Article IV reiterates this commitment, and provides that the specific objectives
to be achieved by the parties are to be set in an Annex to the Convention. The
detailed goals to be realized by the parties are also set in Annexes to the Convention
and relate principally to the reduction of sulphur and nitrogen oxides.

The subsequent Protocols on Sulphur and Nitrogen emissions imposed more
concrete obligations on the parties. The Protocols were an attempt to lay down
concrete emission targets based on sound scientific principles. However, like the
main Framework Convention, the parties are left a wide margin of appreciation in
deciding on the exact methods to be employed in complying with the obligation.
The parties, like in the Framework Convention itself, exchequered any commitment
to a mandatory review process. Again, analogies with the review process prescribed
by the Tribunal in the Trail Smelter arbitration may be somewhat misplaced. To
require a technical committee to review compliance with regulatory regimes,
which relate to the conduct of a wide range of industrial sectors, is financially and logistically unrealistic.

CONCLUSION

On close analysis it appears that much of the negative commentary on the Trail
Smelter arbitration is misplaced. Viewed in its context, in light of both the science
of the day and the declared wishes of the states involved, the decisions were both
innovative and forward-looking. The Tribunal did not, and could not realistically
be expected to, anticipate the radical shift in the science of air pollution and the
dramatic sensitivity to the importance of environmental values that crystallized
in the period after the 1972 Stockholm Conference. That the Tribunal paid scant
attention to invisible environmental damage seems glaringly myopic today, but even
the most forward-looking scientists would not have been unduly disturbed
by this decision at the time. The problems that emerged in the field of aerial
contamination from 1945 onward were so radically different that it is unrealistic to
expect the modest jurisprudence of a localized air pollution problem to provide a
solution. Confined to the narrow range of problems it was designed to address, the
decision remains relevant. With modification, it might even be applied to solve
similar local problems of industrial pollution today.

17 The Impact of the Trail Smelter Arbitration
on the Law of the Sea

Stuart B. Kaye

INTRODUCTION

The 1943 Trail Smelter arbitral decision is often described as a landmark case in
the development of international environmental law. Although not a case
dealing with the marine environment, the same claim has been advanced in
the context of the law of the sea, with the case exerting a significant impact
on aspects of the development of the Law of the Sea Convention, albeit indi-
directly. Trail Smelter certainly informed the deliberations of delegates to the
Third United Nations Conference on the Law of the Sea in the 1970s and
1980s, as well as a number of other diplomatic endeavors aimed at providing
greater protection to the marine environment. Some of the principles underlying
the provisions in the Convention, particularly with respect to marine pollu-
tion, clearly have their antecedents in the 1943 Trail Smelter decision. By con-
trast, there is a dearth of references to Trail Smelter in international cases on
the law of the sea, and the development of marine environmental law seems to
have occurred without direct reliance on the decision. Indeed, an argument
could be made that shipping disasters such as the Torrey Canyon, Amoco Cadiz,

1 Trail Smelter Arbitral Decision, 35 AMERICAN JOURNAL OF INTERNATIONAL LAW 684 (1941) [here-
inafter “Trail Smelter (1941)!”]. See Annex to this volume.

2 Haas described the Trail Smelter arbitration as the “first clash of international legal principles
on transnational pollution.” Ashton Haas, Territorial Sovereignty and the Problem of Transna-
tional Pollution, 69 AMERICAN JOURNAL OF INTERNATIONAL LAW 99, 100 (1975).

after LOSC].

4 The Torrey Canyon struck on Seven Stones Reef near the Selly Isles in March 1967, los-
ing 810,000 barrels of crude oil into the sea. It is regarded by some as the first large oil tanker
environmental disaster. See NOAA: Oil Spill Cases History 1967–1994: Summaries of Significant
noaa.gov/ailas/spills/sh pdf [hereinafter “NOAA REPORT”].

5 The Amoco Cadiz ran aground off the coast of Brittany in March 1978 spilling 1.6 million barrels
of oil. See NOAA Report, supra note 4.
and Exxon Valdez, as well as the emergence of the precautionary principle, have had a greater impact on the development of international marine environmental law than the 1994 Trail Smelter decision. This chapter will explore the relationship between the 1994 Trail Smelter decision and the Law of the Sea Convention and evaluate the influence it has exerted.

DEVELOPMENT OF INTERNATIONAL MARINE ENVIRONMENTAL LAW

After tentative steps before World War II, the first substantial attempt by the international community to address marine pollution was OILPOL 54, which was a limited attempt at preventing discharges of oil from ships in certain circumstances, and other measures to limit oil discharges. Although groundbreaking, OILPOL 54 was criticized as too limited in its effect and practically unenforceable. Further measures followed in the 1950s, culminating in MARPOL 73/78, which established a wide-ranging regime for dealing with pollution of the marine environment from shipping. MARPOL's structure reflected the incremental nature of its approach to marine environmental protection, with many of its substantive provisions contained in a series of annexes. Each annex covered a distinct area of marine pollution from ships, and could be implemented by States parties independently of the other

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6 The Exxon Valdez ran aground on Bligh Reef in King William Sound, Alaska, in March 1989, spilling approximately 420,000 barrels of oil. See NOAA Report, supra note 4.
7 For a discussion of the relationship between Trail Smelter and the precautionary principle, see Brestiss in this volume.
8 International Convention for the Prevention of the Pollution of the Sea by Oil, May 12, 1954, 377 U.N.T.S. 1 (hereinafter "OILPOL 54").
9 See Edgar Codd, Pollution of the Sea in International Law: A Canadian Perspective, 3 JOURNAL OF MARITIME LAW & COMMERCE 15 (1972); Norman A. Wall, Contiguous Zones for Pollution Control, 3 JOURNAL OF MARITIME LAW & COMMERCE 537, 544 (1972); Emeka Dunuogho, Refining the International Law and Policy on Marine Pollution, 31 JOURNAL OF MARITIME LAW & COMMERCE 65, 69 (2000).
10 In addition to amendments to OILPOL 54, two other conventions were concluded in the 1960s: International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, Nov. 29, 1969, 26 U.S.T. 769, 770 U.N.T.S. 41; International Convention on Civil Liability for Oil Pollution Damage, Nov. 29, 1969, 197 U.N.T.S. 3 (hereinafter "Civil Liability Convention").
12 The Torrey Canyon disaster was a significant impetus for the reform of existing international law with respect to pollution from ships at sea. See Alan E. Boyle, Marine Pollution under the Law of the Sea Convention 79 AMERICAN JOURNAL OF INTERNATIONAL LAW 347, 389 (1985).

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13 The MARPOL Annexes are:
   Annex I: Prevention of pollution by oil
   Annex II: Control of pollution by noxious liquid substances
   Annex III: Prevention of pollution by harmful substances in packaged form
   Annex IV: Prevention of pollution by sewage from ships
   Annex V: Prevention of pollution from garbage from ships
   Annex VI: Prevention of air pollution from ships
15 The London Convention was substantially overhauled in 1996. 1995 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter, Nov. 7, 1996, reprinted in 36 INTERNATIONAL LEGAL MATERIALS 600 (1997). One major change was the shift from a black list of materials the dumping of which was prohibited, to a white list of substances approved for ocean dumping. This shift reflects a substantial change in approach, bringing the London Convention more in accord with developments at the United Nations Conference on the Environment and Development in Rio in 1992, and with a precautionary approach, as indicated at Article (1). For a discussion of Trail Smelter and the precautionary principle, see Brestiss in this volume.
international pollution control measures have been negotiated, including agreements dealing with the transboundary movement of hazardous waste,\textsuperscript{19} the use of antifouling paints,\textsuperscript{20} oil spill preparedness,\textsuperscript{21} and most recently ballast water management.\textsuperscript{22}

All these measures exist within the framework of the Law of the Sea Convention. Some, such as MARPOL, existed before the Law of the Sea Convention was concluded. The Convention recognised that substantial progress had already been made in some areas, and it was not the intention of delegates to replace or replace those provisions. Rather, the Law of the Sea Convention was to act as a unifying framework, with a series of more specific agreements dealing with discrete areas.

The Law of the Sea Convention deals with environmental matters principally in Part XII. It imposes a general duty on states to protect and preserve the marine environment,\textsuperscript{23} and then expands on this by indicating some additional measures that are within the competency of a state. These include: the instituting of measures within their capabilities to prevent, reduce, and control marine pollution; a duty not to transfer or transform marine pollution from one area to another; and a duty to cooperate with other states to deal with marine pollution.\textsuperscript{24} Those duties relevant to the 1994 Trail Smelter decision will be considered further later.

The remainder of Part XII links the Law of the Sea Convention to more specialised international regulatory instruments in order to cover all types of pollution that can affect the sea, including land-based sources of marine pollution,\textsuperscript{25} pollution from the seabed subject to national jurisdiction,\textsuperscript{26} pollution from activities in the Area,\textsuperscript{27} pollution by dumping,\textsuperscript{28} pollution from vessels,\textsuperscript{29} and pollution through the atmosphere.\textsuperscript{30} Although pollution from ships and from ocean dumping is the subject of wide-ranging protection regimes under MARPOL and under the London Convention, the other areas lack analogous overarching international agreements. The Law of the Sea measures themselves provide little detail beyond a requirement that states legislate to implement protection of the marine environment, and cooperate with an appropriate international organization\textsuperscript{31} or diplomatic effort.

The Law of the Sea Convention also deals with liability under Part XII. Article 235 provides that States are responsible for fulfilling their obligations to preserve and protect the marine environment, and can be liable in accordance with international law.\textsuperscript{32} Article 235 recognized that further development of this area of state liability was ongoing in 1982,\textsuperscript{33} and the same observation would be as accurate almost twenty-five years later. The fact that after decades of negotiation, the Articles on Responsibility of States for Internationally Wrongful Acts prepared by the International Law Commission are still some way from being incorporated into a binding international instrument indicates that issues surrounding state liability are still contentious.\textsuperscript{34}

In a development parallel to the ongoing discussions about state liability, a number of specific liability conventions for certain types of pollution have been negotiated. These conventions are limited to pollution from ships, particularly, although not exclusively, in the context of oil pollution.\textsuperscript{35} These instruments have dealt with mechanisms to provide for shipowner liability, and the adequacy of insurance coverage to deal with marine pollution from ships.\textsuperscript{36} These mechanisms have been favoured over regimes to determine state liability, and are designed to provide some insurance coverage to deal with the consequences of damage from marine pollution.

\textsuperscript{19} For example, in the context of pollution from ships, the International Maritime Organization would be the appropriate international body, as it administers MARPOL.

\textsuperscript{20} LOSC, supra note 3, art. 235(1).


\textsuperscript{23} For example, see Bunker Convention, supra note 33, art. 2, and HNS Convention, supra note 33, chap. II and Civil Liability Convention, supra note 1, art. 3. See generally, Edgar Gold, Liability and Compensation for Ship Source Marine Pollution: The International System, 2000 YEARBOOK OF INTERNATIONAL COOPERATION ON ENVIRONMENT AND DEVELOPMENT 31, 31-37. See also Duma in this volume.
MARINE ENVIRONMENTAL PROTECTION AND THE TRIAL SMELTER ARBITRATION

The first necessary task in exploring the links between the Trial Smelter arbitration and the Law of the Sea Convention is to identify the key principles arising out of the arbitration. While this has been explored in other chapters in this volume, for the purposes of this analysis, the core principle deriving from the case is neatly summarized in the oft-cited passage from the 1941 judgment:

...under principles of international law, as well as the law of the United States, no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence.36

Essentially, liability flows where one state permits an activity that causes harm that extends beyond its territory into the territory of another state. The principle has been described as lying at the heart of international environmental law, creating what amounts to an international law equivalent of the Latin maxim sic utere tuo utere tuo aut non laeta sit altera's property.37

The first observation that can be made on the Trial Smelter arbitration is that the case had very little to do with marine pollution. Although the smelter itself was located in the valley of the Columbia River, the focus of the case was the atmospheric pollution that it caused, not on degradation of the river itself.38 The physical location of the smelter was well inland, and marine areas were unaffected. Even if contamination of the river had been a significant concern, the Law of the Sea Convention clearly distinguishes rivers from ocean areas, and does not deal with the former.39

As much was acknowledged by the Tribunal in the 1941 Trial Smelter decision itself, which noted:

No case of air pollution dealt with by an international tribunal has been brought to the attention of the Tribunal nor does the Tribunal know of any such case. The nearest analogy is that of water pollution. But here also, no decision of an international tribunal has been cited or been found.40

36 Trial Smelter (1941), supra note 2, at 345.
39 For a discussion of the current water pollution dispute surrounding the Trail smelter, see Clark in this volume.
40 The Law of the Sea Convention only deals with rivers in the context of territorial sea baselines, confirming that rivers are entirely under the sovereignty of the coastal State in the absence of any other arrangement.
41 Trial Smelter (1941), supra note 2, at 374.

The principle that was ultimately used was not, therefore, drawn from a marine context, although that omission should not, of itself, prevent the application of the principle more widely. Nevertheless, it is necessary to consider what issues might arise in removing the arbitration from its wholly terrestrial context.

Because the 1941 Trial Smelter decision was not concerned with the marine environment, the Tribunal did not have to deal with the same range of jurisdictional issues that a case concerning ocean areas would inevitably have raised. The pollution produced at the Trail smelter clearly emanated from a factory located in an area under Canadian sovereignty. Similarly, the pollution that was produced crossed the 49th parallel and adversely affected lands under the sovereignty of the United States.

An equivalent case dealing with damage to ocean areas would have to contend with a lesser degree of clarity on the issue of sovereign responsibility. Only the territorial sea, internal waters, and, if applicable, archipelagic waters, are part of the sovereignty of a coastal state. A coastal state has sovereign rights within its Exclusive Economic Zone (EEZ) only over resources within the EEZ, not full sovereignty over the EEZ itself.42 Whether or not this point of difference is significant enough to justify distinguishing the principles derived from the 1941 Trial Smelter decision alone, it nevertheless remains a point of difference.

More significantly, the jurisdiction possessed by a coastal state over its adjacent waters is different from the control it exercises over land. States must permit the vessels of other states to pass through their territorial sea, archipelagic waters, and EEZ, and cannot generally exclude rights of passage from these areas.43 Canada was responsible for the Trail smelter’s pollution because the smelter was contained in its territory, as domestic law could have been applied to restrict the operation of the smelter. Such an option would not necessarily be available with respect to harm emanating from ocean areas. Although the territorial sea is within the sovereignty of a coastal state, it is not always able to exert direct control over the activities taking place there. For example, a ship polluting the area around it with toxic emissions might cause substantial harm to areas in its vicinity. The ship might be located within the territorial sea of one state and the pollution from it might drift over the territorial sea and land territory of another state. Applying Trail Smelter, there would be liability attaching to the state in whose territorial sea the offending ship was located. Such a result would not be consistent with contemporary international law, where liability for the pollution would attach to the ship, rather than the coastal state.44
have jurisdiction to deal with the pollution, but is not under an obligation to do so.44

As can be seen, there is no positive obligation on a coastal state to exercise its environmental jurisdiction in its adjacent waters, although it possesses the ability to do so. If it chooses to exercise such jurisdiction, it is obliged not to hamper freedom of navigation. It is therefore very clear that the coastal state does not have the same degree of control over its adjacent waters as its land territory, where it clearly could exert unfettered control over activities taking place.

TRAIL SMELTER WITHIN THE LAW OF THE SEA

One key impact on the Law of the Sea Convention possibly attributable to the Trail Smelter arbitration is in the context of the environmental jurisdiction of the coastal state in the exclusive economic zone (EEZ). This is found in Article 56 of the Convention, which deals in part with the marine environment. Article 56(1)(b)(iii) gives the littoral state jurisdiction over marine environmental protection to a distance of at least two hundred nautical miles from the coast, as well as over living and non-living resources and marine scientific research.45

The motivation for this provision has more to do with its other elements than with environmental protection. The utility and value of sovereign rights over marine living resources would be substantially diminished if pollution of the EEZ by other states could take place without restriction. States dumping pollution could damage or destroy fish stocks in parts of the EEZ, rendering jurisdiction over such stocks worthless in the absence of a jurisdiction to prevent such activities.46

The theoretical underpinning of this concept owes something to the Trail Smelter arbitration. There, Canada was liable because it allowed environmental harm to damage property and interests across the border in the United States. States, although not possessing more than sovereign rights in the EEZ, still possess jurisdictional control over the resources of the EEZ. Having an international law right of action for harm caused by another state to such resources is clearly analogous to the circumstances of the Trail Smelter arbitration.

44 LOSC, supra note 3, art. 324(4).


46 As much is evident from the development of Article 56, which in the earlier drafts stressed the importance of State jurisdiction over marine pollution. See a United Nations Convention on the Law of the Sea 1982: A Commentaty 542-544 (Myron H. Nordquist ed., 1993). In addition, the IMO examined the question of the acceptability of State jurisdiction over marine dumping under the then-London Dumping Convention. The United Nations Secretay-General, noting the IMOs work, reported that, for the purposes of dumping, State jurisdiction should be considered equivalent to waters under territorial jurisdiction. See Law of the Sea: Report of the Secretary-General, UN CAOR, 40th Sea. Agenda Item 39, paras. 45, U.N. Doc. No. A/4946 (1979).

47 It is clear that the States obligation extends to pollution from land-based sources, ships, and platforms at sea: LOSC, supra note 3, art. 194(1).


Commission's Working Group on International Liability for Injurious Consequences arising out of Acts not Prohibited by International Law. That report draws heavily on the Trail Smelter arbitration in the context of general principles for liability arising out of transboundary harm, but prefers more recent materials in the context of its discussion of marine pollution.

However, in Part XII of the Law of the Sea Convention, many of the obligations concerning protection of the marine environment would not appear to have their antecedents in the Trail Smelter arbitration alone. The general duty in Article 192 frames a duty to preserve and protect the marine environment in much wider terms than the notion of the escape of harm. Trail Smelter allows the conclusion that a state may do as it pleases with its own environment, so long as the harm it does will not extend its consequences to another state. Article 192 places a stricter obligation on state parties, as their duty is to protect the marine environment, not merely the marine environment beyond the coastal state’s own jurisdiction.

The tenor of other duties in Part XII also go beyond that of the Trail Smelter arbitration. Several articles require that cooperative arrangements be negotiated between states to deal with marine pollution. Exchange of scientific data, the development of contingency plans, and the notification of actual or imminent damage to another’s environment are all required. Trail Smelter provides guidance for liability arising out of an incident, providing a response as to an indication of liability in an adversarial process. The scope of duties under Part XII takes this notion much further, providing for measures to mitigate harm before damage can occur. Although Trail Smelter has provided some foundation to these provisions, subsequent cases and other developments in international environmental law have probably taken a greater role in fleshing out the present provisions. Certainly these provisions are far more sophisticated in their approach to dealing with marine pollution than the application of liability under the Trail Smelter arbitration.

A major point of difference between the Trail Smelter arbitration and contemporary environmental protection is the basic approach to liability.

International environmental marine environmental law has been focused on pollution deriving from ships rather than on pollution originating on land. The emergence of MARPOL and a number of other regimes in the late 1960s and early 1970s were more likely directly a result of the international reaction to the Torrey Canyon disaster in 1967, than the continued development of Trail Smelter. In the years since, the development of MARPOL and other regimes since 1973 has been, in part, hastened on its way as a result of other international shipping disasters.

Furthermore, these developments can be distinguished from the Trail Smelter arbitration in that the focus has been on dealing with pollution from a ship, which generally attracts the liability of the shipowner and the ship’s insurers rather than liability at a state level. State responsibility attaching to a flag state has been seen as undesirable, possibly because so-called flag-of-convenience states would not be in a position to guarantee that payment for damages could be made. For example, it would be fi nancially impossible for Liberia, Vanuatu, or Tuvalu, all flag-of-convenience states, to cover the cost of environmental damage on the scale of the damage possible from a major oil spill, such as the harm to King William Sound in the case of the Exxon Valdez.

The Trail Smelter arbitration was concerned with the liability of Canada for the harm it permitted to escape from its territory. International marine pollution law is directed at prevention of harm, and the creation of insurance and liability schemes that seek to ensure, that in the event of harm, shipowners will be liable. There appears to be little impetus to pursue flag states, and even less to pursue coastal states who have an environmental incident in their EEZ, which is where Trail Smelter’s reasoning might take matters. The connection between the flag and coastal states to the offending ship may be too tenuous to bring about an effective solution to the generated environmental harm.

A more elemental difference also exists between contemporary law and the approach in Trail Smelter. As already noted, much of the development of international law looking at the protection of the marine environment has been directed towards pollution from ships. MARPOL is entirely concerned with pollution from ships, either directly in terms of engine emissions, garbage, sewage, and the like, or pollution from ships carrying cargoes that escape because of misadventure, such as oil spills. Similarly, instruments like the Basel Convention on the Transboundary Movement of Hazardous Waste or the London Convention, address pollution from cargoes or the disposal of pollutants at sea from ships. As a result of shipping accidents like the Torrey Canyon, the international community has

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60 Id. at para. (2) of the General Commentary, and para. (1) of the Commentary to Article 1. See Doremus in this volume.
61 LOSC, supra note 5, art. 192 ("States have the obligation to protect and preserve the marine environment.").
62 Id. art. 192.
63 Id. art. 192.
64 For example, the requirement to notify of actual or imminent damage probably places more to the duty to notify imposed by the International Commission for Justice on Albania in the Corfu Channel Case than it does to the Trail Smelter arbitration. See Corfu Channel (UK v. Albania), 1949 I.C.J. 3 (April 9).
65 Exxon was ultimately fined US$25 million, paid US$100 million in criminal restitution to the Federal and Alaskan governments, and US$1.3 billion in payments as a civil settlement to governments. Exxon has also indicated that it spent US$1.4 billion on the cleanup. See Exxon Valdez Oil Spill Trustee Council, Oil Spill Facts: Settlement, available at http://www.exxonvaldezstateal.us/settlement.html.
moved beyond looking to simply deal with liability for harm. Most measures are
directly designed to minimize the likelihood of harm occurring in the first place.
An example of this can be seen in MARPOL measures to phase out single-hulled
oil tankers, particularly those that are over fifteen years old, as these vessels pose
the greatest risk of substantial harm in the event of a marine accident. Similarly,
Article 211 of the Law of the Sea Convention legitimizes action to minimize harm,
provided there is imminent danger of damage, and the measures are in
response to the magnitude of the threat posed. This is also borne out in the powers available to
port states to limit access to their port facilities. Port states clearly have the power under Article 219 of
the Law of the Sea Convention, to impose requirements that visiting vessels meet
minimum standards of seaworthiness and safety. These extend not merely to
the denial of access, but also to the holding of noncompliant vessels in port until
remedial action is taken. Again, these are measures that go far beyond anything envisaged in the Trail Smelter
arbitration.

Although the Trail Smelter arbitration would seem to have been surpassed in
some areas, it may be of substantial utility in those areas of marine environmental
law where less headway toward regime-building has been made. In one such area,
the issue of land-based sources of marine pollution, very little progress has been
made, in spite of decades of diplomatic effort. This is one area in which the Trail
Smelter arbitration may still exert some influence in the protection of the marine
environment. Where such pollution extends into the EEZ or territorial sea of
another state and causes harm, the Trail Smelter Arbitration would provide clear
authority to the effect that the polluting state was liable for the damage caused.

If land-based sources of marine pollution are not substantially regulated, aside
from the general duties in the Law of the Sea Convention, already largely con-
considered, then there is a substantial lacuna in marine environmental protection.
Although Trail Smelter is not a solution to this lack of progress in creating
a binding instrument, it presents a limited way of dealing with substantial

CONCLUSION

The legacy of the Trail Smelter arbitration in marine environmental law would
appear to be muted. The principle that a state is under a duty not to allow harm to
escape from its jurisdiction owes much to Trail Smelter, and, as has been indicated,
this principle resonates within parts of the Law of the Sea Convention. However,
the issues surrounding protection of the marine environment are more complex
than the factual situation faced in the Trail Smelter arbitration, and the means
available to tackle the problems must equally be more sophisticated.

It is significant that in the one excursion to date into a marine pollution dispute
before the International Tribunal on the Law of the Sea, in the MOX Plant Case,
none of the judges in the case referred to Trail Smelter in their judgments. Whereas the case was dealt with at a preliminary measures stage, and seems
unlikely to be heard to its conclusion by the Tribunal, it would seem strange that
if Trail Smelter occupies an august place in the lexicon of marine environmental
law, none of the Tribunal’s members felt obliged to refer to it.

Ultimately, the Trail Smelter arbitration can be seen as a starting point in the
development of marine environmental protection, but by no means the end of the
story. Much of this area of international law is about prevention of harm before it
ever occurs, rather than attributing liability. Furthermore, the jurisdictional
differences between the marine and terrestrial environments would seem to indicate
a mismatch in the direct transposition of the principles out of the Arbitration.

64 MARPOL is implementing a phase-out of single-hulled oil tankers. See MEPC Resolution 111 (50),
65 See LOSC, supra note 3, art. 219.
66 This would conceivably cover a situation such as the Torrey Canyon disaster, where the Royal Navy
bombed the ship in order to set fire to its oil and minimize the harm it would cause to the Cornish
Coast. See Nordquist (ed.), supra note 46, Vol. 4, 375.
67 LOSC, supra note 3, art. 219.
68 Although the framework of the Law of the Sea Convention could accommodate such an instrument,
the creation of a global regime for dealing with land-based sources of marine pollution has yet to
occur. Diplomatic effort spanning a number of decades has made little progress. See David Huisman,
International Conventions Relating to Land-Based Sources of Marine Pollution Control: Applications and Shortcomings, 46 Georgia Journal of International Environmental Law 587 (2005). The weakness in this area can be seen in the Law of the Sea Convention itself, where
states are obliged to “take into account” international developments rather than meet international
standards. See Boyle, supra note 14, 334.
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