TEST BAN VERIFICATION MATTERS

Entry into Force

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Executive summary

The requirements for the entry into force of a comprehensive nuclear test ban treaty (CTBT) have yet to be resolved at the Conference on Disarmament negotiations in Geneva. If entry into force (EIF) becomes a time consuming part of negotiations, there is a risk that this issue may hold up the rest of the CTB negotiations. If these negotiations fail to reach agreement before the April 1995 Non-Proliferation Treaty (NPT) Conference it may sour the NPT and damage the currently positive atmosphere for nuclear arms control. A comprehensive test ban is an important goal enshrined in the NPT so failure to achieve a ban may adversely affect attempts to extend the duration of the NPT.

- The main argument for stringent EIF proposals, using the principle of universal adherence, is based on a desire for certain states – nuclear-weapon and nuclear-threshold – to participate in the test ban in order to allay security concerns. However if the EIF requirement is ratification by a particular list of states, any of those states could veto the treaty's entry into force by failing to ratify.
- The choice will be a payoff between two underlying concerns: adherence to a CTBT by all nuclear-capable states, and early entry into force of the treaty which will enable early implementation of the verification procedures.
- Ratification by all the five declared nuclear-weapon states would be a minimum requirement for many states. But China and France currently wish to carry out more nuclear tests in 1995 and 1996 which could complicate or delay entry into force.
- Until the treaty enters into force no state is required to carry out the verification and implementation procedures, so limiting the treaty's effectiveness. One of the advantages of the global structure of the verification regime is that any nuclear test could be detected – whether or not conducted by a state party to the treaty.
- Parallels may be drawn with the way in which verification became a stumbling block in previous multilateral negotiations. There are genuine national security issues which need to be addressed by an effective treaty, but there are also ways in which discussion on EIF can be used dishonestly as an effective mechanism to hold back progress by reluctant states.
- The simplest solution to enable early entry into force would be ratification by a number of states. If agreement cannot be reached on such a solution, a formulation might be sought to avoid entry into force being held hostage by any state or states. For example, convening a conference after a set period of time to decide whether to allow the treaty to enter into force without the ratification of the recalcitrant state or states.

Introduction

There are a number of crucial issues which still need to be resolved in the Conference on Disarmament (CD) negotiations on the Comprehensive Test Ban Treaty (CTBT) in Geneva. These include: the scope of the treaty; the verification arrangements; and how many and which countries must ratify the treaty before it enters into force. Entry into force (EIF) is emerging as an issue with the potential to hold up the negotiations. Monitoring states' compliance with the treaty cannot start until it enters into force.

Signature to a treaty obliges a state to abide its terms

A state's signature to a treaty obliges it to refrain from acts which would defeat the object and purpose of the treaty unless it has made its intention clear that it will not ratify the treaty.[1] Thus all the five nuclear-weapon-states will be expected to cease testing from the date of their respective signatures to a CTBT – although it may be argued (perhaps by France or China) that a specified number of tests are essential in order for them to adhere to the treaty when it enters into force. This would be an unusual interpretation, but not necessarily contrary to international law.

Once the instrument of ratification has been deposited with the designated depository state or organization the state is bound under international law to abide by the terms of the treaty. The process of ratification varies from country to country according to constitutional requirements, and the instrument of ratification is commonly a written declaration confirming that this process is complete.

The treaty enters into force once the agreed conditions have been met – usually ratification by a certain number of countries. The implementation process, including the verification regime, is then set in motion. Without the verification and other organisational structures in place, the treaty is ineffective.

1. *Vienna Convention on the Law of Treaties, 1969.*

Entry into force in other multilateral agreements

The Non-Proliferation Treaty

The EIF arguments are not new to negotiations

The arguments arising in the entry into force (EIF) debate are not new to arms control treaties. During the nuclear Non-Proliferation Treaty (NPT) negotiations, objections were raised in response to the US/Soviet draft that the treaty should enter into force after ratification by the three depository states (the USA, UK and USSR) plus forty other states.

Some controversy arose over the number of the non-depository states. The USA, co-drafters of the treaty with the Soviet Union, considered forty to be high enough for the Treaty to be a significant anti-proliferation measure, but not so high as to unduly delay its entry into force.[2] Several states proposed the number should be higher. Mexico reasoned that the Treaty's main obligations lay with the non-nuclear-weapon states, and suggested sixty. Nigeria felt it would be undemocratic or discourteous to recommend a treaty to the UN General Assembly which would not require the support of at least a majority of its members. Zambia suggested two thirds or half of the UN members should accede thus reflecting the serious desire of the entire membership to do away with nuclear weapons.

Threshold weapon states

There were also concerns about who should ratify before the treaty entered into force, which centred around the inclusion of threshold nuclear-weapon states. Switzerland claimed the security of the small states would be endangered unless most of the countries likely to possess nuclear weapons acceded to the treaty, and that non-accession by important industrial powers might be economically prejudicial to the competitive capacity of the atomic industry of the signatory states. Spain proposed that of 60 non-depository states, at least twelve of those should possess nuclear power reactors or have economically exploitable uranium deposits within their territories.

Regional security

Sweden raised the issue of regional security. The Swedish representative Alva Myrdal was concerned that the proposed formula did not take into account the special importance which some prospective parties to the Treaty may attach to the more or less simultaneous adherence by another state or several other states. She added that regional preoccupations may come to play an important role in this process of decision making, as well as fears of uneven commercial competition if some states adhered and some did not, some were under an inspection agreement already settled and that issue was still open for others. Ambassador Myrdal wondered whether this problem could be taken care of by allowing a state to make a reservation in its instrument of ratification to the effect that the Treaty should not enter into force or remain in force for its part until and unless it enters into force and remains in force for another state or states, which would then have to be specified in the same document. She observed that the possibility of reservation would undoubtedly increase the speed of the ratification process in a

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2. This and following section based on material from Mohamed I. Shaker, The Nuclear Non-Proliferation Treaty: Origin and Implementation, *Vol. II, Oceana Publications, London, 1980, pp. 788-791; this book is widely regarded as the most comprehensive published account of the NPT negotiations.*

number of countries of special importance as parties to the treaty.[3] This suggestion is the reverse of the mechanism in the Treaty of Tlatelolco (discussed below) which allows states to waive the EIF requirements and let the Treaty enter into force for them.

The NPT required the ratification of the depository governments plus 40 other states

None of these arguments dissuaded the co-drafters from their original position. The US representative repeated the explanation that the number of 40 states was selected in order to ensure that, when the treaty came into force, it would begin without a dangerous delay to achieve its purpose of halting proliferation. It was expected that it would take at least one year from the date the treaty was open for signature for forty states to complete their ratification, and the experience under the Partial Test Ban Treaty was recalled as considerably relevant. In examining an EIF clause for the NPT, the US representative explained that the possibility of establishing a qualitative rather than numerical standard had been considered, but that a practical one was not found which would be free from controversy or ambiguity in its application, and that moreover, this type of approach would allow any state to veto the treaty by not ratifying it. The EIF requirements stayed at forty states plus the depository governments.

The NPT took 20 months to enter into force. It was signed by the USA, UK, Soviet Union and 59 other countries on 1 July 1968, and entered into force on 5 March 1970. The Soviet Union refused to ratify the treaty until West Germany signed it, which they did in November 1969.[4] The treaty entered into force long before ratification by West Germany, Italy, Japan, Egypt, Spain, and the Netherlands – let alone France or China – who all ratified eventually.

The US Senate delayed ratification as one of the means to punish the Soviet Union for the invasion of Czechoslovakia in August 1968. President Johnson's failure to obtain the Senate's consent before the end of his presidency was also in part due to his weakness in domestic politics. Richard Nixon, as presidential candidate, was generally in favour of ratification, but opposed action on it 'as long as Soviet troops were on Czechoslovak soil'.[5] As President he had a change of heart and recommended ratification to the Senate on 5 February 1969;[6] it was given in March.

The NPT now has 165 parties (September 1994), more than any arms control agreement in history. France and China joined in 1992. The 'threshold' nuclear-weapon states (Israel, Pakistan and India) – who would have to relinquish their capability if they joined – remain outside. Iraq and North Korea, whose nuclear weapons programmes have caused concern in the last few years, are NPT parties. Without the NPT however, the international community would not have been able to insist on inspections and sanctions.

The ratification record of the NPT perhaps bears out the original US analysis that the priority was to establish a non-proliferation norm and let its effectiveness over time persuade states to join. The USA, USSR and UK did not even insist on France and China

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3. Conference on Eighteen Nation Disarmament Committee document ENDC/PV.363, 8 February 1968, para. 29-30.

4. William Potter, Nuclear Power and Nonproliferation: An Interdisciplinary Perspective, *Coelgeschlager, Gunn & Hain, Cambridge, MA, 1982, p. 55.*

5. Glenn T. Seaborg with Benjamin S. Loeb, Stemming the Tide: Arms Control in the Johnson Years, *Lexington Books, D. C. Heath & Company, Massachusetts, 1987, p. 379.*

6. Ibid.

ratifying before the treaty could enter into force. Had they done so, the whole process would almost certainly have stalled.

The Latin American Nuclear Weapon Free Zone (Treaty of Tlatelolco)

The Treaty of Tlatelolco EIF waiver

The EIF mechanism used in the Treaty of Tlatelolco (1967) which establishes a nuclear weapon free zone in Latin America, has been mentioned as an option for the CTBT (see below). The treaty specified EIF conditions[7] but gave the right to each of the parties to waive the requirements thereby allowing the treaty to enter into force for itself. The system was adopted as a conciliatory formula between two distinct views: that the treaty should come into force as soon as eleven states had ratified it (a majority of the 21 members of the negotiating Preparatory Commission); or that it should enter into force only upon the completion of certain conditions (essentially the requirements in note 8).[8] Within a few years of its opening for signature, the majority of states in the region of the treaty had ratified it and had given such a waiver.

The verification provisions for each state are based on a bilateral arrangement with the International Atomic Energy Agency (IAEA) for full-scope safeguards (the equivalent of the NPT), and are therefore not hindered by the non-accession by some states. After more than two decades, Argentina and Brazil agreed to renounce nuclear weapons and begin negotiations with the IAEA for full-scope safeguards to be negotiated within the Treaty of Tlatelolco. Amendments to the Treaty which transfer the inspecting authority from the Treaty's implementing organisation OPANAL[9] to the IAEA have recently been ratified by Argentina, Brazil and Chile enabling all three states to fully accede to the treaty. Following Argentina's and Brazil's announcement of their intention to join the treaty, Cuba announced its willingness to adhere,[10] and on 29 August 1994 announced its decision to accede.

The disadvantage of the EIF mechanism is that – after 27 years or more – the treaty has not yet entered into force for all states. However, it has kept the more reluctant states tied to the process, and has facilitated a process for states to join the treaty.

The Partial Test Ban Treaty

The PTBT required the three negotiating parties' ratification

The 1963 Partial Test Ban Treaty (PTBT), banning atmospheric and underwater nuclear explosions, needed the ratification of only the three negotiating parties, the UK, USA and USSR, for it to enter into force. It was the quickest entry into force of all the multilateral arms control treaties signed this century. After negotiations finally began in earnest, ratification was completed in just over two months, but the treaty does not

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7. (i) Deposit of the instruments of ratification by all the sovereign states in the treaty's zone of application; (ii) signature and ratification of Additional Protocols I and II annexed to the treaty by the powers concerned; and (iii) conclusion of bilateral agreements with the IAEA on the application of safeguards on each country's nuclear activities. From Henry W. Degenhardt, Treaties and Alliances of the World, *4th edition (A Keesing's reference publication), Longman, UK, 1986.*

8. Alfonso García Robles, The Latin American Nuclear-Weapon-Free Zone, *The Stanley Foundation Occasional Paper 19, May 1979.*

9. Organismo para la Proscripcion de las Arms Nucleares en la America Latina (Agency for the Prohibition of Nuclear Weapons in Latin America).

10. John Redick, "Nuclear-Weapon-Free Zones in a Changing Global Environment" in J. B. Poole and R. Guthrie (eds), Verification 1994,VERTIC/Brassey's, London, 1994, p. 72-74.

include an international verification regime. The PTBT is open for signature by other states, and has been ratified by 120[11] as of December 1993. Neither France nor China are parties to the treaty, but ceased atmospheric testing in 1974 and 1980 respectively.[12]

The Chemical Weapons Convention

The CWC requires 65 ratifications

The Chemical Weapons Convention, opened for signature in January 1993, will enter into force 180 days after the 65th state deposits its instrument of ratification. During the negotiations in 1987, the UK recommended that at least 60 ratifications should be the EIF requirement – around one third of the states which may be eligible to join.[13] It was hoped that this would enhance confidence in the universality of the treaty's application. Potentially relevant precedents, including the NPT, were also taken into account (fewer independent countries existed when the NPT was agreed). The inclusion of states which had declared publicly that they possessed chemical weapons was raised, but the final agreement settled on 65, with no further conditions. More than 154 states have signed the treaty,[14] but only 14 have ratified so far.[15]

The Framework Convention on Climate Change

The Climate Change Convention, which limits greenhouse gas emissions, entered into force in March 1994 – 90 days after the 50th state deposited its instrument of ratification. The Convention has been signed by 166 states and ratified by 79 (as of 30 June 1994).[16]

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11. SIPRI Yearbook 1993, *Oxford University Press, Oxford, 1993, p. 763.*

12. *John Edmonds, "At Last, a Total ban on Nuclear Tests?", in* Verification 1994, *VERTIC/Brassey's, London, 1994, p. 36.*

13. *Making the Chemical Weapons Ban Effective, CD 769, 14 July 1987.*

14. *Robert J. Mathews and Antony S. Taubman, "Preparing for Implementation of the Chemical Weapons Convention: Progress During 1993", in J. B. Poole and R. Guthrie (eds),* Verification 1994, *see note 10, p. 111.*

15. *As of 19 August 1994. Source:* Chemical Weapons Convention Bulletin, *No 25, September 1994, p. 5.*

16. Trust and Verify, *No 48, June/July 1994, VERTIC, London.*

Entry into force in a CTBT

The CTBT is being negotiated by 37 members and 47 observers of the Conference on Disarmament (CD). It is intended to be a fully multilateral negotiation, and non-discriminatory between the nuclear-weapon and non-nuclear-weapon states. It is clear though, that the treaty will have a different effect on the would-be nuclear-weapon states and non-nuclear-weapon states, than on the declared nuclear-weapon states.

The debate over EIF has ranged from a minimal requirement of three to thirty states ratifying, to a stringent requirement of a large number of states including all of the declared nuclear-weapon states and all nuclear-capable states. The differences in part stem from how a CTBT is perceived. Some states view it as a symbolic commitment to non-proliferation by the nuclear-weapon states, and therefore argue that all the five declared nuclear-weapon states should ratify before the treaty enters into force. States who believe its primary purpose is to restrict 'threshold' nuclear-weapon states, argue for a large proportion, if not all of these states to be included in the requirements for entry into force.[17]

The choice will be a pay-off between two underlying concerns: adherence by all states currently or potentially capable of nuclear testing, and early entry into force which will bring early implementation of the global verification procedures and the establishment of an international norm against testing.[18]

A stringent requirement may significantly delay EIF

The greater the number of ratifications required, the longer it will take to enter into force. A stringent EIF requirement of a large number of states may significantly delay the treaty's entry into force. The process of ratification, even by states who are very supportive of the treaty, takes time. It may be subject to constitutional or parliamentary procedures which for some states is complicated, especially if the treaty includes complex verification requirements. For many of the emerging democracies the process has not yet been tried and tested. Constitutional procedures may be genuinely time consuming, but this can also be convenient for countries wishing to delay ratification. The UK government for example, has said it has not yet found the time to put the necessary legislation through Parliament to enable ratification of the Chemical Weapons Convention.

Domestic politics can obstruct ratification

A treaty's ratification may require approval by the national legislature, as is the case for China, Russia and the United States, leaving open the possibility for domestic politics to obstruct the process. Ratification could be delayed by 'pork barrel' considerations of industries for example, that may be affected by a cut back in weapons procurement as a result of an arms control treaty. It could also be used as a political football between rival parties. The amendments to the Treaty of Tlatelolco recently signed between Argentina, Brazil, and Chile required ratification by their respective congresses, and it was a close vote in the Argentine Chamber of Deputies where most of the Radical Party opposed ratification.[19] In 1963 President Kennedy feared he could not get the required

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17. Sean Howard, "Prospects for CTB Negotiations", BASIC Papers, No 1, British American Security Information Council, London, 24 January 1994.

18. Comprehensive Nuclear Test Ban Treaty – Australian Resource Paper on Draft Treaty Elements — Explanatory Notes, CD/NTB/WP.50, 30 March 1994.

19. John Redick, "Nuclear-Weapon-Free Zones in a Changing Global Environment", in J. B. Poole and R. Guthrie (eds), Verification 1994, *see note 10, p. 73.*

two thirds majority in the Senate to ratify a comprehensive test ban treaty, so signed the Partial Test Ban Treaty instead.[20]

Ratification can also be used as a tool for conveying criticism to another government for an act that is not necessarily pertinent to treaty issues. For example the US Senate's decision to withhold ratification of the NPT due to the Soviet invasion of Czechoslovakia (as discussed earlier).

If CTBT negotiations continue beyond April 1995, the issue may become ensnared in political manoeuvring around national elections

An EIF formulation which requires the ratification of particular states rather than any number of states could delay the treaty, perhaps indefinitely. The most common proposal in the debate over EIF has been the inclusion of the five nuclear-weapon states. France and China, although currently supportive of a CTB, have indicated their wish to complete their respective weapons testing programmes which may mean more tests in 1995 and 1996. Currently, neither state wants to sign a treaty before 1996. The slower the negotiation, the more politically convenient for them, as they will not be seen to be blocking something agreed by the rest of the world. Their agreement with the treaty is necessary, but if EIF is dependent on their ratification, the conclusion of the treaty may be detained for some time. During this time, elections in France (in May 1995), Russia (1996) and the US (November 1996) may see less enthusiastic administrations, in no hurry to restart the process. In France, the mainstay of support for a CTB since April 1992, has been President Mitterrand, but all of the current candidates for his Presidency would like to end his testing moratorium, and allow between 3 and 20 further tests to be conducted before adhering to a CTBT.

It is expected to take a minimum of one to two years to set up the organizational structures and verification procedures required to fully implement the treaty, by which time China and France may be ready to adhere. But having the treaty enter into force without them may be unacceptable to a significant number of states. One way around this problem may be for France and China to sign the treaty with a codicil stating their inability to adhere to the terms of the treaty until a certain date.

EIF could be vetoed if made dependent on a particular list of states

There has been much debate over the inclusion of states who have nuclear power or research reactors. This is a less pointed formula for ensuring adherence to the treaty by 'threshold' states. However, if the EIF requirement specifies such a list of states, these concerns are matched by the formidable prospect of any state being able to hold up the treaty by refusing to ratify.

EIF is not the only mechanism to ensure compliance

EIF requirements are not the only – nor necessarily the most effective – mechanism to ensure compliance by key or difficult states. The role of diplomatic pressure should not be ignored. The CD negotiating process, which relies on consensus, is an important indication of general support for the treaty by members and observers alike. The Australian resource paper notes that concern over universality "would normally be served through parallel and complementary diplomatic processes" rather than formulated in the text.[21] Brazil expressed the concern that the longer the list of required ratifications, the greater the probability any single state could impede entry into force, and reminded negotiators that the CTBT is not an isolated instrument.

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20. Michael J. Sheehan, Arms Control: Theory and Practice, *Blackwell, Oxford, 1988, p. 85 citing Freeman Dyson, 'Weapons and Hope', Part III,* New Yorker, *20 February 1983, p. 83.*

21. Comprehensive Nuclear Test Ban Treaty – Australian Resource Paper on Draft Treaty Elements, see note 18.

The global nature of the verification regime will mean that nuclear tests will be detected, whether or not conducted by a state party to a CTBT. Crude deliverable weapons do not require testing so a nuclear test explosion would indicate a more sophisticated design and production, and therefore probably beyond the capabilities of a threshold state. For example, the bomb dropped on Hiroshima was not tested in advance. Unless preparations were extraordinarily careful and clandestine, the amount of activity generated in the construction of a nuclear test site and the preparations for a test are likely to be detected by satellite.

The verification regime will be global and thereby able to detect tests by non-parties

Thus, there are distinct advantages in letting the treaty enter into force and thereby establish the international verification regime, rather than wait for perceived 'problem' states to join, or allow them the opportunity to hold up the treaty.

The role of verification in negotiations: parallels with EIF

Verification has often been a stumbling block in negotiations

The issue of verification has often been a stumbling block in arms control negotiations, sometimes to the point where it was used by arms control opponents as a blocking mechanism. Sidney Graybeal, US Commissioner to the US–USSR Standing Consultative Commission to discuss verification problems in the Strategic Arms Limitation Talks (SALT) from 1973–77, observed that "Verification is becoming a shield for those not interested in arms control to hide behind".[22]

The central theme of the debate during the 1970s and 1980s was the contrasting positions between US insistence on stringent verification and the Soviet Union's resistance to intrusive verification measures, particularly on-site inspections. The Soviet position was based on the view of military secrecy as an important strategic asset[23] and the fear of espionage. In the USA, verification was seen as vital to guard against Soviet cheating, with the domestic debate being influenced by accusations of Soviet non-compliance with earlier treaties.

A key indicator of the misuse of verification criteria as a negotiating tactic was if the level of verification required was out of proportion to the amount of control the treaty would impose

The desired level of verification depends on the degree to which uncertainty is acceptable in a treaty. The Nixon administration for example, defined "adequate verification" as a practical standard, the test being "whether we can identify attempted evasion if it occurs on a large enough scale to pose a significant risk, and whether we can do so in time to mount a sufficient response".[24] President Nixon instructed the SALT I negotiators that: "no arms limitation agreement can ever be absolutely verifiable". The key measure is how much undetected cheating could occur which would be of strategic importance. The Reagan administration in particular, then took verification to a far extreme, establishing impossible criteria which precluded agreement on many arms control negotiations.[25] A key indicator of the misuse of verification criteria as a negotiating tactic was if the level of verification required was out of proportion to the amount of control the treaty would impose.

A similar 'practical standard' can be applied to the debate on EIF.

The verification measures proposed by the US in 1984 for a chemical weapons ban were so intrusive they would have been impossible to implement by a US government, much less a Soviet government.[26] The phrase "anytime, anywhere" was used to describe inspections in the US draft chemical weapons convention.[27]

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22. *Quoted in Richard Scribner, Theodore J. Ralston and William D. Metz,* The Verification Challenge: Problems and Promise of Strategic Nuclear Arms Control Verification, *Birkhäuser, Boston, 1985, p. 21.*

23. *Sheehan,* Arms Control: Theory and Practice, *see note 20, p. 20.*

24. *President Nixon's instructions to the SALT I negotiating team quoted in Michael Krepon,* Arms Control – Verification and Compliance, *Headline Series No 270, Foreign Policy Association, New York, September/October 1984.*

25. *Sheehan,* Arms Control: Theory and Practice, *see note 20, p. 122.*

26. *Ibid, p. 130, citing* Fundamentals of Nuclear Arms Control, Part IV, Treaty Compliance and Nuclear Arms Control, *Washington, DC, June 1985, p. 22 (a report prepared by the Congressional Research Service for the Sub-committee on Arms Control, International Security and Science, of The House of Representatives Committee on Foreign Affairs).*

27. *Article 10 of the US draft of the CWC, Conference on Disarmament document CD/500, Geneva, 1984.*

The verification issue beleaguered all previous nuclear test ban negotiations from the late 1950s until well into the 1980s – some time after consensus among the international scientific community that it was technically possible to verify underground nuclear explosions. Nevertheless, the CTB talks were abandoned by the US in 1980 with verification cited as one of the difficulties. The UK government continued to use the argument as an obstacle to restarting negotiations up to the late 1980s when it acknowledged its wish to continue nuclear testing for as long as the UK had nuclear weapons. In 1986, George Younger, Defence Secretary said "It is still the case that verification and so on is the most severe obstacle to achieving [a CTB Treaty]".[28] In June 1988 David Mellor, a Foreign Office minister wrote in a parliamentary Written Answer that verification was becoming "more important but also more difficult".[29] Yet technology had proven that verification of a CTBT was indeed possible; this comment illustrates the political problems constantly being thrown up around the verification question.

Political problems surrounded the verification question

There is concern that EIF may now be taking over from verification as a smoke screen for reluctant states to hide behind. The rationale behind stringent EIF requirements seems logical at first, given that the CTBT will be a major non-proliferation measure which should ideally have all nuclear-capable states on board. But a CTBT must be viewed in its overall political context. Using EIF to ensure adherence by 'problem' states could hold back the treaty and its verification provisions altogether, which would be of advantage to no one but the rogue state.

There is concern that EIF may be used as a smoke screen for reluctant states to hide behind

28. *John Edmonds*, A Comprehensive Test Ban Treaty: Britain's Public Position, 1962-92, *BASIC, January 1993.*
29. *Ibid.*

The options

The range of options for EIF requirements essentially comes down to a choice between a list, a number or a formula.[30] At the beginning of the negotiations a wide variety of proposals were suggested. Some were very stringent (such as ratification by the expanded CD and all countries with nuclear power or nuclear research reactors), and others complicated (such as ratification by a given number of states including a high percentage of the five nuclear-weapon states and of states possessing nuclear power or nuclear research reactors). Appendix A reproduces the June 1994 paper presented by the Friend of the Chair of the Working Group on Legal and Institutional Issues which includes a large number of such variants. In August, the Friend of the Chair presented a paper with six main variants in treaty language which is included in the draft treaty rolling text now being negotiated (Appendix B).

Fast and simple

3 nuclear-weapon states

Ratification by three nuclear-weapon states – Russia, the UK and the USA – would be the quickest EIF solution, as the PTBT experience shows.

A simple number

Ratification by a ***simple quantitative number*** of states such as in the CWC would be the next quickest method, depending on the number of states required. Japan is in favour of such an approach and has suggested 30 countries as an example.[31]

40 states including the 5 declared nuclear-weapon states

However the minimum requirement for most states would include ratification by all the five declared nuclear-weapon states. The 1993 Swedish draft treaty recommended forty states ***including the five nuclear-weapon states*** for EIF.[32] But strong concerns have also been raised over the inclusion of 'threshold' nuclear-weapon states. Early on, ratification by all members of the expanded CD, which would include all 'threshold' states, was a favoured option by states such as France and the UK. (Appendix C lists members and 'observers' of the CD, and the list of states which were suggested for acceptance as members). Agreement on the expansion of the CD is not being reached quickly, thus states who had based an EIF requirement on CD membership are looking to other formulae. France and the UK[33] are now inclined towards the proposal favoured by Russia, which is ratification by all states with nuclear power or research reactors as listed by the International Atomic Energy Agency (IAEA) (see Appendix D).

The IAEA list

The USA initially indicated its preference for an approach designed to garner early adherence by a significant number of key states, but doubted making EIF contingent on ratification by a specific group of states beyond the five nuclear-weapon states. Ambassador Ledogar said they believed that "the considerations that led to the rather conservative entry-into-force provisions of the CWC should not apply to the CTBT".[34]

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30. Rebecca Johnson and Sean Howard, A Comprehensive Test Ban: Setback For an Early Treaty, *ACRONYM booklet No 2, ACRONYM Consortium, London, July 1994, p. 13*

31. CD/PV.675, 17 March 1994.

32. CD/1232, CD/NTB/WP.33, 6 December 1993, nuclear weapon states are defined in the NPT as any State which has manufactured and exploded a nuclear weapon or other nuclear explosive device prior to 1 January 1967.

33. Sean Howard and Rebecca Johnson, Nuclear Proliferation News, *Vol. 94, No 9, Dfax, Bradford, 19 August 1994, p. 4.*

34. CD/PV.669, 3 February 1994.

However the US National Security Council reportedly has instructed the US negotiators to aim for a consensus with the other permanent five UN Security Council (P5) members. It is not clear how quickly the P5 will reach a consensus position, in which case this approach could hold back progress in the CD.

Avoiding a veto of EIF

Specifying that all nuclear-capable states be included in the EIF requirement offers the power to any state to hold up the implementation of the treaty indefinitely. Several formulae have been suggested which would avoid such a prospect.

A percentage of a list

Percentages of the lists have been proposed. The Friend of the Chair's paper presented in August included the option that the treaty enter into force after the ratification by 80% of the states (members or observers to the CD) which participated in the negotiations. This would mean 67 of the 84 negotiating states would have to ratify.

A high percentage of the IAEA list has also been suggested. There are 61 or 62 states, depending on whether Taiwan is counted separately from China, which have either nuclear power or research reactors. Eighty percent would be 49 or 50 states, 90 per cent would raise the number to 55 or 56, and 95 per cent would mean ratification by 58 or 59 states. Using a percentage of either of these two lists could enable early entry into force, but there is also a chance that some states of particular proliferation or regional concern may not be included.

A codicil

In the case of France and China, it may be politically expedient to consider a solution to avoid the prospect of either state holding up negotiations on the treaty until they are ready to sign. The possibility, reportedly being explored in Geneva, would be for both states to sign the treaty with a provision attached stating their adherence will occur by a particular date. This would not be an ideal situation, and states are likely to condemn such a position, but it may be perceived as preferable to holding back progress in the negotiations.

However if the treaty were signed by over 100 states, France and China may find it embarrassing to test again.

The PTBT Amendment Conference

A further possibility is to amend the Partial Test Ban Treaty to include all underground nuclear explosions, effectively turning it into a CTBT. In January 1991 a PTBT Amendment Conference was held to consider the proposal. More than one third of the PTBT signatories had invoked their right to convene an amendment conference despite the reluctance of the UK and the United States. It was clear that had the amendment been presented for a vote, the UK and the US would have vetoed it, as the treaty states that any amendment must be agreed by the three Original Parties (UK, USA and USSR/Russia). The final declaration of the conference gave its President, Ali Alatas of

Indonesia, the mandate to continue consultations with a view to resuming the Conference "at an appropriate time".[35]

If the CD negotiations for a CTBT fail or become completely bogged down, another PTBT Amendment Conference may be seen as a way forward. The fact that France and China are not members of the PTBT would reduce the universality of the process, but to some states there is the distinct advantage that neither state could hold up the negotiations. As the treaty is already in force, once agreement was reached on the amendment, there would be no extra delay in its implementation. A verification regime would have to be negotiated however, so if this issue had not been resolved in the CD negotiations the same arguments could resurface.

Ratification by all five nuclear-weapon states is seen by many as necessary if the treaty is to have any credibility. France (since 1974) and China (since 1980) now abide by the PTBT, without ever having signed or ratified it. Similarly it is assumed that, barring major domestic upheaval, there is reason to assume that both states will stop testing after 1996.[36] However, reverting to the PTBT process is viewed by some states as a desperate measure only to be invoked if negotiations become hopelessly deadlocked in the CD.

A Treaty of Tlatelolco mechanism

Another option could be to use the mechanism in the Treaty of Tlatelolco which gives states the option of waiving the entry into force requirements and allowing the treaty to enter into force for them. Some agreement would have to be made on when the verification provisions would begin, for example, after the ratification of 30 states. This approach could also address some regional concerns, such as between India, Pakistan, and China. However the Tlatelolco Treaty differs from the CTBT in that it is a regional agreement with heavy emphasis on confidence-building in a zone where some countries were fairly advanced in the technologies needed for nuclear weapons development.

A 'Myrdal' formula (the reverse)

This mechanism could also work in reverse whereby a state could sign the treaty with an attached statement saying it will only ratify once state x or state y has ratified, taking regional security considerations into account, as was suggested for the NPT by Sweden during the 1967–68 NPT negotiations (see earlier). This could be used by states as a lever to pressure others to join the treaty. It could also enable a process where states could join the treaty at the same time, as was suggested.

Other solutions

A formula to bypass a veto on EIF could increase diplomatic pressure

If EIF were made dependent on ratification by any list of states, a mechanism could be sought to overcome the veto problem. EIF based on a specific list is similar in many ways to decision-making by consensus. Therefore an approach could be adapted from the experience of consensus-based organisations which have developed a method to

35. *Vipin Gupta, "The Politics of the 1991 Partial Test ban Treaty Amendment Conference", in J. B. Poole and R. Guthrie (eds),* Verification Report 1992, *VERTIC, London, 1992, pp. 86-88.*

36. *Rebecca Johnson and Sean Howard,* A Comprehensive Test Ban: Setback For an Early Treaty, *see note 30, p. 6*

move forward when consensus is blocked by a single participants' specific long-held objection.[37] For example, a conference between signatory states could be convened after a set amount of time in order to decide what to do if a small number of states are holding out. The conference could decide to allow the treaty to enter into force without the recalcitrant states. Or there could be recourse to majority voting on EIF between the states in the EIF requirement list, or between the signatory states. This may increase pressure on the blocking state or states which would be faced with the prospect of entry into force going ahead without them and consequently foregoing any influence they may hope to exert in the CTBT organisation and decision-making.

37. *Rebecca Johnson and Sean Howard,* A Comprehensive Test Ban: Disappointing Progress, *ACRONYM booklet No 3, ACRONYM Consortium, London, September 1994, p. 18.*

Conclusion

A solution to the EIF question must be sought to avoid the treaty negotiations being held up, but it must be one which avoids the prospect of EIF being vetoed or delayed. Two major sticking points are ratification by France and China, and ratification by all nuclear-capable states.

It would be more advantageous to avoid a formulation which gives a state the power to veto EIF and to let the treaty enter into force, rather than wait unduly long for the ratification of 'problem' states. Concerns over nuclear proliferation may be dealt with more effectively in other control regimes. Moreover, diplomatic pressure can be used to encourage adherence by non-signatories. To discourage other states from increasing their nuclear weapons development the five declared nuclear-weapon states need to cease testing.

The simplest formula to enable early entry into force would be ratification by a number of states. Two years ago this formula was agreed by the CD for the Chemical Weapons Convention. At least 154 states signed the CWC within a year of its opening for signature, but only 14 have ratified. It is likely to take some time for the required 65 states to ratify, therefore this number may be too high for a CTBT.

A simple numerical formula would be unlikely to satisfy the EIF requirements of some key states. In which case, if the EIF requirement is a particular list of states, a mechanism to bypass the veto problem could be formulated to increase collective pressure on the state or states holding out, or to move the process forward around the blocking state. For example a conference could be convened between the signatories after a set period of time had passed, such as two years. The conference could decide whether to allow entry into force without the missing state, or there could be recourse to majority voting either between the signatory states or between the EIF list of states.

The global verification regime will detect any nuclear test and is vital to the treaty's success – but the treaty must enter into force for it to operate.

Appendix A

Options presented in the paper of the Friend of the Chair of the Working Group on Legal and Institutional Issues, June 29, 1994

1. A simple numerical option, i.e., ratification by a given number of states.

2. A qualified numerical option, i.e., the entry into force is made conditional upon ratification by a number of countries which should include states having a particular qualification. This option has three possibilities:

– ratification by a given number of countries, including the five nuclear-weapon states.

– ratification by a given number of countries, including a percentage of states possessing nuclear power or nuclear research reactors;

– ratification by a given number of countries, including the five nuclear-weapon states and a percentage of states possessing nuclear power or nuclear research reactors. Slight adjustments could also be considered: ratification by a given number of states, including the five nuclear-weapon states and a percentage of CD members or all of them; ratification by a given number of states including a high percentage of the five nuclear-weapon states and of states possessing nuclear power or nuclear research reactors.

3. Ratification by all CD states after expansion/or by all current CD members and all states which have applied for membership. This option has the following variants: ratification by a percentage of CD states after expansion/or of CD members and of states which have applied for membership.

4. All states which possess or have under construction or have commissioned nuclear power or nuclear research reactors. A simplified formula is as follows: all states possessing nuclear power or nuclear research reactors. This option could be combined with the criterion of CD membership: ratification by all CD states and by all countries possessing nuclear power or nuclear research reactors.

Appendix B

Entry into Force — Draft treaty rolling text

Reproduced from Conference on Disarmament document DC/1273/Rev.1, 5 September 1994, p. 52.

1.1 [This Treaty shall enter into force 180 days after the date of the deposit of the [... th] instrument of ratification including ...], but in no case earlier than two years after its opening for signature.]

1.2 [This Treaty shall enter into force 180 days after the date of the deposit of the instrument of ratification by [... per cent of] all States which have, have ever had, or have under construction, nuclear power or nuclear research reactors at the date of the opening of the Treaty for signature, but in no case earlier than two years after its opening for signature.

For the purposes of this Treaty, a State which has, has ever had, or has under construction, nuclear power or nuclear research reactors is one so specified in the International Atomic Energy Agency list contained in Annex ... to this Treaty.]

1.3 [This Treaty shall enter into force when the following requirements have been met:

(a) One year after the ratification by all the member States of the Conference on Disarmament which are members at the time when the Treaty is open for signature and all the countries known to the International Atomic Energy Agency at that time as having nuclear capabilities (i.e. in possession of nuclear power stations or nuclear reactors);

(b) Not earlier than two year after this Treaty is open for signature.]

1.4 [This Treaty shall enter into force 180 days after the date of the deposit of the instrument of ratification by all States members of the Conference on Disarmament and all States which have applied for membership prior to ..., but in no case earlier than two years after its opening for signature.]

1.5 [This Treaty shall enter into force 180 days after the date of the deposit of the instrument of ratification by all States members of the Conference on Disarmament, and observers to the Conference on Disarmament during the ... session as specified in the Annex ..., but in no case earlier than two years after its opening for signature.]

1.6 [This Treaty shall enter into force 180 days after the date of the deposit of the instrument of ratification by 80 per cent of the States (members or observers to the Conference on Disarmament) which participated in the negotiations, but in no case earlier than two years after its opening for signature.]

2. For States whose instruments of ratification or accession are deposited subsequent to the entry into force of this Treaty, it shall enter into force on the [30th day following the date] [date] of deposit of their instruments of ratification or accession.

Appendix C

Conference on Disarmament

Member States (37)

Algeria
Argentina
Australia
Belgium
Brazil
Bulgaria
Canada
China
Cuba
Egypt
Ethiopia
France
Germany
Hungary
India
Indonesia
Iran
Italy
Japan
Kenya
Mexico
Mongolia
Morocco
Myanmar
Netherlands
Nigeria
Pakistan
Peru
Poland
Romania
Russian Federation
Sri Lanka
Sweden
United Kingdom
United States
Venezuela
Zaïre

Non-Member States (47)

Austria
Bangladesh
Belarus
Cameroon
Chile
Colombia
Czech Republic
Democratic People's Republic of Korea
Denmark
Ecuador
Finland
Ghana
Greece
Holy See
Iraq
Ireland
Israel
Jordan
Kuwait
Libyan Arab Jamahiriya
Madagascar
Malaysia
Malta
New Zealand
Norway
Oman
Philippines
Portugal
Qatar
Republic of Korea
Sénégal
Singapore
Slovakia
Slovenia
South Africa
Spain
Switzerland
Syrian Arab Republic
Tanzania
Thailand
Tunisia
The Former Yugoslav Republic of Macedonia
Turkey
Ukraine
United Arab Emirates
Vietnam
Zimbabwe

States proposed for acceptance as members ('O'Sullivan list') (23)

Proposed in August 1993 by Australian Ambassador Paul O'Sullivan, but blocked by the US because of the inclusion of Iraq, which revived Iran's opposition to Israel. It is possible that this list may be superseded by a proposal to admit all those states (about 33) which had applied for entry by a particular date.[38]

Austria
Bangladesh
Belarus
Cameroon
Chile
Colombia
Democratic People's Republic of Korea
Finland
Iraq
Israel
New Zealand
Norway
Republic of Korea
Senegal
Slovakia
South Africa
Spain
Switzerland
Syria
Turkey
Ukraine
Viet Nam
Zimbabwe

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38. Sean Howard and Rebecca Johnson, Nuclear Proliferation News, *Vol 94, No 8, Dfax, Bradford, 5 August 1994*

Appendix D

States with Nuclear Research Reactors in Operation (November 1993) and/or Nuclear Power Reactors in Operation and under Construction (31 December 1993)

Algeria
Argentina
Austria
Australia
Bangladesh
Belgium
Bulgaria
Brazil
Canada
Chile
China
Colombia
Cuba
Czech Republic
Democratic People's Republic of Korea
Denmark
Egypt
Finland
France
Greece
Germany
Hungary
Indonesia
Israel
India
Iran
Italy
Jamaica
Japan
Kazakhstan
Latvia
Lithuania
Libya
Malaysia
Mexico
Netherlands
Norway
Pakistan
Peru
Philippines
Poland
Portugal
Republic of Korea
Romania
Russia
Slovak Republic
Slovenia
South Africa
Spain
Sweden
Switzerland
Thailand
Turkey
UK
Ukraine
USA
Uzbekistan
Venezuela
Viet Nam
Yugoslavia
Zaire

Note: This list does not include Taiwan.

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