

A FMCT:

Can We Get from Here to There?

Lewis A. DUNN

First surfaced on the nuclear disarmament agenda in the 1950s, the concept of a cut-off of the production of fissile material for nuclear weapons took on new life in the early 1990s. Hopes were high that negotiations on a Fissile Material Cut-off Treaty (FMCT) would soon begin at the Geneva Conference on Disarmament (CD). This promise collapsed in 1995, when apparent agreement on a mandate to begin negotiations in the CD broke down. Perhaps surprisingly, the May 1998 nuclear tests by India and Pakistan gave renewed impetus to a FMCT and negotiations have now begun at the CD.

Successful negotiation of a FMCT (or cut-off, for short) will require that many technical issues be resolved, from defining what materials a cut-off will cover, to developing specific procedures for verification. But getting from today's negotiations to tomorrow's treaty will demand that the negotiating parties define what is meant by a cut-off. Both more streamlined and more ambitious approaches have been put on the table. In that regard, three especially tough political issues will need to be sorted through. These are:

- differences over the scope of a cut-off verification regime, including especially whether to use that regime as a means to equalize the safeguards burden between the nuclear-weapon states (NWS) and the non-nuclear-weapon states (NNWS) parties to the Nuclear Non-Proliferation Treaty (NPT);¹
- differences over how cut-off negotiations should handle past production and existing stocks of weapon-usable fissile materials; and not least,
- convincing key countries, including such critical countries as India, Pakistan and Israel as well as the five NWS, that a FMCT is in their political/security interest or, barring that, determining whether a cut-off must be universal from the start.

This paper briefly examines each of these three issues. Its purpose is not to provide definitive answers to them but rather to carry on a debate that already has begun. Its basic message is clear: prospects for successful negotiations will be enhanced by streamlining our objectives and not trying to make a FMCT carry too much of the future nuclear non-proliferation and disarmament agenda. It may also be necessary to trim our commitment to universality as of entry into force, and instead accept the possibility of a more evolutionary process of adherence.

Dr. Lewis A. Dunn is Director, Center for Global Security and Cooperation, Science Applications International Corporation. The views herein are those of the author and not necessarily those of SAIC or any of its sponsoring agencies.

Cut-off Verification and the Safeguards Burden

Under the NPT, the NNWS have agreed to accept comprehensive safeguards, including extensive routine inspections and other monitoring by the International Atomic Energy Agency (IAEA), on all of their peaceful nuclear activities. By contrast, under the NPT,

Led by the United States and the United Kingdom, the five NWS have each made so-called “voluntary offers” to permit the IAEA to conduct inspections of their peaceful nuclear facilities. The scope of these voluntary offers varies considerably, however, in terms of facilities covered. In practice, moreover, the IAEA has only inspected a sampling of the peaceful facilities of NWS.

the NWS are not legally obligated to accept such international safeguards. Led by the United States and the United Kingdom, the five NWS have each made so-called “voluntary offers” to permit the IAEA to conduct inspections of their peaceful nuclear facilities. The scope of these voluntary offers varies considerably, however, in terms of facilities covered. In practice, moreover, the IAEA has only inspected a sampling of the peaceful facilities of NWS.

In some NNWS, there is considerable sentiment to use a cut-off verification regime as a means to “rectify” this situation and impose a more equal safeguards burden on the NWS. Supporters of this view argue that a cut-off verification regime should be comprehensive in scope and draw extensively on the elements of traditional safeguards under INFCIRC/153. In effect, the regime would be designed not simply to monitor the shutdown of production activities related to nuclear weapons, but to bring under international inspection all non-military nuclear activities in the NWS. It would monitor any residual production of plutonium and highly enriched uranium (HEU), as well as the status of former production plants and also spent fuel.

By contrast, a more streamlined verification approach would concentrate on monitoring declared enrichment and plutonium production facilities, including shutdown facilities. Rather than monitoring the full fuel cycle, it would track any production of plutonium or HEU up to the point that such materials were used for a permitted civilian nuclear purpose. It would rely on challenge inspections to detect undeclared facilities or diversion of materials from declared enrichment or reprocessing facilities producing materials for civilian purposes or non-proscribed military purposes, such as naval reactor fuels.

Proponents of a more comprehensive verification regime argue that it would foster greater transparency among the five NWS, lessen mutual suspicions among them, and enhance wider confidence in their compliance. At root, however, their advocacy of this approach reflects a strong underlying political interest in equalizing the burden of safeguards.

Pursuit of that political interest could well be self-defeating to the goal of realizing a treaty. Extending the scope of a cut-off verification regime to encompass routine inspections of the full peaceful nuclear fuel cycle would most likely increase opposition to such a treaty in key countries such as Israel, India and Pakistan. Indeed, one reason for some Indian officials’ past opposition to cut-off negotiations in the CD almost certainly has been concern that a FMCT is the NPT in disguise. Similarly, in some of the NWS, not least China, a more expansive verification regime would likely reinforce Chinese suspicions of on-site inspections and provide that country with a rationale for not agreeing to a formal production ban. Considering the Russian Federation is already financially unable to meet its arms control obligations, the increased costs of a more expansive verification approach would strengthen opposition to the cut-off. Costs also could play heavily in any debate in the United States Senate about ratification of a future FMCT.

In the final analysis, technical as well as political considerations will shape the contours of FMCT verification. Nonetheless, these risks all suggest that prospects for successful negotiations will

likely be increased by taking a more narrow rather than a more expansive approach to that verification task.

Existing Stocks and FMCT

Perhaps the most vexing political challenge likely to confront the CD negotiations will be how to handle the question of existing stocks—what, if anything, should be done in a future FMCT on the matter of previously produced stockpiles of plutonium and HEU. Differences on this matter helped block the start of negotiations in 1995 and very different perspectives persist.² In differing degrees, each of the five NWS has indicated its belief that the question of existing stocks extends beyond the purview of a FMCT. Several Western countries and some key developed countries, by contrast, have pressed strongly for covering existing stocks of weapon materials in a FMCT, arguing that not to do so would be to leave an important gap. Among the nuclear-capable countries, India and Israel have argued against expanding the scope of a cut-off agreement, while Pakistan has been one of the leading voices for using a cut-off treaty at least to increase transparency for existing stockpiles of weapon-usable plutonium and HEU.

Given these contending positions, any progress on the issue of existing stocks will call for either a major change of position on the part of one of the key participants or some very creative diplomacy. In regard to the latter, at least three broad approaches for dealing with existing stocks in the context of FMCT negotiations are conceivable and may warrant further discussion. None of these approaches seeks to use a FMCT as a nuclear disarmament measure. These are:

- signal the international community's interest in dealing eventually with existing stocks but set the issue aside for now, to be addressed later through follow-on actions and negotiations;
- require declarations of existing stocks of plutonium and HEU produced for weapons under a FMCT; or
- seek enhanced voluntary transparency and controls on all plutonium and HEU parallel with FMCT negotiations, whether unilateral or multilateral.

I will consider each possible approach in turn, including its dimensions as well as its pluses and minuses.

SEND A SIGNAL AND SET THE ISSUE ASIDE

This approach begins from the premise that the top priority in the cut-off negotiations is two-fold. First, a cut-off seeks to turn an apparent *de facto* cessation of the production of plutonium and HEU for nuclear weapons on the part of the five NWS into a formal treaty ban. Second, a cut-off can help contain the risk of a nuclear arms race in South Asia, while capping the nuclear weapon programmes of India, Pakistan and in the Middle East, Israel. The "send a signal" approach recognizes, however, that there is considerable interest in many quarters in greater transparency over and eventual reductions of existing stockpiles of nuclear weapons materials.

Balancing these considerations, this approach would begin by seeking to include appropriate language in the preamble to a FMCT to signal the international community's interest in further steps by the parties to deal with this matter. Partly modelled on preamble of the 1963 Limited Test Ban

Treaty, such language could take many forms. It might range from a very general recognition of the importance placed by many countries on new measures to address this question to more specific undertakings. Among the latter might be, for example, expressions of the parties' intent, in so far as practicable, to bring additional surplus weapon materials under international safeguards, to enhance transparency concerning their stocks, or to reduce and eventually eliminate all stocks of nuclear weapon materials. A general reference looking forward to future negotiations to extend international regulation of nuclear weapon materials might also be included.

This approach clearly would fall far short of what proponents of including existing stocks in a FMCT are seeking. For now, it also would likely go beyond what many of the NWS or nuclear-capable states would find acceptable. At the right point in the negotiations, however, it could become attractive as a means to conclude a cut-off deal.

REQUIRED DECLARATIONS OF NUCLEAR-WEAPONS MATERIALS UNDER A FMCT

A FMCT could include provisions for its parties to declare their existing stocks of plutonium and HEU produced for use in nuclear weapons. To avoid revealing sensitive information about weapon design, such declarations could focus on aggregate stocks and not require details on the isotopic composition of the stocks.

Though limited in scope, declarations of stocks of plutonium and HEU by the five NWS would help to provide a needed foundation for later steps beyond a production cut-off. In particular, without more information about how much weapons material was produced during their Cold War competition, neither Washington nor Moscow is likely to be prepared to move toward extremely low levels of nuclear weapons.

Though limited in scope, declarations of stocks of plutonium and HEU by the five NWS would help to provide a needed foundation for later steps beyond a production cut-off. In particular, without more information about how much weapons material was produced during their Cold War competition, neither Washington nor Moscow is likely to be prepared to move toward extremely low levels of nuclear weapons. Comparable declarations by the other three NWS could also be a useful step towards their eventual involvement in five-power nuclear discussions.

Required declarations by the five NWS, nonetheless, would still fall short of what proponents of including restrictions on existing stocks in a future FMCT are likely seeking — quite possibly provisions for the steady, if perhaps phased, elimination of such stocks under a FMCT. Many of these advocates, moreover, would likely regard this approach as going too far to “legitimize” the nuclear status of India, Pakistan and Israel. Even so, most of the NWS would probably be very reluctant to make such declarations. Depending on the country, concern about the accuracy of a declaration and fear of being embarrassed later, traditional secrecy and scepticism about transparency, concern about getting onto a “slippery slope” leading to future controls on stocks, and a desire to preserve ambiguity all could explain that reluctance.

It remains an open question, moreover, whether greater transparency by India, Pakistan and Israel would serve regional stability. Were India's stocks of plutonium more or less comparable in terms of weapon equivalents to Pakistan's stocks of HEU, disclosure could make it easier for the two countries to achieve their stated goal of minimum nuclear deterrence. An imbalance favouring either side, by contrast, could well fuel domestic and bureaucratic pressures for an arms race. In turn, an Israeli declaration that it had stocks of separated plutonium would reverse long-standing denials and quite possibly reinforce proliferation incentives in at least several Arab countries. That said, it must be expected that each of these three nuclear-capable countries would be very reluctant

to declare openly what stocks of fissile materials it had on hand. Contrasted with the five NWS, moreover, it is difficult to identify sufficiently compelling countervailing considerations that might overcome that reluctance.

ENHANCED VOLUNTARY TRANSPARENCY AND CONTROLS OVER STOCKS

Recognizing the difficulties of mandating transparency within a FMCT, a somewhat related compromise approach would seek to craft a set of voluntary transparency and control actions that might be taken by FMCT parties. For instance, at the time of signing, all five of the NWS could make a joint voluntary declaration of the existing stocks of HEU and plutonium in their weapons programmes. They might also be urged to make a further joint declaration committing them to work toward placing all surplus materials under IAEA controls. For their part, the three nuclear-capable states could be encouraged to declare all their stocks of plutonium and HEU without specifying the purpose for which it had been produced. All other producers of plutonium and HEU could be encouraged to make public declarations of their stockpiles, even though this material would have been produced for peaceful purposes.

As above, such voluntary declarations would help provide a foundation for later nuclear disarmament steps, while beginning to integrate the three medium-sized nuclear powers into the process. A commitment by the United States and the Russian Federation to place surplus nuclear materials from future reductions under international control could help create options for later, more far-reaching nuclear control and reduction measures. In turn, transparency measures that covered all fissile materials regardless of end use could help blur the distinction between production for weapons and for other end uses. This might lessen the extent to which release of such information in connection with a FMCT would comprise *de facto* recognition of India, Pakistan and Israel as nuclear-weapon states. Greater transparency by other countries of plutonium or HEU in their civilian nuclear fuel cycles could serve a comparable purpose. In turn, it might be somewhat easier for India, though not for Israel or Pakistan, to reveal its total stocks of plutonium since it has significant stocks of unsafeguarded but not necessarily weapons-related plutonium.

Regarding feasibility, over the past half-decade the United States has taken the lead in releasing information about its stockpiles of nuclear weapons materials and in placing some stocks of surplus materials under IAEA safeguards. The United Kingdom has also taken steps to enhance transparency, while the Russian Federation has said it will take some steps in the future. Thus, these countries might find the idea of voluntary transparency somewhat more palatable than required declarations. But even here, there is likely to be considerable reluctance on the part of the five NWS to take this step for many of the reasons already highlighted. Nonetheless, it is not inconceivable that they would be ultimately prepared to do so were that the price of a cut-off that included the three nuclear-capable countries.

In that regard, however, there is little reason for optimism that India and Israel would find voluntary transparency much less onerous than obligatory declarations in a FMCT. This is likely for Pakistan as well. Although Islamabad has argued for including existing stocks in a FMCT, that position may have been designed most of all to block the start of negotiations. Instead, Pakistan (like India and Israel) would likely view a commitment to make such declarations as a first step on a slippery slope to future controls. Both India and Pakistan also could be reluctant to do so lest such

There is little reason for optimism that India and Israel would find voluntary transparency much less onerous than obligatory declarations in a FMCT. This is likely for Pakistan as well. Although Islamabad has argued for including existing stocks in a FMCT, that position may have been designed most of all to block the start of negotiations.

declarations reveal a significant gap in available stockpiles in the other's favour. Questions need to be raised as well about the stability impacts in both South Asia and the Middle East of even only voluntary transparency measures. Absent perceived sufficiency, the nuclear arms race would be accelerated — not capped — by cut-off.

What's in a FMCT – for Whom?

Most importantly, getting from here to there in the negotiating process presupposes that all of the key potential participants in a FMCT — the five NWS, the three nuclear-capable countries, and more activist non-nuclear developed and developing countries — conclude that a FMCT would on balance serve their political and security interests. It is far from assured that these countries will reach that conclusion. Though negotiations have begun, each of the three nuclear-capable states has serious reservations about the desirability of a cut-off. In turn, not only do important substantive political differences exist, but what some key countries appear to want in a FMCT is at least for now diametrically opposed to what others may be seeking — particularly with regard to the two matters already discussed of verification and existing stocks. Let's consider in somewhat more detail possible thinking in each set of countries — the five NWS, the three nuclear-capable states, and the more activist developed and developing countries.

THE NWS

For the NWS, support for a FMCT would be one way to take action to meet their nuclear disarmament goals under Article VI of the NPT. The significance of this action as a preparatory step toward deep nuclear reductions would be enhanced were it possible either to include some transparency measures for existing stocks in a FMCT or to take that step voluntarily as part of the overall cut-off endgame. Even without a transparency adjunct, formalizing a ban on production of HEU and plutonium would be a useful psychological and symbolic step ahead. Assuming universal adherence, a cut-off would help cap proliferation in both South Asia and the Middle East.

But other more country-specific considerations are also likely to come into play — both for and against a cut-off. For both the United States and the Russian Federation, a cut-off would reinforce the irreversibility of their nuclear reduction process. This could take on added importance to both countries if the formal nuclear arms control process remains stalled — or is temporarily derailed by the two sides' inability to work out agreed amendments to the 1972 Anti-Ballistic Missile Treaty as are now being sought by the United States to permit deployment of a limited national missile defence system. Both countries also would have an interest in using a FMCT to draw China further into the nuclear arms control process. For China, a readiness to formalize a ban on production would pay dividends in terms of signalling that its nuclear modernization goals are limited, thereby helping to head off new nuclear competition with the United States. A universal FMCT also would contain the future expansion of India's nuclear capability, though it is uncertain how much China pays heed to India's actions.

Other considerations, however, could undermine support in these countries for a future FMCT, particularly a very ambitious treaty. As already noted, at least several of the NWS may be reluctant even to release information about existing stocks, while none of them seems prepared now to agree to more fundamental controls. Costs of verification also could come into play. For China, the risks of

foreclosing the option of a major expansion of its nuclear arsenal are likely to be an issue in its internal debate. Chinese differences with the United States and Japan over the issue of the legitimacy of cooperative efforts to field a theatre missile defence against the missile threat of the Democratic People's Republic of Korea also could enter into a future debate in Beijing on cut-off.

THE THREE NUCLEAR-CAPABLE STATES

Since the revival of interest in a FMCT in the early 1990s, the context in which decisions about cut-off will be made in Delhi, Islamabad and Jerusalem has changed considerably. In South Asia, this change may make it more likely that a FMCT will be reached. In the Middle East, these changes may make it less likely — at least for now.

Perhaps paradoxically, the testing of nuclear weapons by India and Pakistan in May 1998 may have made both countries more prepared to contemplate entry into a FMCT. Since the nuclear tests, the leaderships in both countries have argued that they are committed to avoiding the type of expanding deployments of nuclear arms and intensifying hostility that characterized the American-Soviet nuclear relationship. Instead, they have affirmed that their goal is mutual minimum nuclear deterrence. For several reasons, both India and Pakistan could well conclude that a ban on production of plutonium and HEU would help serve that goal. Like their adherence to the Comprehensive Test-Ban Treaty (which now appears in the offing), adherence to a FMCT would be a further political signal of each side's desire for restraint. More directly, limitations on stocks of materials would build-in a technical brake on the further expansion of each side's nuclear force capability. In both cases, a cut-off could help lessen domestic and bureaucratic pressures to "do more".

Perhaps paradoxically, the testing of nuclear weapons by India and Pakistan in May 1998 may have made both countries more prepared to contemplate entry into a FMCT. Since the nuclear tests, the leaderships in both countries have argued that they are committed to avoiding the type of expanding deployments of nuclear arms and intensifying hostility that characterized the American-Soviet nuclear relationship.

Both countries' adherence to a FMCT presupposes, however, that the issue of existing stocks be resolved in a manner acceptable to them both. This will not be easy. As noted, for now Pakistan argues that at the very least a FMCT should include declarations of existing stocks, while India opposes this position. There are several possibilities. Pakistan could conclude that its stocks of weapon materials are sufficient for a minimum deterrent, that it is better to constrain India's future production than to let it run free, and then fall off its effort to include existing stocks in a FMCT. Or India could shift ground, perhaps agreeing to voluntary declarations of all stocks of plutonium and HEU. Both sides might informally exchange data on stockpiles between them, taking the issue off the agenda but raising the risk of instability if those stockpiles were perceived to be significantly out of balance.

Shifting regions, the situation in the Middle East since the early 1990s is quite different. Israel has acquiesced in the start of formal cut-off negotiations. But the peace process is stalemated and long-term security trends are uncertain. In particular, continuing concerns about Iran's pursuit of nuclear-armed ballistic missiles have now been joined by the prospect of a reconstitution of Iraq's nuclear weapon programme with a breakdown of the international consensus behind UNSCOM. Both possibilities make it all but certain that Israeli leaders will be extremely reluctant to foreclose future nuclear options. Such reluctance to adhere to a cut-off would only be reinforced, to repeat, were it to include provisions governing existing stocks.

The implications of this appraisal will not be welcome in many quarters. At least in the near

term, a universal FMCT may prove unattainable. Instead, it may be especially important to craft the entry into force provisions of a FMCT in such a manner as to make the achievement of a universal cut-off an eventual goal but not to hold the treaty's entry into force hostage to adherence by all three nuclear-capable countries.

NON-NUCLEAR DEVELOPED AND DEVELOPING COUNTRIES

Turning to the third set of countries, there again is reason for concern. Assuming that the five NWS remain opposed to including existing stocks in a FMCT, opinions will differ among non-nuclear countries on the importance of a FMCT. Some of these countries may well welcome even a simple ban on production as an important political and psychological step by the five NWS. It partly closes the book on the Cold War nuclear competition and moves these countries a little further along the slippery slope to drastic reductions in — if not elimination of — nuclear weapons. If some or all of the nuclear-capable states also join, a FMCT would be welcomed, as well, as a cap on these countries' programmes.

By contrast, proponents of a more ambitious FMCT, as already noted, will argue that unless a cut-off controls existing stocks, it will not be meaningful. It will have little impact on the nuclear arsenals of the NWS, especially the United States and the Russian Federation since both countries already possess ample, indeed excessive, stocks of nuclear weapons materials. In addition, more activist countries can be expected to argue that controlling existing stocks is essential to roll back the nuclear programmes of India, Pakistan and Israel. Otherwise, in their view, a cut-off will "legitimize proliferation". In turn, a good number of non-nuclear countries are likely to argue that unless a cut-off includes all three nuclear-capable states, its value would be even more modest.

But in the endgame, the odds are high that proponents of more ambitious versions of a cut-off will confront a dilemma: whether to go along with a streamlined cut-off that at least initially is not universal — or to have no cut-off at all.

Voluntary transparency measures or a commitment to future negotiations, were these steps feasible, would be a potential sweetener. For their own reasons, India, Pakistan and Israel all could decide to adhere to a FMCT that included such voluntary measures. But in the endgame, the odds are high that proponents of more ambitious versions of a cut-off will confront a dilemma: whether to go along with a streamlined cut-off that at least initially is not universal — or to have no cut-off at all.

FMCT – A Bottom Line

Long part of the nuclear disarmament agenda, negotiations have finally begun on a treaty to cut-off the production of plutonium and HEU for weapons. But given the diversity of interests and approaches among the negotiating parties, getting from the start of negotiations to the successful conclusion of a treaty will likely prove very difficult. Pursuit of a more streamlined FMCT — in terms of scope of verification, treatment of existing stocks and evolutionary universality — could ease the negotiating process. It would do so admittedly at the expense of deferring for now more ambitious goals and with no firm assurance of success. The alternative, however, may be long, drawn-out negotiations, eventually ending nowhere.

Notes

1. In this paper, NWS will refer only to those five countries recognized as such in the NPT.
2. In May 1995, the so-called Shannon Mandate to establish a CD working group on a cut-off did not explicitly deal with the matter of existing stocks. As Ambassador Shannon's report noted, however, no delegation was precluded from raising any other issue related to a cut-off's scope. This understanding still governs the now-commenced negotiations at the CD.