Denver Journal of International Law & Policy

Volume 18
Number 2 *Winter*

Article 3

May 2020

Creating a Nuclear Free Zone Treaty That Is True to Its Name: The Nuclear Free Zone Concept and a Model Treaty

Arthur M. Rieman

Follow this and additional works at: https://digitalcommons.du.edu/djilp

Recommended Citation
Arthur M. Rieman, Creating a Nuclear Free Zone Treaty That Is True to Its Name: The Nuclear Free Zone Concept and a Model Treaty, 18 Denv. J. Int'l L. & Pol'y 209 (1990).

This Article is brought to you for free and open access by Digital Commons @ DU. It has been accepted for inclusion in Denver Journal of International Law & Policy by an authorized editor of Digital Commons @ DU. For more information, please contact jennifer.cox@du.edu,dig-commons@du.edu.

Creating a Nuclear Free Zone Treaty That Is True to Its Name: The Nuclear Free Zone Concept and a Model Treaty*

ARTHUR M. RIEMAN**

August 6, 1985 was the fortieth anniversary of the bombing of Hiroshima. That date also hailed another milestone in nuclear history. It was then that the thirteen states of the South Pacific Forum[1] became the first nation-group to declare their region a "nuclear free zone"[2] as they concluded the South Pacific Nuclear Free Zone Treaty[3] (Treaty of Rarotonga). In so doing, these island states purported to create a "comprehensive prohibition on all nuclear explosive devices" in their region of the world.[4] Eighteen years earlier, the entire block of Latin America nations made history by creating a more limited "nuclear *weapon* free zone" of their continent with the Treaty for the Prohibition of Nuclear Weapons in Latin America[5] (Treaty of Tlatelolco), prohibiting nuclear weapons

---

* (c) Copyright by Arthur M. Reiman, 1989.

** Associate, Christensen, White, Miller, Fink & Jacobs, Los Angeles. B.A., UCLA, 1977; M.B.A., Graduate School of Management, UCLA, 1979; J.D., UCLA School of Law, 1988.

I would like to express my deep gratitude to the dozens of foreign service officers of several nations, as well as the other defense and nuclear affairs experts, who afforded me the opportunity to question them about an ofttimes very sensitive subject. Most of the ambassadors and other officers of embassies and United Nations missions spoke candidly about their countries' interests in return for a promise of confidentiality. Particular thanks must go to Washington attorney Eldon Greenberg and to Dr. Jiri Pulz, formerly of the United Nations Security Council. I would also like to acknowledge Greenpeace U.S.A. and its Pacific Campaign Director, Sebia Hawkins, for their support.

I dedicate this article to my parents, Arnold and Sylvia Rieman, who gave life to five children with the hope that they would live in a world of peace. May their hopes, and those of all parents, be realized.

1. The South Pacific Forum consists of the nations of Australia, Cook Islands, Fiji, Kiribati, Nauru, New Zealand, Niue, Papua New Guinea, Solomon Islands, Tonga, Tuvalu, Vanuatu and Western Samoa.

2. Fyfe & Beeby, *The South Pacific Nuclear Free Zone Treaty*, 17 VICT. U. WELLINGTON L. REV. 33, 40 (1987).

3. South Pacific Nuclear Free Zone Treaty, August 6, 1985, 24 I.L.M. 1440 [hereinafter "Treaty of Rarotonga"]. The treaty is also known by its initials, SPNFZ.

4. Fyfe & Beeby, *supra* note 2, at 40. *See infra* § II.B.

5. Treaty for the Prohibition of Nuclear Weapons in Latin America, Feb. 14, 1967, 634 U.N.T.S. 281 [hereinafter "Treaty of Tlatelolco"].

The treaty contains a provision whereby it comes into force for a signatory upon its ratification if it waives unanimous ratification otherwise called for. Treaty of Tlatelolco, art. 28(2), at 354. All but two ratifiers (Chile and Brazil) have adopted the waiver, *see infra* note 279 and accompanying text. So although Cuba and Guyana have yet to ratify the treaty, *see infra* note 283 and accompanying text, it has entered into force for the remaining countries of Latin America. *See generally infra* notes 279-83 and accompanying text.

though not so-called peaceful nuclear explosions.

I. INTRODUCTION

The intent of this article is to analyze the concept of the nuclear free zone as a vehicle for enhancing the protection from the dangers of nuclear weapons, and radioactive contamination and pollution. Though no part of the world can be totally free from a plague released by a nuclear war, those statesmen who have crafted extant nuclear-free and nuclear-weapon-free zone treaties believe that their efforts provide a bit more distance between the threat and the reality of nuclear war, as well as add a shield for their countries from localized nuclear mishaps. The bench mark for this analysis is the South Pacific Forum's South Pacific Nuclear Free Zone Treaty, or Treaty of Rarotonga, due to its status as the most current example of a nuclear free zone, as well as the new ground it has forged compared to the Treaty of Tlatelolco and other proposed examples. Section II introduces the concept of the nuclear free zone through a brief discussion of the Treaty of Rarotonga as well as a history of the development of nuclear free zones, from the earliest proposals made at the United Nations to the present. The focus in Section III is an examination of the strengths and shortcomings of the Rarotonga model and an exploration of the additional protections future nuclear free zone drafters will have to deal with in order to negotiate a more effective and *truly* nuclear free treaty. Particular attention is given to the Law of the Sea as it may bear on such a regime.

The Appendix consists of this author's Model Nuclear Free Zone Treaty ("Model Treaty"). This document incorporates into a viable framework the issues generated by the shortcomings of extant treaties. The Model Treaty, admittedly, is idealistic. Some may view it as extremist. These views should not detract from the purpose of the Model Treaty: it has been created to contribute to the international dialogue, and possibly serve as a foundation for the negotiators of future nuclear free zone treaties.[6]

Section IV of the article escorts the reader through each article of the Model Treaty, directing attention to its key features and requirements. The article concludes with a comparison of the substantive articles of the Model Treaty with those of the Treaty of Rarotonga and, to a lesser extent, the Treaty of Tlatelolco.

---

6. *See* Fry, *The South Pacific Nuclear-Free Zone*, BULL. OF CONCERNED ASIAN SCHOLARS 61 (Apr.- June 1986).

ASEAN member states (Brunei, Indonesia, Malaysia, the Philippines, Singapore and Thailand) have been among the leaders in the effort to force the large naval powers to accept accommodation of the environmental and sovereign concerns of the smaller coastal states in the negotiations of the Third United Nations Convention on the Law of the Sea. *See infra* notes 20, 156-61, 168, 179, 187, 189 and accompanying text.

II. THE CONCEPT OF THE NUCLEAR FREE ZONE

A. *Early Nuclear Weapon Free Zone Proposals*

The concept of a nuclear free or nuclear weapon free zone has been with us for over thirty years. The first proposal for a nuclear weapon free zone, known as the "Rapacki Plan," came in 1957 in the form of a Polish statement to the United Nations General Assembly calling for the creation of a nuclear weapon free zone in Central Europe.[7] Since then dozens of similar resolutions covering Africa,[8] South Asia,[9] various regions of Europe,[10] the Indian Ocean,[11] the Middle East[12] and Latin America,[13] have been proposed and adopted by the General Assembly.

The primary objectives of the various nuclear weapon free zone proposals, of which the Treaty of Tlatelolco is an example, have been the "desire to secure the complete absence of nuclear weapons from various areas of the globe [and] . . . to spare nations concerned from the threat of nuclear attack or involvement in nuclear war."[14] These objectives theoretically are attainable through several alternative routes. A prohibition on

---

7. *Comprehensive Study of the Question of a Nuclear Weapon Free Zone in All Its Aspects* 19, U.N. Doc. A/10027/Add. 1, U.N. Sales No. E.76.I.7 (1976) [hereinafter "*Comprehensive Study*"]. An even earlier proposal by the Soviet Union (in 1956) called for a ban on "the stationing of atomic military formations and the location of atomic and hydrogen weapons of any kind in" Central Europe. *Official Records of the Disarmament Commission, Supplement for January to December 1956*, U.N. Doc. DC/83 Annex 5 (DC/SC.1/41) (1957). In 1959, Ireland first proposed an area-by-area approach to nuclear non-proliferation. *Comprehensive Study*, at 19.

An attempt at a similar study was abandoned in the early 1980's, reportedly due to the failure of consulting countries to agree on the language of a final report.

8. *Comprehensive Study*, *supra* note 7, at 23-25; *A Synthesis of the Arguments Adduced For and Against Each of the Four Proposals For the Creation of Nuclear-Weapon-Free Zones That Have Been Included in the Agenda of the General Assembly (Africa, South Asia, the Middle East and the South Pacific) and For and Against the Proposal For the Establishment of a Zone of Peace in the Indian Ocean, Including a Subject and Country Index* 3, U.N. Doc. A/AC.206/7 (1981) [hereinafter "*Synthesis*"]. The first proposals for an African nuclear weapon free zone were in response to French nuclear testing in the Sahara in the 1960's. *Id.* at 23.

9. *See Comprehensive Study*, *supra* note 7, at 27-28; *Synthesis*, *supra* note 8, at 11; *A Comprehensive Study of the Origin, Development and Present Status of the Various Alternatives Proposed for the Prohibition of the Use of Nuclear Weapons* 19, U.N. Doc A/AC.2061/5 (1981) [hereinafter "*Comprehensive Study 2*"]; *supra* note 32.

The People's Republic of China, though not a member of the United Nations at the time, made the first calls for nuclear weapon free zones in both Asia and the South Pacific in the late 1950's and early 1960's. Peking Review, Aug. 2, 1963.

10. *See Comprehensive Study*, *supra* note 7, at 20-23; *Comprehensive Study 2*, *supra* note 9, at 17; *infra* note 32, *infra* note 104.

11. *See Comprehensive Study*, *supra* note 7, at 27-28; *Synthesis*, *supra* note 8, at 15; *infra* note 32. The proposals for the Indian Ocean area have often been presented as plans for an Indian Ocean "Zone of Peace." *See, e.g.*, *Synthesis*, *supra* note 8, at 15.

12. *Comprehensive Study*, *supra* note 7, at 26-27; *Synthesis*, *supra* note 8, at 7; *Comprehensive Study 2*, *supra* note 9, at 18; *infra* note 32.

13. *Comprehensive Study 2*, *supra* note 9, at 16; *infra* notes 33-37.

14. *Comprehensive Study*, *supra* note 7, at 29.

the possession or control of nuclear weapons by parties to a nuclear weapon free zone treaty relies on the mutual assurance that no treaty Party could launch a nuclear attack against another.[15] Protocols signed by the nuclear powers[16] located outside of the zone of application[17] of a proposed treaty provide that they will not use nuclear weapons against any party to the treaty, nor deploy nuclear weapons on territory within the zone which may be under their *de jure* or *de facto* jurisdiction.[18] However, each nuclear state has placed conditions on these declarations.[19]

---

15. In banning the possession of nuclear weapons among all their number, the leaders of the various Latin American states, among other reasons, sought to prevent any one Latin American state from using nuclear weapons as a means to enforce their will among the others. Robinson, *The Treaty of Tlatelolco and the United States: A Latin American Nuclear Free Zone*, 64 AM. J. INT'L L. 282, 282-84 (1970).

16. For purposes herein, "nuclear power" means any nation which has nuclear weapons. Generally, this term refers to those states which acknowledge their nuclear capability, i.e., China, France, Great Britain, the Soviet Union and the United States. Other nations, commonly known as near-nuclear states, are believed to have nuclear weapons or the capability to produce them, but will not publicly acknowledge this even though some have exploded such weapons. Their inclusion in the discussion of nuclear powers is little more than academic. The near-nuclear states include Argentina, Brazil, India, Iran, Iraq, Israel, Libya, Pakistan and South Africa. L. SPECTOR, GOING NUCLEAR (1987). Most, if not all, of the near-nuclear states are not parties to the Non-Proliferation Treaty, *infra* note 47. Schwartz, *Controlling Nuclear Proliferation: Legal Strategies of the United States*, 20 LAW & POL'Y IN INT'L BUS. 1, 15 (1988).

The term "nuclear state" used herein should be distinguished from the term "nuclear-weapon state" as used in the Non-Proliferation Treaty, *infra* note 47, where it means those states having tested nuclear explosive devices prior to January 1, 1967. *Id.* art. IX, para. 3.

17. "Zone of application" means the geographic area comprised by the treaty in question.

18. The parties to both the Treaty of Rarotonga and the Treaty of Tlatelolco recognized that their efforts would have limited effect without the cooperation of the nuclear powers. This limitation was solved by the use of protocols to be signed by the nuclear powers whereby they would agree not to violate terms of the treaty (a so-called "negative declaration"), whether by: transporting or stationing (on territories controlled by the nuclear power within the zone of application of the treaty) nuclear weapons in the applicable zone of application, Treaty of Rarotonga, *supra* note 3, protocol 1, at 1459-60, Treaty of Tlatelolco, *supra* note 5, protocols I, II, at 360, 366; threatening use of nuclear weapons against party states, Treaty of Rarotonga, *supra* note 3, protocol 2, at 1461-62, Treaty of Tlatelolco, *supra* note 5, protocol II, art. 3, at 364; contributing to a party state's violation of the treaty, Treaty of Tlatelolco, *supra* note 5, protocol II, art. 2, at 364; or testing nuclear weapons within the zone of application, Treaty of Rarotonga, *supra* note 3, protocol 3, at 1463.

The United Nations General Assembly has also passed a number of resolutions calling for such negative assurances, including a call for an international convention providing such a guarantee. *Disarmament Resolutions Adopted by the General Assembly*, U.N. Doc. A/AC.206⅓, at 41-48. *See also infra* note 19.

19. For example, most nuclear powers acceded to the Tlatelolco protocols on the basis that their obligations would in no way hinder self-defense. *See* J. GOLDBLAT, AGREEMENTS FOR ARMS CONTROL 336-339 (1982). In the Rarotonga context, the U.S. and Soviet Union hold differing views regarding port visitation rights. Whereas the United States has decried New Zealand's ban on port visitations by nuclear warships and aircraft, *see* Glover, *Is a Nuclear-Free ANZUS Possible?*, 2 CANTA. L. REV. 324 (1986), *see also infra* note 99 and accompanying text, the U.S.S.R. has interpreted the Treaty of Rarotonga to hold that:

Assuming that such "negative assurances" are ironclad, non-nuclear states are not fully protected from nuclear attack. A nuclear power's military base on third party soil which either services nuclear capable ships or aircraft, or which stores, stations or deploys nuclear weapons, makes that base vulnerable to nuclear attack should a conflagration arise between another nuclear power and the one which maintains the base. The third party state itself may not be the actual target of the attack but the distinction is moot once a nuclear strike is made against a base located within its territory.[20] This irony lies at the heart of the present nuclear debate in Europe, and is articulated in the anti-nuclear thoughts of people in Australia,[21] New Zealand,[22] Melanesia and Micronesia,[23] the Philippines,[24] Latin America,[25] the Soviet Union[26] and elsewhere in the Pacific.

> [T]he admission of transit of nuclear weapons or other nuclear explosive devices by any means, as well as of visits by foreign military ships and aircraft within the nuclear free zone would . . . contradict the aims of the treaty and be inconsistent with the nuclear free states of the zone.

Statement of the Soviet Government on the occasion of signing Protocols 2 and 3 to the South Pacific Nuclear Free Zone, Dec. 18, 1986.

The official United States position on negative assurances was articulated in 1978 by President Carter:

> The United States will not use nuclear weapons against a non-nuclear weapons state party to the NPT or any comparable internationally binding commitment not to acquire nuclear explosive devices, except in the case of an attack on the United States, its territories or armed forces, or its allies, by such a state allied to a nuclear weapons state, or associated with a nuclear weapons state in carrying out or sustaining the attack.

United States Arms Control and Disarmament Agency, Arms Control and Disarmament Agreements 87 (1982).

20. The specter of such an event has not gone without concern. During the course of negotiations of the Third United Nations Convention on the Law of the Sea, "Indonesia and Malaysia were particularly worried about the risk of U.S. and Soviet submarines clashing in their waters." C. SANGER, ORDERING THE OCEANS: THE MAKING OF THE LAW OF THE SEA 88 (1987).

For a Philippine professor's study detailing the effects of a nuclear attack on the Subic and Clark bases leased to the United States, *see* Talisayon, *Consequences of a Nuclear Attack on the Military Bases*, 1 FOREIGN REL. J. 90, (Manila) (1986).

See infra notes 220-26.

21. *See infra* notes 54-57 and accompanying text.

22. *See infra* notes 54-57, 99 and accompanying text.

23. *See infra* notes 67, 100 and accompanying text.

24. *See infra* notes 94-97 and accompanying text.

25. *See infra* notes 33-41 and accompanying text.

26. Growing concern among Soviet citizens about radiation leakage and other nuclear dangers led to the recent banning of a nuclear-powered container ship from all major Soviet Pacific ports early in 1989. Local mayors refused to grant permission for a ship, the *Sevmorput*, to berth, and dockworkers said they would refuse to unload or handle the ship. The Soviet newspaper *Soviet Russia* reported that "[a] huge wave of public indignation has been set in motion by the lack of information, by [uncertainty about] the safety of the ship itself, by an invisible shadow of the Chernobyl tragedy and by the complex ecological situation in the Soviet Far East." The official press agency, *Novosti*, described the dockworkers' action as the "first ecologically inspired labor protest" in the Soviet Union. Parks, *Four Soviet Ports Bar Ship in Protest Over Nuclear Safety*, L.A. Times, Mar. 7, 1989, § 1, at 1,

With modern technology, ships and aircraft presumed to be carrying nuclear weapons are targets of attack by enemy states wherever they may be located. Thus, if a warship capable of carrying nuclear weapons cruising in the territorial sea of a third party state were attacked, the result would be the virtual equivalent of an attack on that state. This scenario isn't addressed in any of the many nuclear weapon free zone proposals proferred by the General Assembly.

The most likely reason for this omission is that the United Nations Convention on the Law of the Sea[27] (UNCLOS III) and customary international law[28] assure innocent passage through territorial seas. For a state or treaty to prohibit transit of warships with nuclear capability through territorial waters might appear to be in direct conflict with the Law of the Sea which seeks to assure that, among other things, no foreign ship be denied "innocent passage"[29] though a coastal state's territorial sea.[30] Indeed, a United Nations report expressed the view that parties to a nuclear free zone treaty "must respect international law, including those principles relating to the high seas, to straits used for international navigation and . . . the right of innocent passage through the territorial sea."[31]

---

col.1.

27. Third United Nations Convention on the Law of the Sea, Dec. 10, 1982, 21 I.L.M. 1245 [hereinafter "UNCLOS III"].

28. "Customary international law" refers to the regime of international order which finds its source in custom and usage. It is generally considered binding on the entire international community. K. BOOTH, LAW, FORCE AND DIPLOMACY AT SEA (1985) [hereinafter "LAW, FORCE AND DIPLOMACY"]. *See infra* notes 140-44 and accompanying text.

29. The "right of innocent passage," as enunciated in UNCLOS III, is granted to all ships passing through the territorial sea. UNCLOS III, *supra* note 27, art. 17. The relevant articles of UNCLOS III state as follows:

> *Article 18*
> *Meaning of passage*
> 1. Passage means navigation through the territorial sea for the purpose of:
> (a)traversing that sea without entering internal waters or calling at a roadstead or port facility outside internal waters; or
> (b)proceeding to or from internal waters or a call at such roadstead or port facility.
> 2. Passage shall be continuous and expeditious. However, passage includes stopping and anchoring, but only in so far as the same are incidental to ordinary navigation or are rendered necessary by *force majeure* or distress or for the purpose of rendering assistance to persons, ships or aircraft in danger of distress.
> *Article 19*
> *Meaning of innocent passage*
> 1. Passage is innocent so long as it is *not prejudicial to the peace, good order or security of the coastal State*. Such passage shall take place in conformity with this Convention and other rules of international law. . . .

Id. (emphasis added). *See id.* arts. 19(2)-(3).

30. *See infra* § III.A.1.

31. *Comprehensive Study*, *supra* note 7, at 49. Interestingly, the same body of international law also holds that "[p]ollution of the marine environment is contrary to . . . freedom of the seas." N. Rusina, *International Legal Principles of Protection of the Marine Environment Against Pollution*, in THE LAW OF THE SEA AND INTERNATIONAL SHIPPING: ANGLO-

Though there have been several proposals for nuclear weapon free zones debated and approved by the General Assembly,[32] the first and only such proposal to grow out of the United Nations which has seen fruition is the Treaty of Tlatelolco.[33] Since the signing of the Treaty of Tlatelolco, not one of the many U.N. resolutions calling for a nuclear weapon free zone has come to fruition.[34]

The Treaty of Tlatelolco arose out of a 1963 Joint Declaration of five Latin American presidents calling for the denuclearization of Latin America.[35] Denuclearization was seen as a means to keep that region free from the economic and political pressure which would bear if their states became entangled in the cold war or the development of nuclear weapons, including the possibility that such weapons could be used against each other.[36] Mexico initiated a treaty preparatory commission the next year. Three years of discussions culminated in the treaty. It addressed most of the concerns raised in the General Assembly and, until the Treaty of Rarotonga, was considered the prototypical nuclear free zone treaty. It also served as a symbolic statement to the effect that a large region of the world can make a distinguished and valuable contribution to universal nuclear disarmament by declaring itself to be a nuclear weapon free

---

SOVIET POST-UNCLOS PERSPECTIVES 261, 262 (W.E. Butler ed. 1985). Rusina goes on to argue that the anti-pollution regime found in the law of the sea is actually founded on basic human rights. Quoting Professor M. Lazarev, she allows that "the protecting of nature, flora, fauna, and man by international law is nothing other than the realisation [sic] of important human rights to life, health, normal conditions of existence, labor and leisure." *Id.* at 268-269.

32. For example, in 1985 there were votes at the United Nations General Assembly for denuclearization or nuclear weapon free zones in Africa, 40 U.N. GAOR Supp. (No. 53) (A/90/92), the Middle East, 40 U.N. GAOR at 82, South Asia (G.A. Res. 40/83), and a Zone of Peace in the Indian Ocean (G.A. Res. 40/153). In 1986, the General Assembly adopted resolutions calling for nuclear weapon free zones in the Middle East (G.A. Res. 41/48), and South Asia (G.A. Res. 41/49), and Zones of Peace in the Indian Ocean (G.A. Res. 41/87), and the South Atlantic Ocean (G.A. Res. 41/11). Such resolutions are not new, however. Between 1961 and 1981 the General Assembly adopted 17 resolutions on an African nuclear free zone and 14 on South Asia. Repeated proposals have also frequented the General Assembly for the Middle East since 1974 and various parts of Europe (since 1957), including the Nordic countries, the Balkans and Central Europe. *See* Delcoigne, *An Overview of Nuclear-Weapon-Free Zones*, 24 IAEA BULL. 50 (1982); *infra* note 104; *see, e.g.*, NUCLEAR DISENGAGEMENT IN EUROPE (S. Lodegaard & H. Thee eds. 1985); NUCLEAR WEAPONS AND NORTHERN EUROPE (1983) (proposals for a Nordic Nuclear Weapon Free Zone).

33. The earliest call for a nuclear weapon free zone in Latin America came from the United Nations delegate from Brazil shortly before the Cuban missile crisis. 17 U.N. GAOR at 19, para. 25, U.N. Doc. A/PV.1125, (1962). As Robinson points out, "[t]he danger of bringing the nuclear arms race between the super Powers [sic] into Latin America was no longer hypothetical." Robinson, *supra* note 15, at 283.

34. Though there have been U.N. resolutions calling for a South Pacific nuclear free zone, the Treaty of Rarotonga was negotiated by the South Pacific Forum in a mere seven months, completely apart from any United Nations entities.

35. 18 U.N. GAOR Annex (Agenda Item 74) U.N. Doc. A/5415/Rev.1 (1963). The five nations issuing the joint resolution were Bolivia, Brazil, Chile, Ecuador and Mexico.

36. *Joint Declaration of 29 April 1963 on the Denuclearization of Latin America*, G.A. Res. 1911 (xviii), 18 U.N. GAOR Supp. (No. 15) at 14, U.N. Doc. A/5618 (1963).

zone.[37]

That treaty's stated objective is to prohibit "[t]he testing, use, manufacture, production[,] acquisition . . . receipt, storage, installation, deployment and any form of possession of any nuclear weapons" by or on behalf of any party to the treaty.[38] Protocols to the treaty seek the assurances of the nuclear powers that they will comport with the treaty as it relates to their activities in Latin America[39] as well as not assist any contracting party in violating treaty provisions.[40] The Treaty of Tlatelolco does not ban the development, testing or explosion of nuclear devices for "peaceful purposes."[41]

In actuality, the Treaty of Tlatelolco was not the first international agreement to set aside a multinational region as a haven from nuclear weapons. Rather, it was the first such agreement to cover a populated region and the first to be imposed upon the territory of the treaty parties. The first treaty prohibiting nuclear emplacement was the Antarctic Treaty of 1959.[42] Among its provisions, the treaty prohibits the stationing of nuclear weapons, nuclear explosions and radioactive waste dumping south of Latitude 60° South and on the Antarctic continent.[43] The Antarctic Treaty arose out of the 1957/1958 International Geophysical Year, which had as one of its objectives the establishment of international cooperation for the scientific research and preservation of Antarctica.[44]

Two other treaties call for nuclear weapon prohibitions in outer and inner space. Signed in the same year as the Treaty of Tlatelolco, the Outer Space Treaty[45] prohibits the stationing or deployment of nuclear weapons or other weapons of mass destruction in space or on celestial bodies. The 1971 Seabed Treaty bans the emplacement of nuclear weapons on the seabed outside a coastal state's territorial sea.[46] Furthermore,

---

37. Speech by Ambassador Alfonso Garcia Robles Delivered at the 133rd Meeting of the First Committee of the General Assembly of the United Nations (Nov. 11, 1963), *reprinted in* A. GARCIA ROBLES, THE DENUCLEARIZATION OF LATIN AMERICA 3-7 (1967).

38. Treaty of Tlatelolco, *supra* note 5, art. 1(1), at 330. The treaty also "undertake[s] to refrain [any contracting party] from engaging in, encouraging or authorizing . . . [or] participating in the testing, use, manufacture, production, possession or control of any nuclear weapon." *Id.* art. 1(2), at 330.

39. *Id.* protocol I, at 360, 362.

40. *Id.* protocol II, art. 2, at 364. A third provision of the protocols calls on the nuclear powers to agree to not use nuclear weapons against contracting parties to the treaty. *Id.* protocol II, art. 1, at 364.

41. *Id.* arts. 17, 18, at 346, 348.

42. Antarctic Treaty, Dec. 1, 1959, 12 U.S.T. 794, T.I.A.S. No. 4780, 402 U.N.T.S. 71.

43. *Id.* art. IV.

44. J. GOLDBLAT, *supra* note 19, at 60-63.

45. Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, Jan. 27, 1967, 18 U.S.T. 2410, T.I.A.S. No. 6347, 610 U.N.T.S. 205.

46. Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Seabed and Ocean Floor and in the Subsoil Thereof, Feb. 11, 1971, 23 U.S.T. 701, T.I.A.S. No. 7337, 955 U.N.T.S. 115.

the Non-Proliferation Treaty[47] ("NPT") explicitly supports the formation of nuclear free zones: "Nothing in this Treaty affects the right of any group of States to conclude regional treaties in order to assure the total absence of nuclear weapons in their respective territories."[48]

B. *The Treaty of Rarotonga*

Eighteen years after Tlatelolco, the members of the South Pacific Forum surpassed the Treaty of Tlatelolco and extant United Nations proposals by creating the world's first *nuclear free* zone, as opposed to simply a nuclear *weapon* free zone.[49] The Treaty of Rarotonga sets forth a comprehensive ban on the manufacture, acquisition, possession, deployment, stationing, emplacement or testing of nuclear explosive devices.[50] It is also distinguishable in its prohibition on all nuclear explosive devices as well as the dumping of radioactive wastes,[51] and its support for the protection of the environment of the South Pacific.[52]

It is significant that the Rarotonga Treaty was not negotiated inside a United Nations-sponsored forum, nor was its development connected with any U.N. resolution.[53] The initial impetus for the South Pacific

---

47. Treaty on the Non-Proliferation of Nuclear Weapons, July 1, 1968, 21 U.S.T. 483, T.I.A.S. No. 6839, 729 U.N.T.S. 161.

48. *Id.* art. VII.

49. Indeed, because of its broader prohibitions, the states of the South Pacific Forum purposefully describe the region created by the treaty as a *nuclear free* zone as opposed to a nuclear *weapon* free zone. Fyfe & Beeby, *supra* note 2, at 40. From a slightly broadened perspective, New Zealand Deputy Secretary for Foreign Affairs, Christopher Beeby, expressed that:

> [I]f you add the two together, the South Pacific Nuclear Free Zone Treaty which deals principally with nuclear weapons — but makes some reference to dumping — and the Convention for the Protection of the Natural Resources and Environment of the South Pacific Region [*see infra* note 52 and accompanying text], I think you can characterize the package as a nuclear free South Pacific.

Interview with Christopher Beeby in Radio New Zealand "Morning Report" (Nov. 28, 1986).

Some critics have been quick to point out that the Treaty of Rarotonga, despite its official title, does not create either a true nuclear weapon free or nuclear free zone. *See* Fry, *supra* note 6, at 61, 67-68.

It is of interest to note that there is now a call for a "nuclear free" zone in Central America. The proposal, recently announced by the University of Costa Rica, would, among other things, prohibit the transport of nuclear weapons and other weapons of mass destruction within 300 miles of the Central American coast. *Central American Nuclear-Free Zone Proposed*, Xinua General Overseas News Service, Feb. 13, 1990.

50. Treaty of Rarotonga, *supra* note 3, arts. 3-6, at 1444-46.

51. *Id.* art. 7 at 1447.

52. At the time the Treaty of Rarotonga was concluded, the nations of the South Pacific were negotiating the now-concluded Convention for the Protection of the Natural Resources and Environment of the South Pacific Region, [hereinafter SPREP]. The Treaty of Rarotonga calls for "conclusion as soon as possible of the proposed Convention . . . ," *id.* art. 7(1)(d) at 1447, and holds for the supersession of the Convention over subsections of the Treaty dealing with radioactive dumping. *Id.* art. 7(2).

53. However, the United Nations recently adopted a resolution endorsing the Treaty of

treaty is found in the local reactions to American, British and, later, French nuclear weapons testing in the South Pacific.[54] The destruction inflicted upon many of the islands and peoples in that region and the continuing threat of nuclear poisoning due to the on-going French nuclear weapon testing program was part of the motivation to create the Treaty of Rarotonga,[55] and has since become a major rallying cry throughout the region.[56] Indeed, the first indigenous call for a nuclear free zone in the South Pacific sounded shortly after New Zealand and Australia sought condemnation before the International Court of Justice of France's nuclear weapons testing policy.[57]

The South Pacific Nuclear Free Zone Treaty is a major step in the non-nuclear states' struggle against the dangers of nuclear weapons and radioactivity. Of course, it breaks new ground in the arena of multilateral nuclear prohibitions. But, at a most powerful symbolic level, the Treaty of Rarotonga, along with the contiguous Treaty of Tlatelolco and the Antarctic Treaty, carves out a nuclear weapon free zone of more than one-third of the Earth's surface.[58]

Though it stands as a significant advancement over its predecessors, the Treaty of Rarotonga does not absolutely prohibit the presence of nuclear weapons nor radioactive substances other than those used for medical and non-military scientific purposes from within the zone of application of the treaty. Despite its comprehensive array of prohibitions, it does not prohibit the transit of nuclear devices through territorial seas, although it does allow any country to establish its own policy on whether to permit port visits by nuclear powered or nuclear capable warships or aircraft.[59] There are no provisions regarding nuclear transit through international straits,[60] exclusive economic zones[61] or other ocean areas encom-

---

Rarotonga. *Australia Welcomes U.N. Resolution on Rarotonga Treaty*, Xinhua General Overseas News Service, Dec. 19, 1989.

54. *See* Lippman, *The SPNFZ Treaty: Regional Autonomy Versus International Law and Politics*, 10 LOY. L.A. INT'L & COMP. L.J. 110-115 (1987); R. Dalrymple (former Australian Ambassador to the United States), Australia and the South Pacific — The Treaty of Rarotonga, speech to The World Affairs Council (Nov. 12, 1986) [hereinafter "Dalrymple Speech"]; Fry, *supra* note 6; *see also infra* note 57 and accompanying text.

55. *See infra* notes 82-83 and accompanying text.

56. *Id.*

57. Nuclear Test Cases (Austl. v. Fr.; N.Z. v. Fr.), 1973 I.C.J. 99 (Interim Protection Order); 1973 I.C.J. 135 (Interim Protection Order); 1974 I.C.J. Judgement 253; 1974 I.C.J. Judgement 457.

58. The contiguous zone runs from Longitude 115° East to Longitude 20° West, and from the South Pole to the Equator and even as far north as Latitude 35° North in North America.

59. Treaty of Rarotonga, *supra* note 3, art. 5(2), at 1446.

60. "Strait transit" or "transit passage" is the UNCLOS III regime which supplies rules for transit through "straits which are used for international navigation between one part of the high seas or an exclusive economic zone and another part of the high seas or an exclusive economic zone." UNCLOS III, *supra* note 27, art. 37. *See infra* § III.A.1(b). The right of transit passage is enjoyed by every ship or aircraft transitting a strait so long as it shall:

(a)proceed without delay through or over the strait;

passed within the treaty's zone of application. It does not prevent a treaty Party from contributing to a nuclear power's nuclear capability through such indirect means as taking part in nuclear research or participating in the control, operation or management of so-called "C³I"[62] installations which are designed, in part, to assist in the fighting of a nuclear war.[63] Although there is a ban on the dumping of radioactive wastes within the Treaty of Rarotonga,[64] there is no prohibition on nuclear activities which could produce such wastes, or any other non-essential uses of radioactive substances.

Such abolitions may be practically, politically or economically difficult. Indeed, these factors limited the treaty from being a more stridently nuclear-prohibitory document.[65] Still, some champions of an absolute abolition remain vocal.

In the wake of the Treaty of Rarotonga, local groups within (and without) the South Pacific Forum criticized the treaty as being insufficiently restrictive.[66] Though supportive of the concept during the Rarotonga Treaty negotiations, Vanuatu, a South Pacific nation, refused to sign the treaty because it does not ban port visits by nuclear ships.[67] Citing a history of anti-nuclear sentiment in the South Pacific, the Fiji Anti-Nuclear Group ("FANG") proposed a draft Treaty for a Comprehensive Nuclear Free Zone in the South Pacific with an aim toward eliminating the "deficiencies" of the Rarotonga Treaty and creating a complete and comprehensive, as opposed to "partial," nuclear free zone.[68]

(b)refrain from any threat or use of force against the sovereignty, territorial integrity or political independence of States bordering the strait, or in any other manner in violation of the principles of international law embodied in the Charter of the United Nations;

(c)refrain from any activities other than those incident to their normal modes of continuous and expeditious transit unless rendered necessary by *force majeure* or by distress. . . .

Id. art. 39(1).

61. *See infra* § III.A.1.(c).

62. *I.e.*, "Command, Control, Communication and Intelligence." *See generally infra* § III.B.

63. *See infra* § III.B.

64. Treaty of Rarotonga, *supra* note 3, art. 7, at 1447.

65. *See Report by the Chair of the Working Group on a South Pacific Nuclear Free Zone (SPNFZ)* 7-8 (1985) [hereinafter "*Working Group Report*"]; *see supra* note 9 and accompanying text. Despite its decision not to sign the protocols to the Treaty of Rarotonga, U.S. State Department spokesperson Charles Redman did acknowledge that "[t]he United States is appreciative of the role of the Government of Australia and other parties to the treaty in this matter, including their efforts to keep our and allied interests in mind as they managed the composition of the treaty and protocols." St. Dep't Statement, Feb. 5, 1987.

66. *See* M. Hamel-Green, Draft Treaty for a Comprehensive Nuclear Free Zone in the South Pacific (1986) (unpublished manuscript).

67. P. Powers, *Nuclear Free Zones: The South Pacific Case*, at 4, paper prepared for the Round Table on the South Pacific Nuclear-Weapon-Free Zone, Apr. 15-18, 1987.

68. M. Hamel-Green, *supra* note 66, at 1-2. The draft treaty proposed therein is hereinafter cited as "FANG Treaty."

Criticism of the Treaty of Rarotonga has not only come from those calling for stronger nuclear prohibitions. The United States, the United Kingdom and France have refused to sign protocols to the treaty[69] which would guarantee their acknowledgement of and respect for the zone. Despite an official U.S. policy supporting nuclear free zones which satisfy specific criteria[70] — criteria which the Rarotonga Treaty satisfies according to State Department officials[71] — the United States refuses to ratify the protocols.[72] The reason given by U.S. officials for this refusal is that

---

69. Both the Treaties of Rarotonga and Tlatelolco contain protocols whereby the nuclear powers and states having international responsibility for territories within the zone would comply with the restrictions imposed by the respective treaty. All the nuclear powers have signed the latter protocol to the Tlatelolco Treaty (Protocol II), though France has refused to sign the protocol which would require it to apply the nuclear weapon restrictions of the treaty for which France is "*de jure* or *de facto* . . . internationally responsible." (Protocol I). Fyfe & Beeby, *supra* note 2, at 38.

France, the United Kingdom and the United States have refused to sign any of the two similar protocols of the Rarotonga Treaty, as well as a third protocol calling for the prohibition of the testing of nuclear explosive devices within the region. *See infra* notes 9-11 and accompanying text. These refusals came despite consultation with, and an attempt to reflect the concerns of these nuclear powers, in the negotiation of the protocols. *See infra* note 9. Nonetheless, Great Britain and the United States "have given assurances that they are not currently acting in a manner inconsistent with the protocols," according to New Zealand Disarmament and Arms Control Minister Fran Wilde. *Solomon Islands Ratifies Nuclear Free Zone Treaty*, Xinhua General Overseas News Service, Feb. 28, 1989. *See also, Australia Welcomes Solomons' Ratification of a Nuclear Free Zone Treaty*, Xinhua General Overseas News Service, Mar. 6, 1989; *House Urges Bush to Sign Pacific Nuclear Free Zone Treaty*, Reuter Library Report, Nov. 7, 1989 [hereinafter "*House Urges Bush*"]. France, however, continues to test nuclear wepons in the South Pacific. *See, e.g., France Resumes Nuclear Tests in Pacific Despite Opposition*, Reuter Library Report, May 12, 1989.

70. The United States has enunciated four criteria for accepting the validity of a nuclear weapon free zone: (1) the initiative must be taken by the states of the proposed zone and the zone should preferably include all states within the area whose participation is deemed important; (2) the creation of the zone should not disturb necessary security arrangements; (3) the zone agreement must allow a nuclear nation the opportunity to move through the zone with nuclear weapons (e.g., U.S. submarines carrying nuclear weapons moving through Panama Canal to another area); and (4) provisions for adequate verification are required.

71. Confidential interviews with officials of the United States Department of State and Arms Control and Disarmament Agency. Anonymity was promised all United States and foreign government and United Nations officials with whom the author spoke in preparing this article.

72. The official U.S. position was read to the news media by U.S. State Department spokesperson Charles Redman: "The United States . . . has decided that in view of our global security interests and responsibilities, we are not, under current circumstances, in a position to sign the protocols [to the South Pacific Nuclear Free Zone Treaty]." St. Dep't Statement, Feb. 5, 1987.

South Pacific Forum states were particularly upset with the decision by the Reagan Administration not to sign the Rarontonga protocols. The Forum

> had sent a mission to the nuclear club capitals to discuss the protocols before writing the final text. It had gone to great lengths to accommodate the views of the U.S., so much so that it included a section which allows signatories to withdraw from the protocols even though it raised criticism from those Forum members who wanted a stronger treaty.

the U.S. does not want to do anything to encourage other regions from creating their own nuclear free or nuclear weapon free zones.[73] Moreover, though President Reagan expressed his support for the non-proliferation of nuclear weapons,[74] officials of his administration felt proliferation of such regions would make it difficult for the U.S. to maintain its strategy of nuclear deterrence, and a treaty which permits treaty Parties to prohibit port visits would run contrary to U.S. strategic interests.[75] Unofficially, the Reagan administration felt that there was little danger of nuclear proliferation in the South Pacific, so little was lost in the battle against proliferation by not signing the protocols.[76]

The U.K. disfavors the Rarotonga Treaty for similar reasons.[77] Addi-

---

> 'That decision was taken with some reservation but it was generally agreed that if such a provision would facilitate endorsement of the protocols by the major nuclear powers, it was worth doing,' [Fiji Prime Minister, Ratu Sir Kamisese Mara] said. The South Pacific countries had on several occasions supported the U.S. on matters that were important to it and had hoped there would be 'some measure of reciprocity.'

We Won't Sign, Says America, ISLANDS BUS. 21 (Feb. 1987) [hereinafter "*We Won't Sign*"].

In a press statement released the day of the U.S. announcement, New Zealand Prime Minister David Lange echoed Mara's comments: "The United States response is . . . disappointing in that intensive consultation took place with the United States authorities over the Treaty and the protocols and considerable efforts were made to heed U.S. concerns." Press Statement by the Prime Minister of New Zealand on Feb. 5, 1987.

The Reagan Administration's position was under fire within the Congress. As reported by the *Christian Science Monitor*, the "House of Representatives recently passed a resolution in support of the treaty, and a chief treaty opponent, former United States Secretary of Defense Caspar Weinberger, has retired." *Pacific Anti-Nuclear Movement: Growing Force for U.S. to Reckon With*, Christian Sci. Monitor, Nov. 30, 1987, Int'l §, at 8, col. 1. Adhering to his predecessor's position, President Bush has also refused to accede to the Treaty of Rarontonga's protocols, despite a resolution passed by the House of Representatives calling on the President to sign the treaty. *House Urges Bush*, *supra* note 69.

73. *House Urges Bush*, *supra* note 69.

74. During his first year in the White House, President Reagan stated that United States policy was to "seek to prevent the spread of nuclear explosives to additional countries as a fundamental national security and foreign policy objective . . . . " President's Statement on Nuclear Nonproliferation Policy, 17 WEEKLY COMP. PRES. DOC. 768, 769 (July 20, 1981).

75. *House Urges Bush*, *supra* note 69. The U.S. position was expressed by then-Secretary of State Geroge Shultz: "I would hate to see the New Zealand policy in place, because it would basically undermine the ability of the United States and its allies to defend the values that we and New Zealand and others share . . . . " Joint News Conference, Manila, June 27, 1986, DEP'T ST. BULL. 36, 37 (Sept. 1986). A contrary view has been expressed privately: that the real reason is the "need[] to counter public pressure in foreign countries to ban American vessels that carry nuclear weapons." Gordon, *Denmark Agrees on Nuclear Policy*, N.Y. Times, June 8, 1988, § A, at 14, col. 1.

The Treaty of Rarontonga does not require its ratifiers to ban port visits. Rather, this is an option reserved for each state to determine as it sees fit. Treaty of Rarontonga, *supra* note 3, art. 5(2). This provision seems to reserve a right which would exist regardless of its specification in the treaty.

76. Confidential interviews with officials of the United States Department of State, *see supra* note 71.

77. *Britain Rejects Pacific Nuclear-Free Treaty*, Reuters (London), Mar. 20, 1987 [hereinafter "Reuters"].

tionally, it believes that in this matter, support of its European Community economic partner, France, is of superior interest to those of its Commonwealth partners and former colonies in the South Pacific.[78] France, too, elected to not sign the Rarotonga accord.[79] France was also the lone nuclear power which refused to ratify all of the Tlatelolco Treaty protocols.[80] Despite loud and persistent protests by South Pacific nations including Australia and New Zealand,[81] France persisted in testing nuclear weapons in the atmosphere through 1974,[82] and still tests its nuclear devices underground in the South Pacific at Mururoa.[83] It is just such intransigence which helped give rise to the South Pacific Nuclear Free Zone Treaty.[84]

C. *Unilateral Nuclear Prohibitions*

Several nations[85] have taken unilateral steps toward protecting their citizens from nuclear dangers. In 1979, the west Pacific island state of Palau (Belau) adopted a constitution[86] which imposed a complete ban on nuclear substances and weapons.[87] That ban could only be overturned on the three-fourths vote of the electorate.[88] In 1986, Palau's President

---

78. Confidential interview with official of the British Foreign Ministry, *see supra* note 71. In the words of a Reuters story, "Western diplomats said the decision would be seen as Britain falling in line with its fellow NATO nuclear powers rather than taking heed of the wishes of traditional allies Australia and New Zealand." Reuters, *supra* note 75.

79. *We Won't Sign*, *supra* note 72.

80. France is the only eligible party not to ratify Additional Protocol I of the Treaty of Tlatelolco. Fyfe & Beeby, *supra* note 2, at 38.

France long has maintained an independent nuclear policy in the era of nuclear history. Among the Western nuclear powers it is the only one not a party to the Nuclear Nonproliferation Treaty. Schwartz, *supra* note 16, at 16. (China, too, has not ratified the NPT, *id.*, though it has acceded to the Rarotonga protocols.)

81. *See supra* notes 54-57 and accompanying text.

82. Recent activities suggest France's willingness to resort to violations of international law to prevent activities it feels may interfere with its testing program. The French sinking of the Greenpeace ship *Rainbow Warrior* in Auckland harbor occurred just prior to its scheduled departure to lead a flotilla to Mururoa to protest French nuclear testing.

83. Describing France's recalcitrance, one nuclear affairs scholar has written that "[u]nlike the U.S. and Britain which have underground metropolitan sites in which to conduct nuclear explosions, France has been unwilling or unable to use its metropolitan territory to carry out its subsurface tests." The result of this policy is ironic: "The only military-related nuclear activity in the huge area [the South Pacific] other than the passage of nuclear-armed craft, French testing has enabled regional states to try to lift themselves onto the world nuclear disarmament stage by means of SPNFZ." P. Powers, *supra* note 67, at 4.

84. Lippman, *supra* note 54, at 113; K. Graham, Nuclear Weapon-Free Zones as an Arms Control Measure 201 (1983) (dissertation, Vict. U. of Wellington) [hereinafter "Graham"]; P. Powers, *supra* note 67, at 4; R. PURVER, ARMS CONTROL: THE REGIONAL APPROACH 24 (1981).

85. *See infra* notes 86-112 and accompanying text.

86. CONST. OF THE REPUB. OF PALAU, adopted Apr. 2, 1979.

87. *Id.* art. XIII, § 6.

88. The Palau Constitution requires that

> [h]armful substances such as nuclear, chemical, gas or biological weapons intended for use in warfare, nuclear power plants, and waste materials therefrom

signed a Compact of Free Association with the United States.[89] It provided Palau with greater autonomy while the U.S. was to provide for its defense. The Compact of Free Association, allowing the United States to bring into Palau nuclear weapons, nuclear propelled ships and other nuclear substances, was approved without the Constitutionally required three-fourths vote.[90] Litigation ensued[91] challenging the validity of the Compact. The conflict eventually reached the Supreme Court of Palau, which ruled that the Compact of Free Association was not lawfully approved and therefore was invalid.[92] Subsequent attempts to sidestep the Palau constitution have met strong opposition in the Palau legislature and courts.[93]

---

shall not be used, tested, stored or disposed of within the territorial jurisdiction of Palau without express approval of not less than three-fourths the votes cast in a referendum of this specific question.

Id. art. XIII, § 6. Another provision stipulates that any "agreement which authorizes the use, testing, storage or disposal of nuclear, toxic, chemical, gas or biological weapons intended for use in warfare shall require the approval of not less than three-fourths the votes cast in such referendum." *Id.* art. II, § 3.

89. Palau was formerly part of the U.S.-administered Trust Territory of the Pacific Islands. For a discussion of the problems affecting the eventual completion of the Compacts of Free Association of the United States with several of its former Micronesian Trust Territories, *see* Comment, *Reconciling Independence and Security: The Long Term Status of the Trust Territory of the Pacific Islands*, 4 UCLA PAC. BASIN L.J. 210 (1985).

Some argue that the U.S. wants Palau as a "back-up" in case Clark Air Force Base and Subic Bay Naval Base in the Philippines are closed. Iveren, *Vote to End Pacific Islands' Atom-Arms Ban is Challenged*, N.Y. Times, Oct. 13, 1987, §A, at 19, col. 1; Dibblin, *Vote Again Until You Get It Right, U.S. Tells Islanders*, New Statesman, Mar. 14, 1986, at 86. *Cf.* note 94 and accompanying text. *See infra* notes 94-96.

90. Gibbons v. Salii, No. 8-86, slip op. at 2 n.1 (Palau 1986). The United States' other "vital" link to the Indian Ocean, its base on the island of Diego Garcia, is also under fire. The government of Mauritius is challenging the U.S. base there, claiming the island as part of its sovereign territory. *Mauritius: Angry Over U.S. Stand on Diego Garcia*, Inter Press Service, Nov. 14, 1989.

91. Gibbons v. Salii, Civ. No. 101-86 (Tr. Div., July 10, 1986).

92. Gibbons v. Salii, No. 8-86, slip op. (Palau 1986).

93. In spite of, or perhaps because of, the Palau Supreme Court's decision in Gibbons v. Salii, *supra* note 90, pro-Compact parties, including President Lazarus Salii, persisted, employing ever more pressure on the Constitutionalists. In June 1987, the fifth plebiscite to approve the Compact was held. But the week before the vote, President Salii laid off two-thirds of all government employees. Salii took the action "because [the] prospective Compact of Free Association with the United States, which would have brought in [$1 billion of U.S. aid over 40 years, $141 million in the first year] if approved, apparently was headed for defeat." *Palau Going Broke, Laying Off Workers*, L.A. Times, July 3, 1987, § 1, at 11, col. 1. The June 30 vote nonetheless was the same as the previous four, turning down the Compact. L.A. Times, July 6, 1987, § 1, at 2, col. 2.

A new tactic was employed early in August of that year, when a vote was held to amend the constitution to allow a modification of the its anti-nuclear provisions — and thus approval of the Compact — with a simple majority vote instead of three-quarters. It passed on August 4. Less than three weeks later, a sixth vote was held on the Compact. It received the same percentage of votes as in previous elections, but this time it was enough to pass. L.A. Times, Aug. 7, 1987, § 1, at 2, col. 1; *Palau Drops Nuclear Stand*, N.Y. Times, Aug. 7, 1987, § A, at 24, col. 1. The August votes were immediately challenged in a lawsuit and in the Palau legislature. However, a death threat against the Chief Justice of the Palau Supreme

The new Constitution of the Republic of the Philippines also provides for the possible prohibition of nuclear weapons. One provision reads: "[t]he Philippines, consistent with its national interest, adopts and pursues a policy of freedom from nuclear weapons in its territory."[94] Legislation passed by the Philippine Senate "bars the development, manufacture, acquisition, testing, use, introduction, installation or storage" of nuclear arms and components. It bans nuclear-powered ships and planes unless their entry is authorized by a Philippine commission.[95] The bill awaits action by the Philippine House of Representatives in its next term.[96] Even prior to the drafting of the new constitution, the Aquino government permanently closed a recently completed nuclear power plant, prohibiting it from being fueled up, despite the billions of dollars (U.S.) poured into its construction cost by the former government.[97]

Some South Pacific Forum states have also taken actions which provide greater restrictions on nuclear weapons than those afforded by the Rarotonga Treaty. In addition to Vanuatu's strong stand,[98] New Zealand has a port visit policy which bans any warship or military aircraft containing nuclear weapons, as well as nuclear powered vessels, from visiting its ports and airfields. All military craft must provide sufficient information to allow the Prime Minister to determine that they are free from such weapons before being allowed permission to enter New Zealand facilities.[99] Fiji formerly had a similar policy, and a new government was

---

Court caused him to halt hearings on the lawsuit. Iveren, *supra* note 89. Nearly a year later in May, 1988, the Palau Supreme Court ruled that the referendum suspending the constitution and the subsequent plebescite on the Compact were invalid, returning the situation to square one. Osmond, *Starting Over Again: Court Rules Referendums on Future Invalid*, FAR E. ECON. REV., May 18, 1988, at 38.

In August of 1988, President Lazarus Salii was found dead in his home. Osmond, *Death in the Afternoon: Salii May Be Gone, But Palau is the Likely Victim*, FAR E. ECON. REV., Sept. 1, 1988, at 26.

In the most recent election, pro-Compact forces again failed to muster the necessary votes to approve the Compact. In contrast to previous elections, which saw as much as 72% support for the Compact, February's vote only achieved a 60.5% showing for the Compact. *Roundup: Palau — Independence Remains Uncertain*, Xinhua General Overseas News Service, Mar. 18, 1990.

94. CONST. OF THE REPUB. OF THE PHIL., art. II, § 8 (1986).

95. *Philippine Senate OKs Bill Opposed by U.S. That Would Bar Nuclear Weapons*, L.A. Times, June 7, 1988, § 1, at 5, col. 1.

96. *Id.*

97. Senoren, *Philippine Nuclear Plant to Make Way for Coal Power*, Fin. Times, Sept. 25, 1986, at 4; *see also* Dumaine, *The $2.2 Billion Nuclear Fiasco*, FORTUNE, Sep. 1, 1986, at 38.

98. *See supra* note 67 and accompanying text.

99. New Zealand's anti-nuclear legislation contains the following provisions:

> When the Prime Minister is considering whether to grant approval to the entry of foreign warships into the internal waters of New Zealand, the Prime Minister shall have regard to all relevant information and advice that may be available to the Prime Minister including information and advice concerning the strategic and security interests of New Zealand.
>
> The Prime Minister may only grant approval for the entry into the inter-

voted into office in 1987 on a platform which included a pledge to reinstate the port visit ban.[100]

---

nal waters of New Zealand by foreign warships if the Prime Minister is satisfied that the warships will not be carrying any nuclear explosive device upon their entry into the internal waters of New Zealand.

When the Prime Minister is considering whether to grant approval to the landing in New Zealand of foreign aircraft, the Prime Minister shall have regard to all relevant information and advice that may be available to the Prime Minister including information and advice concerning the strategic and security interests of New Zealand.

The Prime Minister may only grant approval to the landing in New Zealand by any foreign military aircraft if the Prime Minister is satisfied that the foreign military aircraft will not be carrying any nuclear explosive device when it lands in New Zealand.

. . . .

Entry into the internal waters of New Zealand by any ship whose propulsion is wholly or partly dependent on nuclear power is prohibited.

New Zealand Nuclear Free Zone, Disarmament, and Arms Control, Bill enacted June 4, 1987 by the New Zealand House of Representatives, Oct. 16, 1986, ¶¶ 9-11.

Prime Minister Lange's position is widely supported by the New Zealand people. Despite serious economic problems, Lange's party was overwhelmingly re-elected in August, 1987 elections. Even the conservative opposition has adopted an anti-nuclear platform. Barber, *New Zealand Premier Vows Anti-Nuclear Activity in 2nd Term*, Christian Sci. Monitor, Aug. 17, 1987, Int'l §, at 11, col. 1; *Lange Wins a 2nd Term in New Zealand*, L.A. Times, Aug. 16, 1987, § 1, at 6, col. 4; Evans, *Labor is Winner in New Zealand Vote*, N.Y. Times, Aug. 16, 1987, § 1, at 3, col. 1. A 1988 poll revealed 84% of New Zealand's population in support of Lange's anti-nuclear policy. *New Leader Says Nuke Ban 'Will Not Change'*, United Press Int'l, Aug. 8, 1989. David Lange's successor as Prime Minister, Geoffrey Palmer, vowed to uphold Lange's nuclear policy immediately upon being sworn in. *Id.*

Australia, New Zealand and the United States were partners in the ANZUS alliance, *Security Treaty Between Australia, New Zealand and the United States*, Sept. 1, 1951, 3 U.S.T. 3420, T.I.A.S. No. 2493, 131 U.N.T.S. 83 [hereinafter "ANZUS"], until the U.S. suspended its defense obligations to New Zealand following that country's decision to ban port visits by nuclear capable warships. DEP'T ST. BULL., Sept. 1986, at 86. *See* S. MCMILLAN, NEITHER CONFIRM NOR DENY: THE NUCLEAR SHIPS DISPUTE BETWEEN NEW ZEALAND AND THE UNITED STATES (1987). New Zealand claims that ANZUS is a conventional, not nuclear alliance. Glover, *supra* note 19. Nonetheless, New Zealand has called the alliance "dead." *New Zealand Leader Says Security Alliance with U.S. Dead*, Reuters, Apr. 24, 1989.

On one hand ANZUS has always been a loose confederation and was eventually concluded primarily over concerns about future Japanese aggression. *See generally* Glover, *id.*; 3 *Documents on New Zealand External Relations: The ANZUS Pact and the Treaty of Peace With Japan* (1985). On the other hand, the United States policy of defense for its allies (and, thus, meeting its treaty obligations) through deterrence depends upon using whatever capabilities it believes necessary. As former U.S. Secretary of State George Shultz expressed: "I would hate to see the New Zealand policy in place, because it would basically undermine the ability of the United States and its allies to defend the values that we and New Zealand and others share . . . ." Joint News Conference, Manila, June 27, 1986, DEP'T ST. BULL., Sept. 1986, at 36, 37. However, "American officials say privately that the rule [by which the U.S. refuses to confirm a nuclear presence and thus the incompatibility with the New Zealand policy] is needed to counter public pressure in foreign countries to ban American vessels that carry nuclear weapons." Gordon, *supra* note 75. *See* Note, *The Incompatibility of ANZUS and Nuclear Weapon Free Zones*, 45 VA. J. INT'L L. 455, 464-466 (1987).

100. On April 11, 1987 Fiji voters elected a coalition government on a platform which promised the banning of port visits by nuclear warships. The leaders of a coup the following

Concern over the dangers associated with nuclear weapons and radioactivity is not limited to the Pacific. Sweden, one of the most heavily nuclear dependent states in the world (forty-seven percent of the Scandinavian nation's power is nuclear[101]), voted in a 1980 referendum to phase out all nuclear power plants in operation or under construction by 2010 and to prohibit the construction of any new nuclear power plants.[102] In the wake of the near-total meltdown of a nuclear power plant at Chernobyl in the Soviet Union in 1986, the Swedes reaffirmed their 1980 vote and undertook to begin the phase-out process by 1995.[103]

Sweden's Nordic neighbors also have relatively tough anti-nuclear positions.[104] Though a member of NATO and strategically located along the Soviet Union's northwest flank, Norway prohibits the emplacement of nuclear weapons on its territory, except in case of an attack or threat of attack.[105] In addition, Norway bans nuclear power plants.[106] Norway is now leading the movement for a Nordic Nuclear Weapon Free Zone.[107] NATO member Iceland has an official policy[108] of not permitting nuclear weapons anywhere within its territory except at time of war, including its territorial sea. Denmark, also a NATO country, has a thirty year ban on nuclear powered ships and those carrying nuclear weapons[109] which has never been actively enforced. Last year Danish voters approved a referendum calling for Denmark to enforce this policy,[110] sending shock waves

---

month and a subsequent coup later in the year vowed to not enforce a port visits ban. *Coup Plus Coup Makes Three*, TIME, Oct. 12, 1987, at 46; *No Medals: Fiji Gets a Government at Last*, THE ECONOMIST, Oct. 3, 1987, at 19.

101. Winder, *Letter from Sweden*, Christian Sci. Monitor, Sept. 18, 1986, at 9.

102. *Id.*

103. *Id.*

104. The Nordic countries have been leading proponents of the concept of a nuclear weapon free zone and have a relatively long and constant history of debating such for their region. The first inquiry was made by Sweden in 1961. *Comprehensive Study*, *supra* note 7, at 20, 25; *Nuclear Weapons and Northern Europe* (1983). Two years later the President of Finland proposed a Nordic nuclear-weapon-free zone. *Id.*, at 25. Several additional proposals have been made by the various Scandinavian countries and the Soviet Union. *Id.* Most recently, at the Nordic foreign ministers meeting in 1987, attending members decided to "investigate the conditions for a nuclear-weapon-free zone in the Nordic area as a part of the endeavours to lessen tensions and reduce armaments in Europe." Statement from The Nordic Foreign Ministers Meeting, Reykjavik, Mar. 25-26, 1987.

105. 20 CURRENT NOTES ON INT'L AFF. 441 (1949).

106. However, Norway does operate a small (20 megawatts) heavy water research reactor used by the Western scientific community.

107. In 1984 the Norwegian Stortinget (Parliament) voted to pursue a nuclear weapon free zone with its Nordic Pact allies. *See* KGL, Utenriksdepartement, *Sprsmalet om en Kjernevapenfri Sone i Norden* 7-10 (1985).

108. A. Carsten Damsgaard, *The Nordic Area As a Nuclear-Weapon Free Zone?* 9-10 (unpublished manuscript) (1985). It expects the superpowers, however, to respect this policy in good faith and does not ask foreign states if their vessels and aircraft deploy such weapons. *Id.*

109. *Slicing NATO Too Thin in Denmark*, N.Y. Times, May 9, 1988, § A, at 18, col. 1.

110. Raines, *Danish Voting Tuesday Centers on Military Issues*, N.Y. Times, May 9, 1988, § A, at 9, col. 1.

through the United States State Department.[111]

On a more localized level, communities and provinces throughout the world have declared themselves nuclear free zones.[112]

III. REDEFINING THE BREADTH OF NUCLEAR FREE ZONES

Bold as it may be, the Treaty of Rarotonga represents only one step toward complete "nuclear freedom" for treaty states and toward worldwide nuclear disarmament. There is a great deal that a nation or group of nations can do to achieve a truly "complete and comprehensive" nuclear free zone.

Just as the South Pacific Forum states enhanced and expanded upon the prohibitions contained in the Latin American treaty,[113] forthcoming treaties can and likely will further the nuclear proscriptions established by the 1985 accord. Such an undertaking will require careful scrutiny of the workability and effectiveness of the extant treaties from both theoretical and pragmatic viewpoints. The drafters and negotiators of future nuclear free zone treaties will want to look at what they hope to achieve, what the Tlatelolco and Rarotonga Treaties set out to achieve and what in fact those treaties have achieved.

Though a milestone at the time, from the perspective of the modern nuclear prohibitory movement, the intended scope of the Tlatelolco Treaty is decidedly limited. Compare, for example, the primary objectives of the Treaty of Tlatelolco with those of the Treaty of Rarotonga. The former, entitled a "treaty for the prohibition of nuclear weapons," only prohibits "[t]he testing, use, manufacture, production, acquisition . . . receipt, storage, installation, deployment and . . . possession of any nuclear weapons . . . ."[114] It expressly allows contracting states "to use . . . for peaceful purposes the nuclear material and facilities which are under

---

111. *U.S. Concerns Over Danish Parliamentary Resolution*, DEP'T ST. BULL., June, 1988, at 31. American and NATO concern over the impact of the resolution was resolved by a Danish government assumption that foreign military ships will be "in compliance with the rules laid down by the Danish Government." Gordon, *supra* note 75, quoting Danish Prime Minister Poul Schluter.

112. For example, as of December, 1988, there were 4,407 nuclear free zones in 23 countries. *Nuclear Free Zones in the World*, THE NEW ABOLITIONIST, Mar. 1990, at 9, col. 3. One hundred and sixty-eight nuclear free zones with a total population of more than 16.8 million citizens have been declared by voters in the United States. *Nuclear Free Zones in the United States*, THE NEW ABOLITIONIST, Mar. 1990, at 12 , col. 1.

It has been argued that nuclear free zone ordinances in the United States may not be legally binding if the federal government invokes the supremacy clause or other powers granted by the U.S. Constitution. *See* Weaver, et al., *The Legality of the Chicago Nuclear Weapon Free Zone Ordinance*, 17 LOY. U. CHI. L.J. 553 (1986).

In a recent development, the Justice Department has brought suit to block a "second generation" nuclear free zone ordinance adopted by Oakland, California. Stein, *Effort to Derail Nuclear-Free Zones Reported*, L.A. Times, Mar. 22, 1990, § A, at 3, col. 1.

113. *See infra* notes 38-41, 50-52 and accompanying text.

114. Treaty of Tlatelolco, *supra* note 5, art. 1(1)(a)-(b), at 330.

their jurisdiction."[115] The later Rarotonga Treaty renounces *all* nuclear explosive devices,[116] much exploitation of fissionable material,[117] the dumping of radioactive wastes at sea,[118] as well as the manufacture, possession, control over,[119] stationing[120] and testing[121] of all nuclear explosive devices.

It is readily conceivable that any future nuclear free zone treaty will consider the principal provisions of the Treaty of Rarotonga as its minimum standard or starting point. The difficult issues for future negotiators will be those which expand the scope of such treaties beyond that of the South Pacific Nuclear Free Zone Treaty, including:

1) A ban on the transit of nuclear weapon carrying vessels through treaty Parties' territorial seas and exclusive economic zones;

2) Participation in intelligence systems designed to aid nuclear war fighting capabilities;

3) Military alliances with nuclear powers;

4) Civilian nuclear programs, including nuclear power plants, non-essential consumer and industrial uses of radioactive materials;

5) Radioactive waste disposal; and, last but not least,

6) How to effect compliance of the nuclear powers with a nuclear free zone treaty.

The remainder of this Section will explore these topics.

A. *Nuclear Transit*

One striking limitation of virtually all nuclear free and nuclear weapon free zone treaty proposals tendered by international bodies is their failure to prohibit the transit of nuclear weapons through territorial seas and exclusive economic zones ("EEZ") of treaty parties. As has already been demonstrated herein,[122] the presence of a warship or military aircraft which is believed to be carrying nuclear weapons exposes any land or sea territory within several or even dozens of kilometers of that vessel or plane to the potential effects of nuclear attack or explosion. Obviously, the most effective way to guarantee against this risk, absent a worldwide ban on nuclear weapons, is to enforce a ban of such craft from anywhere within the territorial sea, EEZ or the treaty's zone of application.

---

115. *Id.* art. 1(1), at 330.
116. Treaty of Rarotonga, *supra* note 3, art. 3, at 1444-45.
117. *Id.* art. 4 at 1445.
118. *Id.* art. 7 at 1447.
119. *Id.* art. 3(a) at 1444-45.
120. *Id.* art. 5(1) at 1446.
121. *Id.* art. 6.
122. *See supra* notes 20-31 and accompanying text.

1. The Law of the Sea (UNCLOS III): An Overview

A prohibition on nuclear transit[123] is all but guaranteed to spark controversy. On the surface, such a ban would appear to violate the rule of the law of the sea[124] which provides for innocent passage of non-hostile ships within a coastal state's territorial sea and disavows any attempt to ban passage on the high seas.[125]

Similar objections would be raised if the ban also affected the newly created right of "transit passage."[126] Transit passage, or "strait transit" as it is called by UNCLOS III, purports to guarantee the right of passage through "straits which are used for international navigation between one part of the high seas or an exclusive economic zone and another part of the high seas or an exclusive economic zone."[127] This provision operates much in the same way as those protecting the right of innocent passage, but without many of the rights afforded the strait state by the innocent passage regime,[128] including the proscription on passage which is "prejudicial to the peace, good order or security of the coastal State . . . ."[129] Additional concerns would be raised over any plan to ban nuclear transit through exclusive economic zones.

Historically,[130] the major naval powers[131] have asserted their "right" to unrestrained transit upon the high seas.[132] Similarly, the naval powers

---

123. For purposes herein, "nuclear transit" means the transit or passage of any aircraft or seagoing vessel which either carries nuclear weapons (including nuclear explosive devices not classified as "weapons") or is capable of carrying nuclear weapons but which refuses to confirm whether or not it is carrying such weapons.

124. UNCLOS III, *supra* note 27, arts. 17-19, 21 I.L.M. 1245, at 1273-74. *See infra* § III.A.2.(a).

125. "High seas" is defined as "all parts of the sea that are not included in the exclusive economic zone, in the territorial sea or in the internal waters of a State, or in the archipelagic waters of an archipelagic State." UNCLOS III, *supra* note 27, art. 86, 21 I.L.M. 1245, at 1286. "Territorial sea" refers to that portion of coastal waters lying within a coastal state's sovereign jurisdiction. *Id.* art. 2, 21 I.L.M. 1245, at 1272. The currently accepted limit of a state's territorial sea is twelve miles. *Id.* art. 3, 21 I.L.M. 1245, at 1272.

126. UNCLOS III, *supra* note 27, arts. 37-39, 21 I.L.M. 1245, at 1276-77. *See infra* § III.A.2.(b) for a detailed discussion of transit passage as it relates to a ban on nuclear transit.

127. *Id.* art. 37, 21 I.L.M. 1245, at 1276. Another UNCLOS III article states that, "[s]tates bordering straits shall not hamper transit passage. . . . There shall be no suspension of transit passage." *Id.* art. 44, 21 I.L.M. 1245, at 1278.

See generally UNCLOS III, *supra* note 27, arts. 34-45, 21 I.L.M. 1245, at 1276-78.

128. *See id.* arts. 17-26, 21 I.L.M. 1245, at 1274.

129. *See id.* art. 19, 21 I.L.M. 1245, at 1274.

130. "Historically, naval mobility had been served by the doctrine of freedom of the seas . . . ." LAW, FORCE AND DIPLOMACY, *supra* note 28, at 63.

131. In turn, the Greeks and the Romans controlled the sea lanes. *Id.* at 14. In the 17th century, the British were the dominant naval power. *Id.* at 14. In the late 20th century, the U.S. and U.S.S.R. are the major naval powers. *See generally* J. SEBENIUS, NEGOTIATING THE LAW OF THE SEA 75 (1984).

132. In more recent times, an important "aspect of Britain's ability to use the sea was the doctrine of belligerent's rights . . . . The doctrine of freedom of the sea was merely a

have attempted to exercise ever greater sovereignty over the seas while denying this same "creeping jurisdiction" to lesser powers.[133] The modern invocation of the law of the sea, as reflected in the third United Nations Convention on the Law of the Sea,[134] reflects the will of the naval powers,[135] and includes certain rights[136] of coastal states over their territorial seas (*not* including the right to block innocent passage[137]). Though the Law of the Sea negotiation process has been resistant to attempts by the non-nuclear coastal states to extend their jurisdiction over the seas,[138] the zone of sovereignty (total or otherwise) exercised by coastal states has gradually expanded.[139]

As early as 1702, the limit of the territorial sea was agreed to be about three nautical miles — the maximum range of a cannon.[140] But there has been "an almost irresistible tendency for national jurisdiction to creep beyond the existing" limits.[141] In the years following World War II, many states claimed a twelve mile territorial sea.[142] Today the territorial sea is acknowledged by UNCLOS III to reach to twelve miles.[143] Similarly, some states claimed rights out to 200 miles. In addition, UNCLOS III recognizes a zone of economic dominion (the so-called "exclusive economic zone") of up to 200 miles.[144]

Although the cartographer's lines of claimed and universally recognized rights of sovereignty over the seas have expanded, the inviolability of these perimeters continues to evade universal acceptance. So too have the rules regarding the rights of transitting ships — or coastal states — been unevenly applied by all states. Many states, including the U.S. and the U.S.S.R., proclaim rights beyond those generally accepted by UN-

---

symptom of the fact that nations attempt to further their interests by whatever instruments they have at their disposal, be they military or economic, diplomatic or legal." LAW, FORCE AND DIPLOMACY, *supra* note 28, at 13-14.

133. K. Booth, *The Military Implications of the Changing Law of the Sea*, in THE LAW OF THE SEA: NEGLECTED ISSUES 343-354 (1979) [hereinafter "K. Booth"].

134. *See generally* UNCLOS III, *supra* note 27.

135. *See generally* J. SEBENIUS, *supra* note 131.

136. UNCLOS III, *supra* note 27, arts. 19-22, 24-25, 21 I.L.M. 1245, at 1274-75.

137. *Id.* arts. 17-19, 21 I.L.M. 1245, at 1273-74.

138. J. SEBENIUS, *supra* note 131, at 71-109.

139. *See infra* notes 140-44 and accompanying text.

140. After a half century or so of early attempts to define the concept we now know as "territorial sea," Cornelius van Bynkersheim "suggested that a state's dominion over the sea should be restricted to the range over which its power extended from the adjacent land. This was taken to be the maximum range of a canon . . . the distance agreed was three miles." LAW, FORCE AND DIPLOMACY, *supra* note 28, at 15.

141. *Id.* at 38.

142. In 1945, the Truman Doctrine was announced whereby the United States claimed certain rights over its entire continental shelf. Following that initiative, many countries unilaterally claimed a territorial sea of anywhere from 12 to 200 miles. *Id.* at 16. By 1972, of 111 coastal states, only 25 still accepted the traditional three mile limit. *Id.* at 36.

143. UNCLOS III, *supra* note 27, art. 3, 21 I.L.M. 1245, at 1272.

144. *Id.* art. 57, 21 I.L.M. 1245, at 1280.

CLOS III.[145] At least ten states[146] invoke some regulation of foreign vessel transit through their exclusive economic zones. More than two dozen states require notification and/or approval before foreign warships may pass into their territorial sea.[147] Others claim special security zones.[148] Canada's claimed rights extend 600 miles north of its mainland coast, having "closed" the entire Northwest Passage and the Arctic Archipelago.[149] Among the nuclear powers, the Soviet Union claims full sovereignty over the Sea of Okhotsh,[150] having declared it closed to foreign vessels, and the United States has established over 100 danger zones, primarily used for test firing, within and without its territorial sea, often completely banning transit by all but U.S. naval ships.[151]

Many of the exceptions to full compliance with these provisions of the law of the sea are not based exclusively on military grounds. Prevention of pollution has been the justification for restrictions on unhindered transit. Canada has invoked some of the toughest regulation based on environmental concerns. "Under the Eastern Canadian Traffic Regulation System (ECAREG) all ships over 500 g.r.t. entering the ECAREG traffic zone are required to request clearance twenty-four hours in advance. The

---

145. *See infra* notes 146-51 and accompanying text. The United States first claimed sovereignty beyond the three mile limit in 1945. The Truman Doctrine claimed a right over the continental shelf. LAW, FORCE AND DIPLOMACY, *supra* note 28, at 16. The U.S.S.R. claims complete sovereignty over the Sea of Okhotsh.

146. Guyana, India, Mauritius, Nigeria, Pakistan and the Seychelles regulate passage of foreign vessels in their EEZs, and the Maldives, Mauritania, Portugal and the U.S.S.R. regulate navigation in special zones of their EEZs. Alexander, *Geographical Perspectives on International Navigation*, Paper Presented at the East-West Center/ Law of the Sea Institute Conference on International Navigation (Jan. 1986). Additionally, Brazil exercises control over military maneuvers in its EEZ. CONSENSUS AND CONFRONTATION: THE UNITED STATES AND THE LAW OF THE SEA CONVENTION 302-305 (J. Van Dyke ed. 1985).

147. TRANSIT OF NUCLEAR-WEAPON BEARING VESSELS AND AIRCRAFT: THE RAROTONGA TREATY AND THE LAW OF THE SEA 5 (1986) [hereinafter "TRANSIT OF NUCLEAR-WEAPON BEARING VESSELS"]. Among these states are China, Denmark, Egypt, Indonesia (except for passage in designated sea lanes), Norway, Papau New Guinea and Turkey.

148. *See* TRANSIT OF NUCLEAR-WEAPON BEARING VESSELS, *supra* note 147:

> Burma [sic], India and Vietnam prohibit alien warships and aircraft from military warning zones 24 kilometers wide while Cambodia and Indonesia have such zones 12 kilometers wide. China has a Military Warning Zone extending at some points to 50 miles, North Korea has one out to 50 miles, South Korea . . . one extending 150 miles in the Sea of Japan and 100 miles in the Yellow Sea, and Nicaragua one extending 25 miles requiring 15 days advance notice by foreign warships and planes. (citations ommitted).

Id. at 6.

149. Alexander, *supra* note 146, at 23.

150. *Id.* The Soviet Union doesn't recognize the principle of innocent passage for warships at all. Butler, *Soviet Concepts of Innocent Passage*, 7 HARV. INT'L L.J. 113, 127 (1965); Butler, *The USSR and the Limits to National Jurisdiction over the Sea 1970-72*, in LIMITS TO NATIONAL JURISDICTION OVER THE SEA 177, 179, 189 (G. Yates & J. Young eds. 1974).

151. Sohn, *International Navigation Interests Related to Security*, Paper Presented at the East-West Center/Law of the Sea Institute Conference on International Navigation (Jan. 1986).

stated objective of the regulations is to reduce the danger of pollution."[152] Canada's requirements are especially significant in that Canada's exertion of control could reach beyond the 200 mile EEZ limit. Canada also was successful in including an article in UNCLOS III that allows states with control over ice-covered territory to invoke special controls.[153]

Clearly the law of the sea is not a singular and static paradigm of law, either as customary international law or as codified in multilateral treaties or conventions. Rather, it is constantly changing. Some suggest the change may be dramatic. "We are living in a transitional period of maritime affairs,"[154] one commentator recently wrote. "We are seeing a shift from a regime entirely dominated by the traditional maritime powers to one in which all coastal states (and even non-coastal states) demand a bigger say in ocean affairs and claim greater rights . . . ."[155]

The fact that transit passage became a part of UNCLOS III, though not as the freedom of transit doctrine envisioned by its sponsors,[156] the United States and the Soviet Union, is evidence enough of that. Whereas the United States and Soviet Union were pushing for virtually complete freedom of navigation through international straits,[157] Indonesia, Malaysia and Singapore[158] were ready to "de-internationalize"[159] the Malacca

---

152. LAW, FORCE AND DIPLOMACY, *supra* note 28, at 38-39 (citing E. Gold & D. Johnston, *Ship-generated Maritime Pollution: The Creator of Regulated Navigation*, Paper Presented at the 13th Annual Conference of the Law of the Sea Institute (Oct. 1979)).

153. UNCLOS III, *supra* note 27, art. 234, 21 I.L.M. 1245, at 1315. The full text of the article reads as follows:

> Coastal states have the right to adopt and enforce non-discriminatory laws and regulations for the prevention, reduction and control of marine pollution from vessels in ice-covered areas within the limits of the exclusive economic zone, where particularly severe climatic conditions and the presence of ice covering such areas for most of the year create obstructions or exceptional hazards to navigation, and pollution of the marine environment could cause major harm to or irreversible disturbance of the ecological balance. Such laws and regulations shall have due regard to navigation and the protection and preservation of the marine environment on the best available scientific evidence.

154. LAW, FORCE AND DIPLOMACY, *supra* note 28, at 38.

155. *Id.*

156. P. TANGSUBKUL, ASEAN AND THE LAW OF THE SEA 29 (1982).

157. *Id.* China, on the other hand, took the position that

> straits lying within the territorial waters of a coastal state still come under the national sovereignty of that state, even if they are often used for international navigation . . . . China is of the view that the demand for freedom of transit and freedom of overflight would allow the superpowers to treat the territorial waters of other countries as the high seas purely because the aforesaid waters are straits used for international navigation.

Id.

158. Indonesia, Malaysia and Singapore border the Strait of Malacca and the nearby Strait of Singapore.

159. The position of the three governments was stated in the Joint Statement on "Straits of Malacca and Singapore," issued by the Ministry of Foreign Affairs of Malaysia on November 16, 1971. Among its provisions, it stated that:

> (i) the three governments agreed that the safety of navigation in the

Strait, a principle passage between the Pacific and Indian Oceans. The result is the compromise transit provisions now found in UNCLOS III,[160] which provide for strait transit while allowing limited control by the coastal state.[161]

Reliance on UNCLOS III as the definitive "restatement" of the law of the sea is troubling for another reason: it is not yet the law. The Convention has not been ratified by the requisite sixty nations for it to enter into force.[162] The validity of UNCLOS III as international law will be open to question so long as it has not yet formally entered into force, and perhaps even after that point if major players refuse to ratify. Several key nations have refused to sign or ratify the convention, most notably the United States and the United Kingdom. Still, these states claim UNCLOS III to be customary international law *except* for the provisions which they do not approve.[163] Further, they claim the right to enforce provisions of UNCLOS III against all other states, despite the fact that they do not feel themselves compelled to honor all of its provisions.[164] This posture may be seen as undermining the entire convention, at least so far as it was designed to be an "all or nothing" package.[165]

Straits of Malacca and Singapore is the responsibility of the coastal states concerned;

(ii) the three governments agreed on the need for tripartite co-operation on the safety of navigation in the two straits;

. . .

(iv) the three governments also agreed that the problem of the safety of navigation and the question of internationalization of the Straits are two separate issues;

(v) the governments of the Republic of Indonesia and of Malaysia agreed that the Straits of Malacca and Singapore are not international straits, while fully recognizing the principle of innocent passage. The Government of Singapore takes note of the position of the governments of the Republic of Indonesia and of Malaysia on this point . . . .

P. TANGSUBKUL, *supra* note 156, at 27.

The Philippines has also been a proponent of more restrictive rights of transit passage. *See e.g.*, Manansala, *The Philippines and the Law of the Sea*, 8 L. SEA INST. WORKSHOP 430, 430-41 (1987).

160. C. SANGER, *supra* note 20, at 88. Certain events had raised the level of concern over this important link between the Pacific and Indian Oceans. During the war leading to the formation of Bangladesh as a separate state, both the U.S. and Soviet Union sent warships through the strait without the required notification. *Id.* at 86. Indonesia and Malaysia were also very concerned about the possibility of a clash between nuclear submarines in the strait. They and Singapore were also distressed at the growing pollution problem in their waters, which was playing havoc with their fishing industries. *Id.* at 88.

161. *See id.*

162. As of July, 1988, only 35 states of the required 60 had ratified UNCLOS III, L. OF THE SEA BULL., July 1988. UNCLOS III, *supra* note 27, art. 308(1), 21 I.L.M. 1245, at 1327.

163. TRANSIT OF NUCLEAR-WEAPON BEARING VESSELS, supra *note* 147, at 10.

164. *Id.*

165. Article 309 does not permit a ratification with reservation or exceptions unless specifically provided for in the Convention. UNCLOS III, *supra* note 27, art. 309, 21 I.L.M. 1245, at 1327.

To date, most states have not seen it in their best interest to evade or spurn the provisions of UNCLOS III. In fact, many small coastal states[166] are heavily dependent on the seas and receive significant benefits from UNCLOS III. These states may feel a compulsion to adhere to all provisions of UNCLOS III as a matter of principle or practicality. As such, they would be adhering to the spirit and intent of the convention negotiations which took place under the premise that states would adopt the complete treaty as a single, packaged unit.

In theory the unwillingness of the U.S. and U.K. to ratify UNCLOS III provides signatory states with a basis to deny them and other non-signatories the rights guaranteed by UNCLOS III. It appears that a state is within its authority to prohibit "passage and overflight along sealanes [sic] in archipelagoes and transit passage through straits within territorial seas, arguing that these rights are not customary law and do not accrue to non-signatories of UNCLOS."[167] Indonesia has expressed the position that it has the right to "deny transit passage to those nations that have not signed and adhered to [UNCLOS III]."[168] Nonetheless, most states which have either ratified the convention or intend to honor it fully expect all other states to do similarly.

2. Specific Regimes of UNCLOS III and Nuclear Transit

Following the general discussion of the Law of the Sea above, it is important to note that we review three specific regimes of UNCLOS III which would be directly challenged by prohibition of nuclear transit. The regimes implicated are innocent passage, transit passage and exclusive economic zones. A subpart of this section will deal with each of these in turn. A fourth subpart of this section looks at the future of UNCLOS.

(a) Innocent Passage

UNCLOS III provides that:

> Passage is innocent so long as it is not prejudicial to the peace, good order or security of the coastal State . . . . Passage of a foreign ship shall be considered to be prejudicial to the peace, good order or security of the coastal State if in the territorial sea it engages in . . . any threat or use of force against the sovereignty, territorial integrity or political independence of the coastal State . . . .[169]

Though this language might at first indicate to the contrary, the definition itself provides the vehicle for a state to prevent nuclear transit

---

166. J. SEBENIUS, *supra* note 131.

167. TRANSIT OF NUCLEAR-WEAPON BEARING VESSELS, *supra* note 145, at 3; *see* Surace-Smith, *United States Activity Outside of the Law of the Sea Convention: Deep Seabed Mining and Transit Passage*, 84 COLUM. L. REV. 1032, 1058 (1984).

168. Wisnomoert, *Indonesia and the Law of the Sea*, 8 L. SEA INST. WORKSHOP 392, 406 (1987).

169. UNCLOS III, *supra* note 27, art. 19(1)-(2)(a), 21 I.L.M. 1245, at 1274.

within its territorial sea yet remain within the letter of the Law of the Sea. That vehicle would be to declare, *ipso facto*, that the transit of nuclear weapon carrying or nuclear powered ships is "prejudicial to the peace, good order or security" of the coastal state or parties to a nuclear free zone treaty. Such a declaration would constitute recognition that such transit could not be "innocent" by its very nature.[170] Any nuclear weapon carrying warship or aircraft (or, indeed, any warship or warplane capable of carrying nuclear weapons) is a nuclear target regardless of its locale. An attack on such a plane or ship would unleash the destructive potential of a nuclear weapon against the state within whose territory the ship or plane was transitting. Such an attack would obviously violate "the sovereignty, territorial integrity or political independence of the coastal State," even if the involved territory were not the intended target of the attack.

This argument is not foreign to the international arena. As two Law of the Sea chroniclers pointed out, "[s]ome states regard [nuclear powered] vessels as inherently threatening to their peace and good order."[171] As early as 1964 Spain passed legislation declaring "that the passage of nuclear ships through territorial waters was to be considered an exception to the right of innocent passage."[172] More recently, the New Zealand Foreign Ministry considered taking the position that the transit of nuclear vessels can be inimical to a coastal state's "sovereignty, territorial integrity or political independence" in its preparatory sessions for the South Pacific Nuclear Free Zone Treaty negotiations.[173]

Perhaps surprisingly, UNCLOS III does afford some recognition of the dangers posed by nuclear fueled ships and those with nuclear cargo. Such vessels are required to "observe special precautionary measures established for such ships by international agreements"[174] and may be asked, when "exercising the right of innocent passage through [a coastal state's] territorial sea[,] to use such sea lanes . . . as it may designate or prescribe for the regulation of the passage of such ships."[175] The question for those ultimately concerned with the illegality of nuclear transit under any condition is: Will future interpretations or revisions of the relevant provisions of the Law of the Sea encompass that broader viewpoint? The answer might be found in international fora that have convened in order to study the problem of large-scale pollution.

---

170. *See supra* note 20 and accompanying text.

171. R. CHURCHILL & A. LOWE, THE LAW OF THE SEA 70 (1983) [hereinafter "CHURCHILL & LOWE"].

172. Act No. 25/64, 29 April 1964, art. 7, *UN Leg. Ser.* B/16, p. 45 (reported in CHURCHILL & LOWE, *supra* note 171, at 70).

173. The New Zealand Foreign Ministry ordered a legal study of this question prior to concluding negotiations on the Treaty of Rarotonga. It apparently decided against taking this position in order to conclude a treaty sufficiently favorable to the United States so as to gain U.S. ratification of treaty protocols. *See supra* note 72.

174. UNCLOS III, *supra* note 27, art. 23, 21 I.L.M. 1245, at 1274-75.

175. *Id.* art. 22(1). *See id.* art. 22(2), 21 I.L.M. 1245, at 1274.

One of six developments that the U.S. believes will be a near-future addition to a revised UNCLOS III is an anti-pollution measure calling for the "imposi[tion of] greater controls on navigation" within exclusive economic zones.[176] Such thinking is easily traced to the UNCLOS III negotiations. It was in that forum that Indonesia and Malaysia decried severe damage to the their fishing industries from massive oil tanker mishaps. Due to that experience they have taken the position that "passage of supertankers was non-innocent because the 'peace, good order and security of the coastal state' were being prejudiced by environmental risks . . . ."[177] The United States and other states considered the seriousness of this interpretation to be sufficient to warrant modifying their demand for unfettered strait transit.[178]

If states can effectively argue that the high risk to the environment by potential polluters is a breach of the "peace, good order or security" of a coastal state, as Malaysia, Indonesia and Singapore have contended, it is certainly valid for a state to take the position that the cataclysmal life and society-threatening risk posed by nuclear transit is such a breach. Indeed, this possibility was acknowledged in a United Nations study on nuclear weapon free zones, which posited that the "question of innocent passage" might be reconsidered "in light of the requirements necessary to the effectiveness of [a nuclear weapon free] zone."[179]

Restrictions upon the right of innocent passage are not without precedent. Over two dozen countries[180] require some sort of notification or approval of the passage of foreign warships within their territorial sea, including China and the Nordic countries. Despite the definition of innocent passage found in UNCLOS III, the actions of these states may make it "reasonable to concede to a State the right to enact regulations regarding the passage of foreign warships through its territorial waters, if considerations based on its safety and protection justify it,"[181] particularly

---

176. Alexander, *The Ocean Enclosure Movement: Inventory and Prospect*, 20 SAN DIEGO L. REV. 561, 588-90 (1983).

177. C. SANGER, *supra* note 20, at 88. In statements made after the Joint Statement on "Straits of Malacca and Singapore" was issued, *supra* note 159, the governments of Indonesia and Malaysia expressed specific concern about the problem of pollution. Indonesia took the view that "[e]very nation has the right to protect the territorial waters from use by other countries which could endanger the interest of its people, as by causing water pollution and damaging off-shore exploration and fishing industries." Statement of the Chief of Staff of the Navy, May 19, 1972, *quoted in* P. TANGSUBKUL, *supra* note 156, at 27-28. The Malaysian Prime Minister expressed a similar sentiment: "Indonesia and Malaysia have to control the Straits of Malacca so that it will not be polluted by oil spills from tankers which can and will destroy the fish and the shore of both countries." Opening Statement of the 23d UMNO (Government Party) Conference, May 1972, in *id.* at 28.

178. C. SANGER, *supra* note 20, at 88.

179. *Comprehensive Study*, *supra* note 7, at 49.

180. *See supra* note 147 and accompanying text.

181. Janis, *Dispute Settlement in the Law of the Sea Convention: The Military Activities Exception*, 4 OCEAN DEV. & INT'L L. 51, 54 (1977), (quoting C.J. COLOMBOS, THE INTERNATIONAL LAW OF THE SEA 223 (4th ed. 1961).

when that state takes the legal position that the presence of nuclear weapons cannot be "innocent."

(b) Transit Passage

The rationale for imposing restrictions on nuclear transit through the territorial sea are equally applicable to international straits. Whatever the potential dangers to a coastal state from an incident in its territorial sea, they are magnified in a strait. For example, a strait's narrowness and shallowness leave less room for error. These factors combined with the often heavy traffic passing through a strait[182] bring vessels closer to land and increase the chance for collision or grounding. Further, the importance of international straits to the nuclear powers[183] — and the frequent crossings their vessels make — presents a considerable risk of nuclear confrontation within straits.[184]

The concept of strait transit as a doctrine of international law was originally promoted as a regime of free passage through international straits.[185] Pressure by states bordering straits[186] ("straits states") such as Indonesia, Malaysia, Singapore and Spain resulted in some weakening of the free passage proposal. Still, the strait transit provisions of UNCLOS III, as enacted, served to prevent straits states from exercising complete sovereignty over what would otherwise be their territorial seas when that territorial sea comprised an international strait. Under UNCLOS III, any ship or aircraft is permitted unfettered passage when exercising continuous and expedient transit.[187] This is a weaker standard (from the point of view of straits states) than innocent passage.[188] Objecting to the severe restraints on their rights, several key straits states, among them Spain and Morocco (Strait of Gibraltar), Oman (Strait of Hormuz) and Indone-

182. *E.g.*, 5000 vessels per month through the Strait of Malacca. P. TANGSUBKUL, *supra* note 156, at 25 (citing P. TANGSUBKUL, AN ASIAN VIEWPOINT ON THE STATUS OF STRAITS IN EAST ASIA (1974)).

183. "The United States is especially dependent upon these archipelagic waters and international straits [of Indonesia and Malaysia] for the transit of its submarines to and from Guam and Subic Bay [the Philippines] to Diego Garcia [the U.S. naval base on an island in the central Indian Ocean]." Larson, *Innocent, Transit, and Archipelagic Sea Lanes Passage*, 18 OCEAN DEV. & INT'L L. 411, 417 (1987). *See infra* note 191.

184. *See supra* note 20 and accompanying text.

185. *See supra* note 156 and accompanying text. For detailed descriptions of the advance of the transit passage concept, many sources can be cited, including CHURCHILL & LOWE, *supra* note 171, at 81-89; LAW, FORCE AND DIPLOMACY, *supra* note 28, at 97-113; Kuribayashi, *The New Law of the Sea and the Straits of Malacca*, in INTERNATIONAL SYMPOSIUM ON THE NEW LAW OF THE SEA IN SOUTHEAST ASIA: DEVELOPMENTAL EFFECTS AND REGIONAL APPROACHES 146 (D.M. Johnson, E. Gold & P. Tangsubkul eds. 1983).

The journal Ocean Development and International Law recently published an entire issue devoted to the subject of transit passage. 18 OCEAN DEV. & INT'L L. 391-496 (1987).

186. *See supra* notes 158-61 and accompanying text.

187. *Id.* at 125-27. *See* UNCLOS III, *supra* note 27, art. 37-38.

188. *See infra* note 191 and accompanying text.

sia (Straits of Malacca and Lombok)[189] have declared that they will employ the innocent passage regime, not recognizing transit passage. This issue is of particular interest to an ASEAN nuclear free zone[190] where the straits providing the most expeditious and traveled access between the Pacific and Indian Oceans are located.[191]

The right of transit passage is similar to the right of innocent passage found in the territorial sea regime. Ships and aircraft exercising the right of transit passage are required to "refrain from any threat or use of force against the sovereignty, territorial integrity or political independence of States bordering the strait . . . ."[192] However, the strait state is not reserved the express right to expel a ship whose passage is non-innocent (i.e., prejudices the "peace, good order or security" of the coastal state).[193]

The transit passage regime contains another provision which could be invoked against nuclear-powered vessels and those with nuclear cargoes. In cases in which the environment is threatened, Article 233 of UNCLOS III allows coastal states to "take appropriate enforcement measures" against vessels "causing or threatening major damage to the

---

189. Surace-Smith, *supra* note 167, at 1033.

190. The ASEAN states may well be among the next nation groups to promulgate a nuclear free zone. *See* Fry, *supra* note 6, at 69-71. During the December 1987 ASEAN summit in Manila, Indonesian President Suharto called for an ASEAN nuclear free zone. In the end a paragraph in the final declaration of the summit stated that "ASEAN would intensify its efforts toward the early establishment of a Southeast Asian nuclear weapon free zone . . . ." Vatikiotis, *Zone of Discord: Nuclear-Free Proposal Likely to Split Allies*, FAR E. ECON. REV., Jan. 14, 1988, at 12.

More recently the ASEAN Inter-Parliamentary Organisation, while calling for its members to work for an Indian Ocean Zone of Peace, stressed the need to complete drafting of its own nuclear free zone treaty as soon as possible. *Other Reports: ASEAN Parliamentarians Call for Nuclear Free Zone*, Summary of World Broadcasts (BBC), Aug. 26, 1989. ASEAN leaders have also called upon the removal of all military bases and nuclear weapons from their region. *ASEAN Legislators Want Orderly Withdrawl of Foreign Bases*, Reuters, Aug. 25, 1989.

191. The United States perceives strait transit to be of critical strategic concern to its national defense:

> If straits states such as . . . Indonesia and Malaysia were able to restrict the movement of U.S. carrier forces for reasons of their own determinations of national security, the effectiveness of the U.S. nuclear commitment could be threatened especially in times of crisis, [at] precisely the time when straits states would be under the most pressure, internal and external, to limit passage.

Janis, *supra* note 181, at 58.

The sincerity of such claims by the U.S. is doubted by some. For example, it has been suggested that "the advent of the Ohio class SSBNs (submarines with ballistic missiles) and the Trident I/C4 SLBMs (submarine-launched ballistic missiles), with an estimated range from 4,500-6,500 nautical miles . . . 'would virtually eliminate the dependence of the U.S. underwater nuclear force on passage through international straits.' " Larson, *supra* note 183, at 424 (quoting R. OSGOOD, TOWARD A NATIONAL OCEAN POLICY, 1976 AND BEYOND 47-48 (1976)).

192. UNCLOS III, *supra* note 27, art. 39(1)(b).

193. *See* Wisnomoert, *supra* note 168, at 404.

marine environment of the straits . . . ."[194] This explicit recognition of the straits (and other coastal) states' valid environmental concerns[195] should provide straits states with the means to enforce the same kinds of anti-pollution/anti-nuclear mechanisms, and with at least the same justification, as with cases involving innocent passage.[196]

(c) Exclusive Economic Zones

On the surface, a solution to the question of how to prohibit nuclear transit through exclusive economic zones is not straightforward. Coastal states do not have any explicit rights over the movement of foreign ships and aircraft through the 200 mile exclusive economic zone which is declared[197] to be part of the high seas. Moreover, there is no obligation on the part of foreign vessels or aircraft to refrain from activities which might "prejudice the peace, good order or security" of the coastal state or to refrain from "causing or threatening major damage to the environment."[198] However, UNCLOS III does specify that the "coastal State has sovereign rights for the purpose of . . . conserving and managing the natural resources" in the exclusive economic zone[199] and has "jurisdiction . . . with regard to . . . the protection and preservation of the marine environment."[200] Furthermore, UNCLOS III calls for "compl[iance] with the laws and regulations adopted by the coastal State in accordance with" these provisions.[201] This set of rules provides a potentially effective means to prohibit nuclear transit through the EEZ while remaining within the framework of UNCLOS III.

The dangers to the environment of radioactive pollution are well known.[202] It is not an indefensible position that the transit of any radioactive materials through the exclusive economic zone creates an unacceptable risk to the conservation, management, protection and preservation of the marine environment. There are inherent dangers in the transportation of radioactive substances including the potential for accidents at sea[203] or in the air[204] that could result in the exposure to the marine envi-

194. UNCLOS III, *supra* note 27, art. 233

195. *See supra* notes 152-53, 160 and accompanying text.

196. *See infra* § III.A.

197. UNCLOS III, *supra* note 27, art. 135.

198. *See id.* art. 56.

199. UNCLOS III, *supra* note 27, art. 56(1)(a).

200. *Id.* art. 56(1)(b)(iii).

201. *Id.* art. 58(3).

202. *See, e.g.*, E. COLGLAZIER, JR., THE POLITICS OF NUCLEAR WASTE (1982).

203. To date seven nuclear-powered submarines have sunk, releasing radiation into the sea, and the crew of another nuclear submarine died of radiation poisoning following an accident. Broder & Healy, *Soviet Submarine Sinks Off Norway: Nuclear-Driven Craft Goes Down After Fire; 'Major Loss of Life' Reported*, L.A. Times, Apr. 8, 1989, § 1, at 1, col. 5. It has been argued that the radiation released from those sinkings was not enough to "produce a big effect." *Id.* quoting J. Holdren, professor of energy and resources at Univ. Calif. at Berkeley. But the sinking of an experimental Soviet nuclear submarine in April 1989 off Norway is "basically . . . big trouble," according to the same expert. Ybarra, *Experimental*

ronment of radioactive substances. The lax attitude of the maritime industry toward disposing of and illegally dumping radioactive wastes at sea[205] is an existing source of serious radioactive pollution.

The possibility of sealing off EEZs to nuclear transit is not an abstract vision. As the Law of the Sea now stands,

> [t]he coastal State has the right, within its EEZ, to adopt non-discriminatory rules and standards against vessel-source pollution and to enforce these when necessary . . . . [A] number of coastal States have already adopted domestic legislation with regard to vessel-source pollution which is more severe than the rules and regulations of the International Maritime Organization Convention. The passage of "potential polluters," such as nuclear-powered vessels, vessels carrying nuclear of other "hazardous" cargoes, and ammunition ships, through the EEZs of some coastal States, may in time be jeopardized, treaty or no treaty.[206]

System on Sunken Sub May Pose Radiation Threat, L.A. Times, Apr. 9, 1989, § 1, at 11, col. 1, quoting J. Holdren. The submarine's metallic sodium-cooler, which cools the reactors, is highly explosive when it comes into contact with water, an event which would lead to massive release of the reactors' radioactive fuel.

Altogether, over half of the worlds' nuclear reactors are aboard submarines and nuclear-powered surface craft, "which is the most dangerous place for them to be." Tuohy & Parks, *No Sub Radiation Peril Soviets Say: Gorbachev Reassures World Leaders; More than 60 Feared Lost in Sinking*, L.A. Times, Apr. 9, 1989, § 1, at 1, col. 5, quoting Damian Durrant of the environmental group Greenpeace. The other concern posed by these vessels are their nuclear weapons, which can also leach their radioactivity into the water following an accident at sea.

204. The dangers of a crash of a plane carrying nuclear weapons might be exemplified by the return to earth of nuclear-powered satellites. In 1979, Cosmos 924 crashed over a wide area of Canada, contaminating 40,000 square miles. When Cosmos 1900 was expected to burn up on re-entry in 1988, officials blithely admitted that "everyone in the world will be exposed to the radioactivity." Treen, *Nuclear Crash*, THE NATION, Oct. 3. 1988, at 261.

Of greater concern is the radioactivity which would be released if a space shuttle carrying a plutonium-powered satellite exploded, as did the Challenger in 1986. *Nuclear Debris Could Be Released in Shuttle/Centaur Explosion*, AVIATION WEEK AND SPACE TECHNOLOGY, Mar. 10, 1986, at 288. Plutonium is the deadliest substance known. *See infra* notes 239-40 and accompanying text.

205. *See, e.g.*, Boehmer-Christiansen, *An End to Radioactive Disposal at Sea?*, J. MARINE POL'Y 119 (Apr. 1986); Van Dyke, *Ocean Disposal of Nuclear Wastes*, J. MARINE POL'Y 82 (Apr. 1988).

206. Alexander, *supra* note 176, at 585-86 (quoting Burke, *National Legislation on Ocean Authority Zones and the Contemporary Law of the Sea*, 9 OCEAN DEV. & INT'L L. 289, 289-322 (1981)). This United States government officer's argument relies, in part on two sections of art. 211 of UNCLOS III, *supra* note 27. Art. 211(4) allows that:

> Coastal States may, in the exercise of their sovereignty within their territorial sea, adopt laws and regulations for the prevention, reduction and control of marine pollution from foreign vessels, including vessels exercising the right of innocent passage. Such laws and regulations shall, in accordance with Part II, section 3, not hamper innocent passage of foreign vessels.

Art. 211(5) provides that:

> Coastal States, for the purpose of enforcement as provided for in section 6, may in respect of their exclusive economic zones adopt laws and regulations for the prevention, reduction and control of pollution from vessels conforming to

As long as the law is evolving, maritime parties can expect coastal states to attempt to enforce new provisions to protect their resources. A Soviet participant in law of the sea negotiations has reasoned that

> the practical and legal evolution of the EEZ concept will not be without dispute . . . . It is likely, for example, that some coastal states will undertake actions and enact legislation which will interfere with the rights expected by naval powers in EEZs; they will claim that they are acting in the interests of good order at sea and in accordance with their developing rights in a zone which is unique in the law of the sea.[207]

(d) UNCLOS IV?

It is impossible to predict whether future Law of the Sea Conventions will incorporate any of the proposals suggested above and in the Model Nuclear Free Zone Treaty. What is evident, however, is that "[t]he system of norms and principles of international law is in constant movement. Some norms and principles are just being born, others have been formed, and yet others are dying out."[208] Like the recognition of the EEZ by the Third Convention on the Law of the Sea, those developing norms will eventually find their way into international acceptance.

The stage is being set for the expansion of environmental controls and protective rights by coastal states within their territorial seas,[209] international straits[210] and EEZs.[211] Even at this early date it has been posited that

> [t]he problem of ecological security is closely linked with the human right to a healthy environment and the respective obligations of states. The concept of ecological security has begun to be filled with real substance with the internationalization of the problem of the environment in international relations as an objective process, that is, the aspiration of every country to guard its natural environment and the health of its people against damage which might be caused as a result of the "anti-ecological" activities of other countries.[212]

Another development in this evolutionary process is the effort by anti-nuclear forces to advance the claim of the Spanish legislature "that the passage of nuclear ships through territorial waters [is] to be considered an exception to the right of innocent passage."[213] This approach can

---

and giving effect to generally accepted international rules and standards established through the competent international organization or general diplomatic conference.

207. N. Rusina, *supra* note 31, at 262.

208. LAW, FORCE AND DIPLOMACY, *supra* note 28, at 43.

209. *See supra* subpart (a) of this section.

210. *See supra* subpart (b) of this section.

211. *See supra* subpart (c) of this section.

212. N. RUSINA, *supra* note 31, at 269.

213. Act No. 25/64, Apr. 29, 1964, art. 7, *UN Leg. Ser.* B/16, p. 45, reported in *id.* at 70.

be most effective within the framework of the territorial sea, where innocent passage is the current regime.[214] It would also be easily workable among the several straits states which employ innocent passage instead of the regime of transit passage recently adopted by the yet-to-be activated UNCLOS III.[215] Some countries have already adopted such a stand, most notably New Zealand, which has banned port visits by nuclear capable vessels.[216]

The movement of norms and principles may play a large role in the strait transit area, as well. The transit passage regime, though weaker than they originally sought, favors the strongest naval powers.[217] As the strength and determination of the less powerful coastal states increases, the resistance to the nuclear powers' attempt to install a regime of freedom of the sea through international straits will grow. The advancement of the Law of the Sea may also, one day, affect the transit passage regime's requirement that shipping and aircraft passing through or over an international strait "refrain from any threat or use of force against the sovereignty, territorial integrity or political independence of States bordering the strait . . . ."[218] Is it not conceivable that nuclear transit could be viewed as a violation of this provision?

3. Voluntary Compliance

In the final analysis, compliance with new Law of the Sea provisions, or nuclear prohibitory interpretations of the current Law of the Sea, will most likely be voluntary. Treaties are substantially honored through international pressure and self-interest.[219] Where a nuclear free zone treaty is the vehicle by which nuclear transit is prohibited, there is an institutional form of voluntary compliance: each nuclear power would be asked to sign a protocol. Such protocols attempt to assure that the nuclear powers would honor the respective nuclear free zone treaty's prohibition on nuclear transit throughout the zone, whether it included just the territorial sea, EEZ, or an entire region of the open ocean. This is the theory of the protocols to the Tlatelolco and Rarotonga Treaties.

See supra notes 172-73 and accompanying text.

214. UNCLOS III, *supra* note 27, arts. 17-32. One commentator posits that change will come as cultural norms change. "If States believe that nuclear weapons are illegal, and that NFZs (nuclear weapons free zones) present a hope for world peace, cultural norms will gradually develop into legal norms against nuclear armaments." McFadden, *Nuclear Weapon Free Zones: Toward an International Framework*, 16 CAL. W. INT'L L.J. 217, 249 (1986).

215. *See supra* note 189 and accompanying text.

216. *See infra* note 99 and accompanying text.

217. *See supra* notes 156-61 and accompanying text.

218. UNCLOS III, *supra* note 27, art. 39(1)(b).

219. The doctrine of *pacta sunt servanda* (treaties are to be observed) arose out of the Peace of Westphalia ending the Thirty Years' War in 1648. T. BUERGENTHAL & H. MAIER, PUBLIC INTERNATIONAL LAW IN A NUTSHELL 16 (1985). Despite machinery designed to enforce treaty obligations included in most treaties since then, no nation will honor a treaty if to do so would result in its own detriment.

In the case of a nuclear prohibitory treaty or protocol, compliance does not have to rely on good faith alone. Instead, it may well be assumed that the nuclear powers would monitor compliance by one another providing an indirect method of verification. A ban on port or airfield visits included in such a treaty or protocol would, if honored, create *de facto* compliance.

B. *Nuclear Weapons, Alliances with Nuclear Powers and C³I*

Assuming the Treaty of Rarotonga to be a minimum standard to which future nuclear free zone treaties will adhere, the manufacture, possession, testing, storage, deployment and use of nuclear explosive devices of any type will be prohibited by such treaties.[220] The Rarotonga prohibitions do not, however, apply to activities of assistance, cooperation and participation in support systems for nuclear weapons. Australia, a party to the South Pacific accord, cooperates and co-manages[221] with the United States several so-called C³I,[222] or Command, Control, Communication and Intelligence installations, which are part of the U.S. defense network, helping to monitor and manage the location and activities of American and other forces throughout the Indian Ocean, East Asia and South Pacific regions.[223] As Michael Hamel-Green points out in the commentary to his treaty for FANG, such facilities are "integral parts of nuclear-warfighting [sic] systems and are generally considered to be prime nuclear targets in any nuclear hostilities,"[224] an irony acknowledged by Australian officials.[225]

Such systems might also serve as part of the conventional defense of the "host" state.[226] Nonetheless, if an objective of a nuclear free zone is to

---

220. Treaty of Rarotonga, *supra* note 3, arts. 3-6, at 1444-46.

221. *U.S. Reaffirms Military Role in Pacific*, Reuters, Nov. 4, 1989; R. BABBAGE, RETHINKING AUSTRALIA'S DEFENCE 40, 92-99, 241, 244 (1980); C. Bell, *ANZUS in Australia's Foreign and Security Policies*, in AUSTRALIA'S FOREIGN & SECURITY POLICIES 136 (J. Bercovith ed. 1988). America's major C³I installations in Australia are located at North-West Cape, Nurrungar and Pine Gap. *Id.* at 154.

222. M. Hamel-Green, *supra* note 66, at 3. *See Command, Control, Communications and Intelligence*, SCI. AM., January 1985, at 32 [hereinafter "SCI. AM."].

223. *See* R. BABBAGE, *supra* note 221; M. O'CONNOR, TO LIVE IN PEACE: AUSTRALIA'S DEFENCE POLICY (1985); SCI. AM., *supra* note 222.

224. M. Hamel-Green, *supra* note 66, at 3. Michael Hamel-Green is not the only commentator to suggest this irony. Coral Bell notes that "the most vital of all Australia's vital national interests is the preservation of peace between the central balance powers. And this is also the most *endangered* of Australia's vital interests . . . ." C. Bell, *supra* note 221, at 152 (emphasis in original). Thus, while Australia's greatest threat is from nuclear war, it believes it must also be a participant in that same risk in order to help preserve the balance of power.

225. Confidential interviews with officials of the Foreign Ministry of Australia, *see supra* note 71.

226. C. Bell, *supra* note 221, at 150. However, Bell asserts that "[t]he American connection is useful but not essential to Australia in low-level threats. It would be vital in coping with internal level threats, but the help required would be more in the field of diplomacy, backing, supplies and intelligence than in combat forces . . . ." *Id.*

insure that the region not be a nuclear target, then one must ask, How can the maintenance of such installations comport?

Of course, if Australia or any other state in a similar position were to disband C³I facilities, the U.S. (or any other nuclear power in a similar position) would almost certainly object,[227] claiming that it cannot maintain its nuclear deterrent or its defense obligations to the host nation if the installation were to be removed. Such a claim puts a state desirous of being non-nuclear in a dilemma of sorts as long as there is tension between nuclear powers. If it rids itself of the danger of attack to the C³I facilities located on its soil, it also risks losing the protections of its defense alliance with the Western or Soviet bloc.

A second question inseparable from the C³I issue must also be considered. Should a nuclear free zone treaty prohibit treaty Parties from joining alliances with nuclear powers?[228] There are several questions the non-nuclear state may want to attempt to answer. What protection is actually provided by that alliance? Is the danger of nuclear attack, if nuclear free provisions are not enforced, greater than the danger of external attack should that alliance disband? Is there a strong non-nuclear state within the nuclear free zone that can aid in the defense of the smaller or weaker states against outside conventional forces, and at what cost? Is this defensive aid desirable? Can the strength of the new alliance created by the nuclear free zone treaty serve as a deterrent from outside attack? Is a conventional deterrent more effective for defense purposes than reliance on a nuclear state for protection?

The treaty proposed by the Fiji Anti-Nuclear Group[229] would prohibit "entering into military alliance arrangements with nuclear weapon states under which nuclear weapons would be used in defense of or with the cooperation of any Contracting Party."[230] A more radical approach would be to ban all defense alliances with nuclear states. Such an approach might well be unnecessary if the parties to an alliance involving one or more nuclear powers made it explicit that nuclear weapons would not be used in the defense of the non-nuclear state. This agreement would presumably provide greater assurance of freedom from nuclear attack by the opposing nuclear state, due to the diminished threat of attack from that region, though such an agreement has speculative effect at best. The nearest thing to a precedent may be "negative assurances"[231]

---

227. In an analogous situation, the United States suspended the ANZUS alliance as regards New Zealand following New Zealand's ban on port visits by nuclear capable vessels. *See infra* note 99 and accompanying text.

228. Michael Hamel-Green's Draft Treaty for a Comprehensive Nuclear Free Zone in the South Pacific, prepared for the Fiji Anti-Nuclear Group, calls for the prohibition of any "military arrangements with nuclear weapon states under which nuclear weapons would be used in defense of or with the cooperation of any Contracting Party." Art. 1(f). Text can be found in M. Hamel-Green, *supra* note 66.

229. FANG Treaty, *supra* note 68.

230. *Id.* art. 1(f).

231. Kennedy Graham, a disarmament ambassador for New Zealand, spells out three

whereby nuclear powers have declared not to use nuclear weapons against non-nuclear states, as is the case with a protocol to the Treaty of Tlatelolco.[232] However, the United States has made it clear that it could not abide by such a proviso,[233] thereby withdrawing its defense obligations to New Zealand following that country's nuclear port ban.[234]

For negotiators of future nuclear free zone treaties this may be one of the most difficult issues. The pragmatist might say that the nuclear powers cannot be ignored. Even truly neutral countries may feel threatened by one or the other of the nuclear states or their proxy. Defense alliances may at worst be a "necessary evil." But as New Zealand[235] and the drafters of Palau's Constitution[236] have asserted, there may be no need for such alliances to rely on nuclear weapons.

Still there exists the question of what should future negotiators do regarding C³I and similar facilities? Their use and value for non-nuclear, weapons-related defense and mobility purposes can be great, if not vital. Similarly, even the most basic of such systems, intended and normally used for non-nuclear purposes, could be utilized for monitoring and communicating with nuclear weapons.

Thus, any approach which did not completely ban electronic surveil-

---

forms that negative assurances can take:

> 1. A 'total non-use' pledge never to use nuclear weapons against any state at any time or under any circumstances.
> 2. A 'non-first strike' and a 'non-first use' pledge between nuclear powers in which one undertakes never to be the first to use nuclear weapons against another. A non-first strike pledge excludes the use of nuclear weapons in the form of the first offensive move of war. A non-first use pledge excludes their initial employment in response to aggression by conventional forces. Either of these pledges can be of two kinds:
>
> (a) a total pledge, in which the nuclear power applies the pledge to all other nuclear powers; or
>
> (b) a partial pledge, in which the nuclear power extends the pledge to certain other nuclear powers but not to all.
>
> 3. The more general 'non-use' understanding extended to non-nuclear weapon states. This can similarly be of two kinds:
>
> (a) a total undertaking, in which the nuclear power forswears the use of nuclear weapons to all non-nuclear weapon states under any circumstances;
>
> (b) a partial (or conditional) undertaking, in which the nuclear power agrees not to use nuclear weapons against non-nuclear weapon states under certain circumstances, or on certain conditions. There are a number of variations of condition 'non-use' undertakings, depending on the circumstances and the conditions stipulated.

Graham, *supra* note 84, at 281. *See infra* note 19 and accompanying text.

232. Treaty of Tlatelolco, *supra* note 5, protocol II, art. 3, at 364. The Treaty of Rarotonga contains a similar protocol, Treaty of Rarotonga, *supra* note 3, protocol 2, art. 2, at 1461, but only China and the U.S.S.R have signed protocol instruments. *See supra* notes 69-82 and accompanying text.

233. *See supra* note 70 and accompanying text.

234. *See infra* note 99.

235. *See* Glover, *supra* note 19; *see also infra*, note 99.

236. *See supra* notes 86-93 and accompanying text.

lance, monitoring and command facilities would almost certainly be unenforceable. A better, though not completely satisfactory, approach would be to prevent such facilities located within the zone from being used for any activity in relation to nuclear weapons. Instead of banning such facilities altogether, it would rely on the good faith of the states to uphold the intent of the treaty. And it does, at least, acknowledge the dilemma posed by such facilities. In a nuclear episode the net result just might be the sparing of the facility — and the "host" state — from nuclear attack.

C. *Peaceful Nuclear Activities*

It is both impossible to assure that any nuclear explosive device will only be used for peaceful purposes and to guarantee that the use of such a device will not result in any risk to life or property. The Rarotonga Treaty simply bans all nuclear explosive devices.[237] But what of other allegedly peaceful nuclear purposes?

Virtually no one denies that the use of radioactive materials for medical and limited non-military research purposes is valid and acceptable. However, at what point does non-military scientific nuclear research cross the line to become military research? This is a distinction which authorities and watchdogs may want to watch closely, yet these may be beneficial uses even the most ardent foes of nuclear activity would not prohibit.[238]

Nuclear power plants present a possible problem for some states wishing to go nuclear free. Huge amounts of foreign exchange may have been invested in the reactors.[239] Yet many states which do have nuclear power plants have publicly acknowledged the extraordinarily heavy financial, environmental and social burden which they impose on their people. Such an acknowledgement may have led to the closing down of the brand new reactor in the Philippines[240] and the phase-out of nuclear power plants undertaken in Sweden as early as 1980.[241]

Nuclear power plants also pose nuclear proliferation dangers. Waste material from reactors contains weapons-usable plutonium which,[242] if reprocessed, could be utilized in nuclear weapons.[243] Moreover, fissionable wastes from nuclear power plants are known to be susceptible to diversion.[244] Nuclear power plants are also subject to terrorist attack and could

---

237. Treaty of Rarotonga, *supra* note 3, art. 3, at 1444-45.

238. *See, e.g.*, M. Hamel-Green, *supra* note 66, at 3-4.

239. For example, the Philippine nuclear reactor which President Aquino shut down prior to its launching cost her country more than $2 billion in hard currency. Dumaine, *supra* note 97.

240. *Id.*

241. *See supra* note 101 and accompanying text.

242. R. NADER & J. ABBOTTS, THE MENACE OF ATOMIC ENERGY 78-81.

243. *Id.*

244. *E.g.*, Pakistan and India have avoided or bypassed international nuclear safeguards and supervision, resulting in both countries having the facilities and nuclear material to construct significant quantities of nuclear weapons. L. SPECTOR, *supra* note 16, at 73-124. Similar allegations involving Israel have been commonplace for several years. *Id.* at 130-45.

be held for political ransom.[245] In 1990 the justification for new nuclear power plant construction in most, if not all situations, and even the operation of many existing nuclear power plants, is nil.

Recent years have seen a growth in consumer and industrial uses of radioactive substances. Examples include smoke detectors, food irradiation and sterilization by irradiation.[246] Of course, there is a risk of radioactive contamination with these products, as with all nuclear products. That risk is magnified by the greater dissemination of radioactive materials which will necessarily occur as food irradiation plants are built and operated,[247] not to mention the radioactive waste materials produced by these irradiation facilities.[248] Furthermore, the material used by food irradiation plants, for example, is a direct by-product of weapons-grade nuclear fuel production.[249] A risk completely different in nature is intimated by medical research which links irradiated foods to increased incidence of cancer and other diseases in humans.[250] A truly comprehensive nuclear free zone should at least consider restrictions on the great many of these activities and products. A reasonable approach would be to ban all nuclear activities except those for which there is both a minimal societal benefit *and* no non-nuclear substitute.

D. *Radioactive Waste Disposal*

The London Convention[251] prohibits the disposal of high level radioactive wastes at sea,[252] and since 1983 there has been an international moratorium[253] on the dumping of all radioactive wastes at sea. In no way should this be seen as a permanent device for ocean protection. The 1983

---

245. *See generally*, P. LEVENTHAL & Y. ALEXANDER, PREVENTING NUCLEAR TERRORISM (1987).

246. Among non-food items which are irradiated presumably for sterilization purposes are "blood agar and plasma, blankets and towels, bottles, cosmetics, needles, infant wear, peat moss, sanitary napkins and tampons, lubricating jelly, scalpel blades, and water . . . ." Gibbs, *Zap, Crackle, Pop*, THE PROGRESSIVE, Sept. 1987, at 22, 24. Labels are not required for any irradiated products. *Irradiation Business Gears Up*, UTNE READER, May - June 1987, at 29-30 [hereinafter "UTNE"]. A former federal law requiring labeling of unprocessed whole foods, Gibbs, *supra*, expired in 1988. *See also* UTNE, *supra*.

247. Terry, *Why Is D.O.E. for Food Irradiation?*, THE NATION, Feb. 7, 1987, at 142. Although irradiation is a young business, there have already been significant radioactive spills, sloppy record keeping and other willful violations of safety regulations. *Id.*; UTNE, *supra* note 246.

248. Terry, *supra* note 247, at 142.

249. *Id.*

250. One study found an 80% incidence of a white blood cell anomaly, polyploidy, related to immune system disorders among children who ate products made from irradiated wheat. Gibbs, *supra* note 246, at 22-23. Animal studies have demonstrated genetic mutations among flies and mice fed irradiated food. *Id.* at 23.

251. Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, *opened for signature* Dec. 29, 1972, 26 U.S.T. 2403, T.I.A.S. No. 8165.

252. *Id.*

253. Boehmer-Christiansen, *supra* note 205; Van Dyke, *supra* note 205.

moratorium is currently under review[254] in the hope (by the nuclear exporting and waste producing countries) that its protections will be weakened.

South Pacific Forum states have chosen not to permit such a slackening to occur in their seas. The Treaty of Rarotonga institutionalized the 1983 moratorium's ban for the South Pacific.[255] A year later it was enhanced with the conclusion of the Convention for the Protection of the Natural Resources and Environment of the South Pacific Region, signed in 1986.[256] The seas of the South Pacific may now be free from radioactive pollution, but what of the rest of the world? Certainly any nuclear free zone should incorporate similar prohibitions.

Likewise, the disposal or storage of nuclear wastes anywhere in the vicinity of a watershed, or proximate to an alluvial deposit, should be strictly prohibited. Currently there is no known safe method of radioactive disposal. Until a safe method of storage or disposal is discovered, such products should be kept to a minimum, and where they do exist, the surest and safest alternative is to require users of such materials to store them in a nearby facility affording the maximum possible containment, monitorability and retrievability. Ideally, such facilities would be located near the largest sources of high level radioactive wastes in order to minimize the chance of spillage or loss when wastes are transported to storage facilities.

The net result is that future nuclear free zone treaties would be best to ban all storage or disposal except in monitored, retrievable storage facilities until an acknowledged safe method of disposal is discovered and in use. In the meantime, the world (or a nuclear free zone) would do best to bring the production of such materials to absolutely minimal levels (i.e., necessary medical and scientific uses only).

E. *Nuclear State Compliance*

The extant nuclear free zone treaties have sought to obtain explicit nuclear powers accession to the relevant parts of these treaties through protocols. This device has been accepted by the nuclear powers, given the requirement that nuclear free zones be regional undertakings.[257] The first of the two common protocols to the two extant treaties calls for adherence to the relevant principles of the treaties by extra-regional states which have international responsibility for territory within the region.[258]

---

254. *Id.*

255. Treaty of Rarotonga, *supra* note 3, art. 7, at 1447.

256. SPREP, *supra* note 52.

257. One of eight guidelines for the establishment of a nuclear weapon free zone, agreed upon by the parties to the United Nations study on the subject, is that "[t]he initiative for the creation of a nuclear-weapon-free zone should come from States within the region concerned, and participation must be voluntary." *Comprehensive Study*, *supra* note 7, at 31.

258. Treaty of Tlatelolco, *supra* note 5, protocols I, II, art. 2, at 360, 364; Treaty of Rarotonga, *supra* note 3, protocol 1, art. 1, at 1459, and protocol 2, art. 2, at 1461.

The second seeks assurance that the nuclear states will not assist any treaty party in violating a provision of the treaty as well a promise not to use nuclear weapons against treaty parties.[259] The Rarotonga Treaty includes a unique third protocol which asks nuclear states to refrain from testing nuclear explosive devices throughout the region.[260]

Additional protocols could be devised to obtain nuclear state accession to a broader range of treaty provisions. For example, being that the nuclear transit questions are likely to be among the most difficult to enforce, a pragmatic solution would be to attempt to secure a nuclear power agreement to honor any such provisions contained in the treaty, as proposed in Section III(A)(5) hereof.

Another possible protocol could seek nuclear power assurances that they would not test nuclear capable delivery vehicles anywhere within the zone. The working group to the SPNFZ expressed concern over the increasing frequency of missile tests throughout the Pacific.[261] Such a protocol, however, raises two difficulties. It could be validly argued that the same missiles which propel nuclear warheads can also be used to deliver conventional warheads and satellites. Thus, perhaps intention is the only way to distinguish acceptable versus unacceptable delivery systems. As to the *raison d'etre* of such a protocol, it is not beyond the ken for a nuclear free zone treaty to take whatever actions it can which may slow down the growth in the global nuclear arms race. Certainly such a goal might fall within the treaty's scope.

IV. THE MODEL NUCLEAR FREE ZONE TREATY

The Model Treaty (which appears in full in the Appendix to this article) is one possible ideal approach. Its individual provisions will appear to some as reasonable objectives and to others as anti-nuclear extremes. If considered by any given nation-group somewhere in the world, it may or may not find them pragmatic. Regardless, it is hoped the Model Treaty will promote discussion, both in a general (or even academic) sense and within the specific case or cases of regional groups contemplating the creation of nuclear free zone treaties.

The objective of this article is to contribute to and help foster dialogue, and in so doing and simultaneous thereto, expand the framework and possibilities for these dialogues. If the result is that this analysis and the Model Treaty provide nuclear free zone negotiators with just the smallest bit of fodder, then this effort will have been a resounding success.

What follows is an article-by-article discussion of the Model Treaty's provisions with an emphasis on the objectives each would attempt to ac-

---

259. Treaty of Tlatelolco, *supra* note 5, protocol II, art. 3, at 364; Treaty of Rarotonga, *supra* note 3, protocol 2, arts. 1-2, at 1461.

260. Treaty of Rarotonga, *supra* note 3, protocol 3, at 1463.

261. *Working Group Report*, *supra* note 65, at 27.

complish should the Model Treaty be adopted. The discussion of the substantive articles of the Model Treaty will compare it to the Treaty of Rarotonga. The complete Model Treaty is found at the Appendix.

Article 1. Renunciation of Nuclear Explosive Devices.

Article 1 is similar to Article 3[262] of the Treaty of Rarotonga. Slightly more expansive in its breadth, it prohibits the presence and use, in any form, of nuclear explosive devices by anyone, anywhere within the zone. Its scope is intended to be all inclusive.

Article 2. Prohibition of Nuclear Transit.

This article incorporates a total ban on the transit of nuclear powered ships and of any warship or military aircraft containing nuclear explosive devices anywhere through, over or upon any territory in the zone, including that territory over which a treaty Party has jurisdiction, including its territorial sea and exclusive economic zone. It adopts the language suggested by the discussion in section III(A) above.

As well as prohibiting such transit, paragraph (c) of the article imposes a control system requirement on treaty parties in order to assure their compliance with these provisions. These requirements are designed to force foreign state compliance with the control system.

The South Pacific Nuclear Free Zone Treaty does not prohibit nuclear transit, though it does restrict the presence of nuclear explosive devices and similar items from the zone of application.[263] In addition, Article 5(2)[264] of the Treaty of Rarotonga allows each party to "decide for itself whether to allow visits by foreign ships and aircraft to its ports and airfields, [and] . . . territorial sea," so long as it is "*in a manner not covered* by the rights of innocent passage . . . or transit passage of straits."[265]

Article 3. Prevention of Dumping of Radioactive Wastes.

Unfortunately, even with the 1983 moratorium[266] on the dumping of radioactive wastes at sea (now under review[267]), the question of such dumping is not academic. Article 3 treats the question of radioactive waste dumping at sea, and goes far beyond. It prohibits dumping or storage at any location which could contaminate water supplies or soil. It further requires that radioactive wastes be stored in monitored, retrievable and secure waste management facilities on or in land or structures built thereon or therein. This provision goes well beyond the language of the

---

262. Treaty of Rarotonga, *supra* note 3, art. 3, at 1444-45, is entitled "Renunciation of Nuclear Explosive Devices."

263. *Id.* arts. 3-6 at 1444-46.

264. *Id.* art. 5(2) at 1446.

265. *Id.* (emphasis added).

266. *See supra* note 253 and accompanying text.

267. *Id.*

Treaty of Rarotonga limited solely to dumping.

One of the stickier questions confronting radioactive waste experts today is what constitutes a sufficiently safe and secure waste management facility. Some would defer to International Atomic Energy Agency (IAEA) standards, but these have proven relatively weak. One reason may be that Article II of the Charter of the IAEA states that a main interest and responsibility of the IAEA is the promotion of the expansion of the nuclear industry.[268] As long as this is one of the primary objectives of the IAEA, it will continue to incorporate considerations of nuclear expansion into its recommendations on waste disposal techniques. Thus, IAEA regulations and standards cannot be credible as effective tools for the enforcement of any effective nuclear free zone. Paragraph (d) of the article in fact calls upon party states to support the development of more responsible nuclear-safeguard standards on the part of the IAEA.

The Tlatelolco and Rarotonga Treaties require party states to conclude nuclear safeguard agreements with the IAEA.[269] The Model Nuclear Free Zone Treaty takes a more restrictive stand, calling on party states to provide for "maximum" containment, safety and security (which should be read to include a demonstration that sites selected for radioactive waste storage will be afforded sufficiently restrictive access to eliminate, as much as possible, the threat of terrorist attack or sabotage). Admittedly, the standards contained in Article 3 are non-specific. If specific, effective, workable standards existed, they would be included. As the state of the art of radioactive waste disposal (not to mention other toxic waste disposal) does not afford such standards, the best that can be hoped for at the present time is for party states to police themselves and one another in the spirit of the treaty in order to effectuate such maximum protections.

Nothing in this article would prevent any treaty party from availing itself of the complaint and investigation procedures of Article 12 (Complaints and Special Investigations) if it believed another treaty party to be employing standards so weak as to be inconsistent with the Treaty. This device would act as a further assurance of meaningful and maximal protections and safeguards.

The article avoids any distinction between high and low level wastes. Both present long-term and highly hazardous dangers. For practical purposes it is felt that all radioactive wastes must be stored in maximally safe conditions. To allow a lesser standard for low level wastes would tend to minimize their perceived danger and, perhaps, have the effect of encouraging processes and products which generate such wastes.

---

268. Statute of the International Atomic Energy Agency, Oct. 26, 1956, 8 U.S.T. 1093, T.I.A.S. 3873.

269. Treaty of Tlatelolco, *supra* note 5, art. 13, at 340; Treaty of Rarotonga, *supra* note 3, art. 8(2)(c) at 1448, and annex 2 at 1455.

Article 4. Peaceful Nuclear Activities.

While acknowledging the necessity of medical and non-military uses of radioactive substances,[270] Article 4 disallows the necessity of other uses, including nuclear power. Its provisions would also prohibit the use of nuclear isotope irradiation plants as food irradiators. (On the other hand, hospital irradiators used exclusively for sterilizing food for medical and sanitation purposes would be permitted).[271] Protocol "A" takes a slightly different approach with regard to the banning of specific uses and products derived from or utilizing radioactive substances, such as fertilizers with high concentrations of phosphate, by providing a mechanism for recognizing socially beneficial uses of some radioactive materials. But unless the protocol is adopted, the language of Article 4 will prohibit all such uses.

This requirement goes far beyond that of the Rarotonga Treaty, which is limited to support of the Non-Proliferation Treaty and prevents the provisions of source fissionable materials to non-nuclear states except under IAEA safeguards.

Article 4 must be read in connection with the definition of radioactive substance found in Article 6.

Article 5. Nuclear Weapons Systems.

This is the last substantive article of the Model Treaty, and is a concept not included in the extant treaties. This article starts off with some general language proclaiming the parties' seriousness and intent to encourage the eventual denuclearization of the entire planet. Except for the last two paragraphs (h)-(i), the remaining paragraphs (d)-(g) explicitly address and prohibit indirect ways in which treaty parties might participate in nuclear weapon development.

Paragraph (h) prohibits the use by any state of electronic surveillance and command facilities (i.e., C^3I) if used in connection with the "performance, operation, targeting, testing, or efficiency of nuclear explosive devices." As discussed in section III(B), this paragraph relies on the good faith of the parties. As demonstrated in the cited section, seemingly tougher language would likely result in less compliance with the spirit of the Model Treaty than this more moderate wording.

Paragraph (i) essentially adopts the FANG Treaty[272] principle on military alliances, which prohibits defense alliances in which nuclear

---

270. *See supra* note 238 and accompanying text.

271. Indeed, if it is determined that certain models or types of radioactive or scientific reactors are particularly prone to abuse of the terms of the treaty, it would not be beyond the scope of the treaty for the Parties to ban these reactors, either in the body of the treaty itself or in a protocol or amendment. Such a preclusion might include, for example, the Norwegian research reactor in Halden. *See supra* note 106.

272. FANG Treaty, *supra* note 68, art. 1(f). *See supra* notes 221-28 and accompanying text.

weapons would be employed.

Article 6. Definitions and Terms.

"Nuclear explosive device"[273] and "stationing"[274] are similar to those definitions in the Treaty of Rarotonga. "Nuclear explosive device" is designed to be all inclusive, banning all nuclear explosive devices of any type, anywhere within the zone. Likewise, "stationing" is defined so as to be equally inclusive of all methods of transporting or basing nuclear explosive devices. "Territory" is meant to be all inclusive of any land, sea, subterranean and airspace territory over which a treaty Party has any legal or juridical claims or right of claim. The nature of the whole treaty is intended to be all inclusive, so such a definition of territory is good shorthand if not a pragmatic necessity. "Radioactive substance" is likewise intended to be all inclusive. Its breadth includes any and all substances which are radioactive or contaminated with radioactivity.

Article 7. Zone of Application.

Paragraph (1) refers to Annex 1. Annex 1, which would be tailor-made for the nation group considering the treaty, would contain the geographic definition and boundary of the zone covered by any treaty adopted from this Model Treaty. Paragraph (2), along with Article 20, would allow the expansion of the treaty zone to include adjacent states not included in the original treaty boundary, when the conditions therein specified are met or the broadening of the treaty zone by mutual incorporation with an adjoining nuclear free zone. (Article 20(2) would ensure that the new treaty zone would have standards no less than those incorporated by the present treaty). This, of course, would further the goals of global nuclear disarmament or a global or near-global nuclear free zone. Recall that the two extant nuclear weapon free zones, plus the Antarctic Treaty, form a single contiguous nuclear free zone comprising two-thirds of the South Hemisphere as well as some territory in north-of-the-equator Central America.[275]

Articles 8-10. Consultative Committee; Organization; Annual Meeting.

Articles 8-10 establish the organization of the Model Treaty. The Consultative Committee is the main body of the treaty organization. It consists of a representative of each treaty party. It makes virtually all policy, investigative and remedial actions of the treaty organization. An annual meeting is called for (Article 10), as well as non-scheduled meetings as provided by Article 12.

The Organization (Article 9) is the housekeeping and central clearing house of the treaty organization. The article calls for a Director and nec-

---

273. Treaty of Rarotonga, *supra* note 3, art. 1(c), at 1444.
274. *Id.* art. 1(d).
275. *See supra* note 58 and accompanying text.

essary (presumably small) staff. The Organization is responsible for coordination and communication among the treaty Parties.

Article 11. Reports, Exchanges of Information and Freedom of Information.

The concept of a nuclear free zone, as most international accords, relies on the good faith of the parties. In order to facilitate the trust required to ensure the compliance with and reverence for a treaty of this type, it is believed that maximal information sharing is essential. The sharing of various reports and information, as called for by the article as well as "ad hoc" documents, will also provide the confidence needed to assure that not only are treaty parties adhering to the letter of the law, but to its spirit as well, particularly in regard to their adherence to monitoring requirements of Article 2 (Transit). The article additionally calls for the disclosure of all reports to the public at large except for those documents explicitly made confidential under paragraph (5). An automatic "sunset" provision allows for continuance of the confidential status only on an annually renewable basis.

Article 12. Complaints and Special Investigations.

Another important element of the control system is a means of investigating alleged violations or breaches of the Model Treaty. Article 12 provides a mechanism to insure that complaints are heard and investigations carried out without interference and with the promise of the utmost integrity.

It is felt that these provisions should be part of the main body of the treaty, not an annex as they are in the Treaty of Rarotonga.[276] The South Pacific Forum exhibited great apparent harmony among its members,[277] probably accounting for the location of these provisions in the treaty's annex. Though desirable, it is doubtful that few other regions can make such a claim. Thus, positioning these provisions in the body of the treaty is appropriate.

Articles 13-14. Corrective Actions; Settlement of Disputes.

Article 13 is an adjunct to Article 12 in that it provides the device for corrective action to be taken should a complaint made under the provisions of Article 12 prove true. Sanctions of a group of states against another state are difficult to arrive at or enforce. Creativity may help those in the future to arrive at equitable solutions. Paragraph (3) allows for such solutions. It also lists as a possible action, which could be used should the circumstances warrant, economic sanctions. Such sanctions would likely be most effective where a trade relationship or mechanism is

276. Treaty of Rarotonga, *supra* note 3, annex 4, at 1456-59.
277. Fyfe & Beeby, *supra* note 2, at 35-37.

already in place which would allow concerted effort against the aggrieving party.

Article 14 provides for arbitration or, in the alternative, the adjudication of the International Court of Justice, should the aggrieving party fail to comply with decisions reached under the provisions of Article 13.

Article 15. Amendment.

A two-thirds vote is required for amendments. The Treaty of Rarotonga calls for a unanimous vote before an amendment can be adopted.[278] Such an approach prevents tyranny of the majority, but so does a two-thirds vote while still retaining some flexibility.

Article 16. Signature, Ratification and Deposit.

These are standard treaty provisions. Paragraph 1 holds the treaty open for signature indefinitely. Paragraph 2 requires the treaty be ratified by the treaty parties. Paragraph 3 specifies the Director of the Organization as the Depositary of the Model Treaty once the treaty enters into force. Until that time, the state archivist of the state in which the treaty is signed shall serve as the depository.

Articles 17-18. Reservations; Duration and Withdrawal.

Such a treaty as this cannot permit reservations, nor should it terminate after a period of time. It is hoped by the Model Treaty that such an instrument would not be needed at some time in the future. No one knows when or if that time will come. The permanency of this agreement demonstrates the commitment and determination of the treaty parties to a nuclear free world. To say that after so many years we will reconsider our decision to refrain from building or using nuclear weapons does little to build confidence in one's treaty partners.

Permitting reservations, or a provision allowing states to be free from formally being bound until all possible treaty parties have ratified the treaty as is the case with the Treaty of Tlatelolco,[279] leads to inconsistent results and the denigration of the treaty's credibility. Indeed, both Brazil and Argentina[280] are believed to have been undertaking substantial research and development in nuclear energy and nuclear explosions. However, the two Latin American states have been engaged in a confidence building dialogue to open each other's nuclear facilities to one another.[281]

---

278. Treaty of Rarotonga, *supra* note 3, art. 11, at 1449.

279. Article 28(2) of the Treaty of Tlatelolco, *supra* note 5, at 354, provides that the treaty does not enter into force until all states eligible have ratified the treaty or its protocols. It also allows states to waive this requirement. *Id.* art. 28(2). Chile and Brazil are the only Latin American states to have not exercised this waiver. Martinez Cobo, *The Tlatelolco Treaty: An Update*, 26 INT'L ATOM. ENERGY AGENCY BULL. 25, 26 (Sept. 1984).

280. L. Spector, *supra* note 16, at 179-214.

281. *Id.* at 183-186.

Article 19. Entry Into Force.

The Treaty of Tlatelolco enters into force when all states within the region ratify the treaty.[282] This may never happen. In eighteen years Argentina has not ratified the treaty, Cuba and Guyana have not signed it,[283] and France has not ratified Protocol I. In order to facilitate entry into force, the Model Treaty requires ratification by only two-thirds of the signatories.

Article 20. Extension of the Nuclear Free Zone.

Article 20 contains unique provisions designed to accommodate the growth of nuclear free zones. At some future point it may be more appropriate for individual states to join with neighboring nuclear free zones. For example, a hypothetical, future independent New Caledonia (by whatever name it may be known if and when it obtains independence from France), which lies within the region encompassed by the SPNFZ, might want to join that treaty. The Treaty of Rarotonga allows for this possibility *if* that non-treaty state is a member of the South Pacific Forum.[284] Perhaps not even this kind of condition should be required of a state which seeks to join a nuclear free zone.

Similarly, it is conceivable that neighboring nuclear free zones would find it desirable to "join forces," as it were. Article 20(2) allows for that possibility while insuring the standards of the treaty are not diminished by such a union. For example, a single, truly nuclear free entity comprising the South Pacific and Latin America zones, spanning two-thirds of the Southern Hemisphere's oceans, would be an extraordinary political presence. Article 20 works in conjunction with Article 7.

Article 21. Authentic Text.

Here would be stated the language(s) of the authentic or official texts of the treaty.

---

282. Treaty of Tlatelolco, *supra* note 5, art. 28, at 352, 356.

283. A territorial dispute between Venezuela, the United Kingdom and Guyana, coupled with Article 25(2) of the Treaty of Tlatelolco which prohibits a political entity from admission to treaty when its territory is subject to dispute involving and "extra-continental" entity, prevents Guyana's participation.

284. Treaty of Rarotonga, *supra* note 3, art. 12(3):

> If a member of the South Pacific Forum whose territory is outside the South Pacific Nuclear Free Zone becomes a Party to this Treaty, Annex 1 [describing the area encompassing the treaty] shall be deemed to be amended so far as required to enclose at least the territory of that Party within the boundaries of the South Pacific Nuclear Free Zone. The delineation of any area added pursuant to this paragraph shall be approved by the South Pacific Forum.

Id. at 1450.

Annex 1.

Here would be the geographical definition of the zone of application of the treaty.

Protocol A.

This protocol is a little unusual. First of all, unlike the numbered protocols which follow and those of the Tlatelolco and Rarotonga Treaties, it applies to states party to the main treaty. Second, it modifies a provision of the treaty: unless the protocol has entered into force, the more restrictive language of Article 4 will be in full force.

The hardened nuclear opponent would oppose any non-medical and non-scientific use of radioactive substances. But there are scores of products utilizing radioactive substances and the list is growing monthly. Some of those products may be of great value. A blanket prohibition is thus too restrictive for many. Protocol A provides for a case-by-case review, replacing the virtual prohibition of Article 4 if it stood by itself. The Protocol will require the parties to vote on every product to be permitted (or prohibited). (This in no way would prohibit an individual state from imposing stricter domestic rules.) Every non-approved item would thus be considered specifically excluded.

Protocols 1-3.

These protocols are essentially identical to those of the Treaty of Rarotonga with two exceptions. Whereas Protocol 2 of the extant treaties does not apply to all of the treaty's prohibitions and obligations (which could be applicable) to the Protocol, the Model Treaty does. If a nuclear power is asked to give its assurance of respect for the Treaty, it should be asked to do so for all treaty obligations. Otherwise there would be "loopholes" which would render the treaty less effective and the protocols less meaningful.

The Treaty of Rarotonga permits a protocol-ratifying party to withdraw from the protocol "if it decides that extraordinary events, related to the subject matter of [the] protocol, have jeopardised [sic] its supreme interests."[285] This language allows the nuclear powers a sizable loophole by giving them the ability to opt-out of protocol compliance virtually at will. It was included in the Rarotonga protocols in order to insure their ratification by the United States and the other Western nuclear powers. They refused to sign the protocols anyway.[286] If the intent of a nuclear free zone treaty is to maintain the nuclear freedom of the region, a nuclear power which ratifies the protocol should not be given the assurance that it can back out of compliance on the mere declaration that its "supreme interests" are jeopardized. The Model Treaty eliminates this loop-

285. Treaty of Rarotonga, *supra* note 3, protocol 1, art. 5, *passim.*

286. *See infra* notes 69-79 and accompanying text.

hole in each extra-zonal state protocol by simply stating that the ". . . Protocol is permanent in nature and shall remain in force indefinitely."

Protocols 2-5 would apply to all nuclear powers. While the Model Treaty specifies that the protocols are open to France, China, the Soviet Union, Great Britain and the United States, there is no reason they could include the near-nuclear and "unofficial" nuclear powers. Like the Rarotonga and Tlatelolco protocols, the Model Treaty calls for entry into force of the protocols for each nuclear power upon deposit of their instrument of ratification.[287]

The protocols do not require protocol parties to automatically accede to Amendments to the Model Treaty.

Protocols 4-5.

The Model Treaty contains the two additional protocols discussed in Section III(E). Being that the law of the sea-related proposals of Section III(A) most likely will be among the most difficult to enforce, it makes sense to attempt to secure nuclear power agreement to honor those provisions. Protocol 4 would accomplish this objective. To avoid perceived superpower imbalance and to facilitate their accession to the protocol it would not come into force for any nuclear power until all have deposited their instruments of ratification, unlike the other protocols which come into force for each state upon deposit of their instrument of ratification.

The last protocol, Protocol 5, seeks another nuclear power assurance: that they will not test nuclear capable delivery vehicles anywhere through or within the zone.

V. CONCLUSION

The Treaty for the Prohibition of Nuclear Weapons in Latin America and the South Pacific Nuclear Free Zone Treaty are courageous and powerful statements. Not only do they warrant to prohibit nuclear weapons (and more, in the case of the South Pacific treaty) from the regions in question, but they also sent — and continue to send — a message to the nuclear-weapon-states that their nuclear weapons policies are a threat to the security and existence of the treaty parties, as well as of the whole world.

Our planet is far from being nuclear-free. Even in this post-Cold War era, many feel that it is doubtful that Earth will ever see such a day again. But it is also certain that greater steps can be taken to reduce the dangers of nuclear war and radioactive poisoning from befalling those states so desiring. Many countries around the world have expressed this desire, including the parties to the Tlatelolco and Rarotonga Treaties.

The realities of international politics, of course, have prevented more

---

287. *See, e.g.*, Treaty of Tlatelolco, *supra* note 5, protocol I, art. 3, at 362; Treaty of Rarotonga, *supra* note 3, protocol 1, art. 5, at 1460.

nations from forming nuclear-free zones, as well as unilaterally declaring themselves to be nuclear free. The history of debate in the United Nations attests to this.[288] Still, two such treaties are in force.

The debate over nuclear free zones is growing constantly stronger.[289] The ASEAN states are already considering the formation of a nuclear free zone.[290] Future nuclear free zones will surely provide greater protections than the Treaty of Rarotonga, just as that treaty provided significant protections not found in the Treaty of Tlatelolco. The new provisions that these new treaties will include are impossible to predict. But leaders in this movement have an obligation to propel the debate forward by analyzing the existing treaties in order to identify their strengths as well as areas where improved security can be had. That role involves suggesting goals which national leaders may aim for, including discussion to shape future treaties. It also requires helping to provide arguments for propelling these proposals forward. That is the province of this essay and the Model Treaty.

The Model Treaty was written with the objective of producing a workable framework, both for the principals in future negotiations, as well as other, more "distant" contributors to the discussion. That the proposals may seem extreme to some is, in part, due to idealism. It also demonstrates how far a group of states have to go to achieve comprehensive nuclear freedom.

The purpose here is not to suggest that such a result can be easily achieved. Or that the process will be relatively pain-free. Or that the end product will be readily accepted by the world political order. The contrary is the far more likely result, at least initially. We already know that some world powers have not smiled favorably upon the relatively mild Treaty of Rarotonga.[291] There will be fallout with regard to the Law of the Sea (UNCLOS III, IV, V or whatever). And some geographically distant allies may feel compelled to reconsider the status of alliances.

Whether consideration of or entry into a nuclear free zone treaty is the right course for a given state is beyond the scope of this article. For the state that does venture down that path, this article has attempted to make clear that, despite these concerns, such a course is fully justified and wholly defensible. In the context of international law, adopting and adhering to a nuclear free zone treaty, such as the Model Treaty herein, is legally supportable.

---

288. *See infra* notes 7-13 and accompanying text.
289. *See, e.g., infra* notes 69-84, 99 and accompanying text.
290. *See supra* note 6.
291. *See infra* notes 69-82 and accompanying text.

APPENDIX

MODEL NUCLEAR FREE ZONE TREATY

PREAMBLE

In the name of their peoples and faithfully interpreting their desires and aspirations, the Governments of the States which sign this Model Nuclear Free Zone Treaty,

Recalling Article VII of the Non-Proliferation Treaty which holds that it is the "right of any group of States to conclude regional treaties in order to assure the total absence of nuclear weapons in their respective territories,"

Recalling that the United Nations General Assembly, in its Resolution 808(ix), adopted unanimously, as one of the three points of a coordinated program of disarmament; "the total prohibition of the use and manufacture of nuclear weapons and weapons of mass destruction of every type,"

Recalling that the United Nations First Special Session of the General Assembly on Disarmament, in its unanimously-adopted Final Document, declared that "the establishment of nuclear-weapon-free-zones on the basis of arrangements freely arrived at among the States of the region concerned constitutes an important disarmament measure," that "the process of establishing such zones in different parts of the world should be encouraged with the ultimate objective of achieving a world entirely free of nuclear weapons," that "the States participating in such zones should undertake to comply fully with all the objectives, purposes and principles of the agreements or arrangements establishing the zones, thus ensuring that they are genuinely free from nuclear weapons," and that "with respect to such zones, the nuclear-weapon States in turn are called upon to give undertakings, the modalities of which are to be negotiated with the competent authority of each zone, in particular: (a) to strictly respect the status of the nuclear-weapon-free-zone; (b) to refrain from the use or threat of use of nuclear weapons against the States of the zone,"

Recalling the Treaty for the Prohibition of Nuclear Weapons in Latin America, the first regional treaty creating a zone free from the dangers of nuclear weapons,

Recalling the South Pacific Nuclear Free Zone Treaty, declaring that region to be free of all nuclear explosive devices and radioactive waste dumping, and

Convinced that the mere existence of nuclear weapons is a threat to life and civilization as we know it and that the presence of such weapons on, in or near any sovereign territory, places that territory under direct risk of suffering a nuclear attack,

Convinced that the existence of any nuclear explosive device, or ships or aircraft carrying any nuclear explosive device, or support facilities for such weapons, ships or aircraft, within the territory, territorial sea or

ocean straits of any State, makes that State, and the region, a potential target for nuclear attack, and thus such devices, ships and aircraft are prejudicial to the peace, good order and security, and a threat to the sovereignty, territorial integrity and political independence of that state,

Convinced that any aircraft or ship containing any radioactive substance is fully capable of inadvertently leaking or otherwise discharging that material through some accident, design flaw, human carelessness or attack, and is thus an unnecessary and potentially life-threatening danger to all life through which it passes and transits, and is thus an unconscionable and an unacceptable risk to the protection and preservation of the marine environment,

Convinced that any aircraft or ship containing any radioactive substance is not immune from intentionally discharging that material, whether arising from an emergency situation or otherwise,

Convinced that there is no justifiable purpose for any kind of nuclear explosive device, that there is no acceptable basis for the continued testing of nuclear explosive devices and that they are a source of needless radioactive contamination,

Convinced that radioactive substances are extremely hazardous and pose a substantial danger to all life, that there is a grave, substantial risk of contamination associated with the storage of such materials and in particular radioactive wastes, and that the risks of exposure to such dangers must be minimized to the greatest extent practicable,

Convinced that nuclear power is an uneconomical and potentially dangerous source of electricity which rarely, if ever, provides benefits which are outweighed by the costs, risks and hardships nuclear power facilities create,

Convinced that a nuclear free zone is an appropriate and desirable way for non-nuclear States to prevent the deployment of nuclear weapons as well as protect their inhabitants from the scourge of nuclear weapons and nuclear pollution,

Convinced, as were the signers to the first Nuclear Free Zone Treaty in Tlatelolco that the proliferation of nuclear weapons is inevitable unless States, in the exercise of their sovereign rights, impose restrictions on themselves in order to prevent it,

Finally,

Determined to support the creation of nuclear free zones wherever in the world States come together to protect their interests and insure their survival and vitality,

Determined that it is in the interests of the people of this world, and of all mankind, that this region shall forever be free from armed conflict, and

Determined, in light of the risks detailed above, that the establishment of a nuclear free zone is the best way to reduce the risks associated with nuclear weapons, nuclear pollution and nuclear contamination, as

well as provide for the secure and healthy future of this people of this region,

Have agreed as follows:

ARTICLE 1

RENUNCIATION OF NUCLEAR EXPLOSIVE DEVICES

Each Party undertakes:

(a) not to manufacture, acquire, possess, test, use, or have any control whatsoever over any nuclear explosive device, directly or indirectly, anywhere in the world;

(b) not to seek or receive any assistance in the manufacture, acquisition, possession, testing, or use of any nuclear explosive device;

(c) to prevent the testing of any nuclear explosive device anywhere in its territory, territorial sea or Exclusive Economic Zone;

(d) not to encourage, authorize, or otherwise assist, directly or indirectly, in any way, in the manufacture, acquisition, possession, testing, use or control of any nuclear explosive device whatsoever by any State, whether or not a Party to this Treaty; and

(e) to prohibit and prevent the storage, use, installation, deployment, stationing or possession of any nuclear explosive device anywhere within their territory, as defined in Article 6, paragraph 3 of this Treaty, inside or outside the Nuclear Free Zone, by any State, whether or not a Party to this Treaty or its Protocols.

ARTICLE 2

PROHIBITION OF NUCLEAR TRANSIT

Each Party undertakes:

(a) to accept and abide by the principle here stated that the transit or passage through any waters or airspace of any ship or aircraft whose propulsion is wholly or partly dependent on nuclear power:

(i) is prejudicial to the peace, good order and security of the coastal State;

(ii) by virtue of its presence, is a threat against the sovereignty, territorial integrity and political independence of a coastal state or a State bordering a strait; and

(iii) is a direct and immediate threat to, and cannot comport and accord with, protection and preservation of the marine environment.

(b) to prevent and prohibit visits by foreign warships and military aircraft to its ports and airfields, transit of its airspace by foreign aircraft, and navigation by foreign warships in its territorial sea, archipelagic waters, straits and other seas claimed by it, inside or outside the Nuclear Free Zone, when such ships or aircraft carry nuclear explosive devices of any kind, whether activated or not;

(c) to require that, prior to granting transit or visitation privileges to its ports, airfields, airspace or sea territory, to a foreign warship or military aircraft, the foreign State of whose forces such warship or aircraft are a part must request permission to transit or visit the Party's ports, airfields, airspace or sea territory with adequate advance notice of such transit or visitation as to assure orderly processing of the request:

(i) failure to provide adequate notice to allowing orderly processing of such a request shall result in automatic denial of the transit or visitation rights requested;

(ii) each Party to this treaty shall develop a procedure for processing such requests, and that procedure shall be communicated to all other Parties to this Treaty, to the Secretary General of the United Nations, and to the Governments of all nations known to have nuclear capabilities; and

(iii) all such foreign warships and military aircraft transitting or visiting a Party's claimed seas, ports and airfield shall be open to inspection for the purposes of verifying the non-presence of nuclear explosive devices upon request of the Party or any other Party to this Treaty when any such party has reason to believe such foreign warship or military aircraft is in violation of this Treaty.

ARTICLE 3

PREVENTION OF DUMPING AND USE OF RADIOACTIVE SUBSTANCES AND FISSION PRODUCTS

Each Party undertakes:

(a) to prevent the storage, dumping or disposal of any radioactive wastes and any other radioactive substances by anyone in its sea territory, or on or in any other body of water, any alluvial lands, any riparian lands, any lands adjacent to a watershed or subterranean stream, river or lake, any lands possibly subject to flooding, or any land where, if exposed, radioactive substances could leach into the surrounding or nearby soil, strata or water;

(b) to prevent the storage or disposal of radioactive waste materials except in monitored retrievable and secure radioactive waste management facilities on or in the land or in structures built thereon or therein, and when stored in a manner which can be shown to the satisfaction of competent national bodies of all states party to afford the maximum in:

(i) containment of radioactive materials from the environment;

(ii) safety of workers and the public;

(iii) security from terrorism and theft;

(iv) accessibility to permit expert inspection and supervision;

(v) monitoribility to ensure the early detection of any failure to meet the above criteria; and

(vi) retrievability in the event of the detection of any such failure.

The onus of proof in demonstrating that these criteria be fulfilled for the duration of the design life of the facility shall lie with the prospective operators of the proposed facility.

(c) not to take any action to assist, encourage or support the dumping or disposal by anyone of radioactive wastes and any other radioactive substances, except as expressly permitted by this Treaty, anywhere within the Nuclear Free Zone or in any other place;

(d) to call upon the United Nations and the International Atomic Energy Agency to abandon, as one of its purposes, the promotion of the expansion of the nuclear industry and the development of standards affording maximal safeguards and protections as would be consistent with Article 3.

ARTICLE 4

PEACEFUL NUCLEAR ACTIVITIES

1.(a) The Parties undertake to prohibit the planning, construction and use of all nuclear reactors, whether on land or in ships, other than nuclear reactors required for medical or non-military scientific purposes, except those already in full service and used for the generation of electrical power at the date of the conclusion of this Treaty.

(b) Reactors required for medical or non-military scientific purposes, as permitted in Paragraph (a) of this Article 4, shall not be utilized for any other purpose.

(c) Each Party shall shut down and begin dismantling all other nuclear reactors within one year of that Party's ratification of this Treaty. Constructed but not yet fully operational nuclear reactors, other than those medical and non-scientific reactors permitted in Paragraph (a) of this Article 4, will not be placed into operation.

2. Except as provided in paragraph 1 of this Article and Protocol A of this Treaty, the Parties agree that there shall be no use of nuclear or radioactive substances within their territory or anywhere within the Nuclear Free Zone.

ARTICLE 5

NUCLEAR WEAPONS SYSTEMS

Each Party undertakes:

(a) to support and encourage the complete nuclear disarmament of this planet;

(b) to support the continued and enhanced effectiveness of the international non-proliferation and anti-nuclearization systems based on the Non-Proliferation Treaty, and the several Nuclear-Free and Nuclear-Weapon-Free-Zone Treaties;

(c) to support and encourage the formation of other nuclear free zone treaties, particular those proposed for regions contiguous to the Nuclear

Free Zone created and encompassed by this Treaty;

(d) to prevent the testing of any delivery vehicle or other device designed or intended to carry or deploy nuclear explosive devices through or over its territory;

(e) to discourage the testing of any delivery vehicle or device designed or intended to carry, guide or deploy nuclear explosive devices through or over any territory or seas anywhere within the Nuclear Free Zone;

(f) to prevent and prohibit the development, manufacture or production of any delivery vehicle or other device, in whole or in any part thereof, designed or intended to carry, guide or deploy nuclear explosive devices, by anyone within its territory;

(g) not to participate in any way in the testing, use, design, manufacture, production, possession or control of any nuclear explosive device by anyone or any State, directly or indirectly;

(h) to prohibit the use by any State of facilities carrying out command, control, communication, intelligence, surveillance, navigation, research or other functions, located anywhere on its territory, when employed for aiding the performance, operation, targeting, testing, or efficiency of nuclear explosive devices; and

(i) not to participate or enter into any military or defense alliance under which nuclear weapons would be used in defense of or with the cooperation of any Party.

ARTICLE 6

DEFINITIONS AND TERMS

For purposes of this Treaty:

1. "Nuclear explosive device" means any nuclear weapon or other device capable of releasing nuclear energy, irrespective of the purpose for which it could be or is intended to be used, and includes any such device in any stage of assembly or disassembly.

2. "Nuclear Free Zone" means zone of application of this treaty as defined in Annex 1 and Articles 7 and 20 of this Treaty.

3. "Territory" means the land territory, bodies of water thereon, territorial sea, exclusive economic zone, and any other land or sea territory claimed by a Party to this Treaty, as well as the airspace and subterranean and sub-ocean surface area demarcated by that territory. "Sea territory" means any part of a Party's territory other than land.

4. "Stationing" means emplacement, home porting, deployment, stockpiling, transportation on land, in the air or at sea, emplantation, storage, installation or other physical presence.

5. "Radioactive substance" means any fissionable material, fission products, fission by-products, spent radioactive or nuclear material, the waste products from any fission reaction or any radioactive substances,

raw and source materials which can be processed into such substances, items contaminated by such substances, and materials or products whose value is due either wholly or in part to their radioactivity or their inclusion of radioactive material.

6. "Nuclear reactor" is any device or structure capable of containing a controlled nuclear fission chain reaction.

7. "Party" means any State which has deposited its instrument of ratification to this Treaty with the Depository of this Treaty. "Associate Party" means any State which has deposited its instrument of ratification to any of the Protocols to this Treaty with the Depository.

ARTICLE 7

ZONE OF APPLICATION

1. This Treaty and its protocols shall apply to the whole of the territory within the Nuclear Free Zone as defined in Annex 1.

2. The zone of application of this Treaty may be extended to other contiguous areas by amendment of this Treaty, including but not limited to:

(a) Parties outside the Nuclear Free Zone as defined in Annex 1 which accede to this Treaty after its conclusion and signing, as provided in Article 20(1); and

(b) the consolidation of adjoining nuclear free zone and nuclear weapon free zone treaties with this Treaty, as provided in Article 20(2).

ARTICLE 8

CONSULTATIVE COMMITTEE

1. There is hereby established a Consultative Committee. The Consultative Committee shall be composed of one representative of each of the Parties. The Consultative Committee shall be chaired by the representative to the Consultative Committee of the Party which last hosted the annual meeting of the Consultative Committee as prescribed in Article 10 of this Treaty. Each representative to the Consultative Committee, at the Committee's annual meeting and other meetings as may be called, may be accompanied by advisors.

2. A quorum shall be constituted by representatives of one half the Parties. Except as otherwise provided by this Treaty, decisions of the Consultative Committee shall be taken by consensus or, if failing consensus, by a two-thirds majority vote of those present and voting. The Consultative Committee shall adopt such other rules of procedure as it sees fit.

3. All meetings of the Consultative Committee shall be open to each Party to the Treaty.

4. Without prejudice to the conduct of consultations among Parties by other means, at the written request of one-third of the Parties to this

Treaty requesting a meeting of the Consultative Committee for the same purpose, the Director of the Organization shall convene a meeting of the Consultative Committee as soon as possible.

ARTICLE 9

ORGANIZATION

1. The Parties hereby establish an organization to oversee and facilitate compliance with this Treaty. The organization shall be known as the Nuclear Free Zone Organization, hereinafter referred to as the "Organization."

2. The Organization shall consist of a Director and necessary staff to conduct its affairs. The Director shall be elected for a term of five years by a vote of the Consultative Committee.

3. The Organization shall maintain offices at the city where this Treaty was signed.

4. The Organization shall be responsible for:

(a) scheduling and holding annual meetings as provided under Article 10;

(b) coordinating consultations among Parties and investigations as provided for under Article 11;

(c) disseminating all communications, including reports and exchanges of information, between Parties, as provided under Articles 12 and 13, as well as to other international organizations and the world public at large, as provided elsewhere in this treaty.

ARTICLE 10

ANNUAL MEETING

1. An annual meeting of the Consultative Committee shall be held for the purpose of reviewing operations of the past and upcoming year, including budgeting and activities of the Director and of the Organization. The annual meeting shall be chaired by the representative to the Organization of each Party in rotation in successive years. The meeting shall take place at a location within the territory of, and at the choosing of, that Party.

2. The Director shall report to the annual meeting on the status of this Treaty and all matters arising under or in relation to it, including all matters and communications made under Articles 11 through 15.

ARTICLE 11

REPORTS, EXCHANGES OF INFORMATION, AND FREEDOM OF INFORMATION

1. Each Party and Associate Party shall submit to the Director annual reports stating that no activity prohibited under this Treaty or the

Protocols it has signed has occurred in their respective territories (in the case of Associate Parties, with respect to territory with the Nuclear Free Zone). The Director shall circulate such reports to all Parties and Associate Parties.

2. Each Party and Associate Party shall report to the Director as soon as possible, and prior to, an event occurring within its jurisdiction which may affect the implementation or efficacy of this Treaty. The Director shall circulate such reports to all Parties and Associate Parties as quickly as possible.

3. The Parties shall undertake to keep each other informed on matters arising under or in relation to this Treaty. They may exchange information by communicating it to the Director, who shall circulate it to all Parties.

4. The Parties shall report to the Director all suspected incidents of violations of the Nuclear Free Zone by ships and aircraft powered by or containing nuclear reactors, or which are capable of carrying nuclear explosive devices of any kind which have not provided unequivocal declarations that the they do not carry nuclear explosive devices, as provided in Article 2.

5. All reports prepared by the Director, the Consultative Committee, Parties, Associate Parties, other non-Parties, the IAEA, and by Special Investigation Teams, relating to any matter arising under or in relation to this Treaty or violations of its provisions, shall be made freely and promptly available to any citizen of any Party, as well as to the United Nations Secretary-General. The only exceptions shall be individual reports which the Consultative Committee votes explicitly not to make public. The Consultative Committee may vote on an annual basis to keep a given report from the public. Otherwise, such reports shall be made public after one year from the date of the last vote not to make the report public.

ARTICLE 12

COMPLAINTS AND SPECIAL INVESTIGATIONS

1. The Consultative Committee shall have the power to carry out special investigations anywhere within the Nuclear Free Zone when requested by any Party which reasonably suspects that:

(a) another Party has taken action or is about to take action inconsistent with this Treaty,

(b) an Associate Party has taken or is about to take action inconsistent with the Protocols to this Treaty to which it is a party, or

(c) a non-Party is engaging in some activity inconsistent with this Treaty while within the Nuclear Free Zone.

2. Any such complaint shall first be brought to the attention of the Director who shall then convene a meeting of the Consultative Committee as soon as practicable. Upon consideration of the claim and having al-

lowed the Party (or Associate Party) charged with a breach or potential brach of its obligation an opportunity to respond to the claim, the Consultative Committee may decide, by consensus or simple majority vote of all Parties present excluding the complained of Party, to commence an investigation of the claim. The Consultative Committee shall determine the scope of the investigation.

3. Such investigation shall commence forthwith and shall be conducted by a special investigation team of three to five suitably qualified special investigators appointed by the Consultative Committee in consultation with the complained of (if a Party to this treaty) and complaining Parties and the Director, provided that no national of either Party shall serve on the special investigation team. If so requested by the complained of Party, the investigation team may be accompanied by representatives of that Party. Neither the right of consultation on the appointment of special investigators, nor the right to accompany special investigators, shall delay or impede the expedient work of the special investigation team.

4. Each Party shall give to all special investigators full and free access to all places, persons, and information which it may deem relevant or necessary to enable it to conduct its investigation. Special investigators shall be the sole determiners of which places, persons, and information are relevant or necessary to their investigation, as well as all reasonable and humane methods, respectful of basic human rights to be employed in conducting their investigation.

5. The Party complained of shall take appropriate steps to facilitate the special investigation, and shall grant to special investigators, privileges and immunities necessary for the performance of their functions, including inviolability for all papers and documents, and immunity from arrest, detention and legal process for words spoken and written, and places visited, in connection with the special investigation.

6. The special investigation team shall report in writing as quickly as possible to the Consultative Committee, outlining its activities, setting out relevant facts and information, with supporting evidence and documentation as appropriate, and stating their conclusions and recommendations. The report shall be communicated to all Parties and Associate Parties to this Treaty, and to the Secretary-General of the United Nations, as provided under Article 11.

7. If a complainant declares to the Director that the complaint constitutes an emergency and provides sufficient grounds for that belief, the Director may appoint and dispatch a special investigation team, as otherwise provided in paragraph 3 above, within 24 hours of receipt of the complaint. A meeting of the Consultative Committee will be called and convened as soon as possible, at which time the Consultative Committee may review the scope of the special investigation team appointed by the Director and provide further delineation of the scope of the investigation.

ARTICLE 13

CORRECTIVE ACTIONS

1. Upon presentation of the investigation team's report, the Consultative Committee shall take whatever reasonable corrective action it deems necessary to bring the situation, if inconsistent with this Treaty, into compliance with the Treaty, or to prevent an action which would be inconsistent with this Treaty. The Consultative Committee may also take whatever reasonable action it deems necessary in order to insure peace, security and protection of the environment. If the complained of State is a non-Party or Associate Party to this Treaty, its compliance to the above procedures shall be sought.

2. If a Party determined to have acted in a way inconsistent with this Treaty by the Consultative Committee fails to adhere to the Consultative Committee's corrective actions or other recommendations regarding that violation, the Dispute Settlement Procedures, as provided for in Article 13, shall be called into force unless otherwise determined.

3. If any non-Party or Associate Party fails to comply with the Consultative Committee's corrective actions as provided for under Paragraph 1 of this Article, or if any Party to this Treaty fails to comply with any directives or correction actions provided for under Paragraph 2 of this Article, then all Parties to this Treaty will undertake to compel such compliance by such peaceful means as may be deemed necessary and appropriate, including but not limited to suspension of all economic privileges granted that State and products of national origin of that State, until that party complies with the above procedures, the complaint is found to be without grounds, or remedial or disciplinary action recommended by the Consultative Committee has been effectively carried out. Nothing in this paragraph shall be construed so as to directly violate provisions of any valid and binding multilateral treaty, the sole or primary subject of which is international trade.

ARTICLE 14

SETTLEMENT OF DISPUTES

1. In the case of a Party to this Treaty determined to have acted in a way inconsistent with this Treaty by the Consultative Committee which fails to adhere to the Consultative Committee's corrective actions or other recommendations regarding that violation, the Parties involved shall undertake to submit the decision to arbitration. An arbitration panel shall be selected as follows: The aggrieving Party and the Consultative Committee shall each appoint an arbitrator of their choosing, who shall then select a third arbitrator to complete the panel, which shall arbitrate the dispute.

2. If in the above situation an agreeable arbitration panel cannot be found and unless the Parties concerned agree on another mode of peaceful settlement, the Parties and the Consultative Committee shall submit

the matter to the adjudication of the International Court of Justice.

ARTICLE 15

AMENDMENT

The Consultative Committee shall consider proposals for amendment to this Treaty proposed by any Party as communicated to the Director. The Director shall circulate the proposed amendment to all Parties not less than three months prior to the convening of the Consultative Committee for this purpose. Any proposal agreed upon by a two-thirds vote of the present members of the Consultative Committee shall be communicated to the Director, who shall circulate it for acceptance to all Parties. Amendments adopted shall enter into force thirty days after receipt by the Depositary of acceptances from two-thirds of the Parties.

ARTICLE 16

SIGNATURE, RATIFICATION AND DEPOSIT

1. This Treaty shall be open indefinitely for signature by all States situated within the area defined by Annex 1 and Articles 7 and 20.

2. This Treaty shall be subject to ratification by signatory States.

3. The state archivist of the state in which this treaty is concluded and signed is hereby designated Depositary of this Treaty and its Protocols, and respective Instruments of Ratification until such time as the Treaty is entered into force as provided in Article 19 and the first Director of the Organization is appointed, at which time the Director will thereby be designated Depositary of this Treaty and its Protocols, and respective Instruments of Ratification.

4. The Depositary shall transmit certified copies of this Treaty and its Protocols to the Governments of all signatory States and all States eligible to become Parties to the Protocols to the Treaty, and shall notify them of signatures and ratifications of the Treaty and its Protocols.

ARTICLE 17

RESERVATIONS

This Treaty shall not be subject to reservations.

ARTICLE 18

DURATION AND WITHDRAWAL

This Treaty shall be of permanent nature and shall remain in force indefinitely.

ARTICLE 19

ENTRY INTO FORCE

1. This Treaty shall enter into force on the date of deposit of the

instrument of ratification amounting to two-thirds of the signatories to the Treaty.

2. For a signatory which ratifies this Treaty after the date this Treaty comes into force, the Treaty shall enter into force on the date of deposit of its instrument of ratification.

ARTICLE 20

EXTENSION OF THE NUCLEAR FREE ZONE

1. If a state whose territory is contiguous with the zone of application of this Treaty seeks to become a Party to this Treaty, that state shall make written application to the Director. The Director shall circulate the application to all Parties not less than three months prior to the convening of the Consultative Committee for this purpose. Upon a decision of the Consultative Committee to accept the application, that State shall be invited to become a Party to and sign the Treaty. Upon deposit of its instrument of ratification, the state shall become a Party to the Treaty as provided in Article 19(2).

2. Upon the two-thirds vote of the Consultative Committee and a similar vote by the appropriate decision-making body of a contiguous nuclear free zone or nuclear weapon free zone treaty organization, a broader nuclear free zone shall be declared by the Parties to those Treaties. The Consultative Committee will undertake consideration of such, if and only if the result of a positive vote and the joint effort:

(a) would serve the purposes of both treaties;

(b) that the rights and obligations prescribed by this Treaty will not in any way be diluted or their effectiveness in any way compromised, and that they, at minimum will apply to all Parties of both treaties anyplace within the zone of application of this Treaty or the other treaty;

(c) that the broader nuclear free zone will not obviate this Treaty; and

(d) that the Parties and organs of both treaties will work together to enforce the strongest nuclear prohibitory provisions of both treaties within the broader nuclear free zone.

ARTICLE 21

AUTHENTIC TEXT

This Treaty, of which the [insert appropriate languages] texts are equally authentic, shall be registered by the Depositary in accordance with Article 102 of the United Nations Charter. The Depositary shall notify the Secretary-General of the United Nations of the signatures, ratifications and amendments relating to this Treaty.

ANNEX 1

NUCLEAR FREE ZONE

The Nuclear Free Zone contains all of the land and water territories with the area bounded by a line —

[insert geographic bounds of zone of application].

ADDITIONAL PROTOCOLS TO THE MODEL NUCLEAR FREE ZONE TREATY

PROTOCOL A

The Parties to this Protocol,

Being Parties to the Model Nuclear Free Zone Treaty (the Treaty),

Have Agreed as follows:

Article 1

Each Party undertakes to prohibit the entry, development, manufacture, use, storage, sale and distribution within the Territory of each Party as that term is defined in Article 6 of the Treaty except those radioactive substances or items containing or made of, in whole or in part, of any radioactive substance,

(a) required for medical and non-military and scientific purposes; and

(b) other items of great value to society for which there are no suitable non-radioactive substitutes as determined by Article 4.

Article 2

The Consultative Committee shall be the sole organ capable of determining which items are of great value to society and for which there are no suitable non-radioactive substitutes. Such determination shall be made by a two-thirds majority vote of the Consultative Committee.

Article 3

This Protocol shall be open for signature to all signatories to the Treaty.

Article 4

This Protocol shall be subject to ratification.

Article 5

This Protocol shall remain in force until it is denounced by one-half of the signatories to this Protocol.

Article 6

This Protocol shall enter into force on the date of deposit of the instrument of ratification amounting to two-thirds of the signatories of the Treaty. For a signatory which ratifies this Protocol after the date this

Treaty comes into force, the Protocol shall enter into force on the date of deposit of its instrument of ratification.

PROTOCOL 1

The Parties to the this Protocol,

Noting the Model Nuclear Free Zone Treaty (the Treaty),

Have Agreed as follows:

Article 1

Each Party undertakes to apply, in respect of the territories for which it is internationally responsible and which are situated within the Nuclear Free Zone, the prohibitions contained in Articles 1 through 5, and the reporting, complaint and settlement procedures specified in Articles 11(1), 11(2), 11(5), (12), 13(1) and 13(3).

Article 2

Each Party may, by written notification to the Depositary, indicate its acceptance from the date of such notification of any alteration to its obligation under this Protocol brought about by the entry into force of an amendment to the Treaty pursuant to Article 15 of the Treaty.

Article 3

This Protocol shall be open for signature by [all States which are, *de jure* or *de facto*, internationally responsible for territories within the Nuclear Free Zone].

Article 4

This Protocol shall be subject to ratification.

Article 5

This Protocol is of a permanent nature and shall remain in force indefinitely.

Article 6

This Protocol shall enter into force for each State on the date of its deposit with the Depositary of its instrument of ratification.

PROTOCOL 2

The Parties to this Protocol,

Noting the Model Nuclear Free Zone Treaty (the Treaty),

Have Agreed as follows:

Article 1

Each Party undertakes not to use or threaten to use any nuclear explosive

device against:

a) Parties to the Treaty, or

b) any territory within the Nuclear Free Zone for which a State that has become a Party to Protocol 1 is internationally responsible.

Article 2

Each Party undertakes not to contribute to any act of a Party to the Treaty which constitutes a violation of the Treaty, or to any act of another Party to a Protocol which constitutes a violation of a Protocol.

Article 3

Each Party may, by written notification to the Depositary, indicate its acceptance from the date of such notification of any alteration to its obligation under this Protocol brought about by the entry into force of an amendment to the Treaty pursuant to Article 15 of the Treaty or by the extension of the Nuclear Free Zone pursuant to Article 20 of the Treaty.

Article 4

This Protocol shall be open for signature by the French Republic, the People's Republic of China, the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland, and the United States of America.

Article 5

This Protocol shall be subject to ratification.

Article 6

This Protocol is of a permanent nature and shall remain in force indefinitely.

Article 7

This Protocol shall enter into force for each State on the date of its deposit with the Depositary of its instrument of ratification.

PROTOCOL 3

The Parties to this Protocol,

Noting the Model Nuclear Free Zone Treaty (the Treaty),

Have Agreed as follows:

Article 1

Each Party undertakes not to test any nuclear explosive device anywhere within the Nuclear Free Zone.

Article 2

Each Party may, by written notification to the Depositary, indicate its

acceptance from the date of such notification of any alteration to its obligation under this Protocol brought about by the entry into force of an amendment to the Treaty pursuant to Article 15 of the Treaty or by the extension of the Nuclear Free Zone pursuant to Article 20 of the Treaty.

Article 3

This Protocol shall be open for signature by the French Republic, the People's Republic of China, the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland, and the United States of America.

Article 4

This Protocol shall be subject to ratification.

Article 5

This Protocol is of a permanent nature and shall remain in force indefinitely.

Article 6

This Protocol shall enter into force for each State on the date of its deposit with the Depositary of its instrument of ratification.

PROTOCOL 4

The Parties to this Protocol,

Noting the Model Nuclear Free Zone Treaty (the Treaty),

Have Agreed as follows:

Article 1

Each Party undertakes not to transit territory or airspace, or visit ports or airfields within the Nuclear Free Zone, with warships or military aircraft which are nuclear-powered or carry nuclear explosive devices of any kind.

Article 2

Each Party may, by written notification to the Depositary, indicate its acceptance from the date of such notification of any alteration to its obligation under this Protocol brought about by the entry into force of an amendment to the Treaty pursuant to Article 15 of the Treaty or by the extension of the Nuclear Free Zone pursuant to Article 20 of the Treaty.

Article 3

This Protocol shall be open for signature by the French Republic, the People's Republic of China, the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland, and the United States of America.

Article 4

This Protocol shall be subject to ratification.

Article 5

This Protocol is of a permanent nature and shall remain in force indefinitely.

Article 6

This Protocol shall enter into force for each State on the date of the deposit with the Depositary of the instrument of ratification of the last State eligible to sign this Protocol.

PROTOCOL 5

The Parties to this Protocol,

Noting the Model Nuclear Free Zone Treaty (the Treaty),

Have Agreed as follows:

Article 1

Each Party undertakes not to test any delivery vehicle or other device designed or intended for the carrying, guiding or deploying nuclear explosive devices through or over the Nuclear Free Zone.

Article 2

Each Party may, by written notification to the Depositary, indicate its acceptance from the date of such notification of any alteration to its obligation under this Protocol brought about by the entry into force of an amendment to the Treaty pursuant to Article 15 of the Treaty or by the extension of the Nuclear Free Zone pursuant to Article 20 of the Treaty.

Article 3

This Protocol shall be open for signature by the French Republic, the People's Republic of China, the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland, and the United States of America.

Article 4

This Protocol shall be subject to ratification.

Article 5

This Protocol is of a permanent nature and shall remain in force indefinitely.

Article 6

This Protocol shall enter into force for each State on the date of the deposit with the Depositary of the instrument of ratification of the last State eligible to sign this Protocol.