



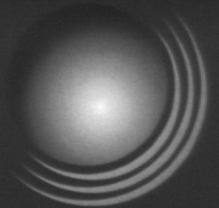
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Advancing the Comprehensive (Nuclear) Test Ban Treaty: Capabilities, Implementation, and Entry into Force

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ISROP
INTERNATIONAL
SECURITY
RESEARCH AND
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INTERNATIONALE

Advancing the Comprehensive (Nuclear) Test Ban Treaty: Capabilities, Implementation, and Entry into Force

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Prepared for the International Security Research and Outreach Programme
International Security Bureau

October 2002

64844264

PREFACE

The view and positions stated in this paper are solely those of the author and do not necessarily reflect the views and positions of the Department of Foreign Affairs and International Trade or of the Government of Canada.

The International Security Research and Outreach Programme (ISROP) commissioned a study that would examine prospects for a complete nuclear test ban regime (CTBT) and answer questions raised about the “sustainability” of the CTBT and its verification body, the CTBTO and the prospects for a possible “provisional” entry into force (EIF) for the CTBT.

The Department of Foreign Affairs and International Trade wishes to thank the author of this study: Dr. George MacLean.

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December 2002

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EXECUTIVE SUMMARY

This report examines prospects for a deepening nuclear test ban regime, and poses some recommendations for moving the regime forward. Without the ratifications necessary for entry into force, questions remain about the “sustainability” of the CTBT and -- in particular -- its verification body, the CTBTO. The research here focuses on two options: 1) sustaining a verification regime (CTBTO) that still does not have the formal political legitimacy of an international agreement; and 2) prospects for an entry into force (EIF) for the Treaty and strategies for dealing with holdout states.

This report is divided into four sections:

1) Background issues: The report provides an evaluation of the need for the CTBT and its implementation, as well as some analysis of the concerns of the 44 crucial states that must ratify the CTBT to allow it to become international law. This section will explore the importance of the renunciation of any nuclear tests explosion, the issue of nuclear capable states and required ratification (Annex 2 ratifications, explained in detail in the report), and a brief overview of current verification capabilities of the Provisional Technical Secretariat of the CTBTO.

2) CTBTO capabilities: The report examines the strengths of the CTBT verification system, and assesses the lack of enforcement response mechanisms granted the CTBT, as well as possible alternatives. This part of the report accounts for the capabilities of the CTBTO and current testing moratoria, and surveys the issues surrounding the CTBT “status quo.”

3) Whither EIF? The report critically examines arguments surrounding a “provisional ratification” of the CTBT. In short, could states that have ratified the treaty bring it into force “provisionally” for themselves? This section explains the important practical and legal questions that must be dealt with in this regard. Furthermore, there are serious political problems that would complicate a provisional EIF, and possibly risk the dissolution of the entire non-testing regime.

4) Conclusions and Recommendations: The report provides a series of propositions that could encourage non-ratifying and non-signatory states to support the CTBT, and provide continued strength to the non-testing regime as a whole.

The general arguments contained in the report are as follows:

- The non-testing regime is at the foundation of nuclear NACD.
- There are two commitments with which states (both Annex 2 states and others) have come to view the Treaty: a commitment to verification, and a commitment to a moratorium on testing.
- Paradoxically, the very conditions for the CTBT's entry into force (EIF) have hampered the implementation of the Treaty.
- According to the United Nations Law of Treaties, ratifying an agreement is the articulation of acceptance of the agreement prior to EIF; furthermore, signing the treaty – even without ratification – is the acceptance of the principles of the treaty, and the implied agreement not to work against the objectives of the treaty. Signatory states are required to “refrain from acts which would defeat its object and purpose in the meanwhile.”
- This creates an interesting state of affairs for the CTBT. Although the agreement clearly has not met the conditions of the EIF provisions, the fact that all P5 states (United States, United Kingdom, France, China, and Russia) have at least signed the treaty requires them to observe conditions that would not “defeat the purpose” of the CTBT. This means that signatory states cannot take part in actions that would render the CTBT useless.
- The strengths of the CTBT lie in its verification capability, which is the most advanced for any NACD regime in the international system. This, coupled with the legal argument that signatory states should at the very least not work towards to defeat the purpose of the treaty, presents an fascinating scenario: the universality and effectiveness of the CTBTO is actually closer to EIF with the status quo than it would be with a provisional EIF.
- There is no consensus regarding the trajectory for the CTBTO with continued non-EIF.
- Given the extent of non-testing verification available to the CTBTO currently, the only stage left is the most important one: establishing the legal elements necessary to permit the implementation of the regime.
- While not official, with the strength of the Law of Treaties (especially Article 18), the global proclaimed desire for both a moratorium as well as verification, and the text creating the Preparatory Commission of the CTBTO, there is now a “de facto” EIF.
- The status quo *supported by the recommendations contained here* is preferable to the potential outright rejection – or at least hardening of attitudes – were a provisional EIF to be pursued.

This report suggests the following course of action:

-Emphasize the continuing importance of the Article 14 Conferences. These conferences offer the best opportunities for pursuing EIF for the CTBT – this is, after all, the primary intention of the conferences. However, the conferences also provide a periodic forum to repeatedly validate that signatory and ratifying states continue to seek to uphold the elements of the Treaty and are not engaged in actions that would serve to defeat the object and purpose of the CTBT. This is crucial for the effective implementation of the CTBT, since in international law, signatory and ratifying states cannot be held in perpetuity to an agreement that has not achieved entry into force. Article 18 of the Vienna Convention on the Law of Treaties specifies that signatories and ratifying states have “expressed ... consent to be bound by the treaty, pending the entry into force of the treaty and *provided that such entry into force is not unduly delayed*” (italics added). This concluding clause is significant because it suggests that ongoing efforts must be conducted to work towards EIF of an agreement.

- Further to this, signatory states as well as ratifiers must be urged to participate actively in Article 14 Conferences. Although only ratifying states are *expected* to attend the conferences, they are naturally open to others as well, including both signatory and non-signatory states, specialized agencies, intergovernmental organizations, and non-governmental organizations. States that have not deposited their instruments of ratification are not permitted to formally participate in the drafting of the Final Declaration. Some consideration should be given to extending a wider role to signatory states in the deliberations of the Article 14 conference and its Final Declaration. The rationale here is fairly straight-forward: those states currently participating in the drafting of the Final Declaration, and acting as full participants in the conference, have already formally expressed their binding support for the treaty. Non-EIF, however, is problematized not by these states, but rather by those that have *not* deposited instruments of ratification. There would be opposition by those that have ratified, but the central intention of the conferences is to bring about EIF for the CTBT. A more active role for non-ratifiers may need to be considered for this goal to be achieved.

- Signatory states considering making their intentions known to be removed from the Treaty should be pressed to – at the very least – retain signatory status.

- The IMS/IDC verification systems should have a target of 2005 for full implementation. Comprehensive and effective verification will provide the strongest argument for non-ratifying states to move forward.

Advancing the Comprehensive (Nuclear) Test Ban Treaty: Capabilities, Implementation, and Entry into Force

Introduction – Why We Need the CTBT

Non-Proliferation, Arms Control, and Disarmament (NACD) continues to be the most important dynamic for international stability and security in the contemporary era. The end of the rhetorical Cold War hostilities between East and West allowed for a more constructive dialogue amongst significant actors regarding arms control, disarmament, and the general security of the international system. NACD, although certainly multi-faceted, is a process-driven system of security-building. Rarely in NACD developments have we witnessed radical and revolutionary movements to full and inclusive regimes for verification and monitoring of international agreements. Rather, NACD is incremental, and, as a developmental process, NACD regimes reflect the normative ideas or beliefs about the restraint of arms: initiatives themselves respond to the perceived need to keep weapons technology in check. Hence, several interdependent regimes served to formulate a paradigmatic way of conceptualizing nuclear restraint. Efforts to stem nuclear technologies and weapons have comprised several separate regime types, ranging from weapons testing, to possession, to arms reductions, and ultimately outright eradication of weapons types.

However, while this new order has to its credit successes such as the indefinite renewal of the Nuclear Non-Proliferation Treaty in April 1995, it also has been marked by setbacks, including the non-entry into force (EIF) of the Comprehensive (Nuclear) Test Ban Treaty (CTBT). The non-testing regime is at the foundation of nuclear NACD. All other nuclear NACD endeavours depend on a operational and inclusive non-testing regime. Former U.S. Arms Control and Disarmament Agency Director Gerald Smith has argued that “it is difficult to conceive of any single measure that would do more to stem the spread of the nuclear scourge than a comprehensive ban on nuclear testing.”¹ Non-testing was the basis for the first true NACD system, the Limited (Partial) Test Ban Treaty (LTBT, or PTBT, in 1963), and efforts to make this treaty truly comprehensive have been at the forefront of NACD undertakings ever since.

The failure of the Conference on Disarmament (CD) to reach consensus on a recommendation regarding a Comprehensive Test Ban Treaty led to the Australian initiative (sponsored by

¹See Smith, "End Testing, Stem the Bomb's Spread," Arms Control Today, (November 1990), 9.

126 states) on a draft CTBT resolution at the United Nations General Assembly on 10 September 1996. As of October 2002, 166 states had signed the Treaty, and 97 had ratified. In accordance with Article 14, the CTBT shall enter into force 180 days after its ratification by 44 States listed in the Treaty's Annex 2 as "states with nuclear capabilities." Although a total of 31 "Annex 2" states have ratified the Treaty, many of these required states (including Algeria, China, Colombia, Democratic People's Republic of Korea, Egypt, India, Indonesia, Iran, Israel, Pakistan, the United States, and Vietnam) have not yet ratified the Treaty. Furthermore, three of the Annex 2 states – India, Pakistan, and North Korea – have not even signed the Treaty.

Due to the rigid nature of the Treaty's Article 14 conditions, the CTBT has been in something of a holding pattern for some time. Paradoxically, the very conditions for the CTBT's entry into force (EIF) have hampered the implementation of the Treaty. The fact that 44 specific states must ratify the Treaty before it becomes operational is in part stalling the implementation of the CTBT. However, this list of 44 states (those listed by the International Atomic Energy Agency as having nuclear reactors) is in fact a compromise, since some CTBT negotiators originally did not want to limit the required number of states to the original five (United States, Russia, United Kingdom, France, and China), while others objected to including three additional tacit possessing powers (Israel, India, and Pakistan).

For each non-ratifying, or non-signing Annex 2 country, there is a distinctive political explanation, or set of explanations, for non support. Some of these hold-out states are more consequential than others: for example, if India were to accede (sign and ratify) the Treaty, Pakistan has stated it would also follow suit. Likewise, if the United States would ratify, China would likely also ratify, and Israel would probably do so as well. With American ratification, furthermore, other hold-out states would be pressed upon by the full diplomatic weight of the United States to speed the Treaty along to EIF.

However, the possibility of either Indian accession or American ratification are not anticipated, for reasons described below. Fortunately, the designers of the Treaty foresaw such a stalemate. Recognizing the inherent difficulty in achieving ratification by all 44 states, CTBT negotiators allowed for annual "facilitating" conferences to permit continued discussion and deliberation. The first Conference on Facilitating the Entry into Force of the Comprehensive Nuclear Test Ban Treaty, held in Vienna, 6-8 October 1999 came three years after the Treaty was made open for ratification. At that time, states that had not yet ratified the treaty were encouraged to sign the CTBT, and were requested to "refrain from acts which would

defeat its object and purpose in the meanwhile.” As argued later in this report, this phrase has tremendous resonance for prospects for the future of the Treaty, and its possible “provisional” implementation.

Since that first facilitating conference in 1999, several integral states, including Bangladesh, Chile, Russia, Ukraine, and Turkey have ratified the Treaty; however, other key states remain holdouts. After that conference, certain principal states such as India, Pakistan, and the United States have undertaken policies that hedge between support for and resistance to the CTBT. These actions appear to if not “defeat the object and purpose” of the CTBT, at least contribute to the current state of inertia among vital potential members of the CTBT, while at the same time declaring their support for a broad-based regime for non-testing. This has contributed to a general sense of uncertainty regarding prospects for a CTBT.

The second EIF conference was originally to be convened at United Nations Headquarters in New York from 25 to 27 September 2001. However, it was postponed due to the September 11 attacks until 11-13 November 2001. At that conference, 109 states were represented, but none of the remaining 13 Annex 2 states have ratified the treaty since. In addition, the United States did not attend the 2001 facilitating conference.² The second conference, which many thought would present an opportunity to expedite the ratification process, was clearly influenced by the United States-led war on terrorism, and prospects for ratification by many key states are not encouraging. However, there is some anticipation that Colombia, Indonesia, and Vietnam may ratify imminently.

Notwithstanding the current CTBT impasse, the CTBT process thus far has been a success, largely due to the productive developments of the Comprehensive Test Ban Treaty Organization (CTBTO) in Vienna, Austria, and the considerable success that the Provisional Technical Secretariat (PTS) of the CTBTO has had in establishing what is surely the world’s most extensive verification and monitoring system. This system, unprecedented in arms control regimes, comprises a worldwide network of observation stations – the International Monitoring System (IMS) – as well as materials processing facilities in Vienna – the International Data Centre (IDC). Since 1996, the status of the CTBT has been largely in a state of suspended

²Non-ratifying states are not required to attend the facilitating conferences, though many attend as observers. Moreover, despite the general impression that the United States does not support the Treaty (which has become more of a concern under the Bush Administration), Washington has not actively sought to remove itself from the Treaty, nor has it disavowed the CTBT. As one official put it, there is always “turnover” in the American Department of State, and support for the CTBT in the Administration could increase, just as it has decreased. Interview, States Party Mission official, Vienna, Austria, 15 July 2002.

animation. The CTBT has taken on an organizational role as a normative forum for a test ban, but lacks the institutional structure that would be provided with a fully operational Comprehensive Test Ban Treaty Organization (CTBTO). In addition, it has become increasingly clear that there are two commitments with which states (both Annex 2 states and others) have come to view the Treaty: a commitment to verification, and a commitment to a moratorium on testing. Finally, although no Annex 2 states have ratified the Treaty since Ukraine in February 2001, universalization has continued apace, with growing momentum during the second EIF conference in the fall of 2001.

Efforts to obtain a comprehensive global nuclear weapons testing ban have not taken place in a vacuum. Rather, the CTBT process has been part of a long-standing international commitment to non-proliferation and disarmament with a series of achievements and setbacks over the past forty years. Furthermore, the test ban regime is one facet of a much broader effort to stem the development of both new and existing nuclear weapons program.

Background Issues – The Test Ban Regime

A truly comprehensive nuclear test ban (a total ban of any nuclear weapon test explosion in any environment) has long been considered by the international community to be a crucial stage towards the ultimate goal of nuclear disarmament. The Limited, or Partial, Test Ban Treaty (the LTBT, or PTBT) in 1963 outlined the anticipation of signatory states to work towards a more comprehensive test ban treaty. A primary objective of the LTBT, outlined in its preamble, was to “put an end to the armaments race and eliminate the incentive to the production and testing of all kinds of weapons, including nuclear weapons.”³

The LTBT prohibits nuclear testing in the air, under water, and in outer space. It was a milestone in the control of nuclear arms, and signalled the beginning of a cooperative side of the largely antagonistic relationship between the United States and the Union of Soviet Socialist Republics (USSR). The initially bilateral LTBT agreement provided the basis for a more multilateral non-proliferation and disarmament process. The initial proposals of the LTBT (still not signed by two possessing powers, China

³“Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space, and Under Water,” signed in Moscow 5 August 1963, EIF: 10 October 1963.

and France) have been used as a basis for a wider testing regime, most notably the efforts to institute a CTBT.⁴

With the LTBT in place, the Nuclear Non-Proliferation Treaty (NPT) of 1968 broadened the non-nuclear regime to include possession of weapons. The NPT created a decidedly asymmetrical system of possessor and non-possessor states.⁵ It was intended to address "horizontal" proliferation by prohibiting new states from acquiring nuclear weapons in exchange for a commitment amongst established nuclear powers to seek an end to the nuclear arms race, and ultimate nuclear disarmament.⁶ The NPT outlined the test ban goal, as well: "to achieve the discontinuance of all test explosions of nuclear weapons for all time and to continue negotiations to this end."⁷ The May 1995 NPT renewal conference meetings in New York ended in a decision to extend the treaty indefinitely into the future. In addition, largely as a result of United States pressure, the possessing states agreed to seek a CTBT and pledged to continue reducing warheads with an intention to eliminate them completely.⁸

⁴Others have suggested a middle-ground approach. Jozef Goldblat and David Cox, for example, proposed a Very Low Threshold Test Ban (VLTTB) of not more than 5 kilotonnes as a "meaningful alternative" to the CTBT. The LTBT spurred the 1974 Threshold Test Ban Treaty between the U.S. and USSR limiting underground tests, as well as the 1976 Peaceful Nuclear Explosions Treaty (PNET—also between the U.S. and USSR) regulating nuclear explosions outside regular weapons tests. Goldblat and Cox, ed., Nuclear Weapon Tests: Prohibition or Limitation? (Stockholm: SIPRI in association with Oxford University Press, 1991).

⁵ The NPT grew out of a 1961 United Nations General Assembly resolution to pursue a treaty governing the acquisition and proliferation of nuclear arms. In some cases, the 1968 Treaty has also required states with purely civilian programs to allow the International Atomic Energy Agency, created in 1957, to inspect their nuclear programmes. The NPT allowed for continuing development of civilian nuclear power programmes.

⁶"Declaring their intention to achieve at the earliest possible date the cessation of the nuclear arms race and to undertake effective measures in the direction of nuclear disarmament," Preamble, "Treaty on the Non-Proliferation of Nuclear Weapons, (729 UNTS 161); EIF March 5, 1970.

⁷"Treaty on the Non-Proliferation of Nuclear Weapons," opened for signature at London, Moscow and Washington: 1 July 1968; Entered into force: 5 March 1970.

⁸The NPT Extension Review Conference adopted a set of Principles and Objectives for Nuclear Non-Proliferation and Disarmament, but was not able to adopt a Final Declaration. The Principles and Objectives included decisions regarding non-proliferation, nuclear disarmament, nuclear weapons-free zones, security assurances, safeguards, peaceful uses of nuclear energy, and increased resources for the IAEA. See Berhanykun Andemicael, Merle Opelz, and Jan Priest, "Measure for Measure: The NPT and the Road Ahead," IAEA Bulletin, 37 (September 1995), 33.

After possession and testing, the next logical dimension of the nuclear restraint regime, and perhaps the most elusive for the time being, surrounds the elimination of nuclear materials used in weapons development.⁹ A fissile material “elimination” regime is something of a watershed in global non-proliferation, because dealing with fissile material (with the eventual goal of eliminating the material) is in effect the culmination of the entire nuclear restraint regime.

Although it is a topic for another report, the proposed Fissile Material Cutoff Treaty (FMCT) constitutes the most important component for the construction of nuclear weapons. The FMCT involve issues of existing inventories of fissile material that may be used in the manufacturing of nuclear weapons, as well as ongoing production of new fissile material. With no controls over weapons grade fissile material, there can be little hope of effective control over proliferation, both vertical and horizontal, of nuclear weapons themselves. The matter is further complicated by the fact that existing inventories and current and future production are considered by many (including significant possessing and threshold states) to be separate matters, and therefore must be examined in isolation if the final goal of global nuclear disarmament is to be obtained. This is no small matter, given the range of fissile material development -- stockpiles and production -- in nuclear weapons states and threshold, or undeclared nuclear weapons states.

The cumulative nature of nuclear NACD is a complicated undertaking. Just as previous arms control and disarmament efforts were (and have) been most successful as a result of incremental developments rather than comprehensive and perhaps overly ambitious attempts, future endeavours must be considered as a process toward the more comprehensive goal of eliminating nuclear weapons altogether, despite the unrealistic vision this may require. This is true for the CTBT, as well. Indeed, placed in a historical context, the current development of nuclear disarmament demonstrates the cumulative effect of efforts during the Cold War and the post-Cold War eras. Driven by the principle of non-proliferation for disarmament, the primacy of the NPT possession regime is directly related to the logic of non-testing and material “cut-off” regimes: the first goal of stemming the spread of existing weapons and weapons technology can then lead to the limitation of testing and weapons development, which ultimately provides the basis for a prohibition of the material needed to produce weapons in the future.

⁹For more, see George A. MacLean, “Expanding the Existing Nuclear Disarmament Regime: Prospects for Bilateral U.S. Russian Cooperation,” in Stuart Nagel, Ed., Handbook of Global International Policy, (New York: Marcel Dekker, 2000); and George A. MacLean, “Moving Right Along: Developments in the Nuclear Disarmament Regime After the Cold War,” The Journal of Conflict Studies, 18 (Spring 1998).

The incremental effect of several distinctive regimes, has created something of a paradigm for Non-Proliferation, Arms Control, and Disarmament (NACD) analysis. That is, the development of these regimes reflects current ideas about the restraint of weapons of mass destruction. Hence, several interdependent regimes served to formulate a paradigmatic way of conceptualizing nuclear restraint.

These developments have spanned over 40 years, working toward the eventual goal of complete nuclear disarmament. The “process” element is significant here because it brings to bear the increasing and progressive scope of arms control agreements and treaties, moving from issues of testing and possession, to limitation and eventually reduction. Numerous arms control and disarmament treaties, multilateral as well as bilateral, were negotiated during the Cold War. Broadly speaking, the most significant arms control initiatives reflect five main stages of the nuclear restraint regime: testing, possession, limitation, reduction, and elimination (see Table 1).

The aforementioned “process” of NACD, however, has been hampered by imbalances along the way. Whereas the test ban regime has been around for the better part of four decades, it is not yet comprehensive, which affects other aspects of nuclear concerns, such as limiting and reducing warhead stockpiles, or dealing with fissile material. The CTBT, therefore, is central to the overall vitality of the nuclear non-proliferation regime. The continuing necessity of renouncing nuclear weapons testing, as well as ongoing concerns about the horizontal proliferation of nuclear weapons states,¹⁰ illustrates the continuing need for a test ban regime. However, despite lasting concerns about new testing and weapons development, the CTBT and its organizational body – the CTBTO – represent significant achievements in NACD.

CTBTO Capabilities – A Success Story

The Comprehensive Nuclear Test Ban Treaty has been characterized as a cornerstone of the international regime on the non-proliferation of nuclear weapons and an essential foundation for the pursuit of nuclear disarmament. Its total ban of any nuclear weapon test explosion in any environment will constrain the development and qualitative improvement of nuclear weapons and end the development of advanced new types of these weapons.¹¹

¹⁰Notably the disturbing admission by North Korea in October 2002 that it had maintained a nuclear weapons acquisition program since 1994, in violation of its prior agreement with the United States to not seek nuclear weapons.

¹¹<http://www.ctbto.org/>

This clearly describes the importance of the test ban regime, and also shows the link that exists with other NACD regimes.

The Comprehensive Test Ban Treaty Organization (CTBTO) is the operational body that will monitor the CTBT after EIF. Until EIF is achieved, the Preparatory Commission of the CTBTO (sometimes referred to as the "PrepComm") was established by states that signed the CTBT to prepare for the verification responsibilities of the CTBTO, and also to ready the Organization for the first meeting of the Conference of States Parties (the meeting of all states party to the CTBT), also after EIF.

The CTBTO will be established upon entry into force of the Treaty, and its headquarters will be situated in Vienna, Austria. The CTBTO will be charged with ensuring the implementation of the Treaty, including issues regarding international verification, and compliance, and will also provide a forum for consultation and cooperation among member states. To this end, member states agreed to establish a Preparatory Commission for the CTBTO on 19 November 1996. The objectives of the PrepComm were to begin work on the required international verification regime for the CTBT, and to organize for the first meeting of States Parties after EIF.

In late 1997, the Preparatory Commission of the CTBTO developed recommendations on goals and tasks for the establishment of the verification system, presented assessments of the cost implications, and defined requirements and technical specifications where needed. These tasks included the formulation of plans, policies, guidelines, procedures and documentation on issues related to the International Monitoring System (IMS), the International Data Centre (IDC), communications and on-site inspections. Seismic, radionuclide, hydroacoustic, and infrasound monitoring technologies have been specified for the IMS, which is under the authority of the Provisional Technical Secretariat (PTS) of the CTBTO. The IMS is slated to have a network of 50 primary and 100-150 auxiliary stations for seismic monitoring, 11 hydroacoustic stations and two American Missile Impact Location Systems (MILS), 75-100 sites for radionuclide monitoring, and 70 infrasound detectors.¹²

With the interim span of six years, the Preparatory Commission has developed the most

¹²Rebecca Johnson, "Ending Nuclear Weapon Testing: Getting and Keeping the CTBT," in Richard Guthrie, ed., Verification 1997: The VERTIC Yearbook, (Boulder: Westview Press, 1997), 27.

advanced system of NACD regime verification, with a network of 321 monitoring stations that can register shock waves emanating from a nuclear explosion underground, in the high seas, and in the air. The system can also detect radioactive debris released into the atmosphere.¹³ The IDC's responsibilities will include providing specific and standardized reports for States Parties, as well as assisting with technical analysis of IMS data. On-site inspections (OSI) are not expected to generate the same emphasis in the CTBTO, as most of the verification work will be completed by the joint IMS-IDC interface.¹⁴

Apart from the legal issues surrounding the EIF of the CTBT, the verification aspects of the CTBT Preparatory Commission specify a different legal nature. The resolution which established the Preparatory Commission was agreed to by states parties that are signatories to the CTBT in 1996. The resolution calls on the Preparatory Commission of the CTBT to establish verification and monitoring facilities necessary to carry out the terms of the CTBT. The resolution, furthermore, stipulates that the Preparatory Commission should establish a regime such that "pending formal commission, provisional operation" would be available.¹⁵ The Preparatory Commission agreement outlines the need for a formal international structure to house the Commission – the CTBTO – which would only be achievable through the EIF of the CTBT. Hence, an important issue of legitimacy arises: if the Preparatory Commission mandate is to set up a verification regime with the capability of "provisional" activity, but the Commission is to be accommodated in the CTBTO (which requires EIF to come into effect), then what role does CTBT verification have with no EIF?

There are two responses to this question. First, on a strictly legal basis, it is not altogether clear that the Preparatory Commission would have a binding mandate – either in customary or treaty law – to conduct its verification and monitoring activities. The Preparatory Commission is not specifically created by a separate treaty which might be binding to states parties, and has been created as a result of a resolution

¹³<http://www.ctbto.org/verification/facilities/mapfacilities.html>

¹⁴OSI is a topic of immense controversy at the CTBTO right now, as some signatory states, such as Russia and the United States, would like to see less emphasis placed on on-site verification. Furthermore, it is not altogether clear how OSI will interface with the IMS/IDC network; OSI is seen as "very independent" of IMS/IDC. However, despite no agreement on confidentiality agreements regarding OSI, it is nonetheless anticipated that OSI will report to the IDC. Interview, official, Preparatory Commission for the Comprehensive Test Ban Treaty Organization, Vienna, Austria, 15 July 2002.

¹⁵http://www.ctbto.org/reference/legal_resources/prepcom_resolution.pdf

of the meeting of states parties to the CTBT. Moreover, the states parties to the CTBT that established the Preparatory Commission were not all ratifying states, and therefore the legal mandate to create a separate international organization (for instance, the CTBTO) does not exist. There are no provisions for signature, ratification, or EIF for the Preparatory Commission resolution.

However, the Preparatory Commission was given the responsibility to “carry out the necessary preparations for the effective implementation” of the CTBT. In addition, the Preparatory Commission was given the right to stand as an international organization, and to enter into agreements with states parties¹⁶ in order to permit the implementation of the CTBT. Rather than creating a separate legal entity, giving this official responsibility to the Preparatory Commission was necessary in order to allow the Commission to enter into formal agreements with states parties to set up the verification and monitoring network required for the CTBTO.

The Preparatory Commission’s legal application with states parties involve two components. The first are “facility agreements,” which allow for the construction of International Monitoring System (IMS) stations, or the delegation of existing stations to be co-located for IMS activities. The other legal component involves the “exchange of letters” between the Preparatory Commission and states parties to endorse the IMS activities on state territory.¹⁷ These legal mechanisms are unquestionably necessary for the effective agreement between states parties and the Preparatory Commission.

On the legal issue, then, the Preparatory Commission *necessarily* has legal standing in order to provide for the effective construction of an international network of test ban verification stations. States parties to the CTBT in 1996 gave the Preparatory Commission the necessary legal tools to prepare for the implementation of the Treaty with EIF. This legal autonomy to act as a purposeful international organization is one of the most legitimizing aspects of the Preparatory Commission, and for the CTBT more generally. As one legal expert argued, non-EIF is “not seen as an obstacle” for the Preparatory Commission, given its prerogative to enter into legal arrangements with states parties. However, the application of provisions between the CTBTO Preparatory Commission and states parties “still needs to be codified in international

¹⁶http://www.ctbto.org/reference/legal_resources/prepcom_resolution.pdf

¹⁷Interview, Preparatory Commission for the Comprehensive Nuclear Test Ban Treaty Organization, Vienna, Austria, 15 July 2002.

law” to be truly binding.¹⁸ This rather confusing legal arrangement stems from the text for the agreement establishing the Preparatory Commission.¹⁹ Whereas the CTBT confines verification activities to the implementation of the EIF for the Treaty, the Preparatory Commission agreement does provide it some autonomy, including the right to “operate provisionally as necessary the International Data Centre and the International Monitoring System networks provided for in the Treaty”²⁰ without EIF. This is a rather unique situation for the Preparatory Commission, but it can be used as grounds for EIF, provided it introduces a viable and amenable system of verification and monitoring.

The second answer to the question surrounding CTBT verification with no EIF is more practical than legal. One might argue that the greatest triumph of the test ban regime has been the creation of a truly effective verification and monitoring system. However, the net effect of this success story is a quandary: at what point does the legal mandate to “provide the services necessary to initiate the work”²¹ of the CTBTO stop? The Preparatory Commission effectively functions as an NACD organization, but its fundamental role is to prepare for the EIF of the CTBT. Practically, rather than legally, the Preparatory Commission is virtually – if not completely – providing for the operative verification structure that the CTBT will require. Yet this structure exists with no EIF for the CTBT. All of this contributes to a truly unique situation where the Preparatory Commission of the CTBTO (an organization created without a formal treaty, but related to one nonetheless) has a more extensive mandate than other verification regimes, due largely to the enormity of global test ban analysis requirements.

¹⁸Interview, Preparatory Commission for the Comprehensive Nuclear Test Ban Treaty Organization, Vienna, Austria, 15 July 2002.

¹⁹“Resolution Establishing the Preparatory Commission for the Comprehensive Nuclear Test-ban Treaty Organization,” Adopted by the States Signatories, November 19, 1996
<http://www.fas.org/nuke/control/ctbt/text/ctbt4.htm>

²⁰Paragraph 5 c) of Annex: Text on the Establishment of a Preparatory Commission for the Comprehensive Nuclear Test-Ban Treaty Organization reads: “The Commission shall, between the time the Treaty is opened for signature and the conclusion of the initial session of the Conference of the States Parties, use funds provided by the States Signatories to meet the necessary costs arising from its functions and purposes, including the capital investments and operating and maintenance costs to establish and, pending their formal commissioning, to operate provisionally as necessary the International Data Centre and the International Monitoring System networks provided for in the Treaty.”
http://www.ctbto.org/reference/legal_resources/prepcom_resolution.pdf

²¹http://www.ctbto.org/reference/legal_resources/prepcom_resolution.pdf

On the one hand, this creates a predicament for the test ban regime. There now exists an effective verification system developed and operational with a global system of monitoring stations, providing data for a central processing operation, which is also up and running. The legal and practical aspects of the Preparatory Commission's mandate, it appears, have been met. The predicament, though, concerns the status of the verification network with no EIF. It is retrospective, of course, but nonetheless interesting to question whether states parties to the CTBT in 1996 thought that the CTBT would still not have achieved EIF when the verification network mandated to the Preparatory Commission was functional.

On the other hand, the Preparatory Commission's accomplishment over the last six years may be used as an effective argument for EIF, particularly with those states that harbour concerns that verification is either impossible or not effective. In spite of the lack of support by the United States, the Article 14 conferences have been a success for a variety of reasons. From a verification perspective, participants at these conferences have provided "votes of confidence" for the treaty's verifiability, lending support to champions of the regime, and standing at odds with detractors, including those in the United States, who have argued that the treaty is not verifiable. More broadly, the conferences have buttressed the objectives of the global non-proliferation regime by keeping the CTBT operative and allowing for the basis for continued negotiation with non-signatories and non-ratifying states. Most estimates concerning the full implementation of the IMS/IDC network suggest that the entire verification system (not including OSI) will be fully operational by 2005.²² The practical aspects of the Preparatory Commission should be used as a constructive argument for urging EIF of the CTBT.

In sum, the CTBTO is representative of a truly effective verification regime, albeit one without the legitimacy of a legally binding treaty behind it. However, as the next section argues, the effectiveness of the CTBTO is the basis of arguments in favour of pursuing a indisputably universal and competent global non-testing regime.

Whither EIF? – Hope Amid Pessimism

As the previous section of this report suggested, the capabilities of the CTBTO to verify a comprehensive test ban is the most advanced among contemporary NACD regimes, and also represents the most promising aspect of the test ban process. Indeed, given the extent of non-testing verification available

²²More conservative estimates have suggested 2007. Various interviews, Vienna, Austria, July 2002.

to the CTBTO currently, one might suggest that the only stage left is the most important one: establishing the legal elements necessary to permit the implementation of the regime.

Of course, the most important legal element for the implementation of the CTBT is the entry into force (EIF) of the agreement. The common understanding of international law is that any treaty agreed to by nation states will not have binding implementation until EIF. In the simplest of models, the necessary number of states party to the CTBT, including the Annex 2 states required in Article 14, would ratify the treaty, making it legally binding and fully operational. However, given the range of issues facing nuclear weapons testing, it is not currently anticipated that EIF through these means is probable. Nevertheless, there are some notable issues that require some consideration. These include:

- Possible effective implementation of the verification regime of the CTBT, even without EIF. This involves the mandate of the Provisional Technical Secretariat, with or without EIF of the treaty.
- Implications for international law, including matters of customary international law, and the rule of law imposed on signatories to and ratifiers of a treaty yet to enter into force;
- Arguments concerning a “provisional” application of the CTBT;
- Issues that extend beyond the “provisional” EIF debate; and
- Whether what is already in place constitutes a “de facto” EIF, worthy of entrenching, not diverting the ratification and EIF process.

This section of the report appraises arguments made regarding the “legality” of non-conventional EIF mechanisms for the CTBT. Some commentators have suggested that, despite the lack of a clear EIF for the CTBT, the verification system for the Treaty is nonetheless effective and operative. This poses serious questions, as there is no consensus regarding the trajectory for the CTBTO with continued non-EIF. There are a number of recommendations being made, including enforcing the agreement with no EIF, partial EIF, “moth-balling” the treaty for the time being, or a “provisional” EIF. This section considers these options, and recommendations are made in the following, concluding section.

Possible effective implementation of the verification regime of the CTBT, even without EIF;

The EIF conditions for the CTBT are particularly strict. According to the agreement, the CTBT will become effective 180 days after the 44 states listed in Annex 2 of the Treaty ratify it.²³ Most of

²³“Annex 2” states are those with nuclear power reactors: Algeria, Argentina, Australia, Austria, Bangladesh, Belgium, Brazil, Bulgaria, Canada, Chile, China, Colombia, Democratic People’s Republic of Korea, Egypt, Finland, France, Germany, Hungary, India, Indonesia, Iran (Islamic Republic of), Israel, Italy, Japan, Mexico, Netherlands, Norway, Pakistan, Peru, Poland, Romania, Republic of Korea, Russian Federation, Slovakia, South Africa, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom of Great

these countries are non-nuclear weapons possessing states already, subject to the conditions of the NPT treaty. However, for the declared weapons possessing states or “threshold” (suspected or non-declared) states,²⁴ ratification is especially significant. While it has been argued that these restrictive conditions make the implementation of the Treaty more difficult, the framers of the Treaty maintained that support is needed from all of these nations in order to make the CTBT truly effective and valid.

Implications for international law

International and domestic principles of law are connected on the basis of authoritative enforcement and ultimate allegiance. That is to say, both international and domestic law depends on a mix of enforced coercion and voluntary compliance. Domestically, this is fairly straight-forward, with internal judicial and policing authorities under sovereign law. For international law, however, the reliance is heavily placed on voluntary compliance, due to the nature of the structure of the international system. International law is normatively infused, based on standards of behaviour, instruments of control (such as treaties), and social order. Fundamentally, international law – including treaty law – is pragmatic, and founded on the mutual convenience of states parties. The success of international law is rooted in consensus, legal precedents, and expectations of parties.

Compliance to international law is based on the principle of *pacta sunt servanda*, or the “sanctity of treaties.” This guiding principle is evidence of the importance of treaties in the international system, since the principle of sanctity is predicated on self-interest: states party to a treaty recognize the common good in them. Treaties, furthermore, provide a template for future state-to-state relations by producing guidelines for behaviour, as well as a constrained and predictable environment.

Therefore, the phrasing of a treaty is critical. Undoubtedly, for the CTBT, the most troubling problem associated with the EIF conditions is the prohibitive nature of the Annex 2 state ratifications. Notwithstanding the number of non-weapons possessing states required to ratify the Treaty, the fact that of

Britain and Northern Ireland, United States of America, Vietnam, Zaire.

²⁴These states include China, France, India, Israel, Pakistan, Russian Federation, United Kingdom of Great Britain and Northern Ireland, and the United States of America. In light of recent developments involving the nuclear weapons acquisition program in the Democratic People's Republic of Korea, and issues of non-compliance in Iran, these two states ought to be considered threshold states, though Iran has not been openly termed as such in the context of international NACD fora.

the seven possessing states (the United States, United Kingdom, China, Russia, France, India, and Pakistan) only three (Russia, the United Kingdom, and France) have ratified. Furthermore, India, Pakistan, and North Korea have not even signed the Treaty. All of this makes prospects for customary EIF less likely.

The Vienna Convention on the Law of Treaties stipulates that EIF allows a Treaty to become legally binding.²⁵ But there are alternate methods through which rules contained in treaties may become legally binding. One involves customary international law, the other is based on the principle of non-EIF treaty obligations held in the law of treaties.

Customary international law

The Vienna Convention on the Law of Treaties is accepted as the benchmark for legal interpretation of international treaties.²⁶ The treaty's preamble recognizes the governance of customary international law,²⁷ and further stipulates that rules held in treaties may be binding on "third states" (states not party to a treaty) as a result of customary recognition in the international community.²⁸

On the matter of nuclear arms testing, there is evidence to counter the claim that non-testing has become the norm, or "custom," in the international community. The French nuclear tests in the Moruroa atoll lagoon in the South Pacific in 1995, Chinese nuclear tests as recently as July 1996, and tests by India and Pakistan in 1998 dispel the point of view that – in practice – nuclear non-testing has become "custom."

²⁵Vienna Convention on the Law of Treaties, Vienna 23 May 1969, Entry Into Force: 27 January 1980 (UN Doc A/Conf 39/28, UKTS 58 (1980), 8 ILM 679).

²⁶It has been argued that states not party to the Vienna Convention on the Law of Treaties are not bound by its contents. This is an important argument, since the United States, Israel, and France are not party to the Convention. However, since these nations cite the Vienna Convention, and given the Convention's acceptance in practice and as a binding legal normative code, the Convention is considered customary international law. Therefore, notwithstanding party status to the Convention, the Convention is nonetheless valid for those states. See for example, Masahiko Asada, "CTBT: Legal Questions Arising from its Non-Entry Into Force," Journal of Conflict and Security Law, 7 (2002): 98.

²⁷Customary law is difficult to define, due to its very nature. Treaty law refers to international agreement concluded between States in written form and governed by international law. Unlike treaty law, customary international law is not written. Rather, customary law is reflected in state practice. Moreover, there must be a belief in the international community that such practice is required as a matter of law.

²⁸Vienna Convention on the Law of Treaties, Article 2 and 38.

This places a different view on the “customary” aspects of a nuclear test ban. The view or belief that the practice or rule of non-testing is legally binding on states originates not from practice (as we can clearly see, as recent practice by France, China, India, and Pakistan dispels the myth that testing is customarily abandoned). Rather, the view that non-testing is “customary” emerges from official statement of governments and delegations. While it might be suggested that political declarations are merely rhetoric and that international law must be supported by binding agreements, and not official statements, customary international law is based on the principle of progressive developments. In other words, a legal obligation is not established until a sense of legal obligation exists. Although a principle may not have fully developed into law, it may become “accepted” as law before being codified. Furthermore, the matter of obligation is essential: legal obligations may arise from moral obligations, or political obligation.

On the matter of the CTBT, governmental statements, as well as the Final Reports of the Article 14 conferences in 1999 and 2001 make explicit reference to the need to refrain from acts that would run counter to the principles of the Treaty “pending its entry into force.” Clearly, the reference to EIF here is more than an accident, and symbolizes the importance placed on the EIF process by members of the Article 14 conference delegations. Therefore, we cannot assume, or make the supposition, that non-testing (and the CTBT itself) is “customary” international law. However, there is an argument to be made in international law that the elements of the CTBT may be enforceable upon signatories and ratifiers. This argument is based on the aforementioned concept of obligation.

Rule of law imposed on signatories to and ratifiers of a treaty yet to enter into force

Based both on practice and rule of law, it would be difficult, if not impossible, to ascertain that customary international law exists for a non-testing regime. In fact, as the previous section argues, “customary” international law simply does not exist for the CTBT.

There is, however, another way of viewing the content of the CTBT as binding. This concerns the “obligations” of signatories and ratifiers of the Treaty not to “defeat” the objectives of the agreement. The most rudimentary way of appreciating this is to consider the nature of international agreements themselves. Despite the fact that international agreements may not be legally binding on states unless they are ratified by those states, and while international agreements often include specific EIF conditions, the act of signing an agreement is not considered merely a charade in global diplomacy. In fact,

the Law of Treaties specifies that signatories to a treaty are obliged to work towards the effective completion of the agreement. The Law of Treaties holds that signatories are “obliged to refrain from acts which would defeat the object and purpose of a treaty”²⁹ by communicating their desire to be bound by the rule of the treaty pending EIF. Signatories must also indicate expressly that they seek to not be party to the treaty if they wish not to be bound by its rule of law. According to the Law of Treaties, ratifying an agreement is the articulation of acceptance of the agreement prior to EIF; furthermore, signing the treaty – even without ratification – is the acceptance of the principles of the treaty, and the implied agreement not to work against the objectives of the treaty.

As an illustration of this, we might note the official statements of non-ratifiers of the CTBT. For instance, immediately following the failed vote of ratification in the American Senate in 1999, former United States Secretary of State Madeleine Albright wrote to foreign ministers of states parties that “the United States will continue to act in accordance with its obligations as a signatory under international law, and will seek reconsideration of the treaty at a later date when conditions are better suited for ratification.”³⁰

This creates an interesting state of affairs for the CTBT. Although the agreement clearly has not met the conditions of the EIF provisions, the fact that all P5 states (United States, United Kingdom, France, China, and Russia) have at least signed the treaty requires them to observe conditions that would not “defeat the purpose” of the CTBT. This means that signatory states cannot take part in actions that would render the CTBT useless. In the case of the CTBT, this is straight-forward: the agreement “bans all nuclear explosions, for military or civilian purposes.”³¹ Former Secretary Albright’s letter is an demonstration of this principle. In some cases, states have linked their observation of the CTBT to that of other nations. For example, at the Article 14 conference meeting in Vienna in 1999, the Russian Federation linked its obligation to cease testing of nuclear weapons to the acceptance of this by other states. However, in the final statement of the Russian Federation at the Article 14 conference in New York in 2001, no such link was made to the

²⁹Vienna Convention on the Law of Treaties, Article 18.
<http://fletcher.tufts.edu/multi/texts/BH538.txt>

³⁰Jack Mendelsohn, “Still Bound,” *Bulletin of Atomic Scientists*, 56 (January/February 2000): pp. 42-43.

³¹CTBTO, Summary of the Comprehensive Nuclear-Test-Ban Treaty (CTBT), 2002.

actions of other states.³²

“Provisional” application of the CTBT

As argued in the previous section of this report, the issues surrounding EIF are really two-fold: first, there is the issue of an effective verification system for the CTBT, and the mandate of the Preparatory Commission of the CTBTO. Second, there is the wider issue of the EIF of the CTBT itself. It must be remembered that the CTBT represents a unique example of a NACD agreement, given the special status accorded the Preparatory Commission by states parties in 1996. As discussed previously, this creates a perplexing situation for both the legal and the practical status of the CTBT, since the verification regime is both operational and effective, but the EIF of the Treaty is not in sight.

This has led to a call for a “provisional” implementation of the CTBT. According to Article 25 of the United Nations Convention on the Law of Treaties³³:

1. A treaty or a part of a treaty is applied provisionally pending its entry into force if:
 - (a) the treaty itself so provides; or
 - (b) the negotiating States have in some other manner so agreed.

Pertaining to Article 25, (a) the CTBT does not contain a condition for a provisional entry into force. This is not, however, due to a lack of undertaking. In June 1995, Austria proposed at the Conference on Disarmament in Geneva that a simple majority of states party to the CTBT could apply the treaty provisionally.³⁴ The Austrian suggestion was not agreed upon, and was not included in the CTBT in 1996. In fact, the text of the CTBT contains no reference whatsoever to a provisional application of the treaty. The argument against a provisional entry into force is quite simple: the Annex 2 countries – all 44 of them – are essential for an effective CTBT.

³²Statement by H.E. Igor Sergeev, Assistant of the President of the Russian Federation on Strategic Stability, The Second Conference on Facilitating the Entry into Force of the Comprehensive Nuclear Test Ban Treaty, New York, 11 November 2001.

³³UN, “United Nations Convention on the Law of Treaties,” 23 May 1969, EIF: 27 January 1980.

³⁴See CD/NTB/WP.242, dated 16 June 1995, submitted by the delegation of Austria, entitled “Draft Treaty Language on Provisional Application,” <http://www.unog.ch/disarm/annualrep/cd1364.htm>

As previously indicated, there is nothing that “forbids” signatory states from seeking an alternative method for a EIF. This, of course, would be strongly discouraged by the United States, China, and Russia. It would also create serious legal problems that actually do not exist right now with the status quo non-EIF situation. To start, it is not clear what would happen to the access to information arrangements with the IMS/IDC. If some states were to provisionally EIF, other, non-ratifying states would likely not have access to information. For instance, could a non-ratifying state “block” information? This is further complicated by the issue of technology access, given that the United States is the primary provider of technology for CTBTO Preparatory Commission verification.

Second, with a provisional EIF, the goal of an Executive Council would be achieved, as outlined in the CTBT. However, it is presumable, or at least possible, that the Preparatory Commission would still be in existence, since non-ratifying states would not likely accede to a provisional EIF any more than they would the CTBT as it had been negotiated. This would create a state of affairs with two rather parallel organizations, including a separate Provisional Technical Secretariat (PTS) and a Technical Secretariat (TS), separate lines of funding, organization, and so forth.

There is a simple reason for the lack of reference to a provisional EIF in the CTBT text. Put plainly, the purpose of the treaty is to create a regime that comprehensively bans testing, which entails comprehensive membership. Without the ratification of the Annex 2 countries detailed in Article 14 of the CTBT, it is argued, the legitimacy of the Treaty would be called into question. Test ban advocates that the only good treaty would be a inclusive treaty. As one official has put it, “having an enforceable treaty without the critical players is only a little bit better than having no treaty at all.”³⁵

The other point of view, however, is not completely at odds with the general desire of those seeking a truly comprehensive treaty; that is, a treaty that is comprehensive in substance, and in membership. Rather, the point of view taken by those advocating a “provisional” EIF is that NACD regimes are part of an overall process, anyhow, and that a “revolutionary” progression towards an immediate and completely comprehensive regime is not at all likely, at least from the perspective of NACD experience and history. This alternative argument, therefore, concerns ways in which the CTBT might be “brought on-line” so as to

³⁵Interview, Preparatory Commission for the Comprehensive Nuclear Test Ban Treaty Organization, Vienna, Austria, 15 July 2002.

contribute to the longer-term goal of inclusiveness in both substance and membership. In many ways, this relates to the argument made in the introduction of this report regarding the cumulative process of NACD regimes (for more information, see Table 1 in annex).

Moving beyond the “provisional” EIF debate

“Provisional” implementation is a tremendously sensitive issue. It is not only politically charged, but also is affected by the variances of regional strategic concerns, and distinctive interpretations of national interests. Discussions of a provisional EIF are often dismissed immediately because the Austrian bid to permit provisional application of the CTBT was refused in 1995-1996. Moreover, a strict reading of the Law of Treaties would suggest that there is no basis in international law to implement the CTBT provisionally, since there is no agreement among states parties, and no arrangement in the CTBT itself.

In sum, there is no endorsement of a provisional entry into force for the CTBT in the Treaty itself. Furthermore, we may accept that, since states party to the CTBT could not agree to an antecedent agreement on wording for a provisional EIF, there was opposition to a mandated, prior settlement regarding provisional EIF. Nevertheless, as pertains to so much of international law, a basic reading of the CTBT, and an overview of legal principles regarding international treaties, is not always enough. International law, as argued above, is based not just on treaty law, but also customary law.

It is true that there is no arrangement for a provisional EIF contained in the CTBT, and that the Law of Treaties outlines provisional entry into force under what appear to be fairly intractable terms: codification in the treaty, or agreement among negotiating states. However, these terms are not so inflexible. There is nothing in the agreement that would prevent negotiating states from “in some other manner so agreed,”³⁶ allowing for a provisional EIF. In fact, provided that a provisional EIF does not impinge upon customary, or peremptory, rules of international law, and does not prejudice states not party to the agreement (including those states that have not ratified the agreement), there is nothing to suggest that a provisional EIF is impossible.

The sensitivity about “other means” towards a provisional EIF for the CTBT concerns the structure of the CTBTO. The Treaty outlines the “organs” of the Organization as the Conference of the

³⁶UN, “United Nations Convention on the Law of Treaties,” 23 May 1969, EIF: 27 January 1980.

States Parties, the Executive Council, and the Technical Secretariat, which includes the International Data Centre. The Conference of States Parties is described as the “principal organ of the Organization,”³⁷ and oversees the activities of other organs of the CTBTO. It is the most democratic and inclusive division of the CTBTO, with all states parties represented. However, the Conference cannot be convened until entry into force of the Treaty. This condition is made explicit in the Treaty, and is directly related to EIF: “the initial session of the Conference shall be convened by the Depository no later than 30 days after the entry into force of this Treaty.”³⁸ The direct identification of the CTBT EIF specifications complicates a provisional entry into force, since Article 2 references Article 14. Were a provisional EIF to take place, it could be argued on the basis of international treaty law that it would violate the prior agreement of negotiating states that the organs of the CTBTO would be overseen, and struck, on the basis of the EIF arrangements codified in Article 14.

This brings into play a series of related issues. For instance, would a provisional EIF allow for the effective implementation of On-Site Inspections (OSI)? Since OSI, according to the CTBT, is to be overseen by the Executive Council, which in turn cannot be activated without EIF as per the Treaty, the logical conclusion would be that OSI is impossible without EIF, conforming to Article 14. Also, what would a provisional application of the CTBT mean for the work of the IMS/IDC? And, could a provisional application allow for the involvement of non-ratifying states? These questions are based on a fairly strict reading of treaty, and assume that the Preparatory Commission cannot undertake any of these responsibilities without EIF. However, the Preparatory Commission does entail a *Provisional* Technical Secretariat, created to prepare for the full operation of the Technical Secretariat; it is reasonable that the PTS will more or less transform itself to the TS once EIF becomes a reality. The PTS has overseen the development of the IMS and the IDC, which presumably will retain their core structure with EIF of the CTBT. As well, the Preparatory Commission mirrors most of the responsibilities of the Conference of States Parties outlined in the CTBT, with membership for signatories as well as ratifiers, and a similar decision-making process.

Strictly speaking, it *is* possible that states parties to the CTBT – ratifying states – could settle on a mechanism “in some other manner so agreed” to bring about provisional application of the CTBT. This would create a viable and binding regime for ratifying states. Moreover, it could be argued that there would

³⁷CTBT, Article 2, B, 24. <http://www.ctbto.org/treaty/treatytext.tt.htm>

³⁸CTBT, Article 2, B, 13. <http://www.ctbto.org/treaty/treatytext.tt.html>

be no serious implication for *jus cogens*³⁹ (“compulsory law”), or for third party states (states not party to the treaty), provided they were not included in the regime.

But there are many problems outside of legal definition that would present themselves with such a scenario. First, non-ratifying states would be considered third parties, unless they deposited instruments of ratification for the treaty. This would mean that states that have not yet ratified the CTBT, but still support the financing, verification work, and administration of the CTBTO and the Preparatory Commission, would undoubtedly remove their political as well as monetary support for the CTBT. This would have serious implications for the work of the CTBTO, because the costs incurred by the CTBTO Preparatory Commission right now are annually met by *signatory* states based on the United Nations scale of assessment.⁴⁰ This means, of course, that the single largest benefactor to the CTBTO Preparatory Commission – the United States – likely would remove its financial support for the Organization. The United States is currently responsible for 22 per cent of the Preparatory Commission’s budget. Furthermore, it should be pointed out that approximately 60 states – including many that have ratified the Treaty – do not make their payments to the Preparatory Commission at all.

Related to this, provisional application of the CTBT would conceivably create a more serious impasse with regard to non-ratifying states. The most important country that has not ratified the Treaty is, of course, the United States. But the issue of potential non-support of the CTBTO by the United States (as opposed to, at best, tacit but sparing support right now) is a serious one with many off-shoots. Introducing a provisional application for the CTBT would surely serve only to isolate and marginalize the United States; however, other countries – important ones, such as China, Pakistan, India, and Israel – would presumably view an American refusal to endorse a provisional CTBT application as a prompt to completely renege on any endeavour to ratify the Treaty, despite what those countries even might be saying about the Treaty right now. In simple terms, provisional application could create the conditions for the very demise of any hope of universality and inclusiveness for a test ban regime. As one test ban supporter remarked, “let’s not give

³⁹*Jus cogens*: Latin: “compulsory law.” A peremptory norm of international law; one that all states must observe. International Law Dictionary & Directory (Ray August, 2001).

⁴⁰The United Nations scale of assessments are the contributions from of Member States, which are assessed on a scale approved by the General Assembly. The scale of assessments is based is the capacity of countries to pay, determined by total gross national product, adjusted to take into account a number of factors, including their per capita incomes.

hold-out states any excuse to abandon the Treaty altogether.”⁴¹ For the time being, the current dilemma surrounding these “hold-out” states is less severe than what could appear if the Treaty were applied provisionally.

The relationship between the Preparatory Commission and the organs of the CTBTO reveals important questions. These questions not only strike at the heart of the CTBT itself, they relate to the purposeful implementation of a viable test ban regime. On another equally important level, there are also issues surrounding current levels of support to the CTBTO Preparatory Commission, both in political and monetary terms.⁴² The upshot of all of this is that provisional application could bring on problems that currently do not exist, such as financing for the regime, and tacit support of the verification regime by states that have still not ratified.

All of this suggests that creating a mechanism for immediate and inclusive implementation of the CTBT is remote, based on the wording of the prior agreement – the CTBT itself. Making matters more complicated is the clear EIF formula devised in the CTBT. Here we seem to have a clear conclusion: we cannot have the CTBT EIF without the EIF process executed, but we cannot have the process executed because the conditions of the EIF cannot be met! Evidently, some countries have attempted to counter this dilemma, and the Austrian attempt to allow for a provisional EIF – though it would not create a truly inclusive and comprehensive treaty, even if it had been agreed upon in 1995-1996 – is the best example of a forward-looking bid to avoid the current dilemma we face regarding EIF. However, as explained later, there are other ideas and potential courses of action that might be undertaken to work towards both an effective, and a binding EIF.

To complicate matters, even if ratifying states opted for “some other manner so agreed” to provisionally implement the CTBT, perhaps the most important unanswered question would be whether such

⁴¹Interview, official, states party to the United Nations and International Organizations, Vienna, Austria, 15 July 2002.

⁴²The most serious example of this concerns the United States decision to reduce its payments to the CTBT. The US specified that it wanted the reduction in payment to come from the OSI budget. The CTBT, however, cannot simply remove the American “share” of the OSI budget from OSI, alone. A “line-item” style of compensation would be unprecedented in international organizations; this is clear to the United States, which has used the “no funds for OSI” argument for domestic political purposes. Rather, the reduction in payment will affect all financed structures of the CTBTO.

a regime would have any meaning for NACD. If pro-CTBT advocates are concerned that the United States will not support the Treaty, then antagonizing the US with a provisional EIF might fulfill that prophecy. It is not clear that ratifying states would even agree to provisional application. Russia, for one, has explicitly referenced the “strict compliance” of Article 14 EIF for the CTBT.⁴³

Yet there are actions that may be taken, and there is a strategy to move the CTBT along. Most importantly, the strengths of the CTBT lie in its verification capability, which is the most advanced for any NACD regime in the international system. This, coupled with the legal argument that signatory states should at the very least not work towards to defeat the purpose of the treaty, presents an fascinating scenario: the universality and effectiveness of the CTBTO is actually closer to EIF in the status quo than it would be with a provisional EIF. While not official, it might be argued that, with the strength of the Law of Treaties (especially Article 18), the global proclaimed desire for both a moratorium as well as verification, and the text creating the Preparatory Commission of the CTBTO, there is now a “de facto” EIF.

A “de facto” EIF?

The CTBT, at its present stage, does not meet the basic requirements of customary international law. But as this report has argued, ratifying states would be within the bounds of international customary law to seek a “provisional implementation” of the CTBT. It can be argued that there is the basis in treaty law to support the customary law argument. Supporters of the CTBT – ratifying states – are not legally bound to *not* pursue “some other manner so agreed” to facilitate EIF for the treaty.

However, officially moving ahead for a provisional EIF would not be the best course of action. It needs to be remembered, of course, that the United States has *not* indicated its desire to not be held to the Treaty, and still does contribute administrative personnel, verification and monitoring hardware and stations (the United States has “gifted” more monitoring stations to the IMS than any other states, and continues to do so). Moreover, the United States still contributes almost a quarter of the Preparatory Commission’s budget, while many so-called “proponents” of the CTBT do not make their payments at all. Third, other non-ratifying states would view the potential non-support on the part of the United States as a

⁴³Statement by H.E. Igor Sergeev, Assistant of the President of the Russian Federation on Strategic Stability, The Second Conference on Facilitating the Entry into Force of the Comprehensive Nuclear Test Ban Treaty, New York, 11 November 2001.
http://www.ctbto.org/reference/article_xiv/2001/111101_speaker9.pdf

cue to revoke what support they maintain right now. Many states such as China, India, Pakistan, and Israel look to the United States in part to frame their own policy regarding a test ban. Finally, the CTBT would lose its most important avenues of technical and financial support, were a provisional application to be pursued without the support of the United States.

As matters stand right now, the strength of customary international law, in concert with the expressed willingness of signatories not to impede the general principles of a test ban treaty (demonstrated by statements invoking Article 18 of the UN Law of Treaties), are strong indicators of the accepted status of the CTBT in the international system, despite its non-EIF. Of course, this is not to suggest that the CTBT is legally enforceable, or has the legitimacy that it would have with EIF; nevertheless, the status quo *supported by the recommendations contained here* is preferable to the potential outright rejection – or at least hardening of attitudes – were a provisional EIF to be pursued.

The greatest strengths for a universal test ban regime currently are the Article 18 assurances given by non-ratifying states (particularly the United States), and the operative verification structure in the IMS/IDC. The former is chiefly political: non-ratifying states still see the relevance and usefulness of the CTBT, and despite discouraging developments since 1996, most Annex 2 states want to see an effectively verifiable and universal nuclear test ban regime in place. The latter issue – the success of the verification mechanism for the CTBT – is not so much politically driven, as it is a function of the unique nature of the Treaty itself. The fact that the Preparatory Commission was authorized speaks to the urgency surrounding the CTBT, but also has created a state of affairs where a operational and constructive verification operation is functional before the Treaty has come into force.

The problem with the current status quo is that it cannot exist in perpetuity. A number of events could occur in the future to undermine the test ban regime. Most seriously, a test of a nuclear device would effectively derail the entire process. The Indian and Pakistani nuclear tests in 1998, for instance, both threatened the test ban regime, but also led proponents of the Treaty to redouble efforts for EIF and effective implementation. As well, North Korea's October 2002 admission of its violation of a non-nuclear development pact with the United States raises concerns about horizontal weapons proliferation. Less seriously, but more probable, would be a political violation of the current tacit agreement not to test new weapons; that is, not a full-fledged test per se, but a declaration not to be bound by the Treaty. Non-ratifying states will subscribe to Article 18 of the Law of Treaties only for so long before the Treaty is seen to be not

worth rectifying. In the meantime, the most serious political objective must be to maintain support for the CTBT among non-ratifying/non-signatory Annex 2 countries, while seeking to elevate this tacit support to outright endorsement.

Conclusions and Recommendations – The Road Ahead

There is, of course, no easy answer to the questions surrounding EIF for the CTBT. However, the reality right now is that the formal EIF mechanism for the CTBT is clearly not in the offing. Thirteen Annex 2 states have not yet ratified the Treaty, and of the thirteen, three have not signed. and of this general list, several show no signs of moving in that direction.

This leaves proponents of the CTBT facing some serious questions regarding next steps. Some more extreme options, such as an outright fractional implementation of the CTBT, or even some variants of a provisional EIF are simply not appealing because they would serve to either further alienate those states that will be integral to an effective implementation of the test ban regime, or would otherwise violate the conditions outlined in the Treaty itself.

The foundations of the CTBT are the following: a commitment to a testing moratorium; technical exchange and assistance for states parties; effective and universal verification and monitoring; and confidence-building among members of the Organization. None of these objectives can be achieved if verification is not operative and comprehensive. Making the CTBTO work without EIF, therefore, is about making verification work in such a manner that states parties have confidence in the regime. To that end, understanding EIF means we must understand verification.

There are three inter-related themes that must be taken into account when considering verification without EIF. First, on a technical level the Provisional Technical Secretariat has demonstrated that the International Monitoring System and International Data Centre are already vastly capable of monitoring a very high percentage of the international system against covert nuclear weapons testing. Developments regarding OSI have been much slower. One reason for this is that some significant states, such as the United States, have not sought to support the OSI of the CTBTO to the same degree as the IMS/IDC. Another reason is that the CTBT precisely outlines that OSI will be overseen by the Executive Council of the Organization, which will not be formulated until after EIF. Finally, the Organization has not completed the preparation of the operational manual for OSI, which will contain all appropriate legal,

technical and administrative procedures for inspections.

Second, on a legal level, there are conflicting points of view regarding the legitimacy of CTBTO verification without EIF. On the one hand, proponents cite the Preparatory Commission text agreement as an indicator that all signatory states parties – including those that have not ratified the Treaty – are in favour of a test ban moratorium and verification by the CTBTO. As mentioned in the introduction, these two elements – verification and a moratorium on tests – are CTBT fundamentals. Others, of course, argue that the Preparatory Commission was meant only to create the conditions necessary for a full-fledged CTBTO verification system after EIF. Legal experts suggest that nothing in the text agreement would give Preparatory Commission the authority to implement anything beyond what has already been done.⁴⁴ And although it is clear that signatory states do have the right in both international customary and treaty law to move ahead with a “provisional” EIF amongst themselves, it is not clear that the CTBT as we understand it today would be the basis of what was entered into force. Indeed, a “provisional” EIF would likely consist of a different set of states parties. Legally, then, there is no clarity about implications for verification with no EIF.

The third and final theme that must be considered has to do with the more practical issues regarding EIF. Technically, the CTBTO is ready for at least preliminary verification and monitoring. Legally, there is an argument that can be made for provisional EIF. However, the practical – or what some might call the political – effects of these two themes are more complicated. The fundamental question here is: does it make sense, practically, to move ahead with EIF through means other than those for which the CTBT provisions allow? For those most concerned about preserving the most basic principles of a test ban regime – effectiveness and universality – provisional EIF is not politically viable.

Forecasts predict that by as soon as 2005, but by 2007 at the latest, the full system of global monitoring and verification will become operable. Officials with the Preparatory Commission for the CTBTO agree with this projection, and evidence suggests that the verification mechanism for the CTBTO is already largely in place. Technically, the IDC still needs time and money to provide for sufficient processing of IMS data. The interim period will be crucial for the IMS-IDC interface, and it will be

⁴⁴Interview, Preparatory Commission for the Comprehensive Nuclear Test Ban Treaty Organization, Vienna, Austria, 15 July 2002.

imperative that significant donors (those at the top of the graduated list of the scale of assessment agreed to by the United Nations General Assembly) are urged to maintain financial support for the CTBTO Preparatory Commission.

In summary form, this report suggests the following course of action:

- Emphasize the continuing importance of the Article 14 Conferences. These conferences offer the best opportunities for pursuing EIF for the CTBT – this is, after all, the primary intention of the conferences. However, the conferences also provide a periodic forum to repeatedly validate that signatory and ratifying states continue to seek to uphold the elements of the Treaty and are not engaged in actions that would serve to defeat the object and purpose of the CTBT. This is crucial for the effective implementation of the CTBT, since in international law, signatory and ratifying states cannot be held in perpetuity to an agreement that has not achieved entry into force. Article 18 of the Vienna Convention on the Law of Treaties specifies that signatories and ratifying states have “expressed ... consent to be bound by the treaty, pending the entry into force of the treaty and *provided that such entry into force is not unduly delayed*” (italics added). This concluding clause is significant because it suggests that ongoing efforts must be conducted to work towards EIF of an agreement.
- Further to this, signatory states as well as ratifiers must be urged to participate actively in Article 14 Conferences. Although only ratifying states are *expected* to attend the conferences, they are naturally open to others as well, including both signatory and non-signatory states, specialized agencies, intergovernmental organizations, and non-governmental organizations. States that have not deposited their instruments of ratification are not permitted to formally participate in the drafting of the Final Declaration. Some consideration should be given to extending a wider role to signatory states in the deliberations of the Article 14 conference and its Final Declaration. The rationale here is fairly straight-forward: those states currently participating in the drafting of the Final Declaration, and acting as full participants in the conference, have already formally expressed their binding support for the treaty. Non-EIF, however, is problematized not by these states, but rather by those that have *not* deposited instruments of ratification. There would be opposition by those that have ratified, but the central intention of the conferences is to bring about EIF for the CTBT. A more active role for non-ratifiers may need to be considered for this goal to be achieved.
- Signatory states considering making their intentions known to be removed from the Treaty should

be pressed to – at the very least – retain signatory status.⁴⁵

- The IMS/IDC verification systems should have a target of 2005 for full implementation. Comprehensive and effective verification will provide the strongest argument for non-ratifying states to move forward.

⁴⁵This is particularly important in the context of the status of American signatory/ratification. As a signatory state, the United States could seek to remove itself from the Treaty provisions by indicating its intention not to be party to the Treaty. However, after the failed Senate vote on the CTBT in 1999, the Treaty remained as a “pending” treaty in the US Senate, which means that it may be considered at a later date by the Senate, and cannot be removed by the executive level of government. The Treaty is in effect the legal “property” of the Senate Foreign Relations Committee until it is reconsidered by the Senate, or sent back to the President. In the United States, the CTBT abides in a “legal limbo” meaning that US signatory status prevails, at least for the time being.

**Table 1. Paradigmatic Development:
Nuclear Restraint Regimes
(October 2002)**

Regime	Representative Treaty/Agreement	Actors or Dimension	Coverage	Subsequent Developments
Testing	Limited (Partial) Test Ban Treaty (LTBT), 1963	Multilateral: 108 signatory states	Eliminated nuclear testing in air, outer space, and under water	Initiated call for Comprehensive Test Ban Treaty (CTBT)
Possession	Nuclear Non-Proliferation Treaty (NPT), 1968	Multilateral: 187 states	Addressed "horizontal" proliferation; committed NWS to limit "vertical" proliferation	Widened role for International Atomic Energy Agency (IAEA); pressure for CTBT
Limitation	Strategic Arms Limitation Talks (SALT I), 1972; SALT II, not ratified	Bilateral: United States, Soviet Union	SALT I: Limited land- and sea-based delivery vehicles; Anti-Ballistic Missile (ABM) treaty; compliance verification SALT II: sought to limit heavy bombers, MIRVed systems	Led to reduction talks; pressure for CTBT
Reduction	Intermediate-Range Nuclear Forces Treaty (INF), signed 1987; Strategic Arms Reduction Talks (START I), signed 1991; START II, signed 1993; "START III" signed 2002	Bi/Trilateral: United States, Russian Federation, Ukraine	INF: Abolished intermediate nuclear weapons; START I: reduced warheads and launchers; START II: reduced warheads to 3000-3500 each; START III: reduced warheads to 2,000-2,500	Call for deployment, dismantlement and storage agreements; Cooperative Threat Reduction (CTR) programme; fissile material coverage; pressure for CTBT
Materials Elimination	HEU Agreement (1994); Plutonium Disposition Agreement (1993); Fissile Material Cutoff Pre-Negotiation Talks, ongoing/stalled	Bilateral: U.S.-Russia; Multilateral: Conference on Disarmament (CD) members, 66 states	Conversion of HEU; Pu production ban, explosive fissile material production ban	Widened scope for fissile material controls; pressure for CTBT

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