

**The Fissile Material Cutoff Treaty (FMCT):
Time for a new approach or renewed commitment?**

Jean du Preez

A ban on the production of fissile materials for nuclear weapons has been on the international security agenda even before the NPT was conceived. References to the need for such a ban were included in the 1946 Baruch Plan and President Eisenhower's 1953 "Atoms for Peace" speech. U.S. studies conducted in the 1950s investigated the possibility of a "cessation of production" of fissile materials, and led to the inclusion of such a ban in a group of nonproliferation measures proposed during the negotiations for the NPT that also included a CTBT. It is interesting that the United States submitted a working paper to the Eighteen Nation Committee on Disarmament in June 1964 in which it described "the inspection of nuclear powers under a cutoff fissionable material for use in weapons." The US then maintained that "inspection of a nuclear power should provide a high degree of assurance that no violation could take place that would result in a significant increase in its existing stockpile of material available for use in weapons." The same working paper contained detailed inspection provisions for a verifiable cut-off treaty.

Although not directly addressed in the articles of the NPT, clear reference to the "cessation of the manufacture of nuclear weapons, the liquidation of all (their) existing stockpiles, and the elimination from national arsenals of nuclear weapons and their means of delivery" is made in the preamble to the treaty. This "desire" is further emphasized in Article VI which requires State parties to undertake "negotiations in good faith on effective measures to cessation of the nuclear arms race at an early date and to nuclear disarmament". In achieving the goals of the NPT, the original drafters envisaged that control over nuclear weapons materials and the cessation of their production for weapons purposes could lead to a quantitative capping of the number of weapons in existence and to laying the foundation for their eventual elimination.

With the end of the Cold War and the perceived need to make progress in arms control, the concept of a fissile material cut-off treaty as a separate instrument was given considerable impetus by the United States. In his 1993 speech to the United Nations General Assembly, President Bill Clinton stated that: "We will pursue new steps to control the materials for nuclear weapons. Growing global stockpiles of plutonium and highly enriched uranium are raising the danger of nuclear terrorism in all nations. We will press for international agreement that would ban production of these materials for ever." The same General Assembly for the first time adopted a consensus resolution entitled "Prohibition of the production of fissile materials for nuclear weapons or other nuclear explosive devices" recommending "the negotiation in the most appropriate international forum of a non-discriminatory multilateral and internationally and effectively verifiable treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices." The General Assembly also requested the IAEA to provide assistance for examination of verification arrangements for such a treaty, although it did not specify the Agency's role.

When the CD adopted the Shannon report in March 1995, it agreed to establish an ad hoc Committee "to negotiate a non-discriminatory, multilateral and internationally and effectively verifiable treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices." At the time Ambassador Shannon stated very clearly that the report did not preclude any delegation from raising the issues of scope and verification within the Committee. The NPT NWS and India supported a mandate that would only permit consideration of future

production of fissile material, while others argued that the mandate should also include consideration of past production. Another group of States felt that consideration of a FMCT should not only relate to production of fissile materials (past or future), but also to other issues, such as the management of such material. Several delegations insisted on the inclusion of existing stockpiles in the negotiation mandate.

The following year, the promise of a FMCT played a prominent, if not determining role in advocating the indefinite extension of the NPT at the 1995 Review and Extension Conference. At the time, the United States launched an intensive campaign among key NNWS linking its commitment to achieving a CTBT, the reduction of nuclear warheads under the START I and II treaties, and a global ban on the production of weapons purpose nuclear material to the indefinite extension of the NPT. The package of integral decisions adopted at the 1995 Conference, thus providing a way for all State parties to support the indefinite decision while providing for the means in which, and the means through which progress toward achieving nuclear disarmament and nonproliferation could be achieved. A key element of this package was the “Principle and Objectives for Nuclear Non-proliferation and Disarmament” which included a call for the “immediate commencement and early conclusion of negotiations of a FMCT in accordance with the Shannon mandate.

The success of the much heralded 2000 NPT Review Conference was largely hooked onto the unequivocal undertaking by the NWS to accomplish the total elimination of their nuclear arsenals as part of thirteen practical steps for the systematic and progressive efforts to implement Article VI. A key component of these practical steps solidified the 1995 agreement to start negotiations on the FMCT in accordance with the Shannon mandate while adding that the negotiations should take into consideration both nuclear disarmament and nuclear non-proliferation objectives. This agreement was, however, inherently flawed in that it required negotiations to commence in the context of an agreed program of work in the CD. In my view this agreement is a good example of the consequences of flawed compromises for sake of consensus and expediency.

The events of 1998 and the linkages made to discussions of a phased timetable of nuclear disarmament and to negotiations on treaty to ban an arms race in outer space, off course lead to a complete breakdown in FMCT related negotiations, despite the innovative efforts by five former CD presidents that finally led China and Russia to accept a compromise proposal.

The July 2004 US announcement that it was “not realistically possible to verify the treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices in any meaningful way” and that “effective verification of an FMCT would require an inspection regime so extensive that it could compromise key signatories’ core national security interests and so costly that many countries will be hesitant to accept it” is widely considered to be a serious – if not fatal - blow to the achievement of one of the longest standing nonproliferation and nuclear disarmament objectives. Although an overwhelming majority of UN members at the last GA session voted in favor of the resolution in support of the original mandate, the negative US vote opened the door for at least two other CD members to question the 1995 Shannon mandate with the consequence that the eight year long deadlock in the CD could continue, placing in further jeopardy its relevance as a negotiating body. It also complicates chances to achieve success at the 2005 NPT Review Conference since many NWS are likely to argue that this is yet another example of how the NWS are ignoring their disarmament obligations while insisting on further restricting access to peaceful nuclear technologies.

Measured against the originals goals set out for the treaty, an FMCT will remain relevant if it aims to prevent production, sale, use, and transportation of weapons-usable nuclear material, and

to close this path permanently to nuclear armament, nuclear proliferation, and nuclear terrorism. Given the lapse of time since the FMCT mandate was agreed, it may be appropriate to investigate whether the original negotiating mandate needs to be revised. In so doing it would be useful to identify and analyze viable alternative options, including on the scope and effective ways to verify the implementation of the treaty in a non-discriminatory way. Given the growing risks of nuclear terrorism, and the potential threats posed by radiological weapons, a related question – albeit it a controversial one - is whether the world would be better off with no production of separated plutonium or highly-enriched uranium, while progressively eliminating existing stockpiles, whether to regulate limitless production of such materials by some States today, and more States tomorrow.

As a fiss ban treaty today would affect individual states differently due to variance in nuclear fuel cycles and inventories of fissile material, States have increasingly divergent views on the objectives of such a treaty.

Scope

The scope of the future treaty remains one of the most challenging issues. Positions are probably now wider divided than they were in 1998. Differences over the scope of the future relate to how to define fissile material and whether to include past production.

A. Defining fissile material for nuclear explosive devices

Fissile material for weapons purposes is commonly understood to be highly enriched uranium (HEU) and plutonium (Pu), although certain other transuranic elements are also used in the production of nuclear weapons. Defining "fissile material" in a generic sense could, however, cause misunderstanding, since from a technical perspective "fissile material" has different definitions. For purposes of an FMCT, a common understanding will have to be agreed upon defining "fissile material" as nuclear materials that can be made to chain react for the purpose of a nuclear weapon. Although no agreement exist to include fissile materials for peaceful purposes, HEU for naval fuel reactors, tritium and other transuranic elements, consideration of these elements are likely to influence the negotiations of an FMCT.

i. Civilian plutonium reprocessing and uranium enrichment:

Given the “new” proliferation threats as a result of the misuse by some States of the “inalienable right” to peaceful uses of nuclear energy and the dangers that fissile material could fall in the hands of terrorists, some critics of civilian plutonium reprocessing and uranium enrichment have proposed to ban commercial reprocessing and enrichment as part of a global fissile material ban, while others have suggested a more moderate approach imposing a phased- in moratorium on reprocessing and recycling plutonium. However, given the large commercial investments and interests in continuing civilian reprocessing as well as enrichment in some countries, including several NNWS, the inclusion of civilian nuclear programs into the scope of a treaty would likely lead to a fatal deadlock in negotiations of the treaty. Many NNWS are already highly critical of proposals to limit commercial civilian reprocessing and enrichment for peaceful purposes which they consider as a core NPT bargain.

ii. Tritium

Although not a fissile material its strategic significance in nuclear weapons design would require consideration of whether to include tritium in a future treaty or not. It is all but inconceivable that the NWS would give up the use of tritium for warheads—since this would require new warhead designs, but a case can be made in favor of tritium control as a qualitative disarmament measure. Whatever its potential merits, it seems very unlikely that the NWS would accept this approach. NNWS are also likely to argue that efforts to include tritium in a future treaty would divert

attention and efforts from the important issue of existing stocks of weapons grade HEU and plutonium, which they want to address without further delay.

iii. Other Transuranic Elements

The IAEA has in recent years identified the proliferation potential of neptunium (Np) and americium (Am). Differences in opinion exist regarding the credible use of Am for weapons purposes due to its physical (not nuclear) characteristics. Since Np is suitable for making a relatively simple gun-type device, it should probably be covered by an FMCT.

iv. Naval Reactors

The continued use of weapons grade material in naval military reactors will require special consideration under any future FMCT. Part of the original bargain when the NPT was crafted, was to leave a number of nuclear activities in the category of acceptable uses so as to satisfy mainly the concerns of the NNWS to maintain the widest possible options in return for giving up their right to nuclear weapons. This included the “inalienable right” to develop research, production and use of nuclear energy for peaceful purposes, other “allowed” uses included so-called “peaceful nuclear explosions” and the operation of naval propulsion reactors for commercial shipping.

Although obvious, there is no common view that naval reactors should be included under an FMCT, given that this type of reactors is a potential source of fissile material for military or other non-peaceful purposes. To include propulsion reactor fuel in an FMCT would be very difficult—some would say impossible—to achieve. However, if HEU for naval propulsion remains unsafeguarded, an FMCT will contain a significant loophole making possible the diversion of those materials to explosive purposes. One possible solution would be to place naval propulsion fuel under international safeguards. A decision by NPT State parties to require the Additional Protocol (INFCIRC/540) as the standard of compliance under the NPT should capture naval propulsion fuel as well as facilities to enrich and process such material. This standard would obviously only be applicable to NNWS, making this an even more controversial issue.

B. The inclusion of past production, in particular excess stock

Although general agreement exist on the need to deal with future production of HEU and plutonium for weapons purpose, the issue of scope mostly concerns whether to include past production or not. It is estimated that globally between 1200 and 2000 tons of fissile materials are kept in stockpiles, including some 50 tons of civilian HEU and 240 tons of Pu. This figure does not include weapons grade material declared as excess. Depending on the weapon design and size, it is estimated that the equivalent number of warheads that could be produce from this material would exceed 50,000. It is further estimated that as of July 2004, mainly the United States and Russia declared as excess roughly 700 tons of weapons grade material or the equivalent of an additional 25,000 warheads.

Given that all nuclear materials and facilities in NNWS are already subject to full-scope safeguards, it is the NWS and the *de facto* nuclear weapons possessors that will be affected by the inclusion of existing stocks. Those in favor of including existing stocks argue that it would ensure that an FMCT

- (a) has a nuclear disarmament objective as provided for under Article VI of the NPT;
- (b) further strengthens nonproliferation benefits by preventing transfer of existing materials from NWS or *de facto* nuclear weapons possessors to NNWS;
- (c) is “non-discriminatory” and equalize the safeguards burden between NWS and NNWS;
- (d) solves the question of asymmetric stocks in South Asia and the Middle East;

- (e) avoids creating a loophole for declaring military fissile material produced after treaty's entry into force as past stocks; and
- (f) prevents materials from falling into the hands of terrorists.

Those (mostly the NPT NWS) who are against inclusion of existing stocks point to the technical difficulties of accounting all historical stocks, arguing for practicality of focusing on future production. They are also concerned about cost implications of a wider scope. Declaration of historically produced stocks of weapons materials by all States with nuclear weapons is not believed to be feasible. The inclusion of all stocks would likely make NWS support for a treaty even more difficult, unnecessarily complicating and prolonging negotiations. Moreover, a full/complete declaration of such stocks as a requirement of the FMCT could be problematic in the negotiations for the treaty, as well as for its subsequent implementation from both a political and a practical perspective. Another argument is that including existing stocks - even just declaring existing military stockpiles - could recognize and codify the right to have such stocks, legitimating the nuclear status of those states outside the NPT.

When considering whether, and how to include past production of weapons-grade material, it is important to bear in mind that even the most transparent of the NWS, have in doing so revealed a problem of great practical significance. The practical significance of declaring stocks with such a large discrepancy is therefore questionable. This is a practical problem which was also experienced in the South African case. During the IAEA's "completeness investigation" in South Africa, the existence of a discrepancy could only be accepted on the strength of other supporting data (i.e. other than nuclear materials accounting), such as operational records, electricity consumption, reports on chemical losses, etc. Considering that South Africa produced a relatively small quantity of HEU over a period of about years, the practical problem of giving an accurate production figure for tens and hundreds of tons of material produced over half a century would present significant practical problems. Declaration of nuclear material in weapons or directly associated with nuclear weapons without the ability to verify the declaration which will be made, would therefore not contribute to confidence building.

When considering whether to include existing stocks under the scope of a future treaty, the following major options exist:

- i. Full incorporation of stocks:* A most extreme and unrealistic treaty would require disposition of all existing military materials. Such a treaty would virtually serve as a comprehensive nuclear disarmament treaty, whose acceptance by NWS is impossible at this stage.
- ii. Partial incorporation of stocks:* Instead of addressing all military fissile materials, the treaty should only target those materials which NWS are more willing to deal with. An FMCT should cover weapons material which has been transferred from military use to peaceful nuclear activities (declared as excess) as a starting point at entry into force of the FMCT for a given State with nuclear weapons. This excess material would be included in a starting inventory of a State - without an obligation to declare its "completeness and correctness" from a production point of view - and would be subject to the verification machinery provided for in the treaty. Further material declared as excess in the future would continuously be added to the starting inventory in an irreversible way. Irreversibility is the key benefit of this option; the control over fissile materials would be steadily increased, serving both disarmament and nonproliferation objectives. This approach would, however, require an agreement that NWS and the *de facto* nuclear weapons possessors would keep appropriate quantities of materials by classifying it as necessary for

maintaining their stockpiles. This could become a complicating factor, especially since it would by implication recognize and codify the right of non-NPT states to have such stocks.

Although a cut-off treaty will have a significant nonproliferation effect to solve the question of asymmetric stocks in South Asia and the Middle East, assuming that the three nuclear weapons possessors in the regions will join the treaty, these States are unlikely to accept a treaty soon. Although regional nonproliferation is important and needs to be addressed, it should not be the major objective of an FMCT.

iii. By keeping the way open for a more substantial consideration in the future, an FMCT will not address the issue of stocks immediately, but will spell out steps to be taken at a later stage for a more substantial consideration. One way would be to include appropriate language in the preamble of a treaty referring to the possibility of future undertakings on stocks. Such language could range from a general recognition of the importance of the stock issue to more specific undertakings. Some would argue that a similar approach could be used to establish a verification system. The advantage of this option is to specify and reconfirm the international community's interests in the issue. Critics of this option argue that it will allow the NWS and the *de facto* nuclear weapons possessors to buy time, and that there is no guarantee that any initiative will be actually taken unless there is consistent and strong political pressure on those countries.

iv. Voluntary initiatives outside a treaty: If existing stocks cannot be dealt with in a treaty, the NPT NWS and the *de facto* nuclear weapons possessors could be urged to take voluntary confidence building measures outside a treaty. Through unilateral, bilateral and multilateral initiatives, they could work on specific issues such as declarations of excess weapons materials and enhancement of physical protection of stocks. As a first step, all the NPT NWS as well as the three *de facto* nuclear weapons possessors should implement and maintain moratoria on fissile material production. Given its voluntary nature, there is no guarantee that any measure would be actually taken. Moreover, the large amount of military direct-use materials existent in those states would remain unsafeguarded.

v. Expansion of the Trilateral Initiative: Another possible way to reconcile the discrepancy between the NWS' perception of an FMCT as purely a non-proliferation tool, and the views of much of the rest of the world that it should also have a nuclear disarmament orientation, is to separate the two goals into different, but mutually reinforcing international efforts. Such a separation can ensure that the discrepancy in perceptions will not hamper the entry into force of an FMCT as has been the case with the CTBT.

Under the Trilateral Initiative, the US, Russia and the IAEA have been working on a framework verification regime, which would allow the IAEA to monitor excess materials removed from the two countries' nuclear arsenals. If implemented, this Initiative could become the first development of a concrete approach to international verification of nuclear disarmament. A model legal framework has already been agreed and is available to be used in new verification agreements between the IAEA and the two states. The United States and Russia should move forward in placing substantive quantities of excess material under IAEA safeguards which would partly address concerns over existing stocks. An expanded Trilateral Initiative should

- (i) include all NWS and *de facto* NWS;
- (ii) incorporate an inventory of excess weapons usable material in a starting inventory upon entry into force of each State's participation in an expanded Initiative with the IAEA;
- (iii) include legally binding agreements between the IAEA and each state;
- (iv) set a timetable for the inclusion of pre-existing stocks of fissile material; and

(v) establish a source of funding, such as the G-8 Partnership Against the Spread of Weapons of Mass Destruction. In addition an expanded CTR could provide the financial means to not only secure weapon-grade fissile material from theft or diversion, but also reduce, and destroy stocks of such material in the states in which it is implemented, thereby serving both a nonproliferation and disarmament objective.

vi. Expansion of the Cooperative Threat Reduction program: Similar to the Trilateral Initiative, an expanded CTR could provide the financial means to not only secure weapon-grade fissile material from theft or diversion, but also reduce, and destroy stocks of such material in the states in which it is implemented, thereby serving both a nonproliferation and disarmament objective. The establishment of the Global Threat Reduction Initiative would be of particular relevance in this regard.

Although not included in these options, ways to address civilian materials, HEU for naval fuel reactors, and tritium need to be examined as well.

Verification in a credible and non-discriminatory way

Key to the success and future credibility and relevance of an FMCT would be how to ensure that it is "effectively verifiable." Although verification would be a political challenge, "it is technically feasible to establish the means to effectively monitor and verify compliance with the treaty in order to detect and deter clandestine nuclear bomb production efforts." This longstanding conclusion by many leading technical experts in the United States and worldwide is now being challenged.

Given the US position on the CTBT and the draft verification protocol to the Biological Weapons Convention (BWC), it seems that they have concluded that the intrusive inspections that would be required to uncover possible covert nuclear material production facilities would compromise U.S. nuclear weapon programs. Since inspections under a verifiable FMCT are likely to also include some form of challenge inspections, the Administration may believe that such inspections could potentially also damage U.S. commercial propriety interests. The cost of such an inspection regime under an FMCT may also have weighed in on this conclusion. An additional consideration may have been the Administration's emphasis on a cut-off of civilian nuclear fuel cycles, with the aim of finding some kind of a compromise between an FMCT and a ban on further civilian production or reprocessing of fissile materials.

Whatever the outcome of the current debate over whether the treaty could and should be verifiable, any re-evaluation of the original negotiating mandate should consider whether verification should apply to all states, or only to states currently possessing nuclear weapons, including the three nonmembers of the NPT. Since the obligation not to produce nuclear weapons would be similar to the current full-scope safeguards in NNWS, the most effective approach would be to place the entire civilian fuel-cycle of NWS and the three non-NPT States under IAEA safeguards. It should, however, be considered whether an FMCT verification system should closely resemble the current IAEA safeguards systems for NNWS, or whether a completely separate regime should be developed for NWS and NNWS respectively. This approach has the advantage that it would reduce the degree of discrimination between NWS and NNWS in the intrusiveness of the verification under the NPT. It will address the criticism by NNWS that their facilities are subject to more intrusive verification measures than NWS. It is, however, likely to be rejected by the NWS and 3 de facto NWS. Another option that could potentially be significantly cheaper would be to target only enrichment and reprocessing that could produce HEU or separated Pu, and tracking fissile material produced for civilian purposes after an FMCT enters into force.

Since the current mandate exclude civilian nuclear fissile material, future consideration of an FMCT is likely to be influenced by the current debate on how to deal with sensitive parts of the civilian nuclear fuel cycle, including enrichment and reprocessing. However, the inclusion of the civilian fuel cycle under an FMCT verification regime would most likely be rejected by the NNWS and would lead to a breakdown in negotiations.

i. Components of a verification system

For an FMCT verification system to be effective, it should be comprised of components (i) to deal with facilities which had previously produced fissile material for nuclear explosive purposes; (ii) suitably adapted to weapons grade materials, declared as excess and placed under the supervision of the verification organization (preferably the IAEA) while this material is still in a sensitive geometrical and compositional form; and (iii) to deal with materials once they have been re-worked into non-sensitive forms and for the production of materials for non-proscribed military uses allowed by the treaty. The latter will be similar to or the same as IAEA safeguards.

ii. Declarations

A verification system under a FMCT should have as a basic requirement declarations within a specific timeframe of all material covered under the treaty upon its entry into force. This will of course be subject to negotiation and will, as in the case with IAEA safeguards declarations, trigger inspections of facilities related to the production, and if appropriate, storage of material covered under the treaty. To close the potential loophole of using naval propulsion reactors as sources for weapons or other explosive devices, the treaty - while recognizing the right of states to produce and employ fissile material for non-explosive military applications - should require some form of declaration of existing stocks as well as future production. Given the highly secretive nature of naval fuels, appropriate verification arrangements would be required.

iii. Verification agreements

Verification of each State party's obligations under the FMCT should be based on a set of legally binding agreements between the State and the organization (such as the IAEA) tasked to verify adherence to the treaty. There are two alternatives for verification agreements: (i) establishing new agreements; or (ii) using the identical agreements for all States, but modifying or suspending some provisions to reflect the restrictions required in States with nuclear weapon programs as well as reflecting that the scope of verification under the treaty would be limited to fissile material subject to the treaty rather than all nuclear material. A complimentary verification agreement specific to the treaty could set out obligations and responsibilities of each States and the IAEA for the exclusive purpose of verifying the fulfillment of its obligations under the treaty. In order to address concerns over the discriminatory division between two types of agreements, a possible option would be for the treaty to provide a mechanism by which a Conference of State parties should take steps to bring about convergence over time with the goal to remove the suspensions allowed for States with nuclear weapons.

iv. Non-compliance

Given that an FMCT would be related to the potential use of nuclear weapons, any concerns over non-compliance would have to be met in a timeframe consistent with the threat. Unlike in the case of the NPT, a more relevant and effective approach under an FMCT would be to provide for a Conference of State parties to be convened promptly in a case of possible non-compliance. Such a Conference would offer opportunities to present the allegations and the response of the suspected State party (or parties) for which non-compliance is raised. The Conference should

have plenipotentiary powers to decide whether to refer the allegations to the UN Security Council or to take other measures, such as appointing a special panel or judiciary to determine the merit of the allegations and the remedies to be effected, and to report back to the States parties through the IAEA Director-General.

v. *Cost of verification*

Although the IAEA has the potential to take-up the responsibility for verification of FMCT undertakings, certain proliferation and resource constraints will have to be addressed. Verification of the FMCT will in practice have a significant impact only on those few States that produce or possess nuclear weapons and/or weapons-grade materials. The cost of verification by the IAEA could mean a two to three fold increase in the IAEA's Safeguards budget because of the extended nuclear activities of these States. Creating a new verification organization may be even more costly. In this regard it should be considered whether the additional cost burden should be covered by only those states that produce fissile material for weapons purposes, or by all State parties based on the UN scale of assessments.

Another related problem is the lack of adequately trained and experienced inspectors. This could create serious problems if the number of IAEA inspectors has to be doubled in the short term. To overcome these problems, the IAEA could be contracted for its verification service which would also avoid the traditional problem of linkage between the Safeguards and Technical Cooperation budgets in the IAEA. It should, however, be realized that to effectively implement a FMCT verification system will require more inspectors than currently employed by the IAEA and could take several years to be established.

Conclusion

Despite U.S. objections to the core element of the original Shannon mandate, the conclusion of an effectively verifiable FMCT remains a very high priority for the vast majority of NPT State parties, including many close U.S. allies, who view this treaty as a way to make progress towards nuclear disarmament. A large group of influential States parties, including the New Agenda Coalition and others such as Germany, Canada, Norway, Japan and the Netherlands, have become increasingly critical over the lack of commitment by the NWS to pursue an FMCT. In addition to the very critical position by the States parties belonging to the Non-Aligned movement, these concerns could prove to be a serious point of controversy - if not a deal-breaker - at the 2005 Review Conference.

For these States, an FMCT without a verification system would severely weaken the effectiveness of the treaty, and will effectively change the nature of the mechanism from an agreed nuclear disarmament tool to a non-proliferation one. An unverifiable treaty as envisaged by the United States would be far less effective and do far less to strengthen the non-proliferation regime than a verified agreement. In addition, such a treaty will do nothing to address nuclear disarmament, as it will essentially only codify the existing moratoria by four of the five NPT NWS, and perhaps capture China, India, Pakistan and Israel. Moreover, India, Pakistan and possibly China are likely not to agree to a revised mandate that would prevent them from increasing their nuclear arsenals, while allowing the State with the largest nuclear weapons arsenal and stockpile of unused nuclear grade fissile material not to be subject to international verification.

The idea of a FMCT is not new. It has been a longstanding goal of the international community. The deadlock in the CD resulted in many innovative initiatives in and around the CD to promote the various objectives of a FMCT. The positions of delegations are well known and sufficient resource material is available to start serious negotiations on a future treaty. All possible options for an FMCT have been analyzed by experts and several versions of a draft FMCT are widely

available. What is lacking is the political will by a few states. These states seem to believe that their interest would be at such risk if negotiations are started in the CD (or elsewhere), that those interests cannot be guarded by the consensus rule that traditionally govern multilateral negotiations of this nature. Since the 1995 Shannon report clearly protects national positions concerning the scope and verification of a future treaty, all CD members will have the opportunity to put forward arguments and concrete proposals in favor of or against the treaty's scope and its verifiability. Although differences remain over the scope of the treaty and its effectiveness, as well as over linkages to negotiate other treaties in the realm of arms control and disarmament, the problem is not one of semantics, but of higher political nature. This would require a careful reflection at the highest political level by all CD members, and by all parties to the NPT at the upcoming Review Conference.

NPT State parties and the members of the CD are now faced with a difficult choice: To start negotiating a non-verifiable FMCT for sake of expediency, or further delay negotiations in CD while considering other options to deal with a legal ban on the production of fissile material for weapons purposes. Instead of starting and concluding negotiations on an inherently flawed treaty for sake of expediency, this may be the price to pay.

The following policy options are offered for consideration by the members of the CD and NPT parties at the Review Conference:

1. *The CD should immediately commence negotiations on an FMCT in accordance with the Shannon mandate, with the understanding that the negotiations can and should address a range of issues, from verification to dealing with existing military materials to banning production of all weapons-usable fissile material, whether "civil" or military.* The major advantage of an agreement to restart negotiations prior to the Review Conference is that it would send a positive signal about progress towards implementation of the "13 steps" on nuclear disarmament.
2. *All NWS and de facto nuclear possessors to adopt moratoria on nuclear weapons grade fissile material.* The adoption and maintenance of moratoria by all 5 NPT NWS will send another positive signal to the Review Conference. The United States could take the lead in discussions with the *de facto* nuclear possessor states to adopt similar moratoria as an interim measures until an FMCT is negotiated and enters into force.
3. *Reach out to the three non-NPT states.* Key NPT state parties, in particular the NWS should work intensively with India, Pakistan and Israel to convince them to accept and adhere to an FMCT, including exploring with them the set of circumstances that would make that possible.
4. *Negotiations of an FMCT will require innovative approaches to ensure that the effectiveness and relevance of the future treaty.* While an FMCT negotiated along traditional lines of treaties such as the CTBT would be the most desirable option, this is not the only option available to address the issue in a sustainable and effective way. Pragmatism and flexibility would suggest that an FMCT could in the first instance, be drafted by the eight states with nuclear weapons. In this regard, the existing Trilateral Initiative supported by the G-8 Global Partnership against the spread of weapons and materials of mass destruction could provide a useful framework. However any such "pre-negotiations" must be done in consultation with other NNWS. Another possible approach would be for the CD to start negotiations on a framework agreement that would include basic political commitments in line with the Shannon mandate. To avoid delays in concluding a normative agreement, negotiations on a principal treaty could be separated from negotiation of a

verification system, provided that the principal treaty includes a legally binding verification obligation. Negotiation of a secondary agreement or agreements could be accomplished in much the same way as the negotiations to conclude safeguards agreements between NPT State parties and the IAEA.

5. *An effective and credible FMCT must have both disarmament and non-proliferation objectives.* An FMCT that verifiably halts further production and bring transparency and accountability to the vast stockpiles of weapons usable material located around the world will be in line with the agreements reached in 1995 and 2000. A relevant FMCT should therefore be part of the nuclear disarmament process, prevent a future nuclear arms race and facilitate further steps to this end. It should also reinforce NNWS commitments under the NPT by preserving the integrity and durability of the nuclear non-proliferation regime. In so doing it should reduce risks of proliferation and nuclear terrorism while respecting states' right to use, and trade in nuclear energy for peaceful purposes. In addition to a ban on further production of nuclear materials for nuclear weapons, a relevant FMCT could act as a receptacle for excess weapons material and associated closed-down/decommissioned facilities, in transition from military explosive use to peaceful use, to ensure the irreversibility of the transition. As such, it should require that declared excess nuclear weapons material be included in a starting inventory of a State upon entry into force of the FMCT.
6. *Acceleration and expansion of the Trilateral Initiative.* The Trilateral Initiative between the United States, Russia and the IAEA could be used as a separate, but supporting mechanism to a future FCMT by expanding it to include all NPT NWS and the three de facto nuclear weapons possessor states.
7. *Informal discussion on verification measures.* The United States, Russia and other NWS (and possibly the *de facto* NWS) should begin informal discussions - possibly including experiments with particular inspection approaches – regarding the best ways to build confidence among them and ultimately with the NNWS that no clandestine nuclear material production facilities exist while at the same time protecting their national security interest. These states could also work with the IAEA to carry out verification experiments at their older reprocessing and enrichment plants, to demonstrate viable approaches to verifying these facilities under an FMCT.
8. *IAEA expert panel.* A technical expert panel could be established by the IAEA utilizing the technical expertise of IAEA experts formerly involved in nuclear weapons design and production.
9. *Establishment of multinational nuclear fuel-cycle facilities and capping the development of national fuel cycles.* Proposals to establish multinational nuclear fuel-cycle facilities and perhaps to cap the development of national fuel cycles to countries that currently possess such abilities have been considered for many years and remain, at best, longer-term options – and, of course, are regulatory in orientation. Many of the most serious problems of stockpiling and transporting fissile materials, of guaranteeing against losses of very small quantities of material, and of protecting against technology transfers would not be addressed. Although the proposals by IAEA Director-General ElBaradei and U.S. President Bush are relevant to the threat presented by both the production as well as stockpiling of fissile material production, their primary focus is on material for civilian nuclear reactors and other peaceful purposes. Since these proposals would in fact introduce a “new deal” with added restrictions on NNWS without reciprocal obligations on the NWS, any linkage between these proposal and the objectives of an FMCT could complicate the negotiating process even further. However, a compromise between these two goals could result in a positive outcome of the upcoming NPT Review Conference. **AP as the new NPT standard of compliance to compromise?**

