

# Port and Coastal State Control of Atmospheric Pollution from Merchant Vessels

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## I. INTRODUCTION

Controlling atmospheric pollution which originates beyond national borders always presents difficult issues. The problems are multiplied when the source is a merchant vessel, registered under a foreign “flag of convenience” and operating seaward of state and federal sovereign limits. Nevertheless, international law provides alternative approaches through which the coastal sovereign may protect its “onshore” environmental interests.

The purpose of this paper is to lay out the problems, both factual and legal, and discuss means by which they may be resolved. California is used as a case study. The state has long suffered from excessive air pollution. Congress acknowledged the state’s unique situation when, in the Clean Air Act, it singled California out for special consideration.<sup>1</sup> Of course, much of California’s original air pollution problem arose from onshore sources, both mobile and stationary. Since the passage of the Clean Air Act, great strides have been made in reducing harmful emissions from those sources. But merchant vessels contribute substantially to onshore pollution, with adverse consequences for both public health and global warming.<sup>2</sup> Until recently, relatively little had been done to cure

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1. See Clean Air Act, 42 U.S.C. § 7543(e)(2)(A) (2006).

2. See Richard Hildreth & Alison Torbitt, *International Treaties and U.S. Laws as Tools to Regulate the Greenhouse Gas Emissions from Ships and Ports*, 25 INT’L J. OF MARINE & COASTAL L. 347, 350 (2010) (reporting that “[i]n . . . Santa Barbara, California, ship emissions are predicted to exceed all land based emissions by 2015.”).

that defect. The discussion which follows details steps that California and the federal government have taken in that direction.

## II. THE FACTUAL AND LEGAL PROBLEMS

### A. *The Factual Problem*

Merchant vessels are universally recognized air polluters. The United States Commission on Ocean Policy’s findings are telling. It explained that “[m]ost large commercial ships are powered by marine diesel engines that use fuels containing high concentrations of contaminants. These engines have high emissions on a per engine basis and contribute to high ozone and particulate matter levels in many coastal and port areas.”<sup>3</sup> Corbett and Fischbeck explain that “[s]ince the 1973 fuel crisis, crude oils have been processed using secondary refining technologies to extract the maximum quantity of refined products (distillates). [And the residue of this process typically fuels merchant vessels.] As a consequence, the concentration of contaminants such as sulfur . . . has increased.”<sup>4</sup> They conclude that “[s]hip engines are thus among the world’s highest polluting combustion sources.”<sup>5</sup> And, they say, “[c]argo ships are the largest polluters, accounting for two-thirds of vessel sulfur emissions.”<sup>6</sup> Hildreth and Torbitt reach similar conclusions, reporting that “[m]arine engines produce emissions at a far higher rate than stationary sources, due to the lack of stringent pollution requirements and the poor quality of fuel burned.”<sup>7</sup> They also note that “ships are a dominant contributor over much of the world oceans to surface concentrations of NO<sub>2</sub> and SO<sub>2</sub>,”<sup>8</sup> and predict that by 2050 they will be responsible for “30% of all NO<sub>x</sub>,

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3. U.S. COMM’N ON OCEAN POLICY, AN OCEAN BLUEPRINT FOR THE 21ST CENTURY 244 (2004), *available at* [http://www.oceancommission.gov/documents/full\\_color\\_rpt/000\\_ocean\\_full\\_report.pdf](http://www.oceancommission.gov/documents/full_color_rpt/000_ocean_full_report.pdf).

4. James J. Corbett & Paul Fischbeck, *Emissions from Ships*, 278 SCI. 823, 823 (1997).

5. *Id.*

6. *Id.* at 823–24. EPA concurs, noting that “[l]arge ships such as container ships, tankers, bulk carriers, cruise ships, and [l]iners are significant contributors to air pollution in many of our nation’s cities and ports.” *Ocean Vessels and Large Ships*, EPA, <http://www.epa.gov/otaq/oceanvessels.htm> (last updated Jan. 12, 2012).

7. Hildreth & Torbitt, *supra* note 2, at 349. These authors also report that “[s]hips are the world’s most polluting combustion source per metric ton of fuel consumed.” *Id.* at 348–49.

8. *Id.* at 349 (internal quotations removed).

18% of all SO<sub>x</sub> and 3% of all CO<sub>2</sub> emissions.”<sup>9</sup> And they constitute “an increasingly important source of air pollution and greenhouse gas emissions.”<sup>10</sup>

Merchant shipping to and from the United States is not expected to decrease in the foreseeable future. The Ocean Policy Commission reports that “[a]s the world’s largest trading nation, the United States imports and exports more merchandise than any other country. . . . [d]omestically, coastal and inland marine trade amounts to roughly one billion tons of cargo, worth more than \$220 billion, a year.”<sup>11</sup> Further, the Commission recounts that California enjoys a substantial part of this economic activity (and, presumably, suffers a similar portion of the environmental consequences), saying “[o]ut of a total of 326 ports nationwide, 10 of them handle 85 percent of all containerized ship-borne cargo, with the ports of Los Angeles and Long Beach accounting for nearly 40 percent of all such cargo.”<sup>12</sup> It has been estimated that ships carry more than 95 percent of the nation’s overseas cargo.<sup>13</sup>

A large percentage of these vessels are registered in foreign States.<sup>14</sup> “In 2002 over 7,000 vessels from 81 flag States made more than 53,000 port calls in the United States.”<sup>15</sup> The Ocean Policy Commission projected that “international and domestic marine cargo [will] double” by 2024.<sup>16</sup> Finally, the Commission found that “approximately 80 percent of vessel air emissions occur within 200 miles of the coast and that a major part of the emissions are concentrated in a few areas in the Northern Hemisphere, primarily along the east and west coasts of the United States, in the North Pacific, and in Northern Europe.”<sup>17</sup> But such emissions may travel much longer distances to reach our coasts. As the Commission also found, “air pollution from human activities in Asia can be carried across the Pacific Ocean by prevailing . . . winds, with potentially significant impacts on the concentration and number of air pollutants in North American coastal areas.”<sup>18</sup> And vessel source emissions do not affect

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9. *Id.*

10. *Id.* at 348. The Ninth Circuit Court of Appeals noted that the bunker fuel used in merchant vessels “contains an average of approximately 25,000 parts per million (“ppm”) of sulfur. In contrast, the diesel fuel used for trucks and other motor vehicles is limited to just 15 ppm of sulfur.” *Pac. Merch. Shipping Ass’n v. Goldstene*, 639 F.3d 1154, 1159–60 (9th Cir. 2011), *petition for cert. filed*, 80 U.S.L.W. 3004 (U.S. June 23, 2011) (No. 10-1555).

11. U.S. COMM’N ON OCEAN POLICY, *supra* note 3, at 192.

12. *Id.* at 193.

13. *Id.* at 236.

14. *See infra* pp. 209–12 (discussing the significance of this fact).

15. U.S. COMM’N ON OCEAN POLICY, *supra* note 3, at 240.

16. *Id.* at 193.

17. *Id.* at 244.

18. *Id.*

only coastal communities. “Ship emissions may contribute to pollution hundreds of kilometers inland.”<sup>19</sup>

As mentioned, these vessel emissions have adverse effects on both public health and global warming. According to the International Council on Clean Transportation, “diesel PM [particulate matter] emissions from the Port of Los Angeles and Long Beach have been found to significantly increase the cancer risk [for coastal populations] by at least 100 in a million [people].”<sup>20</sup> And, “CO<sub>2</sub> emissions from the international shipping sector as a whole exceed annual total greenhouse gas emissions from most of the nations listed in the Kyoto Protocol as Annex I countries.”<sup>21</sup>

It is difficult to disagree with the Ocean Policy Commission’s conclusion that “[v]essel activities create significant benefits, but they also present risks to people and the environment that need to be effectively addressed.”<sup>22</sup>

### *B. The Legal Problems*

Any effort to make a significant reduction in atmospheric pollution from merchant vessels faces two primary hurdles. The first is acquiring jurisdiction over those vessels and their pollution producing activities. The second is establishing more environmentally conscious standards with which such vessels must comply.

In a nutshell, jurisdiction has historically attached to vessels (and individuals) either because they owe personal allegiance to the country or are within its sovereign territory. At first blush, it appears that neither source of jurisdiction will suffice to accomplish our objective here. That is because a vast majority of the vessel activity that requires more stringent environmental control does not involve U.S. vessels or crews, nor does it occur within the “territory” of the United States.

The “citizenship” of a vessel is determined by its nation of registry, or “flag.” The Commission on Ocean Policy makes a number of cogent points regarding the “personal jurisdiction” of the United States over merchant

19. Corbett & Fischbeck, *supra* note 4, at 824.

20. *Air Pollution and Greenhouse Gas Emissions from Ocean-Going Ships: Impacts, Mitigation Options and Opportunities for Managing Growth*, INT’L COUNCIL ON CLEAN TRANSP. 31 (Mar. 2007), available at [http://www.theicct.org/sites/default/files/publications/oceangoing\\_ships\\_2007.pdf](http://www.theicct.org/sites/default/files/publications/oceangoing_ships_2007.pdf).

21. Hildreth & Torbitt, *supra* note 2, at 350.

22. U.S. COMM’N ON OCEAN POLICY, *supra* note 3, at 236.

vessels plying its waters. It notes that “[t]he vast majority of international trade is carried on foreign-registered and foreign-crewed vessels that can be operated at considerably lower cost than U.S.-registered vessels crewed by U.S. merchant mariners.”<sup>23</sup> A few statistics are telling. The U.S. “share of the international fleet is only 454 vessels, or about 1 percent of the total.”<sup>24</sup> “Foreign flag vessels, subject primarily to the jurisdiction and control of other governments, carry more than 90 percent of international commercial freight entering and departing the United States and account for 95 percent of passenger ships and 75 percent of cargo ships operating in U.S. waters.”<sup>25</sup> The top 10 percent of “flag” nations register 56 percent of the world’s ships and those ships may account for up to 65 percent of nitrogen and sulfur emissions.<sup>26</sup>

There are, of course, internationally established standards that are intended to control harmful vessel emissions. These standards are set by an international agreement, known as MARPOL 73/78, and overseen by the International Maritime Organization (IMO), a United Nations agency whose purpose is regulating shipping.<sup>27</sup>

But reliance on international standards has been subject to criticism on a number of grounds. First, it has been said that “international rules and standards [have] been motivated . . . in large part . . . by maritime [S]tates [desire] to forestall unilateral coastal state regulation,” possibly suggesting that the shipping interests were not acting in good faith in the process of setting international standards.<sup>28</sup> Second, some commentators have contended that MARPOL’s standards have been outdated, requiring only “modest” improvements in emission levels that would have a “negligible” effect on the environment.<sup>29</sup> Corbett and Fischbeck make a similar point, noting that “[c]urrent [1997] IMO language limits fuel sulfur levels to 4.5%. This provides little reduction, if any, in sulfur and practically codifies

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23. *Id.* at 194.

24. *Id.*

25. *Id.* at 236–37. EPA has also commented on the fact, noting that “[s]hips are significant contributors to the U.S. and Canadian mobile-source emission inventories, though most are flagged . . . elsewhere.” *Designation of North American Emission Control Area to Reduce Emissions from Ships*, EPA 1 (Mar. 2010), available at <http://www.epa.gov/nonroad/marine/ci/420f10015.pdf> (hereinafter *EPA Designation 2010*).

26. Corbett & Fischbeck, *supra* note 4, at 824.

27. It is understood that substituting national standards “would lead to a ‘patchwork quilt’ of potentially conflicting regulations” thus impeding ocean commerce, “which currently accounts for approximately ninety-five percent of all international trade.” Daniel Bodansky, *Protecting the Marine Environment from Vessel-Source Pollution: UNCLOS III and Beyond*, 18 *ECOLOGY L.Q.* 719, 727 (1991) (citing R.R. CHURCHILL & A.V. LOWE, *THE LAW OF THE SEA* 203 (2d ed. 1988)).

28. *Id.* at 726.

29. Hildreth & Torbitt, *supra* note 2, at 358.

the status quo, because ISO [International Organization for Standardization] limited fuel to 5% sulfur in 1987.”<sup>30</sup>

Finally, the most common concern is that these international standards rely on flag State enforcement. Professor Bodansky identifies the problem, saying “[t]he real question is whether it is sufficient to control vessel-source pollution. . . . questions remain about the adequacy of flag State implementation. In part, this can be attributed to the development of flags of convenience, which may not accept international conventions such as MARPOL or be willing or able to enforce these standards adequately.”<sup>31</sup> It is widely understood that “since shipowners have wide latitude in choosing where to register their vessels, they can choose a ‘flag of convenience’ with comparatively lax environmental regulation or enforcement.”<sup>32</sup>

Hildreth and Torbitt concur, reporting that “[u]nfortunately, flag State regulation has suffered from a ‘race to the bottom,’ resulting in few to no regulations actually being enforced.”<sup>33</sup> They explain that “as flag States compete to gain the benefits of mobility, trade advantages, prestige, and revenue from fees and taxes that ship registration provides, flag States ignore or circumvent their duty to enforce the GAIS [generally accepted international standards] ‘beneath Byzantine layers of corporate owners, operators, and charterers.’”<sup>34</sup> The authors identify Panama, Liberia, Malta, and the Bahamas as “the flag-of-convenience countries where the vast majority of all marine vessels are now registered.”<sup>35</sup> Professor Allen has said, concerning the primacy of flag States in enforcement of international standards, “the wisdom of that formula is increasingly subject to doubt.”<sup>36</sup> The Commission on Ocean Policy appears to agree.<sup>37</sup>

30. Corbett & Fishbeck, *supra* note 4, at 824. Nevertheless, the authors conclude that “in spite of these limitations, both of these global regulations are valuable because adoption of the IMO regulations means that a multinational consensus has been achieved on the principles of ship emission control.” *Id.*

31. Bodansky, *supra* note 27, at 742 (citing CHURCHILL & LOWE, *supra* note 27, at 206–07).

32. Bodansky, *supra* note 27, at 737. In fact, the very term “flag of convenience” is commonly understood to be pejorative. For additional examples of flag State shortcomings in oversight and enforcement, see U.S. COMM’N ON OCEAN POLICY, *supra* note 3, at 239.

33. Hildreth & Torbitt, *supra* note 2, at 354.

34. *Id.*

35. *Id.* at 354–55.

36. Craig H. Allen, *Revisiting the Thames Formula: The Evolving Role of the International Maritime Organization and Its Member States in Implementing the 1982 Law of the Sea Convention*, 10 SAN DIEGO INT’L L. J. 265, 268 (2009).

Some have warned of the consequences, pointing out that “[u]nless states cooperate to develop stronger standards regarding vessel-source pollution, the likelihood will grow that coastal states will take actions to protect their environment that go beyond the Convention [UNCLOS], thereby undermining one of the primary purposes of UNCLOS III, namely to create a stable regime for the world’s oceans.”<sup>38</sup> More recently, other authorities have reported that those predicted “actions” are now underway. According to Hildreth and Torbitt, “[p]ort States have responded to this absence of enforcement of the GAIS by establishing their own standards that vessels must comply with or stay out of the port.”<sup>39</sup>

### III. POTENTIAL SOLUTIONS

These factual and legal problems are not insurmountable. International law provides means by which coastal States may protect their environmental interests from merchant vessel emissions, even though those vessels neither sail under those States’ flags nor violate international standards within their territory. In fact, there are separate avenues provided by California and the federal government. These approaches are complementary, not competing, and are based on different international authority and processes for adoption.<sup>40</sup>

First, California has adopted an approach that only applies to vessels bound for U.S. ports and puts the impetus for enforcement on authorities in the destination port. Second, the federal government has implemented

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37. U.S. COMM’N ON OCEAN POLICY, *supra* note 3, at 237. Major oil companies have also recognized this shortcoming. One authority reports that “Shell Oil claims that 20% of the world’s tankers fail to satisfy international safety standards. British Petroleum failed 299 of the 960 ships it inspected to carry its cargo.” D. HUNTER, J. SALZMAN & D. ZAEKKE, INTERNATIONAL ENVIRONMENTAL LAW AND POLICY 718 (David L. Shapiro et al. eds., 2d ed. 2002) (citing Joel Haveman, *Why Oil Spills Are Increasing*, L.A. TIMES, Mar. 26, 1993, at A1).

38. Bodansky, *supra* note 27, at 721.

39. Hildreth & Torbitt, *supra* note 2, at 355. The authors report that such an effort was undertaken by California but enjoined by a federal appellate court on the finding that the federal law, the Clean Air Act, had preempted such State action, referring to *Pac. Merch. Shipping Ass’n v. Goldstene*, 517 F.3d 1108, 1109–10 (9th Cir. 2008).

California has since revised its program in an effort to avoid the preemption issue. A new attack, by the same plaintiff, challenged the revised program on the ground that the federal Submerged Lands Act, 43 U.S.C. 1301 *et seq.*, prohibits California from asserting its police power over activities seaward of its three nautical mile offshore boundary. The United States District Court for the Eastern District of California upheld the revised State program. In a very thorough decision, the Court of Appeals for the Ninth Circuit affirmed. *Pac. Merch. Shipping Ass’n v. Goldstene*, 639 F.3d 1154 (9th Cir. 2011).

40. “International law has addressed the problem of vessel-source pollution in two ways: first, by establishing international vessel-source pollution standards that serve as an alternative to coastal state regulation; and second, by setting forth rules governing the jurisdiction of flag, coastal, and port [S]tates.” Bodansky, *supra* note 27, at 725.

an approach that applies to all vessels passing through waters of the United States' 200 nautical mile Exclusive Economic Zone (except in the arctic), whether or not bound for a U.S. port. Each approach will be discussed in turn.

### A. *Port State Control*

Port State control of merchant vessel behavior has been identified as the direction which international law is taking in the areas of vessel safety and pollution prevention.<sup>41</sup> Professor Bodansky describes it as “a useful corrective to inadequate flag state enforcement.”<sup>42</sup> He points out that “port states have a direct economic interest in shipping and receiving goods, and therefore they are more likely . . . to balance environmental measures against maritime commerce.”<sup>43</sup> Traditional economic theory would undoubtedly agree. On the other hand, a vessel's flag State has little or no economic incentive to carry out its enforcement responsibilities.

We look now at the port State's “authority” to impose emission conditions on a merchant vessel flying a foreign flag.

#### 1. *The Jurisdictional Basis of Port State Enforcement*

As noted at the outset, our object here is to identify the legal basis by which port authorities may dictate the composition of fuel burned by foreign vessels operated seaward of the port State's national boundaries. Simply put, this answer is: the port State's right to regulate the activity of someone over whom it has no personal jurisdiction, in an area in which it has no territorial jurisdiction, is acquired though a process akin to contract. The port State has complete jurisdiction over the waters of its port. It may admit or exclude foreign citizens and foreign registered vessels as it sees fit. If it imposes conditions on entry, and a foreign vessel enters without complying with those conditions, that vessel has violated the “contract” and now being within the territory of the port state, can be punished for that violation.

We now turn to a discussion of the international law bases for such port state authority.

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41. Allen, *supra* note 36, at 309.

42. Bodansky, *supra* note 27, at 739.

43. *Id.* at 739–40 (contrasting port States with “coastal States,” but the logic applies even more clearly when contrasting “port” and “flag” States).

*a. Customary International Law*

Customary international law has long recognized the right of port states to condition entry permission on compliance with specified requirements. As Professor McDorman explains, “the host state has absolute jurisdiction over visiting vessels in the same manner as if the visiting vessel were a foreign citizen vacationing or doing business in the host country. The result being that a visiting vessel is subject to and must comply with the laws and regulations of the host country.”<sup>44</sup> “International law is clear that authority of the port [s]tate is superior to that of the flag [s]tate while the vessel is in port.”<sup>45</sup>

A port state’s authority goes so far as to permit its insistence on certain design and construction standards,<sup>46</sup> including allowing a port state to “exercise criminal jurisdiction for violation of its [construction and design] or discharge standards.”<sup>47</sup>

In short, “[n]ations have the authority to ensure that foreign flag vessels visiting their ports are in compliance with applicable international *and* domestic requirements.”<sup>48</sup>

The opinions of experts in the field are, of course, recognized as “evidence” of international law. Article 38 of the Statute of the International Court of Justice lists international conventions, international custom, general principles, judicial decisions, and “the teachings of the most highly qualified publicists” as means for determining international law.<sup>49</sup> Innumerable experts on the law of the sea have expressed acceptance of this conclusion. Examples of their recognition of such coastal State authority, and the significance of its role in the prevention of pollution by merchant vessels, include the following:

Important in controlling and reducing vessel-source marine pollution is the authority and willingness of States to enact and enforce standards against foreign vessels that are voluntarily in their ports.<sup>50</sup>

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44. Ted McDorman, *Regional Port State Agreements: Some Issues of International Law*, 5 OCEAN & COASTAL L.J. 207, 210 (2000).

45. *Id.* at 211; see CHURCHILL & LOWE, *supra* note 27, at 65–67; see also Ted McDorman, *Port State Enforcement: A Comment on Article 218 of the 1982 Law of the Sea Convention*, 28 J. MAR. L. & COM. 305, 308 (1997).

46. Allen, *supra* note 36, at 279; see, e.g., 46 U.S.C. § 3703(a)(c)(2) (2006) (requiring that certain tankers have double hulls as a condition of entry into its ports); see also *infra* note 98.

47. Bodansky, *supra* note 27, at 745–47; see also CHURCHILL & LOWE, *supra* note 27, at 219.

48. U.S. COMM’N ON OCEAN POLICY, *supra* note 3, at 240.

49. Statute of the International Court of Justice art. 38, June 26, 1945, available at <http://www.icj-cij.org/documents/index.php?p1=4&p2=2&p3=0>.

50. McDorman, *Enforcement*, *supra* note 45, at 306.

The enforcement authority by coastal States with respect to vessels in port has long been recognized as one of the keys to the development of an effective international regime to prevent marine pollution.<sup>51</sup>

[C]oastal [S]tates have claimed the right to exercise prescriptive and enforcement jurisdiction over vessel-source pollution. This claim is largely based on the territorial principle, since coastal states have sovereignty over their internal waters and territorial sea.<sup>52</sup>

Port [S]tate jurisdiction is generally defined as jurisdiction based solely on the presence of the vessel in port.<sup>53</sup>

[T]he major difference lies in the ‘voluntary’ character of the ship’s presence in port.<sup>54</sup>

Coastal State jurisdiction over foreign flag vessels is most extensive when the vessel voluntarily enters (or is en route to) a port or an offshore terminal of the coastal State.<sup>55</sup>

[V]oluntary presence in port . . . is an essential element of port State jurisdiction.<sup>56</sup>

[P]ort-[S]tate jurisdiction strengthens compliance with national rules and regulations without any interference with the freedom of navigation as entry into port constitutes a voluntary submission of the vessel to the jurisdiction of the port state . . . concurrently with the original jurisdiction of the flag [S]tate.<sup>57</sup>

It was also the understanding of the United States in adopting Annex VI of MARPOL (a tool to regulate greenhouse gas emissions) that Annex VI “did not prohibit parties from imposing stricter emission limits or fuel oil standards as a condition of entry into U.S. ports and internal waters.”<sup>58</sup>

Customary international law of the sea, and the authorities that deal in it, are in agreement. Port states may condition port entry on compliance with international and local pollution control standards, and may enforce those standards on foreign flag vessels in their ports.

51. *Id.* (quoting BRIAN D. SMITH, STATE RESPONSIBILITY AND THE MARINE ENVIRONMENT 173 (1988)).

52. Bodansky, *supra* note 27, at 737.

53. *Id.* at 738.

54. MARIA GAVOUNELI, FUNCTIONAL JURISDICTION IN THE LAW OF THE SEA 44 (2008) (citing McDorman, *Enforcement*, *supra* note 41, at 305–22).

55. Allen, *supra* note 36, at 279.

56. UNITED NATIONS OFFICE OF LEGAL AFFAIRS, ENFORCEMENT BY PORT STATES: LEGISLATIVE HISTORY OF ARTICLE 218 OF THE UNITED NATIONS CONVENTION ON THE LAW OF THE SEA (LAW OF THE SEA SERIES) 2 (2002) [hereinafter ENFORCEMENT BY PORT STATES].

57. GAVOUNELI, *supra* note 54, at 44.

58. Hildreth & Torbitt, *supra* note 2, at 363, (citing 152 Cong. Rec. S3400 (daily ed. Apr. 7, 2006)).

*b. Conventional International Law*

Conventional international law is completely in accord with the principles developed under customary international rules.<sup>59</sup> The United Nations Convention on the Law of the Sea (“UNCLOS”), sometimes referred to as “The Constitution of the Oceans,” provides that,

[i]n the case of ships proceeding to internal waters [which are universally understood to include ‘ports’] or a call at a port facility outside internal waters, the coastal State also has the right to take the necessary steps to prevent any breach of the conditions to which admission of those ships to internal waters or such a call is subject.<sup>60</sup>

Article 25(2) clearly recognizes two rights of the coastal State: the right to condition entry into its ports and the right to enforce breaches of those conditions.

Such recognition is consistent with the purposes of UNCLOS. As J. Peter Bernhardt points out, “[o]ne of the principle aims of the Third United Nations Conference on the Law of the Sea has been to establish effective prescriptive and enforcement regimes for the prevention of pollution from vessels . . .”<sup>61</sup> Bernhardt suggests that this “aim” was advanced by “[t]he concept of port-State enforcement . . . [which] was designed to meet the legitimate need of the coastal State to protect its offshore environment from vessel-source pollution.”<sup>62</sup>

The general consensus is that this UNCLOS objective has been met. According to one authority,

UNCLOS III [the UN conference which produced the 1982 UNCLOS Convention] resolves any doubt that may have existed about whether coastal States may adopt national CDEM [Construction, Design, Equipment and Manning] standards for their ports and internal waters by explicitly referring to the possibility of States establishing ‘particular requirements for the prevention, reduction and control of

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59. Unless otherwise indicated, the relevant convention is the United Nations Convention on the Law of the Sea, Dec. 10, 1982, 1833 U.N.T.S. 397 [hereinafter UNCLOS].

60. UNCLOS, *supra* note 59, art. 25(2); *see also* J. Peter A. Bernhardt, *A Schematic Analysis of Vessel-Source Pollution: Prescriptive and Enforcement Regimes in the Law of the Sea Conference*, 20 VA. J. INT’L L. 265, 291(1980) (reasoning that “[i]f such a clear right is given, certainly the coastal, and thus the port, State may take action against a ship for breach of those conditions once it is voluntarily within the port. This interpretation [is] supported by application of *lex specialis generalis derogate*” and because Article 25 appears after Articles 24(1)(a) and 21(2), which specifically limit similar coastal State jurisdiction *seaward of internal waters*, such as ports).

61. Bernhardt, *supra* note 60, at 265; *see also* McDorman, *Enforcement*, *supra* note 45, at 305 (describing vessel pollution as the “central marine environmental concern” of UNCLOS).

62. Bernhardt, *supra* note 60, at 269–70; *see generally* ENFORCEMENT BY PORT STATES, *supra* note 56, at 7 (providing a legislative history of the conferees’ consideration of port State jurisdiction, including port entry denial).

pollution of the marine environment as a condition for the entry of foreign vessels into their ports or internal waters.’<sup>63</sup>

Moreover, Professor Bodansky notes that “[t]he expansion of port state jurisdiction by UNCLOS III is often regarded as one of the Convention’s most significant features.”<sup>64</sup> Dr. Gavouneli uses similar language regarding the expansion of jurisdiction, calling it “an innovation of the Convention” and “the most important innovation of the enforcement system.”<sup>65</sup>

It appears that this innovation in the law of the sea has resulted in new rules for protection of the environment and enforcement of those rules. Professor McDorman reports that “[f]oreign vessels voluntarily in port are being subjected to an increasing array of local laws regarding navigational safety and marine environmental protection.”<sup>66</sup>

One of the problems identified at the outset of this paper was a reliance on flag State enforcement of merchant vessel operations and the perceived “laxity” of that enforcement. The expansion of port-State authority should not be understood to displace the flag State’s traditional authority. Under UNCLOS, flag States retain all of their rights, and responsibilities, as to their registered vessels. The flag State’s role has been described as the “primary responsibility for regulating vessel safety and pollution prevention.”<sup>67</sup> As Professor Allen explains, UNCLOS “allocates jurisdiction and responsibility for enforcing vessel safety and pollution prevention rules and standards among flag States [Art. 217], coastal States [Art. 220], and port States [Art. 218].”<sup>68</sup>

Flag states have not lost any authority. Rather, coastal states and port states have simply been authorized to assure rule compliance. This result has been described as a “partial compromise”<sup>69</sup> on the principal

63. Bodansky, *supra* note 27, at 747 (comparing UNCLOS, *supra* note 59, art. 211(3) with Cheng-Pang Wang, *A Review of the Enforcement Regime for Vessel-Source Oil Pollution Control*, 16 OCEAN DEV. & INT’L L. 305, 328–29 (1986) (noting that “the term ‘condition for the entry of foreign vessels’ used in Article 211.3 could be interpreted as including the consent . . . to follow the coastal [S]tate’s national CDEM standards” as a condition of port entry)).

64. Bodansky, *supra* note 27, at 759 (citing CHURCHILL & LOWE, *supra* note 27, at 259).

65. GAVOUNELI, *supra* note 54, at 44 (quoting BARBARA KWIATKOWSKA, *THE 200-MILE EXCLUSIVE ECONOMIC ZONE IN THE NEW LAW OF THE SEA* 180 (1989)).

66. McDorman, *Enforcement*, *supra* note 45, at 322.

67. Allen, *supra* note 36, at 290 (citing UNCLOS, *supra* note 59, arts. 94, 217).

68. *Id.* at 276.

69. Bodansky, *supra* note 27, at 725.

debating point: balancing coastal State and flag State enforcement.<sup>70</sup> As Professor McDorman points out, “[t]he innovation of Article 218 is that it permits a port State to initiate action even where the offending discharge had no effect in the port State.”<sup>71</sup> He unequivocally concludes that UNCLOS and the Territorial Sea Convention “contain no limitations on the criminal, civil, or other jurisdiction of a local State over foreign vessels voluntarily in its ports.”<sup>72</sup>

In sum, UNCLOS can be said to strengthen port and coastal State enforcement by codifying pre-existing customary international law regarding a port State’s control of merchant vessels bound for its internal waters. Authorities are in agreement. “Article 211(3) . . . acknowledges that a coastal State can impose requirements respecting prevention, reduction, and control of marine pollution on foreign vessels as a condition of entry to ports and internal waters.”<sup>73</sup> According to the University of Virginia’s Center for Oceans Law and Policy, Article 211(3) “lays the basis for what is commonly termed ‘port State jurisdiction.’”<sup>74</sup>

## 2. *Limitations to Port State Jurisdiction*

Some of the broad statements above may suggest that there are no limits to a port State’s authority to condition, or deny, a foreign vessel’s entry into its port. That is not quite the case. Rather, it would be more accurate to say there are no “onerous” limitations to such authority.

The most common limitations are entry rights established by treaty. Churchill and Lowe point out that “despite the absence of a right of access in customary law, most States enjoy such rights in foreign ports under treaty.”<sup>75</sup> Perhaps the best multilateral example is the Convention and Statute on the International Regime of Maritime Ports.<sup>76</sup> The issue is also often addressed in bilateral “friendship treaties.”

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70. McDorman, *Enforcement*, *supra* note 45, at 306.

71. *Id.* at 322.

72. *Id.* at 309; *see also* Bernard H. Oxman, *The Territorial Temptation: A Siren Song at Sea*, 100 AM. J. INT’L L. 830, 844 (2006).

73. McDorman, *Enforcement*, *supra* note 45, at 309; *see also* LINDY S. JOHNSON, COASTAL STATE REGULATION OF INTERNATIONAL SHIPPING 52 (2004); McDorman, *Agreements*, *supra* note 44, at 218; Allen, *supra* note 36, at 297.

74. 4 CENTER FOR OCEANS LAW AND POLICY, UNIVERSITY OF VIRGINIA, UNITED NATIONS CONVENTION ON THE LAW OF THE SEA 1982: A COMMENTARY 203 (Myron H. Nordquist ed., 1991); *see also* LOUIS B. SOHN & JOHN E. NOYES, CASES AND MATERIALS ON THE LAW OF THE SEA 408 (2004) (discussing other international agreements which recognize port State jurisdiction over foreign vessels).

75. CHURCHILL & LOWE, *supra* note 27, at 47; *see also* McDorman, *Enforcement*, *supra* note 45, at 311.

76. Convention and Statute on the Int’l Regime of Maritime Ports, Dec. 9, 1923, 58 L.N.T.S. 285; *see* McDorman, *Enforcement*, *supra* note 45, at 310; *see also* McDorman, *Agreements*, *supra* note 44, at 218–19.

The General Agreement on Tariff and Trade does not address the authority of port states to condition or deny entry, except to express that such authority may not be used as a tool of “trade” discrimination. Professor McDorman explains that, under the test, entry may be controlled “provided the port state determines access and imposes conditions based on the peculiarities of the vessel (i.e., the vessel is sub-standard) and without discrimination on the basis of flag or between foreign and national vessels, and the measure is not designed to be a disguised trade barrier.”<sup>77</sup>

While generally adopting pre-existing customary international law regarding port State enforcement, UNCLOS contains a number of provisions to safeguard the interests of merchant vessels during proceedings brought against them in a foreign port. Such provisions seek to ensure the efficiency of such processes, protect the rights of the accused, and avoid endangerment to vessels and the environment.<sup>78</sup> Although a requirement that port State standards be published is often listed as a limitation to the rule, the basic principle remains.<sup>79</sup> Absent treaty obligations, “coastal States may impose conditions on foreign vessels regarding access to their ports and may deny access altogether.”<sup>80</sup>

### *3. Port State Enforcement and Penalties*

Enforcement authorities have “prosecutorial discretion” in considering whether punishment will be sought for a specific violation. This has been particularly true in the law of the sea context. Traditionally, coastal States have not prosecuted violations of their laws that occur on foreign flag vessels while within their internal waters unless the activity in question affects the “peace and good order” of the coastal State.<sup>81</sup> Instead,

77. McDorman, *Agreements*, *supra* note 44, at 221.

78. See UNCLOS, *supra* note 59, arts. 223–33; see also JOHNSON, *supra* note 73, at 47–50; see also Allen, *supra* note 36, at 296 (describing the UNCLOS safeguards as provisions “to guard against abusive investigative practices, unreasonable detentions, and hearing procedures that are fundamentally unfair.”).

79. Allen, *supra* note 36, at 298–99.

80. McDorman, *Enforcement*, *supra* note 45, at 311; see, e.g., 33 CFR § 160.107 (2012) (“District Commander or Captain of the Port, subject to recognized principles or international law, may deny entry into the navigable waters of the United States or to any port or place under the jurisdiction of the United States . . . to any vessel not in compliance with the provisions of the Port and Tanker Safety Act (33 U.S.C. 1221–1232) or the regulations issued thereunder.”).

81. See SOHN & NOYES, *supra* note 74, at 382–83.

enforcement is left to the flag State or, in appropriate instances, the sovereign to which an individual participant owes allegiance.<sup>82</sup> Following such precedents, port States might defer to other countries for enforcement. However, that seems unlikely in the circumstances of concern here.

Clearly, violations of environmental controls would adversely affect the port State's peace and good order. That is one of the reasons that the legal requirements were imposed in the first place. Another is that the likely alternative jurisdiction, the flag State, has probably been considered lax in enforcing similar requirements in the past.

For these reasons, the port State will likely not forego its authority to enforce environment rules, nor is it required to. The traditional practice of deferring to flag States for punishment is not based on any legal requirement, but on international comity.<sup>83</sup> We can expect that it will not be followed in cases involving port State protection of environmental interests from foreign flag merchant ships.

Interestingly, little has been written about the penalties that may be imposed by a port State for the violations of concern here. According to Professor Allen, the UNCLOS Convention contains "no restriction" on the right of a state to establish port entry requirements. "[T]he coastal State has the right to take any necessary steps to prevent a breach of the conditions of port entry."<sup>84</sup> Professor McDorman adds that "[t]here does not appear to be any restriction in international law regarding the type of penalty that can be levied against a foreign vessel which, while in port, breaches such laws or standards."<sup>85</sup>

Professor McDorman does, however, raise an interesting question as to whether *all* port States may benefit from the port State jurisdiction described in Article 218 of UNCLOS. In the foregoing discussion, port State jurisdiction is described as being founded primarily on customary

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82. See CHURCHILL & LOWE, *supra* note 27, at 54–55 ("But since ships are more or less self-contained units, having not only a comprehensive body of laws—those of the flag State—applicable to them while in foreign ports, but also a system for the enforcement of those flag State laws through the powers of the captain and the local consul, coastal States commonly enforce their laws only in cases where their interests are engaged; matters relating solely to the 'internal economy' of the ship are left to the authorities of the flag State.").

83. See *id.* at 55 ("The Anglo-American position . . . summarized in American Cases such as *Cunard S.S. v. Mellon* (1923), is that the coastal State's jurisdiction over foreign ships in its port is complete, but that it may, as a matter of policy, choose to forgo the exertion of its jurisdiction.").

84. Allen, *supra* note 36, at 294 (citing UNCLOS, *supra* note 59; Oxman, *supra* note 72, at 844).

85. McDorman, *Agreements*, *supra* note 44, at 223. The author goes on to discuss the monetary consequence of detaining offending vessels while enforcement proceedings progress and the provisions of UNCLOS which deal with that issue, particularly Articles 219 and 226(1). *Id.* at 223.

international law. McDorman cites prominent authorities for the proposition that Article 218 is an expansion of the pre-existing international law of port State jurisdiction. He reasons that “the port State clause in the UNCLOS Convention confers on the local State new authority over foreign vessels voluntarily in port . . . and that it cannot be confidently concluded that the provisions have entered into the corpus of customary international law.”<sup>86</sup>

Standing alone, this conclusion might be read as being of only academic concern. However, from that proposition, McDorman quite logically points out that “at least for the time being, only parties to the UNCLOS Convention can benefit from the Article 218 port State enforcement jurisdiction.”<sup>87</sup> Three years later, he renewed his conclusion, stating that “[i]t is highly questionable whether Article 218 of the Law of the Sea Convention [footnote omitted] has emerged as part of customary international law.”<sup>88</sup>

Our interest here is in determining whether a port State is prohibited by UNCLOS from attaching conditions to a foreign flag vessel’s entry into its internal waters. We believe that Professor McDorman’s conclusion, and that of the authorities upon which he relies, cannot be read to mean that the longstanding customary international law right to condition “port entry” has been superseded by UNCLOS, with the consequence that only parties to that Treaty can impose port entry conditions. Our reasoning proceeds as follows.

First, the McDorman approach seems to concede that there had been a long history of port State control prior to the negotiation of UNCLOS. Article 218 is described as including “innovative expansions” of international law. However, there is no suggestion that a port State’s “conditioning” such entry was one of those “innovative expansions.” Clearly, it was not. The substantive provisions of UNCLOS that instead deal with port State authority are both traditional and new. Nothing in

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86. McDorman, *Enforcement*, *supra* note 45, at 320 (citing GEORGE C. KASOULIDES, PORT STATE CONTROL AND JURISDICTION: EVOLUTION OF THE PORT STATE REGIME 183–84 (1993); CHURCHILL & LOWE, *supra* note 27, at 259; Thomas A. Clingan, *Vessel-Source Pollution, Problems of Hazardous Cargo, and Port State Jurisdiction*, in INTERNATIONAL NAVIGATION: ROCKS AND SHOALS AHEAD? 273, 277 (Jon M. Van Dyke, Lewis M. Alexander & Joseph R. Morgan eds., 1988).

87. See McDorman, *Enforcement*, *supra* note 45, at 318–20. Before reaching this conclusion, McDorman had considered a number of additional factors which, he concluded, weighed in favor of his determination. *Id.* at 318–20.

88. McDorman, *Agreements*, *supra* note 44, at 216–17.

the Convention, or its legislative history, indicates intent to retain pre-existing port State authority for parties to UNCLOS, but deprive non-party sovereigns of long-enjoyed rights to condition entry into internal waters.

Second, the right of port states to condition entry to internal waters fits a recognized basis for such control—that being complete sovereignty over internal waters. States have long been understood to have the same control over their internal water as is held over their land territory.

Third, the authorities cited seem to focus only on Article 218 of UNCLOS. Perhaps that Article, which authorizes port States to participate in the enforcement of internationally established emission *standards* beyond their national sovereignty, is not part of customary international law. But Article 218 is not the only relevant provision of UNCLOS. Article 211(3) speaks directly to the issue here—“port entry conditions.” The relevant provision of paragraph (3) specifically recognizes that States may “establish particular requirements for the prevention, reduction and control of pollution . . . as a condition of entry of foreign vessels into their ports or internal waters.”<sup>89</sup> In such cases, the port State is enforcing local law that is violated within national territory—not international law violated beyond its sovereignty. The former assertion of jurisdiction is founded on long-established rights of customary international law. The latter assertion is founded on novel authority arising from UNCLOS itself. There is no indication in UNCLOS that longstanding port State rights were, henceforth, to be denied to non-party States.

#### 4. Crafting “Conditions of Entry”

The objective of the foregoing analysis was described above as “controlling atmospheric pollution from foreign flag vessels when they are seaward of our national boundaries.” Yet most of what followed was a survey of international law that produced the conclusion that coastal States may impose conditions on foreign vessel entering into their ports. The time has come to make clear the relationship between the two points.

The key to successful port State control over foreign vessel activities beyond national boundaries is in crafting the description of the prohibited activity. It must be clear that the prohibition is violated while the vessel is indisputably subject to the port State’s jurisdiction. That is, the illegal

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89. UNCLOS, *supra* note 59, art. 211(3). For an expanded discussion, see GAVOUNELI, *supra* note 54, at 46.

activity must occur in port.<sup>90</sup> But, it is not always easy to understand the “process” for acquiring port State jurisdiction.

Lindy Johnson may have come up with the most straightforward explanation. She explains:

[I]f a port State has identified an important interest to protect, it will impose port entry conditions on a ship for activities in or beyond its territorial sea.<sup>91</sup>

If a ship voluntarily enters port without complying with [those conditions,] the violation occurs while the ship is in the territory of that State.<sup>92</sup>

[A] port State could draft its regulations imposing these conditions so that the violation itself is not the actual activity occurring beyond the territorial sea, but the entry into port after a ship has engaged in such activity.<sup>93</sup>

For example, if the object is to regulate atmospheric emissions 200 nautical miles offshore, the violation must be something like “entering internal waters” after having been responsible for such emissions.<sup>94</sup>

90. See McDorman, *Enforcement*, *supra* note 45, at 311–12 (“[T]he local State can enact and enforce environmental laws and vessel standards where the actions or inactions that breach the local law occur or exist while the vessel is in port.”); McDorman, *Agreements*, *supra* note 44, at 216 (“[The] port state can only enforce laws that relate to activities of a foreign vessel that take place *while the vessel is in port*.”) (emphasis in original).

Particularly difficult questions arise when port States impose CDEM standards which are more demanding than internationally recognized standards, but at least one recognized authority has taken the position that “the better view is that if such CDEM standards are made conditions of port entry, the port or coastal State may take such enforcement action, because then a violation of national CDEM law takes place while the ship is in port.” Bernhardt, *supra* note 60, at 290–91.

91. JOHNSON, *supra* note 73 at 41–42; see also *id.* at 42 n.141 (containing examples and other authorities).

92. *Id.* at 40; *infra* notes 141–144 and authorities cited therein.

93. *Id.* at 42–43. The author puts this slightly differently when she says “the violation is not the use of a piece of equipment when the ship is beyond the territorial waters, but the entry into port after not using the equipment.” *Id.* at 52, 54.

94. Although we have emphasized the traditional customary international law basis for port State control, the comprehensive UNCLOS now includes a conventional international law recognition of such jurisdiction when, through Article 211(3) of the “Constitution of the Oceans,” it provides that “States which 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 ports or internal waters . . . shall give due publicity to such requirements.” UNCLOS, *supra* note 59, art. 211(3).

## 5. Port State Control in the United States

Long established American jurisprudence recognizes the right of a coastal State to assert jurisdiction over foreign flag vessels so long as that control represents a reasonable balance between legitimate sovereign interests and lawful commerce.<sup>95</sup> Recent federal decisions provide an example of the principles discussed above.

### a. *Royal Caribbean Cruises Ltd. v. United States*:<sup>96</sup> *A Federal Case Study of Port State Control*

A United States Coast Guard aircraft observed the cruise ship *Nordic Empress* discharging oil in Bahamian waters, while en route to the United States. Upon the vessel's arrival in Miami, the Coast Guard conducted a document and safety inspection. During its review of the vessel's oil record book, the Coast Guard observed that there was no entry for the discharge observed on February 1, 1993.<sup>97</sup>

On the suspicion that the discharge nevertheless occurred, and following international protocol, the United States "referred this matter to a representative of the government of Liberia [the flag State] via the Department of State."<sup>98</sup> Approximately a year after the event, the Liberian government replied, finding that "it was difficult to respond to the allegations of improperly recorded Oil Record Book entries . . . and recommended expunging the allegation."<sup>99</sup>

However, case preparation continued, an indictment was returned alleging, *inter alia*, that the defendant "failed to record the overboard discharge of oil contaminated bilge waste" in violation of U.S. law, and defendant filed a Motion to Dismiss.<sup>100</sup>

On denial of that Motion, the Court made the following statements:

We agree with [defendant] that the careful international regulatory balance created by MARPOL [the relevant treaty] must be respected. Equally compelling, however, is the right of the United States to enforce its laws within its borders. *See Wilson v. Girard, supra*. If the policy goal of a comprehensive regime of anti-pollution measures is to be achieved, it is necessary that domestic and international law work together to the extent possible to maximize enforcement. The discharge of oil in an improper manner is one crime; the failure to keep an Oil Record Book as required by MARPOL/APPS is another; and the

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95. *Church v. Hubbard*, 6 U.S. 187, 235 (1804).

96. *United States v. Royal Caribbean Cruises Ltd.*, 11 F. Supp. 2d 1358 (S.D. Fla. 1998).

97. *Id.* at 1361.

98. *Id.* at 1361–62.

99. *Id.* at 1362.

100. *Id.*

deliberate presentation of a false material writing to the U.S. Coast Guard is another.<sup>101</sup>

Having already determined that the United States had jurisdiction to bring the case, the District Court found as an alternative, “the extraterritoriality doctrine providing jurisdiction over certain extraterritorial offenses ‘whose extraterritorial acts are intended to have an effect within the sovereign territory.’”<sup>102</sup>

The *Royal Caribbean* decision raises an additional point that could be useful in future port State prosecutions. Defendants argued that ‘conventional international law,’ UNCLOS, has superseded the ‘customary international law’ upon which we primarily rely in support of port State jurisdiction. In pleading the *Royal Caribbean* case, the executive branch of the federal government—the branch primarily responsible for international relations—took the following positions: “UNCLOS does not . . . regulate what a nation can do to enforce its domestic laws in port” and “UNCLOS places no restriction on the enforcement of domestic laws for violations committed while a ship is in port.”<sup>103</sup> In future litigation, whether or not involving the federal government, these interpretations of international law may be helpful to State prosecutors.

*Royal Caribbean* also provides an excellent example of the importance of properly casting both the domestic legislation’s prohibited activity and any allegation of violation.

The key to successful prosecution is making clear that the violation is *entering port* without having complied with identified conditions—not merely failing to meet those conditions. The federal government has imposed port entry conditions to protect a broad range of other public interests. Some examples include:

- A requirement that petroleum tankers entering United States ports have double hulls to reduce the threat of oil spills through collision.<sup>104</sup>

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101. *Id.* at 1368; *see also* *Wilson v. Girard*, 354 U.S. 524, 529 (1957) (“A sovereign nation has exclusive jurisdiction to punish offenses against its laws committed within its borders, unless it expressly or impliedly consents to surrender its jurisdiction.”).

102. *Royal Caribbean Cruises*, 11 F. Supp. 2d at 1364 (citing *United States v. Padilla-Martinez*, 762 F.2d 942, 950 (11th Cir. 1985)).

103. *Id.* at 1370.

104. The condition was prompted by the 1989 *Exxon Valdez* grounding and the 11 million gallons of crude oil spilled in Prince William Sound, Alaska. It has since been adopted worldwide through an IMO regulation. International Convention for the Prevention

- An effort to control aquatic nuisance species from spreading by requiring segregated ballast tanks.<sup>105</sup>
- A requirement that certain vessels employ inert gas systems.<sup>106</sup>
- Finally, for port security reasons, the Coast Guard requirement of advance notice of a merchant vessel's arrival in a port of the United States.<sup>107</sup>

*b. Pacific Merchant Shipping Association: A State Case  
Study of Port State Control*

California has, for many years, grappled with severe air pollution and its health consequences. The federal Clean Air Act of 1970 gives States a leadership role in attacking the nation's air pollution problems. In carrying out that role, California has made substantial gains in reducing air pollution from stationary and mobile sources within its boundaries. Now it is moving aggressively to reduce vessel source pollution, and its adverse health and climate consequences, from operations both within and beyond its waters.

The state proposal has been challenged in the Courts by an organization that speaks for the regulated industry. In its most recent brief before the Ninth Circuit Court of Appeals, California explained the importance of regulating such pollution from merchant vessels. For example, it reports that:

[sulfur oxide] emissions from ocean-going vessels are the single largest source of [sulfur oxide] emissions in the State, responsible for 40% of all [sulfur oxide] emitted. The [particulate matter] emissions from these vessels are also significant, equivalent to about 150,000 California big rig trucks traveling 125 miles per day.<sup>108</sup>

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of Pollution from Ships, Annex I, Reg. 13(F)(3), Nov. 2, 1973, as amended by Protocol, Feb. 17, 1978 [hereinafter MARPOL Annex I]. On its face, the U.S. requirement applies to all vessels operating on "all waters subject to the jurisdiction of the United States, including the Exclusive Economic Zone." 46 U.S.C. § 3703a(c)(2) (2006). However, its legislative history makes clear that "[t]his section is not intended to apply to vessels transiting U.S. waters or transiting the Exclusive Economic Zone in innocent passage." H.R. Rep. No. 101-653, at 141 (1990). Consequently, "this requirement has been understood and applied only as a matter of port entry." Johnson, *supra* note 69, at 54, n.177.

105. 16 U.S.C. §4701 (1996); 33 C.F.R. §157.09 (2009). Such non-native species have been recognized as "an insidious threat to States' resources, property, and even public health." JOHNSON, *supra* note 69, at 57.

106. 46 C.F.R. § 32.53 (2008).

107. 33 C.F.R. § 160.212 (2011). This Coast Guard regulation requires vessels on voyages of less than 24 hours to give 24 hours advance notice of arrival and vessels on voyages of 96 hours or more to give 96 hours advance notice of arrival in a U.S. port.

108. Brief for Appellee-Defendant at 2, *Pac. Merch. Shipping Ass'n*, 639 F. 3d 1154 (9th Cir. 2011) (No. 09-17765).

The state goes on to explain that emission levels from merchant vessels are high, in part, because vessels usually use bunker fuel.<sup>109</sup> Bunker fuel contains mostly residual fuel, the lowest grade and cheapest fuel available.<sup>110</sup> In comparison to the 0.0015% (15 parts per million) sulfur limit for diesel fuel for trucks and other motor vehicles in California, residual fuel contains an average of 2.7% (27,000 parts per million) of sulfur.<sup>111</sup>

In its first effort to combat the adverse pollution effects of these products, the California Air Resources Board imposed “standards” on merchant vessels within twenty-four miles of its coasts to limit emissions of particulate matter, nitrogen oxide, and sulfur oxide.<sup>112</sup> The Pacific Merchant Shipping Association (“PMSA”) challenged the program on numerous grounds, including contentions that Congress had preempted State establishment of such standards through the Clean Air Act and the Submerged Lands Act.<sup>113</sup> The federal district court ruled that the State approach was preempted by the Clean Air Act and enjoined its enforcement.<sup>114</sup> The Ninth Circuit Court of Appeals later affirmed.<sup>115</sup> On the second attempt, California did not impose an “emissions standard” as a means of reducing air pollution from merchant vessels. Instead, it focused on regulations on the fuel producing the undesirable levels of pollution and imposed “in use requirements.” For example, California now dictates the maximum sulfur content of fuels.<sup>116</sup> In practical effect, this means that merchant vessels bound to or from California ports must do three things: burn cleaner fuels when within 24 nautical miles of the State’s coastline, keep records of when and where they switched to the designate fuels, and be prepared to present those records—and other proof of their compliance with California law—to the Executive Officer of the California Air Resources Board.<sup>117</sup>

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109. *Id.*

110. *Id.* at 2 (citing to the district court record).

111. *Id.* at 2–3.

112. CAL. CODE REGS. tit. 13 § 2299.1(a), (b)(1) (2011).

113. *Pac. Merch. Shipping Ass’n v. Cackette*, No. CIV. S-06-2791 WBS KJM, 2007 WL 2914961, at \*1 (E.D. Cal. Oct. 5, 2007).

114. *Id.* at \*2.

115. *Pac. Merch. Shipping Ass’n*, 517 F.3d at 1112 (9th Cir. 2008).

116. CAL. CODE REGS. tit. 13 § 2299.2(a), (e)(1) (2011); *see also* CAL. CODE REGS. tit. 17 § 93118.2(a), (e)(1) (2011).

117. CAL. CODE REGS. tit. 13, § 2299.2(b)(1)(F), (d)(30)(F), (e)(2)(A)–(C) (2011).

PMSA also challenged this new program. It relied, primarily, on two bases. Each basis alleges that the federal government has preempted the field. PMSA first contended that Congress, through the Submerged Lands Act, has preempted assertions of California's police power seaward of the State's 3 nautical mile offshore boundary.<sup>118</sup> Second, PMSA contended that, through the Constitution itself, the federal government has preempted State regulation of all interstate and international commerce.<sup>119</sup>

This time the federal district court found for California.<sup>120</sup> PMSA appealed to the Ninth Circuit Court of Appeals, but the appellate court upheld the lower court decision.<sup>121</sup>

*c. Legal Opinion of the Attorney General of the United States*

By unusual coincidence, the U.S. Attorney General in 1977 published an official opinion that touched upon many of the questions of concern in *Pacific Merchant Shipping*. The relevant facts were indistinguishable. The Acting General Counsel of the Federal Energy Administration sought the Attorney General's opinion regarding whether the State of California would have jurisdiction and authority to regulate emissions from oil tankers bound for a proposed tanker terminal at Long Beach, California while such tankers are operating beyond the 3-mile territorial limit of the State.<sup>122</sup> Addressing preemption, commerce clause, and State power concerns, the Attorney General ultimately concluded that California has authority to regulate operations taking place beyond the 3-mile limit.<sup>123</sup>

The Attorney General addressed statutory preemption concerns by reasoning that "a basic object of the Clean Air Act is to preserve the primary role of the States with respect to control of air pollution."<sup>124</sup> For that reason, California's proposal to regulate emissions from tankers was

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118. Brief for Appellant-Petitioner at 12–13, *Pac. Merch. Shipping Ass'n*, 639 F. 3d 1154 (9th Cir. 2011) (No. 09-17765).

119. However, PMSA at times seemed to acknowledge California's authority to assert full police power within its internal waters (landward of its baseline) and territorial waters (3 nautical miles seaward of its baseline). *Id.* at 21, 25, 31, 35–39.

120. *Pac. Merch. Shipping Ass'n v. Goldstene*, 639 F.3d at 1158 (9th Cir. 2011).

121. *Id.*

122. State Jurisdiction to Regulate Pollutant Emissions, 1 Op. O.L.C. 141 (1977) [hereinafter O.L.C.]. In 1977, the territorial sea of the United States extended 3 nautical miles off the coast, as did the boundary of California. The maritime area between 3 and 12 nautical miles was, at that time, a "contiguous zone" over which the federal government asserted certain internationally recognized jurisdiction short of full sovereignty. U.S. Territorial Sea and Contiguous Zone, 37 Fed. Reg. 11,906 (June 15, 1972).

123. O.L.C., *supra* note 122, at 147.

124. *Id.* at 145 (citing *Huron Portland Cement Co. v. Detroit*, 262 U.S. 440, 445–46 (1960)).

reasonable because the purpose of the requirements was to protect the air over the State's territory.<sup>125</sup> With limited exceptions, the Clean Air Act does not preempt use of the State's authority to impose standards regarding air pollution.<sup>126</sup>

In response to potential interstate commerce concerns, the opinion cites *Huron Portland Cement Co. v. Detroit*,<sup>127</sup> and its progeny that support the view that the proposed California standards would not be invalid. From these cases, the opinion notes:

Congress has indicated its view that, with regard to air pollution, variation from State to State is permissible. Even if the California standards were to impose requirements going beyond Coast Guard regulations and entailing substantial expense (*e.g.*, additional equipment or changes in the vessels), California could assert that the seriousness of its air pollution justifies the measures it has adopted.<sup>128</sup>

Finishing with consideration of the reach of California's police power, the Attorney General's response noted that:

States retain the authority to exercise independent police power to deal with air pollution. If the requisite nexus exists, that authority could be used to reach conduct in the contiguous zone [*i.e.* beyond State boundaries] . . . [T]his is another area where the issue of jurisdiction over foreign ships is raised. In our opinion, California possesses some regulatory authority over such ships.<sup>129</sup>

Based on the foregoing, the Attorney General concluded that assuming there is no conflict with an applicable treaty, Federal statute or regulation, California would have authority to regulate foreign ships, as well as United States ships, using the proposed terminal.<sup>130</sup> Thus, “[f]or purposes of international law, the authority to impose such conditions [on the use of its ports] may be exercised not only by the Federal Government but also by a State government.”<sup>131</sup> This interpretation, which California has

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125. *Id.* at 146.

126. *Id.* at 144 (citing 42 U.S.C. § 1857 (2011) (transferred and now appears as 42 U.S.C. § 7401 (2011) which provides that there is no such preemption so long as the standard based upon state law is not less stringent than standards set forth in the Clean Air Act).

127. 362 U.S. 440 (1960)

128. O.L.C., *supra* note 122, at 145.

129. *Id.* at 146–47.

130. *Id.* at 146.

131. *Id.* at 147.

submitted to the Ninth Circuit as “supplemental authority,” would seem to give additional support to the state’s case.<sup>132</sup>

In summary, port State control of merchant vessel pollution can help overcome the inefficiencies of traditional internationally set standards and flag state enforcement. Port state authority has long been recognized as a logical extension of the port state’s right to set conditions for entry. Port states may not be able to enforce entry conditions beyond their maritime boundaries, but they can condition entry upon compliance upon such conditions.<sup>133</sup> Moreover, those conditions can be enforced in port (clearly within the territorial jurisdiction of the State) even though the undesirable emissions occurred beyond the boundaries of the State.

Although the reasoning and result may appear to be little more than slick lawyering to avoid traditions of flag state control, it is not. Port state control has long been accepted in customary international law. It is efficient to adopt—there being no need to coordinate with, nor get the approval of, international organizations. At first blush, it might appear to leave much room for unreasonable reaching by port states. However, authorities balance that concern with the realization that the economics of operating a port are meaningful to a port State; and before imposing conditions on entry, any State will weigh carefully any potential loss of business to a competing port.

One disadvantage of port state control, as contrasted with coastal state control, is that the former jurisdiction attaches *only* if the vessel in question intends to enter, or is leaving, the port. A port State may not impose its port entry conditions on vessels merely passing through its territorial sea or a more seaward zone of its maritime jurisdiction en route to a third State.

We turn now to our second alternative for controlling pollution from foreign flag merchant vessels—that being “coastal State” control.

### *B. Coastal State Control*

As we use the term here, “coastal state control” refers to the authority of a coastal sovereign to regulate emissions from ocean going vessels in various zones of maritime jurisdiction adjacent to its coasts. This approach differs, at least theoretically, from port State control in that it is accomplished primarily through conventional, rather than customary,

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132. See Letter from Nicholas Stern, Cal. Deputy Attorney Gen., to Molly Dwyer, Clerk of Court, U.S. Court of Appeals for the Ninth Circuit, (Apr. 30, 2010).

133. The few exceptions to this argument do not limit its general applicability. They include port entry pursuant to a treaty right, diplomatic immunity of government vessels, and as required by weather or emergency. We should also note that conditions of entry may not result in discrimination against vessels flying a particular sovereign’s flag.

international law. Nevertheless, its object is much the same—the allocation of jurisdiction over merchant vessels between flag and coastal States.

Two international agreements are especially relevant. They are UNCLOS and The International Convention for the Prevention of Pollution from Ships (“MARPOL”) Annex VI.<sup>134</sup> The two play different roles in allocating coastal State control over maritime pollution and we will discuss them separately.

### 1. *The UNCLOS Approach*<sup>135</sup>

#### a. *Generally Applicable Zones of Maritime Jurisdiction*

Professor Bodansky explains that under UNCLOS, “the balancing of coastal and maritime interests has been undertaken in broad geographic terms by dividing the oceans into different zones and internal waters; the territorial sea, the contiguous zone and . . . the exclusive economic zone. Each zone has its own allocation of jurisdiction between coastal and flag states.”<sup>136</sup> We begin by identifying these zones.

134. UNCLOS, *supra* note 59; International Convention for the Prevention of Pollution from Ships, Nov. 2, 1973, 12 I.L.M. 1319 (entered into force Oct. 16, 1978) [hereinafter MARPOL Annex VI], amended by Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships, Feb. 17, 1978, 17 I.L.M. 546 (entered into force Oct. 16, 1978). MARPOL Annexes I and II were amended and reorganized, effective Jan. 1, 2007. See Int’l Maritime Org. [IMO], *Amendments to the Annex of the Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships*, Marine Env’t Prot. Comm. MEPC. 117 (52) (Oct. 15, 2004); IMO, *Amendments to the Annex of the Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships, 1973*, Marine Env’t Prot. Comm. MEPC. 118 (52) (Oct. 15, 2004).

135. We note here that although the United States was actively involved in the lengthy negotiations that led to UNCLOS, Presidents of both major political parties have endorsed it, and it is pending ratification in the Senate, the United States is not yet party to the Treaty because the Senate’s requisite “advice and consent” has not yet been given. Nevertheless, federal courts have determined that the Treaty provisions are relevant in these circumstances on at least two bases. First, UNCLOS “carries the weight of law . . . from the date of its submission by the President to the Senate.” *Royal Caribbean Cruises*, 11 F. Supp. 2d at 1371 (citing Vienna Convention on the Law of Treaties, art. 19, May 23, 1969, 1155 U.N.T.S. 331 (entered into force Jan. 27, 1980)). And second, the court concludes that “[i]t does appear from all of the testimony produced in this case, as well as the case law in this area, that UNCLOS is properly considered customary international law.” *Id.* at 1372. Interestingly, the court had taken the testimony of renowned experts in the law of the sea in the case before it. See, e.g., SOHN & NOYES, *supra* note 74, at 405; see also *Sarei v. Rio Tinto PLC*, 221 F. Supp. 2d 1116, 1161–62 (C.D. Cal. 2002).

136. Bodansky, *supra* note 27, at 737–38.

Internal Waters: Internal waters lie landward of the baseline from which the more seaward zones of maritime jurisdiction are measured.<sup>137</sup> As has just been discussed at length, internal waters—which include rivers, bays, lakes, and ports—fall under the full sovereignty of the coastal State. As a general proposition, individuals (and vessels) within those waters are subject to the sovereign’s anti-pollution legislation.

Territorial Sea: The territorial sea is a belt of water immediately adjacent to the baseline and extending offshore to a distance of up to 12 nautical miles. The coastal State’s jurisdiction over its territorial sea is also described as “sovereignty” but, in fact, it is limited by the UNCLOS requirement that such sovereignty be “exercised subject to this Convention and to other rules of international law.”<sup>138</sup> The most commonly mentioned example is the long recognized right of foreign vessels to “innocent passage” through this zone.<sup>139</sup>

Contiguous Zone: The next most seaward offshore area of jurisdiction is known as the Contiguous Zone. It lies adjacent to the territorial sea and extends up to 24 miles from the baseline. The coastal State is not described as having “sovereignty” in this zone but “control” necessary to prevent violations, and punish infringements, of specified laws in its territory and territorial sea.<sup>140</sup>

Exclusive Economic Zone (“EEZ”): The EEZ breaks the pattern of ever more seaward adjacent maritime zones. Rather than beginning at the seaward limit of the contiguous zone, it begins at the seaward limit of the territorial sea and extends offshore up to a distance of 200 nautical miles of the coast.<sup>141</sup> Within this zone, the coastal State has rights—and obligations—to preserve and manage natural resources of the sea and seabed.<sup>142</sup> Its rights to these resources are described as “sovereign”<sup>143</sup> and it is given authority to enforce those rights.<sup>144</sup>

These “zones of maritime jurisdiction” produced new opportunities for coastal States to expand their pollution control authority over foreign flag vessels. Article 211 of UNCLOS added authority. First, it requires

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137. That “baseline” is a composite of the mean low-water line along the open coast, closings across the mouths of rivers, bays and ports which open on the sea, and artificial baselines along deeply indented or island-bound mainlands as permitted by Article 7. UNCLOS, *supra* note 59, arts. 7–11.

138. *Id.* art. 2(3).

139. *Id.* arts. 2(1), 17–26.

140. *Id.* art. 33. Those laws and regulations may involve customs, fiscal, immigration or sanitation.

141. *Id.* art. 55. The consequence here being that the contiguous zone is subsumed within the EEZ.

142. *Id.* arts. 55–73.

143. *Id.* art. 73(1).

144. *Id.* art. 73.

States to “establish international rules and standards to prevent, reduce and control pollution of the marine environment from vessels.”<sup>145</sup> In addition, it requires that:

States shall adopt laws and regulations for the prevention, reduction and control of pollution of the marine environment from vessels flying their flag or of their registry. Such laws and regulations shall at least have the same effect as that of generally accepted international rules and standards established through the competent international organization or general diplomatic commerce.<sup>146</sup>

And finally:

States which 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 ports or internal waters or for a call at their off-shore terminals shall give due publicity to such requirements and shall communicate them to the competent international organization.<sup>147</sup>

Nevertheless, writing nine years after the negotiation of UNCLOS, Bodansky expressed concern that although Article 211 envisioned re-examination of international standards to better balance coastal and maritime interests, little progress has yet been made, and “the question is whether the balance set forth in UNCLOS III will be revised by unilateral assertions of jurisdiction by coastal states, maximizing instability and conflict, or through multilateral negotiations.”<sup>148</sup> He concluded “[w]hat needs to be done now is to balance . . . the competing interests of coastal and maritime States, so that expansions of coastal state authority are undertaken in an orderly manner with the least burden on navigation.”<sup>149</sup>

*b. Special Areas of Maritime Jurisdiction—Article 234  
Ice-Covered Areas*

For some time, arctic States have expressed concern that areas of their maritime jurisdiction, which are ice-covered for most of the year, may be particularly vulnerable to vessel source pollution. Ice shelves have

145. *Id.* art. 211(1). As noted *supra*, many thought that international standards had not kept up with pollution control technology.

146. *Id.* art. 211(2).

147. *Id.* art. 211(3).

148. Bodansky, *supra* note 27, at 777

149. *Id.* For example, as Bodansky points out, “Article 21 [of UNCLOS] permits coastal states to adopt laws and regulations for the prevention, reduction, and control of pollution of their territorial sea. [21(1)(f)]. But under Article 211(4), these coastal state prescriptions may not ‘hamper’ innocent passage. The problem, of course, is to determine which coastal state laws and regulations would have that effect.” *Id.* at 764–65.

kept the Arctic Ocean from serving as a reliable transit route around the continents. However, with anticipation of global warming has come the expectation that ice shelves may recede, making the arctic navigable for portions of each year. Plans are underway to construct merchant vessels capable of transiting a more hospitable arctic. The possibility of the route's commercial viability has prompted Canadian legal authorities to renew their relatively 'dormant' claims that the 'passage' is composed of Canadian 'internal' water. This prompted the government to authorize the construction of six patrol vessels to monitor its entrances year-round and allocate \$720 million for a new polar class icebreaker.<sup>150</sup>

Great circle routes would greatly reduce the distance, and thereby the cost, of transporting goods between Asia and Europe.<sup>151</sup> The most likely route is expected to be through the vast archipelago of Canadian islands, which extend as much as 700 nautical miles north from the continental mainland.

Canada began to consider means of asserting jurisdiction over such vessel traffic as much as fifty years ago, when the United States tested the route with the ice-breaking tanker "Manhattan".<sup>152</sup> Since that time, Canada has put forward claims of "historic internal waters" and has drawn baselines around the circumference of the archipelago. These lines were originally described as the limits of historic internal waters—not UNCLOS Article 7 "straight baselines."<sup>153</sup> The United States does not recognize the waters of the archipelago as internal under either theory.<sup>154</sup>

However, UNCLOS Article 234 provides a third avenue by which Canada may be able to protect its environmental interests in the arctic without being accused of stretching Article 7's treaty law of straight baselines or the customary international requirements for historic internal waters. Article 234 permits a coastal State to adopt marine pollution control measures in portions of its EEZ that are ice-covered for most of the year,<sup>155</sup> creating exceptional hazards to navigation in an area in which major harm to the environment could result.

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150. TED L. MCDORMAN, *SALT WATER NEIGHBORS: INTERNATIONAL OCEAN LAW RELATIONS BETWEEN THE UNITED STATES AND CANADA* 230–32 (2009).

151. It has been estimated that the Northwest Passage will shorten the existing Panama Canal route by more than 5,000 statute miles. *Id.* at 231.

152. At the time, ice-breaking tankers were being considered as a means of transporting petroleum from the North Slope out of Alaska. The Alaska pipeline was built instead.

153. MCDORMAN, *SALT WATER NEIGHBORS*, *supra* note 150, at 233–40.

154. American Embassy Ottawa Note No. 222 of June 24, 1985, State Department File No. P85 0118 0711/0714, *quoted in* J. ASHLEY ROACH & ROBERT W. SMITH, *UNITED STATES RESPONSES TO EXCESSIVE MARITIME CLAIMS* 345–46 (Shigeru Oda ed., 2d ed. 1996). For a thorough history and discussion of law of the sea relations between Canada and the United States, see MCDORMAN, *SALT WATER NEIGHBORS*, *supra* note 150.

155. UNCLOS, *supra* note 59, art. 234.

Article 234 brings a new protective device to international law, which was negotiated specifically in anticipation of future transit through the Northwest Passage, and will likely be employed by Canada to protect the waters of its arctic archipelago if and when that area becomes navigable to commercial vessels.

As Professor Bodansky notes, “The [Canadian] conflict has now been resolved by Article 234 . . . which specifically allows coastal states to prescribe and enforce laws for the prevention, reduction, and control of marine pollution from vessels in ice covered areas in their EEZ.”<sup>156</sup>

## 2. *The International Convention for the Prevention of Pollution from Ships—MARPOL*

The IMO has recently taken significant steps toward controlling atmospheric pollution from the world merchant fleet.

First, Annex VI of MARPOL has been amended to substantially reduce nitrogen dioxide emissions worldwide. The requirements will be introduced in two stages, applying to newly built engines in 2011 and generally beginning in 2016. Long-term standards are expected to result in an eighty percent reduction in nitrogen dioxides.<sup>157</sup>

Second, the IMO is processing coastal State requests that special Emission Control Areas (“ECAs”) be authorized adjacent to designated coastlines within which even more stringent nitrogen dioxide restrictions may be imposed. One such ECA has been approved for much of the coasts of Canada and the United States.

### a. *The United States/Canadian Emissions Control Area*

A recent example may be evidence that Professor Bodansky’s preferred “multilateral” approach to balancing environmental and maritime interests is merely late in coming rather than being replaced by “unilateral” assertions of jurisdiction. Our example is the designation of an ECA off the coasts of the United States and Canada.

The IMO is a specialized agency of the United Nations responsible for, among other things, facilitating the development of standards to

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156. Bodansky, *supra* note 27, at 772 n.274.

157. EPA Regulations implementing programs can be found at the electronic Code of Federal Regulations at Protection of Environment, 40 C.F.R. §§ 94, 1042, 1043 (2008).

control air emissions from ships. The International Convention for the Prevention of Pollution from Ships (“MARPOL”) Annex VI is a United Nations treaty administered by the IMO and pursuant to which the IMO accomplishes its goals—including the establishment of global vessel emission standards and even more restrictive standards where adjacent coastal areas are suffering from acute environmental effects of vessel emissions.

In 2004, the United States Commission on Ocean Policy recommended that “[t]he United States should ratify MARPOL Annex VI and work for International Maritime Organization (IMO) adoption of even stricter air emission standards that reflect advances in marine engine technology, availability of cleaner fuels, and improved operational practices.”<sup>158</sup> Moreover, “[t]he U.S. Environmental Protection Agency . . . should use Annex VI criteria and guidelines to evaluate U.S. ocean and coastal areas with impaired air quality, and seek IMO designation of appropriate areas as Sulfur Oxide Emission Control Areas.”<sup>159</sup>

Both of these recommendations are now in effect. New global standards for marine diesel engines and fuels were adopted by IMO member States in 2008 and went into effect in 2010. Even more stringent emission standards were set out for specific coastal areas. Thereafter, the United States and Canada sought, and received, authority to designate sulfur oxide ECAs within which the more stringent standards would apply along specified stretches of their coasts.<sup>160</sup>

The ECA extends 200 nautical miles seaward off the coasts of the United States and Canada south of 60 degrees north latitude, including the eight largest of the Hawaiian Islands.<sup>161</sup>

The U.S. Environmental Protection Agency (“EPA”) explains that to comply with ECA restrictions, “ships operating in designated areas will be required to use engines that meet the most advanced technology-forcing standards for NO<sub>x</sub> emissions, and to use fuel with sulfur content at or below” the prescribed standards.<sup>162</sup> Those standards are: 15,000 ppm

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158. U.S. COMM’N ON OCEAN POLICY, *supra* note 3, at 244.

159. *Id.*

160. For a more complete history of the U.S. efforts to establish the ECA, see Hildreth & Torbitt, *supra* note 2, at 364–65.

161. A separate ECA has been designated within 200 nautical miles of the French islands of Miquelon and St. Pierre, off the coast of Newfoundland, extending the environmental protection in both the Atlantic and Pacific Oceans from the U.S./Mexican border to 60 degrees north, approximately the latitude of Anchorage, Alaska.

162. *New Emission Control and Fuel Standards for Large Marine Engines*, THE MARITIME EXEC. (Jan. 20, 2011), <http://www.maritime-executive.com/article/new-emission-control-and-fuel-standards-large-marine-engines>.

prior to July 2010, 10,000 ppm from 2010 to 2015, and 1,000 ppm for 2015 forward.<sup>163</sup>

The EPA also reports that “[t]his most stringent ECA fuel standard is expected to be met through fuel switching.”<sup>164</sup> “In most cases, ships already have the capability to store two or more fuels.”<sup>165</sup> And “[a]s an alternative to using low sulfur fuel, ship operators may choose to equip their vessels with exhaust gas cleaning devices (“scrubbers”). In this case, the scrubber extracts sulfur from the exhaust.”<sup>166</sup>

*b. Coastal State Enforcement 200 Nautical Miles Offshore*

The standards just described will become enforceable in August 2012.<sup>167</sup> In contrast with the previously discussed “port control” authority, conventional international law recognizes the right of coastal States to enforce the internationally adopted standards of the IMO well seaward of their national territories.

Article 220 of the United Nations Convention on the Law of the Sea, entitled “Enforcement by coastal States,” paragraph 3, provides that:

Where there are clear grounds for believing that a vessel navigating in the exclusive economic zone or the territorial sea of a State has, in the exclusive economic zone, committed a violation of applicable international rules and standards for the prevention, reduction and control of pollution from vessels or laws and regulations of that State conforming and giving effect to such rules and standards, that State may require the vessel to give information regarding its identity and port of registry, its last and its next port of call and other relevant information required to establish whether a violation has occurred.<sup>168</sup>

Paragraph 5 of that Article further provides:

Where there are clear grounds for believing that a vessel . . . has . . . committed . . . [such] a violation . . . resulting in a substantial discharge causing or threatening significant pollution of the marine environment, that State may undertake physical inspection of the vessel . . . if the vessel has refused to give information or if the information supplied . . . is manifestly at variance with the evident factual situation . . .<sup>169</sup>

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163. *EPA Designation 2010*, *supra* note 25, at 4. The final standard is that required by the European Union since 2010. Hildreth & Torbitt, *supra* note 2, at 365.

164. *EPA Designation 2010*, *supra* note 25, at 4

165. *Id.*

166. *Id.*

167. Hildreth & Torbitt, *supra* note 2, at 365.

168. UNCLOS, *supra* note 59, art. 220(3).

169. UNCLOS, *supra* note 59, art. 220(5).

And Paragraph 6 concludes that where such violation resulted “in a discharge causing major damage or threat of major damage to the coastline or related interests of the coastal State . . . that State may . . . institute proceedings, including detention of the vessel, in accordance with its laws.”<sup>170</sup>

Article 220 represents a major development in the international law of the sea and the continuing effort to balance the protection of coastal States’ environmental interests and the merchant mariners’ traditional right to freedom of navigation.<sup>171</sup>

It has now been 20 years since Professor Bodansky, and others, expressed concern that maritime States might not have been acting in good faith in the IMO process of setting international pollution standards; suggesting that their motivation may have been “a desire . . . to forestall unilateral coastal state regulation.”<sup>172</sup> In the meantime, coastal States and environmental interests have played a larger part in IMO determinations, and it would now appear that international practice is following the approach set out in conventional international law.

#### IV. COSTS AND BENEFITS OF THESE REDUCTIONS IN VESSEL SOURCE POLLUTION

Costs and benefits of the foregoing anti-pollution programs have been estimated by a number of measures. In the most general terms, the EPA predicts that:

The U.S. coastline and much of the interior of the country will experience significant improvements in air quality due to reduced PM [particulate matter] and ozone from ships complying with ECA standards. Coastal areas will experience the largest improvements; however, significant improvements will extend hundreds of miles inland to reach nonattainment areas in states such as Nevada, Tennessee and Pennsylvania. National treasures such as the Grand Canyon National Park and the Great Smoky Mountains will also see air quality improvements.<sup>173</sup>

Although expensive, the EPA believes that “[t]he costs of implementing and complying with the ECA are expected to be small in comparison to the health and welfare benefits and on par with the costs of achieving similar emissions reductions through additional controls on land-based

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170. UNCLOS, *supra* note 59, art. 220(6) (permitting interference with freedom of passage only in the most extreme circumstances).

171. UNCLOS, *supra* note 59, art. 57 (“The exclusive economic zone shall not extend beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured.”). The United States asserted its claim to such a zone by Presidential Proclamation. Proclamation No. 5030, 48 Fed. Reg. 10,605 (Mar. 10, 1983).

172. Bodansky, *supra* note 27, at 726.

173. EPA *Designation 2010*, *supra* note 25, at 5.

sources.”<sup>174</sup> Those costs to the merchant vessel industry, between 2010 and 2020, have been estimated at \$3.2 billion—increasing the costs on a route that includes 1,700 nautical miles in the ECA by about 3%, or \$18 per 20 foot container.<sup>175</sup>

On the other hand, the EPA estimates that these programs will bring substantial benefits in public health, with significant monetized savings. Annual benefits in 2020 are predicted to include the prevention of between 5,500 to 14,000 premature deaths, 3,800 fewer emergency room visits, and 4,900,000 fewer cases of acute respiratory symptoms.<sup>176</sup> Combined, these would result in “monetized health benefits in 2020 in the U.S.” of \$47–\$110 billion.<sup>177</sup>

The Ninth Circuit Court of Appeals also considered costs and benefits in its review of the State of California’s program to condition port entry on compliance with vessel fuel standards.<sup>178</sup> It is fair to conclude, as the EPA and Court of Appeals seem to have suggested, that health and global warming benefits to be gained from these State and federal programs significantly outweigh the additional monetary costs to shippers and eventual consumers.

#### V. COMPATIBILITY OF PORT AND COASTAL STATE PROGRAMS

It might appear from the distinct differences between these State and federal environmental programs that compliance with *both* could impose substantial burdens, and costs, on merchant vessels bound for California ports. In upholding the State regulations, the Ninth Circuit Court of Appeals looked carefully at that question and concluded that such consequences were unlikely.

First, the Court noted that the only substantive difference between the two programs is that the ultimate State standards would become effective in 2012, three years prior to the final federal standards.<sup>179</sup> Congress had acknowledged this difference in enacting legislation for the federal program,

174. *Id.* at 4.

175. *Id.* at 4–5; *see also Pac. Merch. Shipping Ass’n*, 659 F. 3d at 1159 (9th Cir. 2011) (showing that others have projected that this additional cost is equivalent to a 12.5 cent increase in the price of an Asian television set sold in the United States.); Hildreth & Torbitt, *supra* note 2, at 366.

176. *EPA Designation 2010*, *supra* note 25, at 5

177. *Id.*

178. *See Pac. Merch. Shipping Ass’n*, 639 F. 3d at 1154, 1159–60, 1175–76 (9th Cir. 2011).

179. *See id.* at 1158–59, 1161.

and specifically provided that the more stringent State provisions would not be superseded.<sup>180</sup>

The California rules are similarly accommodating. They include a specific “sunset” clause, which provides for “their termination when CARB’s Executive Officer makes a finding that the federal government has adopted and is enforcing requirements that will achieve equivalent emission reductions.”<sup>181</sup>

Clearly, both sovereigns intended the outcome reached by the Ninth Circuit. More stringent state standards will remain until the equivalent federal standards come into effect.

Second, it might have been argued that, although California and the federal government had assured that their programs would not present merchant seamen with inconsistent requirements, sister states might adopt such legislation. The appellate court short-circuited such a contention by pointing out that “it appears that no other state in the Union has adopted, or is likely to adopt before the full implementation of the ECA [federal program], any ‘competing or conflicting’ fuel use requirements.”<sup>182</sup>

Third, the standard international concern is that port State control will interfere with traditional freedoms of navigation. Yet the trial court emphasized, and the Court of Appeals noted, that:

PMSA [plaintiff/appellant] presented no evidence indicating that the Vessel Fuel Rules impeded commerce or navigation, observing in particular that: (1) PMSA admitted that compliance is not technically impossible or even especially difficult; [and] (2) PMSA failed to show that the required fuel is unavailable or otherwise would adversely affect ship operations.<sup>183</sup>

Fourth, there is no doubt that the cost of complying with the proposed rules is substantial, estimated to be \$30,000 per vessel call at a California port.<sup>184</sup> Put in perspective, however, as the court did:

[A]ny increased cost . . . would appear to be relatively small in comparison with the overall cost of a trans-Pacific voyage (representing less than 1% of the cost of a typical trans-Pacific voyage and approximately a \$6.00 increase per 20-foot shipping container) as well as the increased costs eventually passed on to the

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180. “Authorities, requirements, and remedies of this chapter supplement and neither amend nor repeal any other authorities, requirements, or remedies conferred by any other provision of law. Nothing in this chapter shall limit, deny, amend, modify, or repeal any other authority, requirement, or remedy available to the United States, or any person, except as expressly provided in this chapter.” 33 U.S.C. § 1911 (2008); *see also Pac. Merch. Shipping Ass’n*, 659 F.3d at 1180 (9th Cir. 2011).

181. *Pac. Merch. Shipping Ass’n*, 659 F.3d at 1159 (9th Cir. 2011).

182. *Id.* at 1181.

183. *Id.* at 1176.

184. *Id.*

ultimate consumer (amounting, for instance, to an extra *12.5 cents* in the cost of a plasma TV).<sup>185</sup>

Finally, the Court of Appeals contrasted these “costs” of the California program to the State’s “especially powerful interest in controlling the harmful effects of air pollution resulting from the fuel used by ocean-going vessels while they are within 24 miles of the state’s coast.”<sup>186</sup> As mentioned at the outset, California has made great strides in reducing atmospheric pollution from onshore sources—both stationary and mobile. Despite those efforts, the State will apparently be unable to comply with national air quality standards by the 2014 deadline without this control of merchant vessel emissions.<sup>187</sup>

The federal and State programs are compatible.<sup>188</sup>

## VI. CONCLUSION

Vessel source atmospheric pollution remains a significant health and climate change problem. Historically, “flags of convenience” have been accused of exacerbating the problem by failing to enforce existing international emission standards and standing in the way of even stricter standards. Some international authorities have expressed concern that States, suffering adverse environmental effects as a result, might turn to unilateral assertions of jurisdiction over vessels sailing under foreign flags—thereby undermining the stable regime of the oceans envisioned by the United Nations Convention on the Law of the Sea.<sup>189</sup>

Our review of two new American programs to reduce such pollution indicates that protection is provided without unreasonably imposing on long-standing freedoms of navigation.

The California program of “Port State” control is grounded on the traditional international right of a port State to condition entry into its internal waters. Prohibited acts occur within the port and enforcement

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185. *Id.*

186. *Id.* at 1180–81.

187. *Id.* at 1181 n.8.

188. In June 2011, appellant Pacific Merchant Shipping Association petitioned the United States Supreme Court for a writ of certiorari—asking that the Court review the judgment of the Ninth Circuit.

189. For example, Professor Bodansky expressed concern that “[u]nless maritime states display greater willingness to agree to international measures that address the concerns of coastal states, the likelihood will grow that coastal states will develop their own standards or assert jurisdiction beyond what is allowed by UNCLOS III.” Bodansky, *supra* note 27, at 771–72.

occurs there. Vessels have no freedom of navigation in foreign ports. If they choose to enter a port, they subject themselves to the port State's jurisdiction.

The federal Emission Control Area is based upon entirely different authority. It regulates emissions within 200 nautical miles of the United States' coast, but not through a unilateral assertion of jurisdiction. Rather, both the jurisdiction and standards to be enforced are established through international treaty. Through that process worldwide, international vessel emission standards have been significantly tightened, and endangered coastal States can petition an international body for authorization to enforce even stricter standards in designated maritime zones adjacent to their coasts. International law still protects navigational rights to innocent passage.

Although long in coming, it would appear that the Law of the Sea has achieved a workable balance between the interests of maritime States (freedom of navigation) and coastal States (environmental protection).