⁵⁷

Whereas the aim and purpose of the Conference was aptly clear (Security at Sea⁵⁸) and the scope and extent of matters treated at the Conference,

55 For the (original) French text of the Convention, *Parry*, The Consolidated Treaty Series 1913-1914, 177; an English translation was published by His Majesty's Stationery Office, Harrison and Sons, 1914 (Convention: p. 65 et seq.; Regulations: 84 et seq.). This publication does also contain (in French only) the Conference's complete “Procès-verbaux, Rapports des Commissions et autres documents.” (available under: <https://ia802605.us.archive.org/5/items/textofconvention00inte/textofconvention00inte.pdf> (accessed January 14, 2017)).

56 U.S. Department of Homeland Security. United States Coast Guard: History of the International Ice Patrol (IIP): <http://www.navcen.uscg.gov/?pageName=IIPHistry> (accessed January 14, 2017).

57 *Sydney Buxton*, President of the (British) Board of Trade, Procès-Verbaux des Séances Plénières, Séance d'ouverture le 12 novembre 1913, 11. The Head of the German Delegation, *Dr. Koerner*, put it somewhat more emphatique: « Lorsqu'au printemps de l'année passée, la nouvelle se répandit de l'épouvantable catastrophe dont le grand vapeur "Titanic" avait été la victime, lorsque les derniers accords du chant funèbre: "Nearer, my God, to Thee," vibraient dans tous les cœurs du monde entier, tous se posèrent cette question: Comment peut-on éviter la répétition d'un pareil désastre? » (ibid. 13).

58 In the words of *Lord Mersey*, Head of the British Delegation to the Conference: « Le but de cette Conférence est simple et précis: c'est d'assurer la sécurité des voyageurs sur les navires effectuant une navigation internationale » (ibid., at 14). In the same vein, the British Government's letter of invitation to the Conference: « L'objet de la Conférence serait de s'efforcer d'établir un accord entre les Etats participants en ce qui concerne les conditions nécessaires pour la sécurité à impos-

and measures eventually taken, proved quite impressive,⁵⁹ the contracting States were nonetheless eager to limit to a minimum (potential) infringements of their sovereignty. Probably the major of such limitations, provided for in article 68 para. 2 of the Convention, sounds quite familiar still today:

“It is understood that, the subject of this Convention being safety of life at sea, questions relating to the well-being and health of passengers, and in particular of emigrants, as well as other matters relative to their transport, continue subject to the legislation of the different States.”

Indeed, having a direct impact on the future composition of the state’s population as such (as well as its health and security), and hence touching upon the very core of national sovereignty, immigration-related issues (whom to admit and under which requirements) were most sensitive ones then – as they are still today. More than a century later, migration having evolved into one of the most pressing problems on today’s international agenda, the prevention of illegal immigration is still, and probably more than ever, a matter of top priority for the legislative and law enforcement activities of many coastal States, particularly in the developed world.⁶⁰ One may even well argue that the jurisdictional prerogatives provided for

er aux navires à passagers et en ce qui concerne les autres mesures dans l’intérêt de la sécurité du transport maritime des passagers.» (ibid., 1).

59 The Conference set up five Committees to deal with “la sécurité de la construction”, “les engins de sauvetage”, « la radiotélégraphie », « la sécurité de la navigation” and “la délivrance des certificats constatant l’observation des exigences établies par la Convention », respectively.

60 *D.-E. Khan*, Article 33 MN 30, in: *Proells* (ed.), *The United Nations Convention on the Law of the Sea: A Commentary*, Baden-Baden and elsewhere 2017, 252. See for just one example: *Immigration New Zealand - Operation Manual* (effective 03.09.2012) – Y3.60 Powers of entry and search by immigration officers, members of the Police, and Customs officers: “[...] d. A member of the Police or a Customs officer undertaking immigration duties may enter and search any ship or other sea-borne vessel within the contiguous zone or territorial sea of New Zealand, if they believe on reasonable grounds that there is on board a person who, if they land in New Zealand, will commit an offence against the Immigration Act 2009, or be liable for deportation, or be or likely to be liable for turnaround.” (<http://www.immigration.govt.nz/NR/rdonlyres/731882A3-EBAF-446E-AEE6-E653C7D1B50/0/Borderentry.pdf>, (accessed 14 January 2017)).

in article 33 para. 1 of the 1984 UN Convention on the Law of the Sea⁶¹ still resonate to some extent these albeit time-honored “reservations of sovereignty” in immigration matters.

VI. SOLAS 1914 and the Issue of Icebergs

In arduous negotiations, delegates at the 1913/1914 London Conference reached unanimity on virtually all points of substance, including in particular the endorsement and implementation of an “International Ice Patrol” in the North Atlantic. And in fact, under the immediate impression of the Titanic disaster, this legislative project was even to become the very core element of the chapter on “Safety of Navigation”.⁶² However, as to another issue with a direct impact on safety of navigation in the area at stake and thoroughly discussed at the Conference, the North Atlantic Routing System, only a minimum consensus could eventually be reached. With explicit reference to the 1898 North Atlantic Track Agreement⁶³, the British Government, in a Memorandum outlining the “points of discussion”, forwarded three different avenues of action to be pursued in this respect:

“ [...] on devrait considérer

- (a.) Si la responsabilité de choisir et de suivre ces routes doit être attribuée aux compagnies intéressées comme à présent;
- (b.) Si les Gouvernements doivent prendre des mesures pour d'assurer que les lignes de navigation qui sont à présent en dehors de cet arrangement soient forcées de suivre les routes;
- (c.) Si les Gouvernements en question, après d'être consultés, doivent ordonner que les routes soient suivies et doivent entreprendre la responsabilité de voir qu'on y adhère.»⁶⁴

61 For a comprehensive overview of the development of the concept of the contiguous zone see: *Lowe*, The development of the concept of the contiguous zone, BYIL LV 1981, 109.

62 Chapter III, Art. 5-15 of the 1914 Convention. Specific rules for ships carrying passengers in the North Atlantic further included, inter alia, the equipment of lifeboats (Art. 40 para 1 subpara. 3).

63 « 22. Routes transocéaniques. Les compagnies principales transatlantiques ayant, depuis plusieurs années, décidé que leurs bateaux suivraient des routes fixées, pour faire les traversées vers l'Orient et vers l'Occident [...] » (Sujets à discuter. Mémoire distribué par le Gouvernement de Sa Majesté britannique, at 5).

64 *Ibid.*

Dismissing the further-reaching alternatives (b.) and (c.), the Conference eventually limited itself to the adoption of a slightly enhanced version of the status-quo-preserving alternative (a.), imposing upon shipping companies only “the obligation to give public notice of the regular routes which they propose their vessels should follow, and of any changes which they make in them.”⁶⁵ There were manifold reasons for this legislative restraint, emanating in particular from two principles deeply rooted in both, established principles of international law and in maritime tradition and practice: First, the principle of freedom of the seas and, second, the freedom accorded to the shipmaster to choose his own route.⁶⁶ Moreover, the cardinal principle that a ship on the high seas was subject only to the authority of the State the flag it flies, was still a most forceful impediment to any kind of interference by international legal authorities at all. Although the 1927 decision by the Permanent Court of International Justice in the *Lotus Case*⁶⁷ may well be interpreted as a first crack in this rather clear picture, it took another almost half a century that, with the adoption of the 1972 “Convention on the International Regulations for Preventing of Collisions a Sea”,⁶⁸ routing at sea was definitely recognized as a legitimate subject of international law-making.⁶⁹

Unfortunately enough, due to the outbreak of World War I, the Convention was doomed to failure. In fact, ratified by just five States within the

65 Article 13 s. 2 of the Convention. Sentence 1 of this provision reads: “The selection of the routes across the North Atlantic in both directions is left to the responsibility of the steamship companies.”

66 See also *Traizet*, *Naviroutes and the North Atlantic*, *The Journal of Navigation* 1962, 24 (with a number of other relevant considerations).

67 The Court rejected the position of France, according to which a rule existed in international law to the effect that a state whose flag the vessel flew had exclusive jurisdiction over virtually any matter occurring on the high seas (PCIJ, Series A., No. 10, 1927). Interestingly enough, article 11 para. 1 of the 1958 High Seas Convention and article 97 para. 1 of the 1984 Law of the Sea Convention, respectively, “re-establish” the exclusive competence of the flag state, at least in a *Lotus* like scenario.

68 1050 U.N.T.S. 16.

69 SOLAS 1948 has at least gone one step further in providing that governments would do everything within their power to ensure that all ships adhere to these routes in the converging areas (Chapter V, Regulation 8(c)).

given timeframe,⁷⁰ it never entered into force⁷¹ and did thus at no time produce any binding legal obligations at all. However, such a limited and all to positivist perspective does obviously not do justice to the enormous achievements regarding standard-setting on “safety at sea” reached during the deliberations at the London Conference and eventually endorsed in its final document. Indeed, most rules contained in SOLAS 1914, *nota bene* many, if not the majority of which were no mere codification of pre-existing standards but rather legislative innovations, were obeyed to on a voluntary basis, thus making this treaty probably a prominent example of an early 20th century soft law instrument. Further, although under no (international) legal obligation whatsoever to do so, the adoption of SOLAS 1914 triggered extensive application regulations in Britain, France, the United States and Scandinavia, the most important of these acts probably being the US Seamen’s Act of March 1915,⁷² which, apart from a whole number of other issues, also set safety requirements, including in particular the provision of lifeboats⁷³ – obviously one more legislative legacy of the Titanic tragedy.

70 December 31, 1914 (article 71 para. 1 of the Convention - United Kingdom on December 30, 1914 and the Netherlands, Norway, Spain and Sweden on December 31, respectively (mostly with far-reaching reservations).

71 Interestingly enough, according to its wording (article 71 para. 2), the Convention should have become legally binding at least as between the (five) contracting States. However, it seems that it was never treated as producing such effect. Due to the absence of the major contributors to the expenses (article 7 of the Convention), at least with respect to the “International Ice Patrol”, such a partial setting into force would also have made little sense (in fact, according to the intended scheme, contracting States were to carry only 39% of all expenses).

72 Full title: “An Act to promote the welfare of American seamen in the merchant marine of the United States; to abolish arrest and imprisonment as a penalty for desertion and to secure the abrogation of treaty provisions in relation thereto: and to promote safety at sea” (Publication No. 302. Sixty-third Congress, p. 136).

73 In fact, about two-thirds of the entire body of the act is taken up with the regulations relating to life-saving appliance and the manning of life boats (Section 14). On the difficult and controversial genesis of this act see *Kennedy*, *The Seamen's Act*, *The Annals of the American Academy of Political and Social Science*, January 1916, 232.

VII. Patrolling Icebergs in a Changing Legal Environment

Virtually unimpressed by the non-entry into force of SOLAS 1914, and – as a consequence – the lack under international law of a firm legal basis for its operation and financing, the International Ice Patrol continued its observation activities in the early years of World War I, that is during the seasons of 1915 and 1916. It was only in 1917 (and eventually 1918) that, “due to international complications which culminated in the United States entering the war, no ice observation or ice patrol was made.”⁷⁴ It is, however, highly remarkable that even under war time conditions, that is in 1915 and 1916, the International Ice Patrol was keen (and eventually managed) to safeguard its merely technical and non-politicized character as an “international institution”: According to the instructions of February 2, 1916 by the U.S. Treasury Department, United States Coast Guard to the Commanding Officer Coast Guard Cutter *Seneca*, entrusted with the ice observation mission:

“The work of the *Seneca* on this duty will be of international character, and as the various maritime nations of the world have intrusted the management of the ice observation and ice patrol service to the United States, it is important that this work be done as thoroughly and satisfactorily as possible in order that the record of the United States, and the Coast Guard in particular, for efficiency, shall be sustained.”⁷⁵

Instructions issued today, that is a whole century later, would probably not read much different: The duty fulfilled by the International Ice Patrol is still of “international character” and its legal foundations, too, are still very much the same as they were in the first half of the 20th century. The two legal pillars upon which this unique institution rests ever since are a) The International Convention for the Safety of Life at Sea (SOLAS) in its different versions since 1914, and b) a corresponding and somewhat com-

74 Report of the International Ice Patrol in the North Atlantic, Bulletin No. 7 (1919), p. 3. The service was reestablished in 1919. During the war the Coast Guard was operating as a part of the Navy, under the direction of the Secretary of the Navy, and continued to so operate until August 28, 1919, when the service, by Executive order, was returned to the jurisdiction of the Treasury Department (today the Coast Guard is part of the U.S. Department of Homeland Security).

75 Report of the International Ice Patrol in the North Atlantic, Bulletin No. 7 (1919), at 7. Particularly instructive as to the activities pursued and challenges and problems faced by the Patrol: Report of the International Ice Patrol in the North Atlantic, Bulletin No. 25 (1935), at 1 et seq.

plementary legal regime under U.S. law, originating in an Act passed by U.S. Congress on June 25, 1936 “to promote safety at sea in the neighborhood of ice and derelicts, and for other purposes”.⁷⁶ Both legal regimes are intimately related to each other: SOLAS has from the very beginning explicitly attributed operational responsibilities for the ice observation mission to the United States⁷⁷ and U.S. legislation on its part has acknowledged that this mission “is conducted under the provisions of the International Convention on Safety of Life at Sea”.⁷⁸

Another peculiar feature of the institutional framework governing the operation of the International Ice Police, enshrined likewise in both, the international and the national (U.S.) legal regime, is the “internationalization” of the funding of its expenses by “the High Contracting Parties ... specially interested in these services”⁷⁹ or – in modern legal parlance – “the Contributing Governments”.⁸⁰ Whereas the original 1914 treaty provided for fixed proportions among the then eleven High Contracting Parties – running from 2 percent (Austria-Hungary, Canada, Denmark, Rus-

76 74th Congress, Session II, Chapter 807, June 25, 1936, at 1922-1924.

77 See Art. 7 s. 1 SOLAS 1914: “The Government of the United States is invited to undertake the management of the three services of derelict destruction, study an observation of ice conditions, and ice patrol.” Nova Scotian (Halifax) and Newfoundlandian (St. John’s) ports having always during the course of the last century, in one way served or the other, as “base stations” for respective U.S. Coast Guard operations, the Ice Patrol has in fact always been conducted in close collaboration with Canadian authorities. Collaboration continues, and has been intensified in recent years, by virtue of a close cooperation of the Ice Patrol and the Canadian Ice Service (CIS – <http://www.ec.gc.ca/glaces-ice> (accessed January 14, 2017)), which issue one daily iceberg analysis under the North American Ice Service (NAIS), a collaborative agreement to unify North American ice information and improve service to mariners. In fact, the appendix to Chapter V to SOLAS 1974 (6.3.) makes explicit reference to the Canadian contribution: “the ... annual cost incurred by the Governments of the United States of America and Canada [emphasis added] of managing and operating ice patrol services ...” (6.3.).

78 Report of the International Ice Patrol in the North Atlantic, Bulletin No. 26 (1936), v. Section 1 of the 1936 Act empowers the U.S. President “to conclude agreements with interested maritime nations (a) to maintain in the north Atlantic Ocean a service of ice patrol [...]”, an unequivocal reference to the international treaty law on safety at sea. The current *de lege lata* situation does not provide otherwise (see 46 U.S. Code § 80301 (a)).

79 Art. 7 s. 2 SOLAS 1914.

80 Appendix to Chapter V to SOLAS 1974: “6. *Contributing Government* means a Contracting Government undertaking to contribute to the costs of the ice patrol service pursuant to these Rules.”

sia) to 30 percent (Great Britain) of total expenses,⁸¹ today's financial regime, operative beginning with the ice season of 2002⁸² and currently comprising a total of 17 States,⁸³ is considerably more flexible in this respect:

"2. [...] The contribution to the Government of the United States of America shall be based on the ratio which the average annual gross tonnage of that contributing Government's ships passing through the region of icebergs guarded by the Ice Patrol during the previous three ice seasons bears to the combined average annual gross tonnage of all ships that passed through the region of icebergs guarded by the Ice Patrol during the previous three ice seasons.

3. All contributions shall be calculated by multiplying the ratio described in paragraph 2 by the average actual annual cost incurred by the Governments of the United States of America and Canada of managing and operating ice patrol services during the previous three years. This ratio shall be computed annually, and shall be expressed in terms of a lump sum per-annum fee."⁸⁴

Interestingly enough, although the Convention puts a certain pressure to contribute on States "specially interested in these services whose ships pass through the region of icebergs",⁸⁵ there is effectively no legal obligation to do so. However, since a withdrawal or a reduction of one's own

81 Art. 7 s. 2 SOLAS 1914. The share of France, Germany and the United States was fixed at 15 percent each.

82 Appendix to Chapter V to SOLAS 1974: 6.8.

83 Belgium, Canada, Finland, France, Germany, Greece, Italy, Japan, the Netherlands, Norway, Panama, Poland, Spain, Sweden, the United Kingdom, and the United States (Report of the International Ice Patrol in the North Atlantic, Bulletin No. 97 (2011), Appendix A, at 58 (erroneously termed as "Contracting" instead of "Contributing" States).

84 Appendix to Chapter V to SOLAS 1974: 6.2/6.3. The United States on their part have an accounting obligation: "6.6. The Government of the United States of America shall furnish annually to each contributing Government a statement of the total cost incurred by the Governments of the United States of America and Canada of managing and operating the Ice Patrol for that year and of the average percentage share for the past three years of each contributing Government 6.7. The managing government shall publish annual accounts including a statement of costs incurred by the governments providing the services for the past three years and the total gross tonnage using the service for the past three years. The accounts shall be publicly available. Within three months after having received the cost statement, contributing Governments may request more detailed information regarding the costs incurred in managing and operating the Ice Patrol." (ibid.).

85 Appendix to Chapter V to SOLAS 1974: 6.2: "... *undertakes* to contribute to the Government of the United States of America" [emphasis added].

contribution, the possibility of which is explicitly provided for in the Convention itself,⁸⁶ would inevitably lead to an increase of the financial burden of the remaining States, there is obviously a certain “solidarity factor” among interested maritime nations, which impedes States to leave and thus keeps membership in the group of contributing States rather stable during the last decades.

However, a most recent change in U.S. legislation⁸⁷ indicates not only a growing awareness of US legislative and administrative bodies for the financial implications of services provided by the International Ice Patrol, but probably also mirrors a certain free-rider mentality among a number of States and – eventually – a certain negligence of Contributing States vis-à-vis their financial obligations, too.⁸⁸ Whereas until the very recent past, data collected by the International Ice Patrol was disseminated to all ships alike passing the danger zone, this has now been limited, effective as of January 1, 2017, to a) vessels documented under the laws of the United States and b) vessels of those countries that made the payments provided for in SOLAS and U.S. law.⁸⁹ Indeed, this brand-new piece of legislation cannot be but considered as a (partial) parting from the time-honored “post Titanic ideal” of the International Ice Patrol’s rather “altruist” humanitarian mission and a turn-back to the scheme of traditional inter-State relations, in which the individual (in distress) is granted no standing of its own at all on the international plane. Even if the wording of SOLAS 1974 (Chapter V – Regulation 6) is not explicit on this point, one may indeed well argue that both the object and purpose of the Convention as well as a historical interpretation of its terms (see article 31 General Rule of Interpretation of the 1969 Vienna Convention on the Law of Treaties) do not allow for such a fundamental restriction by the United States of its dissemination policy. The recently introduced legal duty of ships transiting the danger zone to use the services provided by the Ice Patrol (“... are required to make use of ...”),⁹⁰ may further support the incompatibility position.

86 Appendix to Chapter V to SOLAS 1974: 6.4.

87 Pub. L. 113–281, title III, § 314(a) (3), Dec. 18, 2014, 128 Stat. 3049. .

88 However, the author could not ascertain whether or not and to which extent this is actually the case.

89 46 U.S. Code § 80301 (b). The United States Code is a consolidation and codification by subject matter of the general and permanent laws of the United States (<http://uscode.house.gov/> (accessed January 14, 2017)). Title 46 of the Code is concerned with shipping matters.

90 SOLAS 2002 (new Regulation 6.1 s.1 – see *infra* note 96).

However, apart from this recent and everything but insignificant modification, the compatibility of which with SOLAS 1974 is highly questionable,⁹¹ continuity prevails and, in the course of the past 100 years the legal regime has indeed suffered very little changes: Even the fine for an excessive speed of US vessels within the danger zones,⁹² presumably one of the prime causes for Titanic hitting the iceberg, has never been changed. It still stands at a maximum of \$ 500⁹³, as it already did in 1936 – under present day conditions obviously not a very deterrent sanction. What rests is the recent replacement of the word “vessel” by the word “aircraft” or “ice patrol” respectively: An overdue tribute to technological change!

The effectivity of the services provided by the International Ice Patrol since its inception in 1913 is beyond reasonable doubt: With not a single reported loss of life or property due to collision with an iceberg, the safety record of the International Ice Patrol is impressive indeed. The sinking of the Danish *S.S. Hans Hedtoft* with a loss of 95 passengers and crew⁹⁴ off the southernmost point of Greenland on January 29, 1959⁹⁵ – that is well beyond the geographical limits of the International Ice Patrol’s area of operation as determined in identical terms by SOLAS and U.S. Law – as well as numerous collisions with icebergs by ships transiting through the area patrolled by the International Ice Patrol that entailed no serious consequences, aptly demonstrate that the potential for an iceberg-related catastrophe in the North Atlantic has not ceased to exist.

91 It may only be recalled in this context that Art. 68 of SOALS 1914 expressly provided “... the subject of this Convention being safety of life at sea”, see also *supra* III. In the view of the author, an *argumentum a maiore ad minus* is inadmissible, too: The undeniable right of the United States to discontinue the service at all (Regulation 6, 6 SOLAS 1974, *infra* note 95) does not grant this State the right to act in a discriminatory or selective manner.

92 In accordance with the pertinent rules of international law, as enshrined both in customary international law as well as in the United Nations Convention on the Law of the Sea (UCLOS 1984), the United States do not claim jurisdiction in international waters over foreign vessels.

93 46 U.S. Code § 80303 (b).

94 With no survivors, the ship vanished traceless, its ultimate fate remaining a mystery. The only piece of wreckage ever recovered was a lifebelt which washed ashore some nine months after the ship sank.

95 A distress call located the hitting with an iceberg at 59°30'N 43°00'W.

VIII. *The International Ice Patrol: A Centenarian in Good Shape*

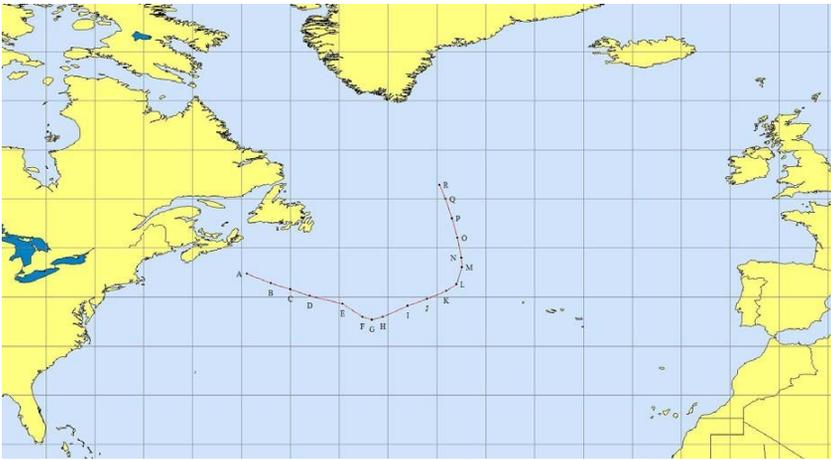


Fig. 9: Extreme limits of ice of all types in the North Atlantic Ocean (coordinates as defined in: SOLAS 1974, Appendix to Chapter V 1.4)

In maritime matters, under both, an institutional as well as under a substantive law perspective, almost everything has changed in the course of the last 100 years, but the International Ice Patrol has not. The current regulations governing the structure and work of this unique institution – Chapter V Regulation 6⁹⁶ of SOLAS 1974 (as

96 Regulation 6 - Ice Patrol Service:

The Ice Patrol contributes to safety of life at sea, safety and efficiency of navigation and protection of the marine environment in the North Atlantic. Ships transiting the region of icebergs guarded by the Ice Patrol during the ice season are required to make use of the services provided by the Ice Patrol.

The Contracting Governments undertake to continue an ice patrol and a service for study and observation of ice conditions in the North Atlantic. During the whole of the ice season, i.e. for the period from February 15th through July 1st of each year, the south-eastern, southern and south-western limits of the region of icebergs in the vicinity of the Grand Banks of Newfoundland shall be guarded for the purpose of informing passing ships of the extent of this dangerous region; for the study of ice conditions in general; and for the purpose of affording assistance to ships and crews requiring aid within the limits of operation of the patrol ships and aircraft. During the rest of the year the study and observation of ice conditions shall be maintained as advisable.

amended)⁹⁷ and the Appendix thereto⁹⁸ – still bear striking similarities with the original 1914 legal framework, yet indeed, both legal regimes are in fact virtually identical.⁹⁹ History matters in other respects too: Each year, the International Ice Patrol awards the vessel that submits the most

Ships and aircraft used for the ice patrol service and the study and observation of ice conditions may be assigned other duties provided that such other duties do not interfere with the primary purpose or increase the cost of this service.

The Government of the United States of America agrees to continue the overall management of the ice patrol service and the study and observation of ice conditions, including the dissemination of information therefrom.

The terms and conditions governing the management, operation and financing of the Ice Patrol are set forth in the Rules for the Management, operation and financing of the North Atlantic Ice Patrol appended to this chapter which shall form an integral part of this chapter.

If, at any time, the United States and/or Canadian Governments should desire to discontinue providing these services, it may do so and the Contracting Governments shall settle the question of continuing these services in accordance with their mutual interests. The United States and/or Canadian Governments shall provide 18 months written notice to all Contracting Governments whose ships entitled to fly their flag and whose ships registered in territories to which those Contracting Governments have extended this regulation benefit from these services before discontinuing providing these services.

97 With a quasi-universal 162 contracting States, flagging 99,17 of merchant ships' worldwide gross tonnage (September 20, 2016), the (new) SOLAS Convention has confirmed (earlier versions were adopted in 1929, 1948 and 1960, respectively) its status as the most important of all international treaties concerning the safety of merchant ships. Updated and amended on numerous occasions since then, the Convention in force today is therefore frequently referred to as SOLAS, 1974, "as amended". A rapid adaption of the legal framework is very much facilitated by the "tacit acceptance procedure", which provides that an amendment shall enter into force on a specified date unless, before that date, objections to the amendment are received from an agreed number of Parties.

98 The Appendix contains basically a number of legal definitions, namely of the terms: "Ice season" (1.), "Region of icebergs guarded by the ice patrol" (2.), "Routes passing through regions of icebergs guarded by the Ice Patrol" (3.), "Extreme limits of ice of all types" (4.), "Managing and operating" (5.), and "Contributing Government" (6.).

99 The same is true, as shown (*supra* VII.), with respect to the applicable national (U.S.) legal framework.

iceberg reports.¹⁰⁰ In 2015 given to the Canadian *GB Atlantic Hawk*,¹⁰¹ the award is named after the *Carpathia*, the vessel credited with rescuing 705 Titanic survivors. And every year, on April 15, an International Ice Patrol ship or aircraft lay a wreath at the site of the Titanic disaster. However, the International Ice Patrol as it stands today is far from being merely a somewhat nostalgic, backward-oriented or even outlandish phenomenon from a remote past: With 1.165 icebergs drifting into the transatlantic shipping lanes, the year 2015 was indeed the 13th most severe Ice Season on record dating back to 1900,¹⁰² and the enhanced breaking off of icebergs from glaciers in Greenland, many of which drifting south with currents into the North Atlantic Ocean,¹⁰³ are very likely to pose, in the very near future, an

100 The (everything but self-evident) duty under international law of private individuals to report was indeed already enshrined in Art. 8 para 1 of SOLAS 1914: "The master of every ship which meets with dangerous ice or a dangerous derelict is bound to communicate the information by all the means of communication at his disposal to the ships in the vicinity, and also to the competent authorities at the first point of the coast with which he can communicate."

101 With 24 Iceberg reports (Report of the International Ice Patrol in the North Atlantic, Bulletin No. 101 (2015), at 71).

102 Report of the International Ice Patrol in the North Atlantic, Bulletin No. 101 (2015), Foreword. See also the rather dramatic account of the current situation by the (German) *Bundesamt für Seeschifffahrt und Hydrographie (Hamburg)*: „90 Jahre nach dem Untergang der Titanic am 15. April 1912 erleben die Grand Banks derzeit entsprechend der Zahl der im Bereich der Nordatlantikkroute treibenden Eisberge eine schwere Eisbergsaison. Anfang Mai wurden durch die Überwachung der International Ice Patrol südlich von 48° N etwa 250 Eisberge registriert - - "MANY ICEBERGS ARE NORTH OF 4400N AND WEST OF 4400W". Die südlichsten (auf 41°45' N zwischen 48° und 50° W) und östlichsten Positionen (auf 40°45' W zwischen 46° und 47° N) liegen nahe der maximalen Eisberggrenze in dieser Jahreszeit. Da die Eisberge mit dem Labradorstrom südwärts in den Bereich der Hauptschifffahrtsroute hineindriften, ist natürlich auch die Zahl der weiter nordwärts bereitstehenden Eisberge von Interesse, um abschätzen zu können, ob sich der Trend fortsetzen wird. Nach den Zählungen des kanadischen Eisdienstes von Anfang Mai sind dies zwischen den Breitenkreisen 48° - 50° N: 307 Eisberge, 50° - 52° N: 129 Eisberge, 52° - 54° N: 183 Eisberge, 54° - 57° N: 475 Eisberge. Dieser ‚Vorrat‘ von knapp 1100 Eisbergen, die sogenannte iceberg crop, lässt daher noch einen erheblichen Zuwachs in der Gesamtzahl der Eisberge erwarten, die im Monatsverlauf in das Seegebiet südlich von 48° N hineindriften werden. Sie liegt durchschnittlich bei 40 Bergen (Medianwert 1961 - 2001) [...]“ (<http://www.bsh.de/de/Meeresdaten/Beobachtungen/Eis/Eisbergsaison01.jsp> (accessed January 14, 2017)).

103 In 2015, the southern Iceberg Limit extended to 40°45'N, approximately the latitude of New York City in the United States, the eastern Iceberg Limit expanded

even ever greater hazard to transatlantic shipping.¹⁰⁴ Today equipped with the most up-to-date technology,¹⁰⁵ the mission of the International Ice Patrol is still very much the same as it was more than a century ago: To monitor the iceberg danger in the North Atlantic Ocean and provide relevant iceberg warning products to the international maritime community. In the face of unprecedented climatic and environmental challenges, which affect in particular the northern polar region, there is little doubt that the combined efforts to secure safety at sea in the region at stake, provided for in the international *Grundnorm* for safety at sea, the SOLAS Convention, and operated by the International Ice Patrol, do still serve its original purpose and will remain to do so in the foreseeable future.

No matter whether or not there might exist today even a duty under international law, at least in *statu nascendu*, to provide, to the extent possible and reasonable,¹⁰⁶ any service such as the Ice Patrol, there can be no doubt whatsoever that the mission of the International Ice Patrol still is “utile à l’humanité et aux relations pacifiques des peuples” – to use the words of the German head of delegation, *Dr. von Koerner*, at the Inaugural Session of the 1913 London Conference, received with “vifs applaudissements”.¹⁰⁷ And indeed, not least in the face of the terrifying images of virtually thousands of refugees in the Mediterranean and elsewhere around

to a (very unusual) 36°00’W (Report of the International Ice Patrol in the North Atlantic, Bulletin No. 101 (2015), Foreword).

104 Virtual unanimity prevails in today’s scientific community that climate change has indeed a major impact on the polar regions of the Northern Hemisphere in general and on iceberg production by Greenland glaciers in particular, see only *Nick et al*, Future sea-level rise from Greenland’s main outlet glaciers in a warming climate, *Nature* 2013, 235 (with extensive references).

105 Today, primary reconnaissance is conducted by HC-130J long range surveillance aircraft –and additionally – data collected by ships operating in or passing through the ice area. In order to predict the drift of icebergs, all data, along with ocean current and wind data, is fed into a computer model at the IIP Operations Center (New London, Connecticut). Each day, the predicted iceberg locations are used to estimate the iceberg limit – information made public by several means, including INMARSAT SafetyNet, NAVTEX, SITOP, and the Internet.

106 The author reserves to a later study the putting of this very specific legal régime into a somewhat broader context of (general) international law, and, in particular, the in-depth exploration of whether or not (and to what extent) there might even be an obligation of States under the law of State responsibility to engage in the safety of sea lanes threatened by sea ice.

107 Procès-Verbaux des Séances Plénières, Séance d’ouverture le 12 novembre 1913, at 14.

the globe, who have tried in vain to conquer a place for a better life: Could there be a better scope and purpose for international co-operation than quite simply “humanity”?



Fig. 10: A Coast Guard C-130, based out of Air Station Elizabeth City, N.C., flies past an iceberg in the waters near Newfoundland, Canada (U.S. Coast Guard photo by Petty Officer 1st Class Brandon Brewer)