International Law and International Relations

Edited by Beth A. Simmons and Richard H. Steinberg

CAMBRIDGE www.cambridge.org/9780521861861

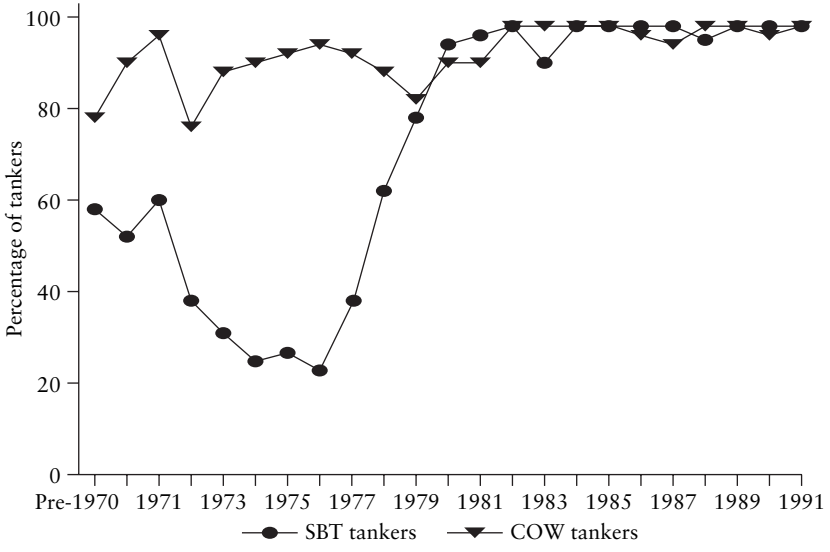

FIGURE 25.2. Percentage of tankers with segregated ballast tanks (SBT) and/or crude oil washing equipment (COW) onboard in 1991, by year of tanker construction.

Source: Electronic version of Clarkson Research Studies, Ltd., *The Tanker Register* (London: Clarkson Research Studies, Ltd., 1991), provided to the author.

from that same pressure.] The relevant question is, "Could the United States, through unilateral measures, have induced so many tanker owners to install SBT?" Available evidence suggests not.

While the United States wields tremendous diplomatic leverage, it wields nothing near hegemonic power in oil transportation markets. Since the United States became concerned about oil pollution in the late 1960s, it has been responsible for less than 5 percent of new tankers built, less than 7 percent of tanker registrations, and less than 20 percent of world oil imports.[45] Given SBT's high costs, oil transportation companies would have been more likely to respond to unilateral U.S. equipment requirements by installing SBT on a sufficient number of tankers to service the U.S. market than by installing it on all tankers. *** Indeed, in terms of power to control oil tankers, Japan – which opposed SBT

[45] See Lloyd's Register of Shipping, *Annual Summary of Merchant Ships Completed* (London: Lloyd's Register of Shipping, various years); Lloyd's Register of Shipping, *Statistical Tables* (London: Lloyd's Register of Shipping, various years); and United Nations, *Statistical Yearbook* (New York: United Nations, various years).

requirements in both 1973 and 1978 – consistently has controlled larger shares of tanker construction, tanker registration, and oil imports than the United States. ***

MECHANISMS OF INFLUENCE

Compliance with discharge standards via the use of LOT was largely an artifact of economic factors. Compliance with requirements for SBT and COW has been both higher and more clearly the result of the treaty. Rival explanations of economic influences and international political hegemony prove incapable of adequately explaining the observed outcomes. The equipment subregime succeeded at inducing reluctant tanker owners to spend considerable money on additional equipment that provided no economic benefit. ***

Which of the many differences between the two subregimes best explain the different levels of observed compliance? [The design of the equipment regime induced compliance by (1) eliciting monitoring and enforcement and (2) reducing opportunities for violation.]

Enhancing Transparency

The equipment subregime had one major advantage over the discharge subregime in its significantly higher transparency level. Violations of the SBT and COW requirements simply [were easier to observe.]

Consider the two compliance information systems. Both OILPOL and MARPOL required tanker captains to note discharges in record books and to make those books available to port authorities for inspection. This obvious reliance on self-incrimination made naval and aerial surveillance programs the more common means of detecting illegal discharges. The total discharge standard of one fifteen-thousandth of cargo capacity improved on this system by providing a criterion that could be monitored by tank inspections in port without relying on information supplied by the tanker captain. Practically speaking, these inspections were restricted to ports in oil-exporting states, since discharges occurred after delivery, on a tanker's return to port to load more cargo.

In contrast, the compliance information system for equipment standards relied on the fact that buying or retrofitting a tanker requires the knowledge and consent of at least three other actors: a builder, a classification society, and an insurance company. Agents in each of

these industries would know of a violation even before it was committed. MARPOL also required flag state governments, or classification societies nominated by them, to survey all tankers to ensure compliance before issuing the required International Oil Pollution Prevention (IOPP) certificate and to conduct periodic inspections thereafter.[46] As part of the process of evaluating tankers to provide insurers with the information needed to set rates, classification societies regularly monitor compliance with international construction requirements ***.[47] Finally, MARPOL gave all port states the legal authority to inspect a tanker's IOPP certificate and its equipment ***.

The equipment standards subregime made violations more transparent than violations in the discharge standards subregime in several ways. To begin with, regulating the tanker builder–tanker buyer transaction yielded a drastically reduced number of events to be monitored. While several thousand tankers ply the world's oceans, they are owned, built, and classified by only a few owners, shipyards, and classification societies. A tanker making ten trips per year could violate the total discharge standard three hundred times in its thirty-year life but could only violate the equipment requirements once.

Equipment standards also required authorities to monitor fewer locations ***. The discharge process standards – 100 ppm, clean ballast, and 60 l/m – required patrols of wide areas of ocean to detect slicks that often could not be linked with the responsible tanker. *** The addition of total discharge limits allowed detection of violations while a tanker was in an oil port, a procedure involving far fewer resources. Unfortunately, most oil-exporting states exhibited little interest in preventing marine pollution ***. Inspections to verify compliance with equipment standards could occur in developed oil-importing states, which had shown far more interest in enforcement. The shift from the 100 ppm and 60 l/m limits to total discharge limits improved dramatically the practical ability to detect violations. The shift from total discharge limits to equipment standards improved the regime further by increasing incentives for monitoring among those who already had the practical ability to monitor.

Equipment standards dramatically eased the problem of obtaining evidence needed to sanction a violator. The standards eliminated any reliance on self-incrimination by the perpetrator of a violation. Detecting

[46] *MARPOL 73/78*, Annex I, Regulations 4 and 5.

[47] Personal interview with John Foxwell, Shell International Marine, London, 27 June 1991.

an equipment violation and identifying its perpetrator also were not time-sensitive. *** Authorities also faced several difficulties in transforming detection of a discharge at sea into a case worthy of prosecution. In what can be called "passive voice" violations, often a tanker could not be identified as responsible for a detected slick: authorities could only say a violation "had been committed." Even if a responsible tanker could be identified, determining whether the 100 ppm or 60 l/m criterion had been exceeded generally was difficult. The total discharge standard could have eliminated this problem, but oil-exporting states never established inspection programs. These flaws in the design of the discharge standards compliance system were not necessarily inherent or insurmountable. For example, some analysts proposed placing observers on all tankers to verify compliance with discharge standards.[48] *** However, such programs would have involved huge expenditures of resources to produce only a low probability of successful deterrence.

* * *

The entry into force of total discharge standards in 1978 allowed inspectors in oil-loading ports to assume that any incoming tanker with all tanks free of slops had violated the very low limit placed on total discharges. However, even those oil-exporting states that were party to MARPOL had strong disincentives to inspect ships in their ports: ports that were conducting inspections were less attractive loading sites than neighboring ports that were not conducting inspections. Not surprisingly, most governments did not alter their enforcement strategies in response to the greater potential for enforcement provided by the promulgation of total discharge standards. In contrast, considerable evidence confirms that the equipment regime significantly changed the ways in which nations and classification societies conducted tanker inspections. Many of the states that originally had opposed the 1973 and 1978 U.S. proposals for equipment regulations subsequently conducted the in-port inspections needed to detect violations. In 1982, the maritime authorities of fourteen European states signed a Memorandum of Understanding on Port State Control, committing themselves annually to inspect 25 percent of ships entering their ports for violations of maritime treaties, including MARPOL.[49] *** Even though several member states had voted against

[48] Cummins et al, "Oil Tanker Pollution Control," p. 171.

[49] "Memorandum of Understanding on Port State Control," reprinted in *ILM*, vol. 21, 1982, p. 1.

SBT, all fourteen have included checks of IOPP certificates in the thousands of inspections they conduct each year. *** While *** countries undoubtedly vary widely in how frequently and carefully they conduct inspections, all have made inspections for MARPOL-required equipment a standard element of their inspection programs.

The effectiveness of these governmental inspections depends at least in part on the initial issue of accurate IOPP certificates by flag states or classification societies designated by them. Reports to IMO for 1984 to 1990 show that missing and inaccurate pollution certificates declined steadily from 9 percent to 1 percent; the memorandum of understanding secretariat reports similar declines – from 11 percent to 3 percent.[50] These trends suggest that after an initial period of learning how to issue and inspect certificates, classification societies and governments both now issue thorough and accurate certifications. Like port state governments, flag states and classification societies appear to have altered their behavior to become active participants in the equipment subregime's compliance information system. ***

The greater transparency of violations of equipment requirements served perhaps most importantly to reassure other tanker owners that their own compliance would not place them at a competitive disadvantage in the marketplace. An environmentally concerned tanker operator inclined to comply with the discharge standards could not escape the knowledge that others probably would not comply. The economic incentives to discharge oil at sea, the absence of transparency about who was and who was not complying, and the attendant inability of enforcement efforts to effectively deter discharges precluded any assumption other than that many competitors would violate the discharge standards to reduce their costs. The greater transparency of equipment requirements assured a tanker owner installing SBT and COW that all other owners also were doing so. ***

The equipment standards provided the foundation for a compliance information system far more transparent than was possible under the discharge subregime. In response, even governments that had opposed the adoption of the requirements conducted inspections for compliance. The subregime's compliance information system channeled the behavior of both governments and classification societies into monitoring activities that supported the regime. It did so by ensuring that those actors

[50] Secretariat of the Memorandum of Understanding on Port State Control, *Annual Report* (The Hague: The Netherlands Government Printing Office, various years).

with incentives to monitor compliance also had the practical ability and legal authority to do so. ***

Facilitating Potent but Low-Cost Sanctions

Greater transparency translated into higher levels of compliance with equipment standards only because the compliance system also induced likely and potent sanctions. The noncompliance response system of the discharge subregime failed to do the same. ***

Detected discharge violations frequently remained unprosecuted because the subregime relied on customary international law with its deference to enforcement by flag states. Both OILPOL and MARPOL required a government that detected a discharge violation at sea to forward all evidence to the flag state for prosecution. *** Flag states often lack the ability to prosecute, since tankers flying their flag may rarely enter their ports. They also have few incentives to prosecute because vigorous enforcement on their part would induce owners to take their registrations, and the large associated fees, to a less scrupulous state.[51] *** In short, the flag states with the authority to prosecute lacked incentives to do so, and the coastal states with the incentives to prosecute lacked the authority to do so.

Under the discharge standards, even states sincerely seeking to prosecute and convict a violator faced major obstacles to success. As already noted, evidence of a violation often failed to produce a violator, and otherwise convincing evidence often failed to meet the legal standards of proof needed for conviction. Evidentiary hurdles should have decreased with the prohibition of discharges that produced visible traces. However, even with aerial photographs of discharges, tankers frequently avoid conviction.[52] Between 1983 and 1990, port and coastal states discarded for lack of evidence an average of 36 percent of cases occurring in territorial seas and successfully convicted and fined less than 33 percent of all detected violators.[53] An additional 20 percent of high-seas cases referred

[51] Paul Stephen Dempsey, "Compliance and Enforcement in International Law – Oil Pollution of the Marine Environment by Ocean Vessels," *Northwestern Journal of International Law and Business* 6 (Summer 1984), pp. 459–561 and p. 576 in particular.

[52] See ibid., p. 526; and personal interview with Ronald Carly, Ministry of Transportation, Brussels, 10 June 1991.

[53] Peet, *Operational Discharges from Ships*, pp. 17–18, Tables 11 and 12; and Marie-Jose Stoop, *Olieverontreiniging door schepen op de noordzee over de periode* 1982–1987: *opsporing en vervolging* (Oil pollution by ships on the North Sea 1982–1987: Investigations and prosecution) (Amsterdam: Werkgroep Noordzee, July 1989).

to flag states were not prosecuted for the same reason, and less than 15 percent of all referrals resulted in fines being imposed.[54] *** Many experts had hoped that the clearer evidence from inspections for total discharge violations would overcome these problems, but *** there is no record "of a single case where the one fifteen-thousandth rule was used for prosecution."[55]

When conviction was successful, governments rarely imposed penalties adequate to deter future discharge violations ***.[56] Most states' courts are reluctant to impose fines disproportionate to the offense to compensate for low detection and conviction rates. The principle that "the punishment should fit the crime" places an upper bound on fines that may be too low to successfully deter violation, if detection and prosecution is difficult. Since 1975, the average fine imposed by states never has exceeded $7,000 and *** has decreased over time.[57] Even when a large penalty is assessed, the delays between initial violation and final sentencing and the reluctance of most states to detain tankers for minor discharge violations often mean that the responsible tanker and crew have long since left the state's jurisdiction, making fine collection difficult. ***

In place of the discharge subregime's legal system of prosecution, conviction, and fines, the equipment subregime relied on quite different responses to noncompliance. The most immediate sanctions involved the ability of classification societies, insurers, and flag state governments to withhold the classification, insurance, and pollution prevention certificates that a tanker needed to conduct international trade. As John Foxwell put it, tankers "cannot get insurance without certification, and can't get certification without compliance."[58] These sanctions amounted to preventing any illegally equipped tanker from doing business. ***

Besides these market-based sanctions, the equipment subregime obligated port states either to detain tankers with false pollution prevention certificates or inadequate equipment or to bar them from port.[59] As administrative sanctions, these responses skirted both flag state and port state legal systems – and the associated sensitivities regarding legal

[54] Ronald Bruce Mitchell, "From Paper to Practice: Improving Environmental Treaty Compliance," Ph.D. diss., Harvard University, Cambridge, Mass., 1992, Table 5–1.
[55] Personal interview with E. J. M. Ball.
[56] *MARPOL* 73/78, Article 4(4).
[57] Mitchell, "From Paper to Practice," Table 4–5.
[58] Personal interview with John Foxwell, Shell International Marine, London, 27 June 1991.
[59] *MARPOL* 73/78, Articles 5(2) and 5(3).

sovereignty. Paradoxically, this strategy made port states more likely to use detention and flag states more willing to accept it. Detention also had the virtue that even low usage by a few major oil-importing states forced tanker owners to choose between risking detention and the more costly option of not trading to those lucrative markets. Authorizing developed states to detain violating tankers effectively moved the right to sanction to countries that had far greater domestic political pressures to use it.

Coupling the equipment requirements themselves with these administrative sanctions completely eliminated the legal and evidentiary problems that make even clear violations of discharge standards difficult to prosecute successfully. Detention imposed opportunity costs on a tanker operator of several thousand dollars per day, and forced retrofitting could cost millions of dollars – far exceeding the fines for discharge violations.[60] Detention had the positive quality that it was not so costly as to be considered a disproportionate response to the crime but was costly enough to deter other violations. In short, detention was simultaneously more likely and more costly.

* * *

Although few states detained ships, available evidence supports the conclusion that the subregime altered enforcement behavior. Not one of the states that detained ships began to do so until after MARPOL took effect in 1983.[61] Even the United States waited until that year – ten years after the detention provision had been accepted. Consider the counterfactual: it is unlikely that the United States would have detained tankers for breaching U.S.-only requirements for SBT, even though it had the practical ability to do so. Without MARPOL, such detentions would have constituted a major infringement of flag state sovereignty. If the use of the more costly detention sanction had reflected an exogenous increase in the interests of states in environmental enforcement, fines for discharge violations should have increased at the same time. Yet, as states began to use detention, fines did not increase dramatically.[62] ***

The equipment subregime operated not by convincing reluctant actors to enforce rules with which they disagreed but by removing the legal

[60] Personal interviews with John Foxwell; and with Richard Schiferli, Memorandum of Understanding Secretariat, Rijswijk, The Netherlands, 17 July 1991.

[61] Personal interview with Daniel Sheehan.

[62] See Peet, *Operational Discharges from Ships,* annex 15; and Dempsey, "Compliance and Enforcement in International Law."

barriers that inhibited effective enforcement by those states and nonstate actors willing to enforce them. Classification societies had interests in ensuring that the tankers they classified were able to trade without fear of detention. The incorporation of equipment requirements into their classification criteria provided the foundation for insurers to penalize noncompliant tankers. The willingness of a few environmentally concerned oil-importing states to inhibit tankers that lacked the required equipment from trading freely posed an extremely potent threat to a tanker owner. However, the ability and willingness of these states to threaten this sanction depended on removing international legal barriers to its use. Once these barriers were removed, imposing sanctions involved few costs to those imposing them, whether classification societies, insurers, or port state authorities. It thereby made detention more likely, even though it created no new incentives for states to impose sanctions. In a case of "nothing succeeds like success," the various threats of the equipment subregime's noncompliance system led to initial compliance by almost all tankers, making it rare that sanctions ever needed to be imposed.

Building on Existing Institutions

The oil pollution control regime induced implementation of those provisions that involved few direct costs to governments. Monitoring and enforcement proved especially likely when their costs were pushed "off-budget" by deputizing private, nonstate actors to issue certificates and conduct inspections. ***

MARPOL's equipment subregime fostered monitoring by allowing governments to delegate responsibility for surveys to classification societies. *** MARPOL allowed [developing] states to fulfill their treaty commitments by assigning classification and inspection responsibilities to actors who often had greater access to and more resources with which to conduct such inspections. Classification societies also had strong incentives to conduct accurate surveys as a means of protecting their business reputations and avoiding problems with insurance companies. The strategy thus simultaneously removed these tasks and the resources they required from the hands of governments and placed them in the hands of actors who could more easily accomplish them. *** Adding pollution control to classification societies' long inspection checklists required only marginal changes to existing procedures.

The many inspection programs operated by developed port states parallel this pattern. [The] maritime authorities of the European memorandum of understanding states, the United States, and other states interested in enforcing the equipment requirements could make simple, low-cost alterations to port state inspections already being conducted for safety, customs, and other purposes. *** In contrast, where states have had to incur significant new costs to implement treaty provisions, they have proved unlikely to do so. *** Most developed states have not established large, ongoing surveillance programs. ***

* * *

Coercing Compliance Rather than Deterring Violation

The compliance systems of the two subregimes differ most strikingly in the fundamental model underlying their regulatory strategies. The equipment standards subregime relied on a "coerced compliance" strategy, which sought to monitor behavior to prevent violations from occurring in the first place. The discharge standards subregime was deterrence-oriented, attempting to detect, prosecute, and sanction violations after they occurred to deter future violations.[63] This basic difference in orientation made the compliance task facing the equipment standards subregime more manageable than that facing the discharge standards subregime. The underlying strategy choice had important consequences for the level of compliance achieved: inhibiting the ability to violate treaty provisions proved far more effective than increasing the disincentives for violating them.

MARPOL's equipment standards created a remarkably effective system for detecting and sanctioning violations. *** However, the equipment subregime's strength really came from the fact that it rarely had to use the more potent sanctions it made possible. *** The subregime relied on surveying behavior and preventing violations rather than detecting and investigating them afterwards.[64] [The] equipment rules allowed identification

[63] Neither strategy was incentive-based, as was the funding of compliance under the Montreal Protocol and Framework Convention on Climate Change. For development of the distinction between these three strategies, see Albert J. Reiss, Jr., "Consequences of Compliance and Deterrence Models of Law Enforcement for the Exercise of Police Discretion," *Law and Contemporary Problems* 47 (Fall 1984), pp. 83–122; and Keith Hawkins, *Environment and Enforcement: Regulation and the Social Definition of Pollution* (Oxford: Clarendon Press, 1984).

[64] Reiss, "Consequences of Compliance and Deterrence Models of Law Enforcement for the Exercise of Police Discretion."

of potential violators and made it harder to actually commit a violation. Tanker captains faced many regular autonomous decisions about whether to violate discharge standards. In contrast, tanker owners only had to decide once between violating or complying with equipment standards, and their decision required cooperation from other actors and involved major economic consequences. *** Classification societies, insurance companies, and flag state inspectors could withhold the papers necessary to conduct business in international oil markets, thereby frustrating any tanker owner's attempt to reap the benefits of sidestepping these standards.

Experience with the discharge standards had shown that many states would not enforce pollution standards ***. Given the costs of SBT, if deterrence had been the major source of compliance, one would expect some tankers initially to have violated the equipment standards in an attempt to identify which and how many states actually would enforce the rules. Yet, compliance levels did not follow a pattern of initial noncompliance followed by stiff sanctions and subsequent compliance. The compliance system of the equipment subregime succeeded by effectively restricting the opportunities to violate it rather than making the choice of violation less attractive. The very low noncompliance levels suggest that in most cases an owner simply decided it would be impossible to convince a tanker builder, a classification society, and an insurer to allow the purchase of a tanker without COW and SBT. *** [Obstacles] to committing a violation played a major role in preventing such violations. New tankers have been built initially to MARPOL standards, not retrofitted later in response to deterrence threats. ***

The equipment subregime may have been as successful as it was precisely because it produced a redundant regulatory system. It established compliance information and noncompliance response systems that prevented most violations but could successfully deter any actors who might otherwise have considered violating it. *** The initial discharge standards subregime faced problems at almost every step of the process: detecting violations, identifying violators, prosecuting violators, and imposing potent sanctions. The shift to total discharge standards eliminated or mitigated some of these problems, but the problems remaining left overall deterrent levels essentially unchanged. A tanker captain evaluating the expected costs of violating OILPOL's or MARPOL's discharge standards could only conclude that the magnitude and likelihood of a penalty were quite small. Successful deterrence strategies must ensure that the whole legal chain operates smoothly, since the breakdown of any link can significantly impair its effectiveness.