The Experience of South Pacific States in Ensuring the Absence of Nuclear-Armed Vessels in their National Waters and Ports

Michael Hamel-Green

Emeritus Professor, College of Arts & Education,

Victoria University Melbourne

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Nuclear-armed ship and submarine visits and transit have been a difficult and contentious issue across the world, and pose particular challenges for regions seeking to establish nuclear-weapon-free zones consistent with the UN definition of, and requirement for, the total absence of nuclear weapons within such zones.[[1]](#footnote-1) The following discussion paper will focus primarily on port visits and nuclear-armed ship transit through the territorial waters of South Pacific NWFZ members since other papers will be discussing the wider issues of transit in exclusive economic zones (EEZs) and the high seas.

***The South Pacific Nuclear Free Zone Treaty (SPNFZ)***

The 1985 South Pacific Nuclear Free Zone (Rarotonga) Treaty (SPNFZ) was the second NWFZ to be established by a regional grouping of states after the 1967 Tlatelolco Treaty. The zone was negotiated through the South Pacific Forum, the then regional organization of independent South Pacific states that included Australia, New Zealand, Fiji, Papua New Guinea, Niue, Tonga, Western Samoa, Nauru, Solomon Islands, Cook Islands, Vanuatu, and Kiribati.[[2]](#footnote-2) Since then the regional body has been recast as the Pacific Forum and now includes other Pacific Island states and self-governing territories, including the Marshalls, French Polynesia, New Caledonia, Palau, Federated States of Micronesia, and Tokelau, although these have not as yet become part of the South Pacific Nuclear Free Zone treaty.

The SPNFZ Treaty was the culmination of Pacific countries’ direct experience of nuclear weapons and their effects from the very beginning of the nuclear age. This was in the shape of 321 nuclear tests by Western nuclear-armed states in the Pacific from 1946 to 1996, including atmospheric tests by the US 1946-62, Britain 1952-58 and France up to 1974.[[3]](#footnote-3) Test sites included Bikini and Enewatak atolls in the Marshall Islands, Moruroa and Fangataufa atolls in French Polynesia, Christmas Island in Kiribati, and Maralinga in South Australia. Fallout from the tests and radioactive contamination, as well as forced relocations, led to devastating health and humanitarian crises for indigenous peoples affected, and incurred increased cancer risks across the whole Pacific region.[[4]](#footnote-4)

From the early 1960s through to the 1980s, there was also rising concern among many within Pacific countries, especially within New Zealand, Australia, Fiji, Vanuatu and Papua New Guinea, about the threats posed by the increasing nuclear arms race during the Cold War. This was at a time when both the US and then Soviet Union deployed not only strategic nuclear missiles but also tactical, cruise and intermediate range nuclear missiles on various platforms, including ships, planes and land bases. The concerns were heightened by the “near-miss” global nuclear conflict that could have erupted during the 1962 Cuban Missile Crisis, the siting of US nuclear-related communication, command and control bases in Australia from 1963, US missile testing at Kwajalein in the Marshalls, awareness that US ships visiting ports in the region could be carrying nuclear weapons, and the possibility of Pacific sites, including ports and American base sites, becoming nuclear targets in the event of a war between the superpowers.

To address this range of nuclear threats civil society groups, such as the Nuclear Free and Independent Pacific Movement and Greenpeace, together with national peace, disarmament and environment groups, campaigned vigorously, and with much public support, for Pacific governments to negotiate a nuclear-weapon-free zone. The SPNFZ zone proposal came to fruition during 1983–85 when Labor Party Governments came to power in Australia and New Zealand and cooperated with Pacific Island states in responding to civil society calls for the creation of a regional South Pacific NWFZ.[[5]](#footnote-5)

***Regional Views on Nuclear-Armed Ship Visits***

In the event, the SPNFZ 1983-85 negotiations, despite much consensus, did expose some major regional disagreement over the issue of port visits and transit in territorial waters by nuclear-armed ships.

Australia and New Zealand were allied with the United States under the ANZUS Treaty and both were under pressure from the US to accept such visits and transit. The Australian Labor Government was reluctant to jeopardize its US alliance relationship and sought to allow port visits under the new SPNFZ treaty. On the other hand, the New Zealand Labor Government was far less willing to accept such visits. Confronted with a proposed 1984 visit by the US nuclear-capable guided-missile destroyer, *USS Buchanan*, the Lange Labor Government refused the visit despite awareness of the risk of US withdrawal from ANZUS Treaty arrangements with New Zealand.[[6]](#footnote-6) As the New Zealand Prime Minister at the time, David Lange, noted in a much publicized Oxford Union Debate: “There is simply only one thing more terrifying than nuclear weapons pointed in your direction and that is nuclear weapons pointed in your enemy’s direction. The outcome of their use would be the same in either case, and that is the annihilation of you and all of us. That is a defence which is no defence”.[[7]](#footnote-7)

***The SPNFZ Compromise on Nuclear-Armed Ship Visits***

The SPNFZ Treaty’s negotiated solution to the nuclear ships issue was a compromise formula whereby individual states could make their own decision on allowing or disallowing such visits and transit in territorial waters. This permitted Australia to continue such visits, and for New Zealand and some other Pacific states to disallow such visits. This was specified in the final wording of Article 5:

***“Article 5 Prevention of stationing of nuclear explosive devices***

*1. Each Party undertakes to prevent in its territory the stationing of any nuclear explosive device.*

*2. Each Party in the exercise of its sovereign rights remains free to decide for itself whether to allow visits by foreign ships and aircraft to its ports and airfields, transit of its airspace by foreign aircraft, and navigation by foreign ships in its territorial sea or archipelagic waters in a manner not covered by the rights of innocent passage, archipelagic sea lane passage or transit passage of straits”*.[[8]](#footnote-8)

‘Stationing’ was defined in Article 2 *as “emplantation, emplacement, transportation on land or inland waters, stockpiling, storage, installation and deployment.”[[9]](#footnote-9)*

During the course of the South Pacific NWFZ negotiations, both Papua New Guinea and Vanuatu voiced strong concerns that the treaty’s lack of regulation of port visits by nuclear-armed vessels could lead to some form of de facto stationing.[[10]](#footnote-10) They argued for time limits on the “duration and pattern of port visits” and a “prior warning” requirement for nuclear ship visits. Even at the time of the negotiations, it was noted by a leading authority on US bases in Australia that US nuclear-armed attack submarines visited at Stirling Naval Base in Western Australia some 20-25% of the time.[[11]](#footnote-11) However, Australia, which chaired the negotiations, rejected the PNG/Vanuatu proposal, and, in the event, New Zealand accepted the compromise proposal, apparently concerned to minimize damage to its relations with the US over the nuclear ship ban by indicating that it was not necessarily seeking to “export” its “nuclear allergy” (as American officials liked to label the New Zealand and Island stance on nuclear ship visits).

***National Policies on Nuclear-Armed Ship Visits Since 1985***

Since 1985 when the SPNFZ was first signed, there have been few changes in the stances of both Australia and New Zealand on nuclear-armed ship visits and transit through territorial waters. In the case of Australia there continues to be bipartisan support for allowing such visits on the part of the two main parties, and the government has permitted US military exercises at Darwin with annual rotations of 2,500 US marines as part of the US “pivot” towards Asia. In the case of New Zealand the policy against nuclear-armed ship visits was consolidated through its 1987 New Zealand Nuclear Free Zone, Disarmament and Control Act, which, under Article 9, specifies that the Prime Minister may only grant entry into the internal waters of New Zealand if “satisfied that the warships will not be carrying any nuclear explosive device”.[[12]](#footnote-12) This clearly rules out port visits by nuclear-armed ships. However, in relation to NZ territorial seas and straits, it exempts any ship “exercising the right to innocent passage” or “right of transit passage”.[[13]](#footnote-13) By 1990, the New Zealand National Party, under pressure from public opinion, reversed its former policy of supporting nuclear-armed ship port calls and now continues to support a ban on such visits.

Following the 1991 decision of the US to cease deploying tactical nuclear weapons on vessels, the issue became a less urgent one for Pacific countries opposed to such vessels. During the late 1990s, the NZ Clark Government reaffirmed the country’s ban on nuclear-armed ship port calls, emphasizing the need for New Zealand to take a leading role on nuclear disarmament.[[14]](#footnote-14) In the context of the US decision to remove tactical nuclear weapons from its surface vessels, the Key National Party government did, in November 2016, allow the USS Sampson warship to make a visit, the first in 33 years.[[15]](#footnote-15) The current NZ leader, Jacinda Ardern, has continued to reaffirm the country’s anti-nuclear position as embodied in its 1987 legislation.[[16]](#footnote-16) In December 2018, New Zealand convened a Pacific regional conference involving South Pacific island states to support implementation of the UN Treaty on the Prohibition of Nuclear Weapons (TPNW), now signed by New Zealand, Fiji, Cook islands, Vanuatu, Tuvalu, Samoa, Kiribati, Nauru, and Palau.[[17]](#footnote-17)

***Implications: Port Calls by Nuclear-Armed Vessels***

Despite a long period of reduced concern by many South Pacific states following the 1991 US removal of tactical nuclear weapons from its vessels and planes, we are now entering a potential new Cold War period of conflict in which some of the major nuclear powers are currently modernizing their nuclear forces and may once again seek to deploy tactical and longer range cruise and intermediate range nuclear weapons on ships and planes, and move to base or station such weapons in regions where nuclear-weapon-free zones are established or proposed.

The United States has already, it seems, begun deploying from late 2019 a new long-range missile armed with a tactical “low-yield” warhead W76-2 (believed to be about 5 kt) on its Ohio-class SSBN submarines.[[18]](#footnote-18) In the case of Russia, Hans Kristensen has recently noted that the Russian Navy has some 900 nonstrategic nuclear weapons, including cruise missiles, antisubmarine rockets, torpedoes and depth charges, which could be deployed on submarines, aircraft carriers, cruisers, destroyers, frigates, corvettes and naval aircraft.[[19]](#footnote-19) Both sides are justifying their modernization of existing nonstrategic nuclear weapons on the basis of each other’s moves, and the US additionally expresses concern about Chinese nuclear weapon modernization.

The possibility of redeployment of tactical nuclear weapons on board ships and planes visiting the South Pacific raises the question of what can be taken from the region’s experience at both government and civil society levels in ensuring the absence of nuclear weapons in national ports and waters.

Certainly the example of New Zealand’s experience in successfully banning port visits by nuclear armed ships suggests the crucial importance of civil society campaigns and action both in direct protest over such visits, in public education on the risks both locally and globally, and on lobbying major parties and governments. Civil society action to create a nuclear free zone and ban such visits was crucial in the evolution of New Zealand policy.[[20]](#footnote-20) Public opinion moved so decisively in favour of imposing bans on nuclear ship port calls that the National Party leadership realised it would be politically costly to continue to support such visits. New Zealand also offers a valuable model for other countries in its consolidation of the ban on nuclear-armed ship port calls in its binding 1987 Nuclear Free Zealand legislation.

In the case of other South Pacific island countries imposing bans, the role of civil society action was again very apparent, particularly in the case of the trans-Pacific Nuclear Free and Independent Pacific movement.[[21]](#footnote-21)

While the SPNFZ was a compromise on nuclear-armed ship visits, David Lange did, by way of explanation, note at the 1985 Rarotonga press conference launching the new treaty: “You can’t climb a ladder by starting at the top”.[[22]](#footnote-22) Lange was anticipating perhaps that it could be strengthened in later years. The treaty most certainly was a major advance in committing the region to anti-stationing and anti-testing prohibitions. On nuclear ship visits, regional strengthening of bans on nuclear ship visits is certainly possible under the SPNFZ treaty’s Article 5, if more and more regional states were to follow New Zealand’s example. It is also feasible to revise the treaty itself to ban such visits through the treaty’s amendment provisions, although this would be unlikely while the current stance of the Australian Government remains in place.[[23]](#footnote-23)

In the light of a potential decision of major nuclear powers to redeploy tactical and intermediate nuclear weapons on board ships and planes visiting the region, the actual implementation of the South Pacific NWFZ clauses on port calls and territorial transit of nuclear armed vessels certainly warrant further tightening up to prevent de facto stationing by nuclear-armed states. A recent 2020 article by Samuel Bashfeld that forms part of a two-year Australian National Security College, Australian Defence Department supported, project on the Indian Ocean notes:

“*Australia takes advantage of…ill-defined wording in the Treaty of Rarotonga…to host nuclear-capable US platforms. By not specifying the duration of a “port visit’, Australia is able to manage alliance obligations while complying with a treaty similar in scope and design to the Pelindaba Treaty*“.[[24]](#footnote-24)

Australia’s practice would seem to conflict with the whole intent and spirit of the SPNFZ treaty’s anti-stationing obligations, and opens the wider South Pacific region and neighbouring states to possible targeting and involvement, particularly given nuclear powers’ embracing of Air-Sea Battle concepts in which not only direct targets but also communication infrastructure may be targeted in the process of rapid nuclear escalation. Such possibilities would seem to confirm the original concerns of Vanuatu and Papua New Guinea during the Rarotonga Treaty’s negotiations that there be limits on the duration and pattern of port visits. Negotiators of proposed new zones, such as the Middle East Weapon of Mass Destruction Free Zone, might well consider the need for a more watertight definition of “stationing” to prevent any possibility of de facto stationing under the guise of frequent and prolonged port calls by nuclear-armed ships or airport calls by nuclear-armed aircraft.

***Implications: Nuclear-Armed Transit in territorial seas***

Beyond bans on nuclear-armed vessel port calls, there is the further issue of territorial transit. Under the Rarotonga Treaty’s Article 5, as well as under the 1987 New Zealand Nuclear Free Zone legislation, territorial waters transit is permitted under rights of “innocent passage”. The wording of this article can be construed as allowing nuclear-weapon-states an automatic legal right to transit through the territorial waters of nuclear-free-zone members without needing permission from the relevant NWFZ members, and, at the time of negotiations, the Australian Chair of the Rarotonga Treaty claimed that this was the case. However, under the Law of the Sea (UNCLOS), this is most certainly not the case. In a detailed legal study of the Rarotonga Treaty[[25]](#footnote-25), Philp notes that, while it does guarantee innocent passage rights of transit through territorial waters, UNCLOS defines innocent passage as passage which is “not prejudicial to the peace, good order, or security of the coastal State”, and, more specifically still, that the rights of coastal states would be violated if a transiting vessel engages in any of the following activities:

*(a) any threat of use of force against the sovereignty, territorial integrity or political independence of the coastal State, or in any other manner in violation of the principles of international law embodied in the Charter of the United Nations; (b) any exercise or practice with weapons of any kind;…(f) the launching, landing or taking on board of any military device”.[[26]](#footnote-26)*

Philp concludes that UNCLOS specifically provides for a coastal state to “take necessary steps in its territorial sea to prevent a passage which is not innocent”, and that the establishment of a regional nuclear weapon free zone banning nuclear weapons transit could be considered such a necessary step.

Even if a complete ban on nuclear weapons transit in territorial waters were not to be imposed directly through an amended SPNFZ treaty, sovereign states would have the right under UNCLOS to regulate such transit in a number of ways. These include: prior notification of transit, restriction of transiting vessels to defined sea lanes, prohibition of military exercises, restriction in mode of transit (eg submarines must surface), and limits on numbers of transiting vessels. Regulations of this nature would at least serve to prevent nuclear weapons transit from passing close to population centres and such centres becoming targets in any escalating nuclear power conflict.[[27]](#footnote-27)

Given the absence of reference to such requirements in the Rarotonga Treaty, negotiators of new NWFZs or WMDFZs might well seek to reduce the risks of nuclear-armed states circumventing the nuclear bans imposed by either regional or national NWFZs by specifically inserting wording embodying UNCLOS definitions and requirements, particularly those relating to prior notice of transit and confirming the innocent nature of such passage consistent with the UNCLOS provisions. This, no doubt, will pose continuing problems for states such as the US who insist on “non-confirm, non-deny” policies in relation to nuclear weapon presence but, under UNCLOS, coastal states have a right to such confirmation

While not explicitly stated in the UNCLOS specifications but a logical consequence of them, new regional zones might also consider the need for specifically banning any transiting nuclear-armed vessel within their territorial seas from the use or threat of use of nuclear weapons against any target inside or outside the zone region (as, indeed, the existing Southeast Asian Nuclear Free Zone Treaty seeks to achieve in its Protocol for signature by the five NPT-recognised nuclear-armed states). This would also be consistent with principles and obligations imposed under the Treaty for the Prohibition of Nuclear Weapons, which, under Article 1(g), prohibits Parties from allowing “any…deployment of any nuclear weapons…in its territory or at any place under its jurisdiction or control”.[[28]](#footnote-28) The nine South Pacific states that have supported and signed the TPNW may be expected to either nationally, or regionally (through revision of the Rarotonga Treaty), impose bans on transit of such weapons through their territorial seas. It should also be noted that the International Committee of the Red Cross has interpreted the TPNW’s Article 1(e) prohibition of “assisting” anyone to engage in activities prohibited under the treaty as also prohibiting nuclear weapon transit where this would result in the deployment of nuclear weapons.[[29]](#footnote-29)

***Conclusion***

In conclusion, there are a number of general lessons and issues raised by the experience of South Pacific states in seeking to ban and/or regulate nuclear-armed ship vessel port calls and transit through their territorial waters.

One is the importance of civil society campaigns to educate the public and work closely with governments and political parties on the need to both reduce nuclear risks and create the political will to work towards wider global nuclear disarmament, on which the long-term future of the human project depends. Such campaigns were crucial in both New Zealand and several other Pacific island states in developing policies to ensure the total absence of nuclear weapons in their ports through bans on nuclear ship visits. Following the negotiation of the 2017 UN Treaty on the Prohibition of Nuclear Weapons, there has already been strong support within the region for this new measure to delegitimize and outlaw nuclear weapons. Even within Australia, the International Campaign Against Nuclear Weapons has now successfully secured Opposition Labor Party policy platform support for the TPNW. Regional support for the new treaty was evident in the New Zealand-convened December 2018 regional Pacific Conference on the TPNW, and makes it very likely that most regional states will continue to oppose nuclear-armed vessel port calls in their region under their sovereign right as specified in Article 5 of the SPNFZ treaty.

However, while South Pacific countries have been able, within the compromise formulation of SPNFZ Article 5, to decide whether or not to accept nuclear-armed vessel port calls, the key objective of the zone treaty to prevent stationing of nuclear weapons does raise important issues as to whether the relevant clauses and definitions are adequate to prevent circumvention by one or more of the nuclear-armed states, both in relation to port calls and in relation to territorial waters transit. With potential redeployment of tactical nuclear weapons on board surface vessels in the context of a potential new Cold War, the issue is by no means merely hypothetical.

In the case of port calls, the SPNFZ Treaty, as discussed, does not impose any restriction in its definition of stationing or in Article 5 on the duration of port calls involving nuclear weapons. It is evident in the past that the United States has already engaged in de facto stationing, with nuclear-armed vessels being present in some Australian ports for up to 25% of the time. In the event of redeployment of nuclear-armed tactical weapons on board such vessels, this would certainly incur the direct risk of being targeted in any escalating conflict between major nuclear-armed states, and have much the same outcome as if nuclear weapons were to be in place all the time, something that is clearly prohibited under the treaty. This problem would seem to indicate that in the negotiation of new NWFZs or WMDFZs the relevant provisions should be drafted with particular attention to preventing de-facto forms of stationing, perhaps through much tighter time limits on particular visits, or through prohibiting such visits altogether.

In the case of territorial sea transit, the SPNFZ Treaty was silent on the obligations under the Law of the Sea. As the Treaty wording of Article 5 stands, it might be assumed that nuclear-armed states have an automatic right of innocent passage through zone territorial waters. This is far from being the case under UNCLOS definitions of what does and does not constitute innocent passage, and under UNCLOS obligations of coastal states to prevent passage that is not innocent. In new NWFZ or WMDFZ initiatives, or amendment of existing NWFZ treaties, it would seem important to explicitly include in any new or amended NWFZ treaty reference both to UNCLOS definitions of innocent passage and to UNCLOS requirements relating to passage of nuclear-armed vessels through coastal state territorial waters, including prior notice of transit, evidence that military exercises are not involved, and that there is no taking on board of any military device.

Beyond the territorial seas, it is also worth noting (although it has not been the focus of this paper) that the Rarotonga SPNFZ Treaty establishes an important and innovative precedent in prohibiting a particular category of nuclear weapon activity, nuclear testing, within high seas and EEZ areas lying within the designated boundaries of the zone. The SPNFZ boundaries encompass a vast expanse of ocean lying between the Equator and Latitude 60 degrees South (boundary of the Antarctic Treaty), and between the Western side of Australia to Longitude 115 degrees East (boundary of the Tlatelolco Treaty), and thereby also includes French Polynesia. This high seas/EEZ nuclear test ban is achieved through the Rarotonga Treaty’s Protocol 3, which requires the five NPT-recognised nuclear-weapon-states, France, US, UK, Russia and China, to undertake “*not to test any nuclear explosive device anywhere within the South Pacific Nuclear Free Zone*”.[[30]](#footnote-30)

Protocol 3 reflected the widespread regional protests over health and environmental impacts of French, US and UK nuclear testing in the region. Concern over this testing was indeed one of the prime motivations in establishing the South Pacific NWFZ. Contrary to sceptics who questioned whether SPNFZ could ever succeed in securing binding agreements from nuclear weapon states to limit their nuclear activities on the high seas, the treaty has been successful in securing ratification of Protocol 3 by four out of the five NPT-recognised nuclear powers (France, UK, China and Russia), while the fifth, the US, has signed but not yet ratified this legally binding protocol. The ratification by France, which terminated its nuclear test program in French Polynesia in 1996, was a particularly significant success for the SPNFZ treaty.

The South Pacific NFZ would also seem to be an important precedent for showing how, even in high seas areas not directly under the control of regional states, and assuming sufficient political will, there are still ways in which regional states can move towards the complete absence of nuclear weapons within their region through NWFZ protocols that lock nuclear weapon states into relinquishing their nuclear weapon activities.

In the case of the EEZs and high seas regions falling within the designated boundaries of a NWFZ or WMDFZ, it would seem equally feasible for such zones to include a separate protocol under which nuclear-armed states voluntarily forgo their rights of nuclear-weapon transit through such areas even if they can legitimately claim innocent passage rights. Given the UNCLOS requirement that the “high seas shall be reserved for peaceful purposes”, coupled with the advent of the UN TPNW Treaty declaration that any use of nuclear weapons is “contrary to international law applicable in armed conflict, in particular the principles and rules of international humanitarian law”[[31]](#footnote-31), it would seem difficult for any nuclear states to assert that its transit of such weapons, whether in territorial seas, EEZs or the high seas, could be considered “innocent”, except, perhaps in the transport of nuclear weapons to be dismantled and destroyed under International Atomic Energy Agency (IAEA) supervision.

1. United Nations General Assembly, Resolution 3472 (XXX) B defines a Nuclear-Weapon-Free Zone as requiring “the statute of the total absence of nuclear weapons”, UNODA, <https://www.un.org/disarmament/wmd/nuclear/nwfz/> (accessed 29/5/20) [↑](#footnote-ref-1)
2. For detailed studies of the SPNFZ, see: Michael Hamel-Green, *The South Pacific Nuclear Free Zone Treaty: A Critical Assessment* Peace Research Centre, Research School of Pacific Studies, Australian National University, Canberra, 1990 (available online at ANU Library, <https://openresearch-repository.anu.edu.au/handle/1885/111864>); Gregory Fry, “Regional Arms Control in the South Pacific,” in Pitt and Thompson, eds., *Nuclear-Free Zones*, Croom Helm, London, 1987, pp. 46-66; T.V. Paul, “Nuclear-free-zone in the South Pacific”, *The Round Table*, 75:299, pp.252-262, 1986. [↑](#footnote-ref-2)
3. Michael Hamel-Green “Nuclear Tests in the Pacific,” in Nigel J. Young, ed., *The Oxford Encyclopaedia of Peace*, Oxford University Press, Vol.3, 2010, pp. 264-269; United States Government Department of Energy (DOE), United States Nuclear Tests, July 1954 through September 1992 US Department of Energy, NV-209, Rev.15, 2001); Bruno Barrillot, *Les Essais Nucléaires Français 1960-1996: Conséquences sur l’environnement et la santé*, Centre de Documentation et de Recherche sur la Paix et les Conflits, Lyon, 1996); Vitali Fedchenko and Ragnhild Ferm Hellgren, “Nuclear Explosions, 1945-2006,” *SIPRI Yearbook 2007*, Oxford University Press, Oxford, 2007, pp. 555-557. [↑](#footnote-ref-3)
4. For accounts of the effects of nuclear testing on Pacific islanders and indigenous people, see: Jonathan Weisgall, “The Nuclear Nomads of Bikini”, *Foreign Policy*, No.39 Summer 1980, pp.74-98; Jonathan Weisgall, *Operation Crossroads: The Atomic Tests at Bikini Atoll*, Naval Institute Press, Annapolis, 1994; Stewart Firth, *Nuclear Playground*, Allen & Unwin, Sydney, 1987; Jane Dibblin, *Day of Two Suns: US Nuclear Testing and the Pacific Islanders*, Virago Press, London, 1988; Ronnie Alexander, *Putting the Earth First: Alternatives to Nuclear Security in Pacific Island States*, Matsunaga Institute for Peace, University of Hawaii, Honolulu, 1994; Nic Maclellan & Jean Chesneaux, *France in the Pacific,* Ocean Press, Melbourne, 1998; Nic Maclellan, *Grappling with the Bomb: Britain’s Pacific H-bomb Tests,* ANU Press, Canberra, 2017; Alan Parkinson, *Maralinga: Australia’s Nuclear Waste Cover-up,* ABC Books, Sydney, 2017. [↑](#footnote-ref-4)
5. Hamel-Green, *op.cit.* [↑](#footnote-ref-5)
6. For detailed studies on New Zealand, Australian and Pacific Island policies at the time on nuclear-armed ship visits and nuclear disarmament, see: Kevin Clements, *Back from the Brink: the creation of a Nuclear-Free New* Zealand, Allen & Unwin, Wellington, 1988; Michael Pugh, *The ANZUS Crisis: nuclear visiting and deterrence,* Cambridge University Press, Cambridge, 1989; David Capie, “Nuclear-free New Zealand: Contingency, contestation and consensus in public policy-making” in Joanna Luetjens, Michael Mintrom, Paul ‘t Hart (eds.), *Successful Public Policy: Lessons from Australia and New Zealand,* ANU Press, 2019; Greg Fry, *Framing the Islands,* ANU Press, Canberra, 2019; Jessie Dorfmann, “You Can Never Sink a Rainbow: Anti-Nuclearism in the Pacific, *Harvard International Review,* vol.37, no.2, Winter 2016, pp 4-7. [↑](#footnote-ref-6)
7. David Lange quotation cited in Veronika Meduna, *New Zealand Set to Mark Anti-Nuclear Victory over the United States,* Australian Broadcasting Commission News,<https://www.abc.net.au/news/2016-08-13/new-zealand-celebrates-anti-nuclear-victory-over-united-states/7731644> (accessed 28/5/20). [↑](#footnote-ref-7)
8. United Nations Office For Disarmament Affairs, Treaties Database, *South Pacific Nuclear Free Zone Treaty text,* <http://disarmament.un.org/treaties/t/rarotonga/text>, (accessed 29/4/20). [↑](#footnote-ref-8)
9. Ibid. [↑](#footnote-ref-9)
10. South Pacific Bureau for Economic Cooperation, *Report by the Chairman of the Working Group on a South Pacific Nuclear Free Zone to the South Pacific Forum, Rarotonga, 4-6 August 1985,* SPEC, Suva, 1985; also see Michael Hamel-Green, “Regional Arms Control in the South Pacific: Island State Responses to Australia’s Nuclear Free Zone Initiative, *The Contemporary Pacific,* vol.3 no.1, Spring 1991, pp.59-84. [↑](#footnote-ref-10)
11. Desmond Ball, “Limiting Damage from Nuclear Attack” in Ball, D & Langtry, J.O. (eds), Australian National University & Allen & Unwin, Canberra, 1983, p.155. [↑](#footnote-ref-11)
12. Pugh, 1989,  *op.cit.,* “Appendix 7, Extracts from the New Zealand Nuclear Free Zone, Disarmament and Arms Control Act”, pp.208-210. [↑](#footnote-ref-12)
13. *Ibid.* [↑](#footnote-ref-13)
14. David McCraw, “New Zealand Foreign Policy Under the Clark Government: High Tide of Liberal Internationalism”, *Pacific Affairs,* v.78 no.2, Summer, 2005, pp 217-235. [↑](#footnote-ref-14)
15. Nicky Hager, “US warship visit to New Zealand”, *New Zealand Herald,* 9 June 2016. [↑](#footnote-ref-15)
16. New Zealand Herald, “Jacinda Ardern revives disarmament and arms control role to stress anti-nuclear stance”, NZ Herald, <https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=12002708>

(accessed 1/6/20). [↑](#footnote-ref-16)
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18. Robert Burns, “US Adds ‘Low Yield’ Nuclear Weapon to Its Submarine Arsenal”, *The Diplomat,* httpss://thediplomat.com/2020/02/us-adds-low-yield-nuclear-weapon-to-its-submarine-arsenal (accessed 28/5/20) [↑](#footnote-ref-18)
19. Hans M. Kristensen & Matt Korda, “Russian nuclear forces, 2020”, *Bulletin of the Atomic Scientists,* 76:2, 2020, pp.102-117. [↑](#footnote-ref-19)
20. Capie, *op.cit.;* Hager, *op.cit.* [↑](#footnote-ref-20)
21. Hamel-Green, 1990, *op.cit.*; Nic Maclellan, “The Nuclear Age in the Pacific Islands”, *The Contemporary Pacific,* v.17, no.2, 2005, pp 363-372. [↑](#footnote-ref-21)
22. Author’s notes of David Lange’s comments recorded when present at the South Pacific Forum press conference on the South Pacific Nuclear Free Zone, Rarotonga, 6th August 1985. [↑](#footnote-ref-22)
23. Treaty amendment mechanisms are discussed in Michael Hamel-Green, “The South Pacific – The Treaty of Rarotonga” in Ramesh Thakur (ed.), *Nuclear Weapons-Free Zones,* Macmillan, London, 1998, pp.59-80. [↑](#footnote-ref-23)
24. Samuel Bashfield, “Mauritious, Diego Garcia and the small matter of nukes”, Lowy Institute, <https://lowyinstitute.org/the-interpreter/mauritius-diego-garcia-and-small-matter-nukes> (accessed 28/5/20). [↑](#footnote-ref-24)
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26. Cited in Philp Jr, *ibid.* [↑](#footnote-ref-26)
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