Evolution of Thinking on FMCT

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Introduction

Efforts for control of proliferation of nuclear weapons began soon after they were used in 1945. Much progress in this regard, however, could not be made due to states' security imperatives. For the same reason progress on FMCT has also not been made, but FMCT drafts give us an insight on the rationale behind the proposals suggested by the states and organizations.

The Treaty on the Non-Proliferation of Nuclear Weapons (NPT) prohibits non-nuclear weapon states parties to the treaty, from developing nuclear weapons. The treaty, however, exempts five 'de-jure' nuclear weapon states (NWS); France, China, Russian, United Kingdom, and United States from this ban. These five states had tested nuclear weapons before the treaty was negotiated in 1968. Three other nuclear armed states India, Israel, and Pakistan have not joined the NPT, but are commonly considered as 'defacto¹' nuclear weapon states. In addition, North Korea recently declared itself a nuclear weapon state by exploding three nuclear devices. NWS are considered to have legitimate right to possess nuclear weapons as per NPT provisions. Defacto nuclear weapon states' right of possession of nuclear weapons, however, is not yet recognized under NPT provisions or any other multilateral regime.

Background

Fissile material cutoff treaty was initially conceived and discussed in 1946 in the Acheson-Lilienthal Report on the international control of atomic energy and the Baruch Plan. The report included the reasons for the international control of atomic energy, and provided for a system of inspections. The report has three sections based on the commitment of states to international control, principal considerations in developing a system of safeguards, and international cooperative development. It includes preliminary ideas on safeguards. The report proposed that all fissile material should be owned by an international body to be called the Atomic Development

¹ *Defacto* nuclear weapon states (states that have acquired nuclear weapons after the NPT opened for signature in 1968). Available at: http://www.slmk.org/larom/wordpress/en/fast-facts/.

Authority, which would release small amounts to individual nations for the development of peaceful uses of atomic energy. The report emphasizes that the complete path from the uranium and thorium mines to post production stage be placed under international ownership. An internationally administrated authority will have the right to dispense licenses to countries wishing to pursue peaceful nuclear research.² The rationale was to minimize international rivalry and ensure that states' refrain from dangerous nuclear activities.

In line with this report, another plan the Baruch Plan was proposed in 1946. Some salient points of the Baruch Plan³ are scientific cooperation for peaceful ends; to implement a mechanism for control of nuclear power; to promote disarmament; and to establish effective safeguards inspection and other means to protect complying states against the hazards of violations and evasions. The plan also borrowed heavily on the Acheson-Lilienthal report.

However, Baruch Plan has some additional points from Acheson- Lilienthal report, notably in asserting that "there must be no veto" to protect those who violate the controls. It argued that there must be "immediate and sure punishment" for violations. It also created ambiguity on whether the Atomic Development Authority should actually own all uranium and thorium mines in the world explicitly on various "stages" or merely exercise control over them.4 It was also not clear whether United States would give up its bombs after the plan came into force. To support plan implementation, US proposed creation of International Atomic Development Authority which was also proposed earlier in Acheson-Lilienthal report. To this authority all phases of the development and use of atomic energy would be entrusted, starting with the raw material and including: either managerial control or ownership of all atomic-energy activities potentially dangerous to world security, including power to control, inspect, and license all other atomic activities. But support for establishment of the authority from states could not be obtained because it was inconsistent with the then-prevailing political realities. The disarmament efforts faced the challenge of disagreement since inception of this idea. The Soviets strongly opposed the plan

² Randy Rydell, "Looking Back: Going for Baruch: The Nuclear Plan That Refused to Go Away," *Arms Control Association*, June 2006. Available at: http://www.armscontrol.org/print/2064. Also See; Official Document, "The Acheson-Lilienthal & Baruch Plans, 1946," MILESTONES: 1945-1952. Available at: http://history.state.gov/milestones/1945-1952/BaruchPlans.For Details, The Acheson-Lilienthal Report on the International Control of Atomic Energy March 16, 1946. Available at: http://www.learnworld.com/ZNW/LWText.Acheson-Lilienthal.html.

³ Official Document, The Baruch Plan (Presented to the United Nations Atomic Energy Commission, June 14, 1946). Available at: http://www.atomicarchive.com/Docs/Deterrence/BaruchPlan.shtml.

⁴ Randy Rydell, "Looking Back: Going for Baruch: The Nuclear Plan That Refused to Go Away," opcit, p.2.

because it allowed the US to retain its nuclear monopoly, and international inspections of Soviet facilities would pose hurdles in its nuclear development.

After the Report and Plan, the 1953 "Atoms for Peace" speech by US President Dwight Eisenhower was a call before the United Nations for the elimination of fissile materials. His speech can be seen as a tipping point for international focus on the peaceful uses of atomic energy and shift of paradigm in the approach of developing nuclear weapons. President Eisenhower's initiative ushered in an era of international co-operation in the peaceful uses of nuclear energy, which in turn, led to the creation of the IAEA. In contrast with the Baruch Plan, the "Atoms for Peace" proposal envisioned the spread of nuclear fuel cycle facilities while placing emphasis on policy commitments regarding peaceful uses and non-proliferation, and a system of international safeguards to verify compliance.⁵ The important point to notice is that idea of eliminating fissile material had gained prominence during the early stages of the Cold War. US had officially proposed a cutoff in 1956, a suggestion the Soviets continued to oppose until January 1989, when Mikhail Gorbachev first supported the idea. President George H.W. Bush then rejected the proposal apprehending that it would undermine US nuclear deterrent.⁶ These two documents are the basis and precedents for further progress in the FMCT drafts and working papers by various states.

Several states have long been calling for a ban on the production of fissile materials. The issue has been on the UN's agenda since 1957 and on the planned agenda of the Conference on Disarmament (CD) for around 17 years. In 1978, the Final Document adopted by the UN General Assembly, after its first Special Session on Disarmament, contained a program of action on disarmament. In December 1993, the UN General Assembly adopted by consensus, resolution 48/75. This resolution recommended negotiation of a non-discriminatory, multilateral, and internationally and effectively verifiable treaty for banning the production of fissile material for nuclear weapons or other nuclear explosive devices. On 25 January 1994, CD appointed a special coordinator, Ambassador Gerald Shannon of Canada, to get the

⁵ Available at: http://www.iaea.org/newscenter/focus/fuelcycle/key_events.shtml

⁶ Kingston Reif and Madeleine Foley, Fact Sheet on the Fissile Material Cutoff Treaty (FMCT), *Center for Arms Control and Non-Proliferation*, February 11, 2013. Available at: http://armscontrolcenter.org/issues/nuclearweapons/articles/071509 factsheet fmct/#contact.

⁷ A Paper, "Proposed Fissile Material (Cut-off) Treaty (FMCT)." Available at: http://www.nti.org/treaties-and-regimes/proposed-fissile-material-cut-off-reaty/.

⁸ A Paper by *United Nations Institute for Disarmament Research*, "A Fissile Material Cut-off Treaty Understanding the Critical Issues," New York and Geneva, 2010. Available at: http://www.unidir.org/files/publications/pdfs/a-fissile-material-cut-off-treaty-understanding-the-critical-issues-139.pdf.FMCT, Major reading.

sense of states on the most effective way to negotiate a fissile materials treaty which met the demand request of the UN General Assembly. The resulting report 1995, (CD/1229), came to be known as the "Shannon Mandate." It proposed that an *adhoc* committee be constituted to pursue negotiations and settle several outstanding issues, including, whether existing stocks should be made part of the treaty. The substantive part of the report pertained to "ban on the production of fissile material for nuclear weapons or other nuclear explosive devices." Ultimately, efforts to establish the committee failed, but many states continue to refer to the Shannon Mandate as the basis for future negotiations. Since then, the initiation and early conclusion of FMCT negotiations in the CD have been approved by all states, party to the NPT, at the 1995, 2000, 2005, and 2010 NPT Review Conferences. In this regard, for years China and Russia persisted to link FMCT to work on the prevention of an arms race in outer space. In August 2003, China and Russia broke from this position, and agreed to go forth with FMCT negotiations based on the Shannon Mandate.

The efforts that have taken place in the CD so far consist of informal discussions regarding the treaty's purpose; definitions and scope; the production of fissile materials for non-explosive purposes and the role of the International Atomic Energy Agency (IAEA)¹²; transparency and stockpiles of fissile materials; compliance and verification; and other provisions including settlements of disputes, entry into force, ratifications, depositaries, duration, and conditions for withdrawal. A number of treaty drafts and working papers ¹³have been presented. These include 2003 proposal by the IAEA Safeguard Office, Green Peace International Organization's 2004 proposal, the US proposal of 2006 and International Panel on Fissile Material (IPFM) proposal presented in 2009 and a Hungarian proposal of March 2013.

Attempts Made at Evolving a Consensus on FMCT

First formal draft for the FMCT on the basis of effectual control and exclusion of fissile materials as an essential step toward nuclear disarmament was presented by

⁹ A Paper, "Proposed Fissile Material (Cut-off) Treaty (FMCT)." Available at: http://www.nti.org/treaties-and-regimes/proposed-fissile-material-cut-off-reaty/.

¹⁰A Paper, "Fissile Material Cut-off Treaty." Available at: http://www.reachingcriticalwill.org/resources/fact-sheets/critical-issues/4737-fissile-material-cut-off-

¹¹ Kingston Reif and Madeleine Foley, p.2.

¹² The International *Atomic Energy Agency* (IAEA) serves as the world's central intergovernmental forum for scientific and technical co-operation in the nuclear field. It was set up as the world's "Atoms for Peace" organization in 1957 within the United Nations. The Agency works with its Member States and multiple partners worldwide to promote safe, secure and peaceful nuclear technologies.

¹³ See Annex I.

International Atomic Energy Agency (IAEA) on 13 November 2003. It was an effort for getting states' support to produce an agreed text for a potential treaty after conducting extensive formal/informal consultations with key players. The draft mentioned a number of points to rationalize the agenda of the treaty such as; certainty of dangers of weapons of mass destruction to humankind, and of the subsequent efforts made towards elimination of existing nuclear arsenals and prevention of further proliferation and threats of nuclear terrorism. It promoted the view that controls on fissile and fissionable materials could limit the development of nuclear weapons and provide a mechanism for international verification related to nuclear disarmament and non-proliferation.

The 2003 draft is divided into four main sections and analyzing proposed suggestions of this draft can be helpful in understanding the evolution in thinking on FMCT in the ensuring years. Section (A) deals with the operational features of the treaty.

- Article I includes the basic undertakings in which each party to the treaty pledges not to produce, redirect, transfer, import fissile or fissionable material facility, equipment, and technology suitable for production or use of nuclear weapons. Article II deals with the cessation of production of Nuclear weapons and verification and inspection of production facilities and excess military stocks.¹⁴ Article III includes peaceful use program's approval in which each state party to the treaty provides a description of its nuclear facilities within 90 days of entry into force. Moreover, within 3 years, a committee of the conference of state parties shall review each state's nuclear program. Findings of the committee are open to non acceptance; states may appeal to the conference of disarmament of the states parties.
- Article IV and V deal with the non explosive military use with the condition of approval from conference of state parties at least 2 years prior to the commencement of production, and with the prevention of theft, and unauthorized use of nuclear material in accordance with the provisions of INFCIRC/225¹⁵.

¹⁴ Including name, geography, purpose, date of construction and operation for future plans and excess material released from military use, the condition to declare all existing stocks of fissile material and fissionable material.

¹⁵ Official Document for the Physical Protection of Nuclear Material and Nuclear Facilities. Available at:

http://www.iaea.org/Publications/Documents/Infcircs/1999/infcirc225r4c/rev4_content.html.

Section (B) of the treaty includes clauses for verification agreements incorporating all articles of INFCIRC/153 without change¹⁶, together with a protocol additional to the safeguard articles of INFCIRC/540.¹⁷Section (C) includes the cooperative prospects of the treaty about confidence building measures with article VII of transparency to report before conducting a nuclear operation within a state's territory.

 Article VIII and IX include suggestions pertaining to participation in complementary treaty regimes to extend the scope of the treaty for non proliferation of Nuclear Weapons (NW) and the broader concept of cooperative threat reduction to resolve collective potential threats to the security of the states. Thus, also to address nuclear safety and security issues.

The final part of the treaty draft section (D) comprises the administrative clauses of the treaty which specify implementation mechanism of the treaty.

The main points of 2003 treaty draft followed the basis on which Acheson Report and Baruch Plan were formulated. The additional thinking is visible in article III about approval for peaceful use of nuclear program and provision of appeal to the conference. The important point in this draft is in its section C with respect to Confidence Building Measures. Article VII of the treaty draft obligates the states to take transparency measures before conducting any nuclear operation. Other points in article VIII and XI also give broad concepts of the regime and cooperative threat reduction measures, which is an important addition in the draft proposal.

Further understanding of FMCT treaty draft is facilitated by reading the working papers on it presented by Japan, Canada and South Africa. In 2003 Japan presented a working paper ¹⁸ on FMCT. The priority in this working paper is on multilateral nuclear disarmament, and nuclear nonproliferation. Japan considers these two disarmament and arms control measures crucial to world peace due to the growing menace of nuclear proliferation and threats of nuclear terrorism by non state actors.

¹⁶ Official Document for the Structure And Content Of Agreements Between The Agency And States Required In Connection With The Treaty On The Non-Proliferation Of Nuclear Weapons. Available at: http://www.iaea.org/Publications/Documents/Infcircs/Others/infcirc153.pdf.

¹⁷ Official Document for Model Protocol Additional To The Agreement(S) Between State(S) and The International Atomic Energy Agency for the Application of Safeguards. Available at: http://www.iaea.org/Publications/Documents/Infcircs/1997/infcirc540c.pdf.

¹⁸ The Points are reproduced from working paper by Japan, on a Treaty to Ban the Production of Fissile Material for Nuclear Weapons and Other Nuclear Explosive Devices, (CD/ 1714). 19 August 2003. Available at: http://daccess-dds-

ny.un.org/doc/UNDOC/GEN/G03/640/23/PDF/G0364023.pdf?OpenElement.

The aim of the working paper is primarily to structure discourse on FMCT by placing various issues in different categories. The purpose was to make FMCT a more efficient and effective framework by enhancing transparency and promoting reduction of existing stocks of fissile materials for nuclear weapons use. On the issue of existing stocks various suggestions were introduced in the paper, like total inclusion of existing stocks, as well as legally binding provisions to eliminate them. Japan emphasized that fissile material for "...peaceful purposes should not be included in the scope of prohibition under FMCT. In their view, only safeguarded activities for peaceful uses of nuclear energy should be allowed as they pose no harm to the purpose of nuclear non proliferation and disarmament." 19 Nuclear materials that are subject to IAEA safeguards comprise two mutually exclusive categories: special fissionable materials²⁰ and source materials²¹. For verification system, Japan sought clarification of "comprehensive" and "focused" approaches which have been extensively discussed but remained ambiguous. Comprehensive approach covers all nuclear fuel cycle facilities and all types of nuclear materials. The focused approach includes the enrichment, reprocessing facilities and fissile materials in downstream facilities. It may also include R & D laboratories. The important consideration for adopting any of the approaches is to address security confidentiality, effectiveness of verification and cost efficiency. The working paper by Japan is important due to its innovative approach on FMCT. Canadian working paper presented in 1999, proposed "a separate but parallel process" for existing stocks. 22 The suggested approach by Canada comprises four main categories; increasing transparency; declaration, placing of excess fissile material under verification and disposition. This working paper has a few points which were also included in Japan's working paper with additional emphasis on transparency.

Another viewpoint regarding FMCT draft proposal, in the form of a working paper²³ was presented by South Africa in 2002. It is of much relevance for the progression on FMCT. Clauses in this working paper stressed on the option "to ensure irreversibility of ban on further production of nuclear material and shifting from military explosive to

19 Ibid.

²⁰ Uranium and Plutonium.

²¹ Tritium and Thorium.

²² Official Document, "Working Paper by Canada Elements of an Approach to Dealing with Stocks of Fissile Materials for Nuclear Weapons or Other Nuclear Explosive Devices, (CD/1578)," 18 March, 1999. Available at: http://daccess-dds-

ny.un.org/doc/UNDOC/GEN/G99/609/09/PDF/G9960909.pdf?OpenElement.

²³ Official Document working paper by South Africa, "The Possible Scope and Requirements of the Fissile Material Treaty (FMT)," (CD/1671) 28, May, 2013. Available at, http://daccess-dds-ny.un.org/doc/UNDOC/GEN/G02/616/62/IMG/G0261662.pdf?OpenElement.

peaceful use."²⁴The point of irreversibility is an important constraint proposed in the South African working paper.

All three working papers are important to assess the development in thinking and sorting out viable and appropriate solutions on the issues pertaining to FMCT. Major thrust of all proposals on FMCT is on banning production of plutonium and highly-enriched uranium. But only Japanese working paper emphasized on the inclusion of other elements such as tritium, depleted uranium, neptunium, natural uranium, plutonium 240 and 242, americium, curium and californium in the treaty. These elements are not fissile, but are used in nuclear weapons programs.

Another draft for FMCT was formally presented by Greenpeace Organization in 2004²⁵. It offers a model treaty as the basis for discussion to address the questions critical to the feasibility and functioning of a Comprehensive Fissile Material Treaty.

Article I of the Green Peace proposal presents rationale and scope, and gives definitions of fissile material.

- Article II, includes the detailed submission of all existing stocks of weapon usable fissile material transit through its territory.
- In article III each party is directed to shut down all production, submission of existing storage list and allowing access to all facilities for verification, in accordance with article IV, within 60 days after entry into force.
- In article V, the draft proposed the concept of establishment of a permanent organization to achieve the objective and purpose of the treaty, to ensure the implementation of its provisions, including those for international verification of compliance and to provide a forum for consultation and cooperation.
- From article V to VIII administrative clauses mention financial cooperation for the national implementing measures, to enact penal legislation with respect to all activities prohibited by this treaty which were also mentioned in the Baruch plan.

²⁴ Ibid

²⁵ Greenpeace is a non-governmental environmental organization active in over forty countries and with an international coordinating body in Amsterdam, the Netherlands. Greenpeace states its goal is to "ensure the ability of the Earth to nurture life in all its diversity" and focuses its campaigning on worldwide issues such as global warming, deforestation, overfishing, commercial whaling, genetic engineering, and anti-nuclear issues.

• In Article IX the point of settlement of disputes is an additional factor in comparison to other drafts.

In comparison to the IAEA 2003 draft, Green Peace proposed one governing body with authority to deal with all matters related to fissile material as mentioned in article III, which was not agreed to by many states.

The United States, on its part, did not even announce its position on FMCT publicly until July 2004. George W. Bush administration tabled a draft treaty on 18 May 2006, which many argue is far removed from the original concept of a non-discriminatory, verifiable treaty. The draft did not include any verification provisions, banned new production of plutonium and highly enriched uranium for use in nuclear weapons for 15 years, and the treaty provided entry into force with only five established nuclear weapon states. This draft proposed an alternative to the draft treaty, which was limited in scope and verification, and was submitted by the Bush Administration to CD the on May, 2006. Majority of the member states of the CD pointed out lack of verification mechanism, and issue regarding existing stocks as major omissions and for these reasons considered American draft highly unsatisfactory.

On April 5, 2009, U.S. President Barrack Obama reversed the U.S. position on verification and proposed to negotiate "a new treaty that verifiably ends the production of fissile materials intended for use in nuclear weapons."²⁶

A draft by International Panel on Fissile Materials (IPFM) was also presented in 2009.²⁷ The IPFM draft stated serious reasons for verification. It argued that agreed verification measures are essential for creating confidence and trust in an FMCT. For the Non Nuclear Weapon States (NNWS) the draft emphasized that parties to the NPT had already accepted comprehensive safeguards, implemented by IAEA, in regard to their civilian nuclear programs which were required not to divert nuclear materials for weapons use. The justification for the verification addresses many of these states' concerns because the nuclear-weapon states are not required to have similar safeguards on their civilian nuclear activities, and the NPT places NNWS at a major disadvantage in the development of civilian nuclear power. In reference to the NPT, the draft treaty

²⁶ Kingston Reif and Madeleine Foley, Fact Sheet on the Fissile Material Cutoff Treaty (FMCT), *Center for Arms Control and Non-Proliferation*, February 11, 2013. Available at: http://armscontrolcenter.org/issues/nuclearweapons/articles/071509 factsheet fmct/.

²⁷ The Points are reproduced from official document (CD/ 1878), "Draft for Discussion Prepared by the International Panel on Fissile Materials (IPFM)," 5 February 2009. Available at: http://fissilematerials.org/library/fmct-ipfm_feb2009draft.pdf.

calls upon the IAEA to implement the needed verification arrangements, but these arrangements are not spelled out in the treaty itself.

The IPFM draft emphasized a method that would not immediately require the elimination of existing stocks, but would instead require greater transparency, a need to declare and a report on progress made by each state party to reduce such stockpiles.²⁸ This requirement for nuclear weapon states could enable an obvious understanding of their competitors' stocks and signify progress on the disarmament agenda. Yet nuclear weapon states have so far been uncomfortable with such a level of transparency. An additional idea incorporated in this draft is the requirement to separate military materials from civilian nuclear sectors before the treaty comes into force, and future use of fuel for naval propulsions and other military programs.²⁹

Conclusion

All the drafts and working papers for the FMCT clearly promote the agenda of nuclear disarmament and the idea of nuclear free world. The points of transparency, idea of governing nuclear related activities through a central organization, full utilization of IAEA facilities, and issues of excessive and already existing stockpiles in different drafts indicate states' evolving thinking on the FMCT.

The world nuclear order *vis-à-vis* nuclear disarmament is at a crossroads, due to reservations and concerns of the nuclear and non nuclear weapon states. Many states, including the United States, United Kingdom, and Japan, support a treaty which limits only future production of fissile materials. Other states, such as those belonging to the Non-Aligned Movement believe that the treaty should also address fissile materials already produced and stockpiled. ³⁰ Non-Nuclear Weapon States generally view FMCT as a step toward elimination of nuclear weapons.

China has conditioned its support for a FMCT to the US and other parties' cooperation on a treaty for the Prevention of an Arms Race in Outer Space (PAROS) and believes that a FMCT should not restrict itself to weapons use of existing fissile material. Russia officially supports a verifiable ban on the production of fissile material for

²⁸ BASIC project on, "Unjamming the FM(C)T," British American Security Information Council (BASIC).

March 2013. Available at: http://www.basicint.org/sites/default/files/fmct-overview-2013march29.pdf. ²⁹ Ibid. Official Document (CD/ 1878), "Draft for Discussion Prepared by the International Panel On Fissile Materials (IPFM)," 5 February 2009. Available at: http://fissilematerials.org/library/fmct-ipfm feb2009draft.pdf.

The Non-Aligned Movement (NAM) is a group of states which are not aligned formally with or against any major power bloc. As of 2012, the movement has 120 members and 17 observer countries.

weapons purposes to which every state with enrichment programs and the capability to produce a nuclear weapon is a signatory. This includes India, Israel, North Korea, and Pakistan.

Others include Israel which strongly opposes a FMCT because it believes that the FMCT is a challenge to its strategic posture and an inadequate security measure against Iranian nuclear program. Indian views about FMCT reflect that they would adhere to the FMCT provided it is universal, non discriminatory and applicable to all states and backed by verifiable mechanisms. Prime Minister Manmohan Singh stated that "India is willing to join only a non discriminatory multilaterally negotiated and internationally verifiable FMCT as and when it is concluded in the conference on disarmament, provided our security interests are fully addressed." It is evident that India is not willing to allow any limited approach towards arms control. It also emphasized upon global elimination of weapons during CTBT and FMCT negotiations. In 2008, Pakistan issued a letter to the President of the CD outlining its position on FMCT. Apprehensive that India possesses a larger stockpile of fissile material, it wants a verifiable treaty that addresses past, present, and future production of fissile material.

It is obvious from various drafts and working papers that the nuclear and non nuclear states have divergent stances on FMCT thinking. The most critical states also have reservations *vis-à-vis* suggested options in the drafts. Hence, consideration of and thinking on FMCT is still in the process of evolution. It may take some time for states to arrive at a consensus on the subject.

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³¹ Excerpts from Prime Minister's Reply to Discussion in Rajah Sabha on "Civil Nuclear Energy Cooperation with the United State," *the Hindu Online Edition*, August 17, 2006. Available at, http://www.hindu.com/nic/indoUSdeal.htm.