

Chapter 1 : Fissile Material Cut-Off

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Since negotiations have not yet begun, it is unclear if scope of the treaty will include pre-existing stocks of fissile material. Several draft treaties have been proposed including one by Dr. This Plan proposed the creation of an International Atomic Development Authority that would have "managerial control or ownership of all atomic energy activities potentially dangerous to world security. When President Eisenhower proposed the creation of the International Atomic Energy Agency in his "Atoms for Peace" speech, gone was the hope that an international body would control all fissile materials. Throughout the s, a ban on the production of fissile materials for military purposes was included in discussions covering a larger group of nonproliferation and arms control measures. In June , the United States submitted a working paper to the Eighteen Nation Committee on Disarmament that discussed "the inspection of nuclear powers under a cutoff of fissionable material for use in weapons. In September, President Bill Clinton delivered a speech to the United Nations General Assembly UNGA calling for a multilateral convention banning the production of fissile materials for nuclear explosives declaring, "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 forever. The resolution also called on the IAEA for support regarding the verification arrangements of the treaty. However, the Shannon Mandate has since been used as a basis for negotiations. The Mandate addresses the disagreement regarding the scope of the proposed treaty as to whether, in addition to future production, past production of fissile materials should be included: Some delegations expressed the view that this mandate would permit consideration in the Committee only of the future production of fissile material. Other delegations were of the view that the mandate would permit consideration not only of future but also of past production. Still others were of the view that consideration should not only relate to production of fissile material past or future but also to other issues, such as the management of such material. It has been agreed by delegations that the mandate for the establishment of the Ad Hoc Committee does not preclude any delegation from raising for consideration in the Ad Hoc Committee any of the above noted issues. In Step 3, States Parties agreed on "the necessity of negotiation in the Conference on Disarmament on a non-discriminatory, multilateral and internationally and effectively verifiable treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices. However, for various reasons see Developments section below , the CD has not yet formally launched negotiations on such a treaty. Under Article I, State Parties would agree not to produce, acquire or encourage the production of fissile material for nuclear weapons or other nuclear explosive devices. Each State Party would also agree to disable, decommission and, when feasible, dismantle its fissile material production facilities. Article I also calls on States to declare and submit to IAEA monitoring fissile materials in excess of their military requirements and future excess materials resulting from future nuclear disarmament measures. While a "ban on the production of fissile material for nuclear weapons or other nuclear explosive devices" implies a cut-off, a number of states often call for a fissile material treaty FMT that would limit existing stockpiles of fissile material in addition to future production. The Shannon Mandate specifically does not preclude these states from raising this issue in negotiations. In this manner an FMT would promote the principles of both nonproliferation and disarmament. Compliance With regard to compliance, the verification issue is what separates the various drafts of an FM C T. In the draft released by IPFM, the treaty requires verification. The treaty itself does not state the verification requirements, but calls upon the IAEA to implement any needed verification arrangements. In contrast, the draft tabled by the United States contained no verification procedures, as the Bush Administration believed such a treaty could not be effectively verified. Unless all or most of these states participated, a fissile material cut-off would be of little value. The possibility of extending verification procedures to India, Israel, North

Korea and Pakistan is viewed by many as crucial, as it would legally bring them into the international nonproliferation regime. The NPDI expressed its concern over the continued stalemate in the Conference on Disarmament and called upon all nuclear armed states to maintain or declare moratoriums on the production of fissile material for nuclear weapons or other nuclear devices. On 1 May, a group of states submitted a working paper advocating a progressive approach to nuclear disarmament. The working paper highlighted the need for a verifiable and non-discriminatory treaty banning the production of fissile material for nuclear weapons. The report emphasized that a treaty banning the production of fissile materials would contribute to implementing Article VI of the Treaty. On 4 March the Russian Federation submitted a draft program of work to the Conference on Disarmament calling for the creation of a working group to identify effective measures to ban the production of fissile materials for nuclear weapons and other nuclear explosive devices. The report contains the views of Member States on a treaty banning the production of fissile materials for nuclear weapons and other nuclear explosive devices. On 22 September the Conference on Disarmament submitted its annual report to the seventy-first session of the General Assembly of the United Nations. The report included the work of the Conference in its session, including a treaty banning the production of fissile material for nuclear weapons and other nuclear explosive devices. The report emphasizes the need for a non-discriminatory, multilateral and internationally and effectively verifiable treaty banning the production of fissile material for nuclear weapons and other nuclear explosive devices. States reiterated previously held positions. Canada representative also delivered a statement, calling for substantive negotiations on the FMCT. On 5 June, France delivered a statement, considering the adoption of the draft treaty on the prohibition of the production of fissile materials for nuclear weapons FMCT in April as noteworthy progress. On 9 June, Pakistan expressed oppositions towards the FMCT draft treaty with regard to the issues of scope, definitions, verification, and entry into force. Most countries speaking at the Conference expressed support to the draft treaty, except for Pakistan and India. The two countries argued that the draft treaty has no value in disarmament with no inclusion of past production. On 24 August, Pakistan submitted a working paper to the Conference on Disarmament on the elements of a Fissile Material Treaty, the scope of which addresses existing stockpiles of fissile materials. The working paper also addresses definitions of fissile material and methods for verification. On 15 October the delegate from Pakistan, Tahmina Janjua, addressed the First Committee calling into question the balance between disarmament and nonproliferation efforts. On 20 October the Canadian Delegation submitted a draft resolution on a treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices in the First Committee. Canada urges immediate action on behalf of the Conference on Disarmament to begin negotiations as well as encouraged further involvement of the GGE. Cuba, South Africa, and Egypt also expressed concern that the working group explicitly prioritized working on fissile material. Referencing their previous explanations, the delegations of Pakistan and Egypt blocked the adoption of the program of work. Many representatives, including the those from the United States, Canada, Australia, Japan, and the European Union, argued that an FMCT should firstly ban the production of fissile material for nuclear weapons. Delegations from Iran, South Africa, Switzerland, and Ireland also argued that the treaty must address existing stockpiles in order to effectively address nuclear nonproliferation. On 24 April, Canada made a statement calling on states in South Asia to declare a moratorium to the production of fissile material for nuclear weapons. Also on 24 April, the International Panel on Fissile Materials hosted an event to provide proposals directed to NWS to increase transparency on fissile material stocks. Canada and Spain issued a working paper no. It includes the duration of the treaty, a mechanism for its entry-into-force, and clauses for withdrawal. The second session of the CD ran from 13 May to 28 June, but failed to adopt a program of work. Many delegations reiterated their priorities in order to adopt a program of work. Ambassador Hoffman of Germany noted that the two statements by the Group of 21 did not include a mention of an FMCT, after which Cuba, Egypt, and Zimbabwe clarified that their positions had not changed. This draft programme of work would have established a working group on agenda items 1, 3, and 4 and appoint a special coordinator on items 1, 3, and 4. However, Australia, Germany, France and the United Kingdom argued that there is not much point in a programme of work based on the lowest common denominator without a negotiating mandate. On the other hand, some other delegations were willing to go

along with it because the proposal was comprehensive and balanced. In the end, this proposal was not accepted by all members of the CD and the CD president decided not to take any formal action on the text. The United States reiterated its position that such a treaty should only cover new production of fissile materials, while others, including Iran, Syria and Switzerland, argued for the inclusion of existing stocks in the negotiations. States Parties discussed the relationship between an FM C T and a nuclear weapons convention, and whether or not fissile material stocks should be included in an FM C T. Several states emphasized the need for a nondiscriminatory and verifiable treaty. On 28 August, the CD concluded its thematic discussion on the revitalization of its work and began discussions of its draft annual report to the General Assembly. Delegates did not reach a consensus on the scope and details of an FM C T. In place of a formal program of work, the CD President Ambassador Grinius of Canada proposed a series of thematic discussions. On 3 February, the CD met to discuss a fissile material cut-off treaty. Pakistan reasserted its opposition to an FM C T based on the Shannon mandate, emphasizing the need to address asymmetries in nuclear stockpiles in addition to halting production. The representatives from Australia and Japan announced a series of side events that would discuss definitions for an FM C T, though these would be simply informal discussions driven by national initiative and not connected with the work schedule of the CD. Most expressed an interest in starting negotiations on an FM C T, but differences emerged in how it would be accomplished. Russian Foreign Minister Sergei Lavrov expressed concern that parallel disarmament initiatives would degrade the multilateral disarmament system. On 3 March discussion of four different definitions of fissile material was held in the CD. However, the proposal also stated that if substantive steps towards negotiations were not taken in , the NPDI would request that the UN General Assembly begin to consider ways to proceed on negotiations outside of the CD. Ambassador Suda of Japan reported on this round of events at the CD plenary meeting on 16 June, noting that like the second round of side events, these meetings were focused on verification measures. Manfredi reported that discussions also covered an entry-into-force provision, verification and stockpiles. Hilde Skorpen spoke about the entry into force of the Convention on Cluster Munitions, citing it as an example for the fissile material treaty. She stated that the formation of the cluster munitions convention outside the CD provided "grounds for inspiration" for the negotiations on an FM C T. In response, Ambassador Zamir Akram of Pakistan outlined why his country continued to oppose the negotiation of a fissile material treaty. No program of work was adopted by the CD the in the first two parts of its session. For the second time, the Norwegian delegation called for FM C T negotiations to occur in a different venue if the CD remained deadlocked. However, a proposal to convene a conference outside the CD to address the fissile material cut-off issue did not receive a consensus support at the RevCon. The consensus action plan adopted by the NPT Review Conference made direct reference to a fissile material treaty, stating: The Secretary-General of the CD Sergei Ordzhonikidze warned that delegates would probably have at most one more year to start negotiations of an FM C T before parallel initiatives were organized. Ambassador Akram of Pakistan observed that there are clear options for negotiating an FM C T outside of the CD that would not be opposed by Pakistan, but that it would not participate in such negotiations. In December, the Fissile Material Control Initiative FMCI published a report on global fissile materials, presenting the official declarations of fissile material production and stocks around the world. This report provides important insight into the level of fissile material currently possessed by states as well as an indication of disarmament measure being taken by states. In his oration, President Obama declared the need for a treaty that "verifiably ends the production of fissile materials intended for use in state nuclear weapons. On 29 May, for the first time in a decade, the CD adopted a program of work. In the program of work, the CD established a working group entitled "Cessation of the nuclear arms race and nuclear disarmament" which was charged which negotiating a treaty on the basis of the Shannon Mandate. On 24 September, the UNSC adopted Resolution , which "calls upon the Conference on Disarmament to negotiate a Treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices as soon as possible. FMCI would be a voluntary, multilateral arrangement open to any country that possessed fissile material whether safeguarded or not and was willing to sign onto a set of agreed principles. The overall goals of FMCI would be to increase security, transparency, and control over fissile material stocks worldwide; to prevent their theft or diversion to non-state actors or additional states; and

to move fissile materials verifiably and irreversibly out of nuclear weapons and into forms unusable for nuclear weapons. The content of the draft decision is almost identical to the documents L. The draft decision uses the A5 Proposal from as its basis. Only China, Iran and Pakistan withheld their support for the comprehensive package.

Chapter 2 : Fissile material - Wikipedia

The Fissile Material Cut-off Debate. Manpreet Sethi, Research Officer, IDSA International attention is once again beginning to zero in on the issue of fissile material production cut-off. The impasse in the Conference on Disarmament (CD) with respect to negotiations on the issue which had developed in , has finally been, momentarily at least, somewhat resolved with India, Pakistan and Israel.

Introduction We will deal mainly with the question: The question of "linkage" with nuclear disarmament will inevitably come into the discussion. Before coming to the main topic, however, it may be useful to remind ourselves of some of the early debates over the decades, wherein some of the five nuclear-weapons states N-5 of today, at their stage of development of nuclear-weapons arsenals at the time, had raised objections to related proposals, which were very similar to the objections now raised by states other than the N-5, to a stand-alone FMC convention, which does not address itself to their security concerns. Thereby one may get a better perspective on the stalemate that had arisen at the Conference on Disarmament CD over the mandate of the ad hoc committee on an FMC. The Baruch Plan envisaged the setting up of an authority called the International Atomic Energy Control Agency, which would be entrusted with the managerial control or ownership of all atomic energy activities in the world. In this proposal, the production of atomic weapons was to cease and existing stocks were to be destroyed after the controlling agency had started operating effectively. In other words, controls would come first, and disarmament would follow later. At this stage, the USA had a monopoly over nuclear weapons, and the USSR felt that it would be vulnerable in the asymmetric situation which would persist until the existing stocks were destroyed. As a result, the USSR made a counter-proposal the Gromyko Plan in which the convention on outlawing nuclear weapons and providing for their destruction was to precede the establishment of a control system. The Baruch Plan got rejected by the USSR essentially because in the asymmetric situation prevailing between the USA and USSR, the question as to whether disarmament or non-proliferation should have precedence did not find an agreeable answer. In , when the USA, on behalf of Canada, France and the UK, proposed to the 5-member UN Disarmament Commission that all future production of fissile material be placed under international supervision and used exclusively for non-weapons purposes, the USSR rejected this on the basis that banning weapons-fissile material without also banning weapons was impractical. The situation was highly asymmetric. Meanwhile, by , all the members of the Security Council had acquired nuclear weapons. The objection a raised by France in can be seen to be very similar to the objection by some countries in the recent negotiations on an FMC, that a stand-alone FMC will perpetuate the existing inequitable nuclear regime, thereby threatening their security. In the context of the present workshop, the usefulness has to be discussed in relation to the objective of a nuclear weapon-free world NWFW. On the other hand, it expresses the conviction that an FMC "would be a significant contribution to nuclear non-proliferation in all its aspects". It is amazing that, in spite of this fact, it is often described⁴ as one of the most important next step on the disarmament agenda. The USA and Russia have a super-abundance of highly enriched uranium HEU and plutonium Pu as a legacy of the Cold War, enough for tens of thousands of fusion warheads if they decide to proliferate vertically again. All the N-5 have, therefore, stopped, production of HEU and Pu for weapons purposes or are in the process of doing so. Is this what one wants? Is horizontal non-proliferation to be equated with nuclear disarmament? Is it even a step toward nuclear disarmament? Measures aiming at horizontal non-proliferation lock in or freeze the existing imbalances to which France objected in in the context of the Indian-Mexican Resolution. The imbalances are to be viewed in the context of the fact that nuclear disarmament is as distant as ever. Nearly 30 years after the NPT, and nearly ten years after the end of the Cold War, some 36, nuclear warheads still remain in the world. The policies of the NWS are based on an indefinite retention of nuclear weapons and of the right of first-use. A treaty that perpetuates the present international nuclear regime cannot be useful as a step along the way to an NWFW. Parts do not Necessarily Make the Whole It has been argued⁸ that an FMC will have to be an essential part of any comprehensive nuclear disarmament regime or an eventual Nuclear Weapons Convention. But parts do not automatically make a whole. They have to be part of a design. Giving up nuclear

deterrence, acceptance of no-first-use, commitment to building up an NFWF, prohibition of nuclear weapon production, possession and use, are also essential parts of an eventual Nuclear Weapons Convention. It is significant that the N-5 are avoiding these parts. Partial measures, selected according to the priorities defined by them, serve only to tie up the NNWS and the new nuclear weapon states, without any concrete commitment on the part of the N-5 that they are heading towards an NFWF, and doing so fast enough. Such partial measures create an illusion of motion in the direction of nuclear disarmament when actually no such movement is taking place. The process can drag on indefinitely, ignoring the urgency of elimination of nuclear weapons. The danger to human civilisation would thus be allowed to persist indefinitely. A related argument⁹ is that an FMCT will put in place an essential prerequisite for the achievement of nuclear disarmament in the form of verification arrangements in respect of all enrichment and reprocessing facilities; and that "there is a range of complex verification issues that will need to be resolved before we can conclude such a Treaty". The problem with such an argument is that it does not discuss at what stage of the nuclear disarmament process such a control should be introduced. Before a commitment to a NFWF? Before giving up the doctrine of nuclear deterrence? Before an agreement on no-first-use? These are also prerequisites which will require the resolution of a range of complex issues. The question of "linkage" is not just "a game of those who do not really want to make any progress at all",⁹ as alleged. There is no point in discussing verification arrangements for an FMC unless there is an unequivocal commitment to an NFWF on the part of the N-5, and the series of practical and realistic steps recommended by the Canberra Commission are carried out by them. The real issue is: Recommendations of the Canberra Commission The Canberra Commission¹⁰ has stated that the first requirement is for the N-5 to commit themselves irrevocably to the elimination of nuclear weapons, and to agree to start work immediately on the practical steps and negotiations for its achievement. The commission recommends that the commitment of the N-5 to an NFWF must be accompanied by a series of practical, realistic and mutually reinforcing steps recommended by it. The steps that can be taken immediately, according to the commission, and whose "implementation would provide clear confirmation of the intent of the NWS to further reduce the role of nuclear weapons in their security postures", include an "agreement amongst the NWS of reciprocal no-first-use undertakings, and of a non-use undertaking by them in relation to NNWS". The commission then lists some "reinforcing steps" that "would build on the solid foundation of commitment, accomplishment and goodwill established through implementation of the steps recommended for immediate action". These "reinforcing steps" include action to prevent further horizontal proliferation, and developing verification arrangements for an NFWF and FMC. One would like to emphasise the stage at which an FMC appears in these recommendations. The NPT is a good example. The NPT was never intended to be an indefinite licence for a two-tier world of nuclear haves and have-nots, but embodied a bargain, in which, while on one side, the signatory nuclear have-nots agreed not to acquire nuclear weapons, on the other side, the NWS undertook "to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control" Article VI of the NPT. For 20 years after signing the NPT, they competed intensively in developing new nuclear weapon systems, carried out over 2, weapons tests, and their stockpile of warheads actually increased from what it was when the NPT was signed about 38, and reached a staggering figure of close to 70, in the mid-Eighties. Though this number has come down to about 36, the steps taken by the USA and Russia in this regard seem to be rather in the nature of arsenal rationalisation measures. The assurances given by the N-5 at the time of the indefinite extension of the NPT in , and the advisory opinion of the International Court of Justice in , have made no difference. Rather, as Ambassador Douglas Roche has observed recently,¹¹ "Despite the indefinite extension of the NPT and the signing of the CTBT, a new technology race in the quest of far more innovative and lethal nuclear weapons has broken out". The NWS continue to stubbornly oppose any attempts to put the issue of elimination of nuclear weapons on the agenda of the CD. Robert Bell, national security assistant to President Clinton has stated recently that "the US will continue to rely on nuclear arms as a cornerstone of its national security for the indefinite future". Step-by-Step Approach vs Comprehensive Approach: In such an approach, enumeration of the steps, their sequencing, and the approximate time-scale for each step become important. The sequencing

and the time-scale depend on the objective. If the objective is an NFWF, there would be another sequence. Douglas Roche has remarked: A time-frame becomes important because of the lack of seriousness shown by the NWS so far, e. It is disingenuous to make such a claim. Steps Must Respect Common Security The steps and their sequencing must respect the security concerns of all the parties involved. None must feel that any step increases its vulnerability, so long as the situation continues to be asymmetric. The Canberra Commission has observed: To this end, nuclear weapon elimination should be conducted as a series of phased verified reductions that allow states to satisfy themselves, at each stage of the process, that further movement toward elimination can be made safely and securely" emphasis added. Without a careful enumeration and sequencing of steps in a well-defined time-frame, an FMCT will only strengthen the present inequitable and dangerous nuclear regime, wherein the NNWS will continue to be at the mercy of the N The dangerous character of the regime is easily lost sight of by even sensitive individuals in the N-5 countries or those in NATO countries and Japan which are under the nuclear umbrella of an NWS. Philip Smith¹³ has recently reminded us of a statement of former Secretary of State Haig that fission and fusion explosives were tools used daily all over the world in US diplomacy. One cannot but feel greatly concerned in the face of the World Order that is sought to be created under the stewardship of the N-5 and the G Nuclear Disarmament vs Nuclear Non-Proliferation Annette Schaper¹⁴ has summarised the underlying conflict in the CTBT negotiations as that of nuclear disarmament vs nuclear non-proliferation, and remarked that the same conflict is now blocking the progress at the CD in the negotiations with regard to an FMC. The size of potential nuclear arsenals will get limited only if the FMC is part of a Nuclear Weapons Convention in which all the unsafeguarded stocks of fissile material and not merely those considered surplus to military needs , including those that will become available due to dismantling of warheads, are transferred to non-weapons use under international safeguards. Such a transfer is, in any case, needed in order to make the nuclear arms reductions under treaties like START irreversible; and the USA and Russia should enter into a bilateral fissile material cut-off treaty including the fissile material available from dismantling of warheads under the START process , to solemnise their moratorium on the production of fissile material. It has been argued that an FMC has become a symbol of the goodwill of the N5 to take seriously their commitment to nuclear disarmament. One fails to see how it can be so treated, if the N-5 continue to retain their huge stocks of HEU and Pu, and of weapons, with no commitment to a prohibition of nuclear weapons, and in fact, continue to obstinately refuse to allow nuclear disarmament to be put on the agenda of the CD. A symbolic measure of this kind is worse than useless because of its differential impact on the NWS and others. Further, even if one grants the claim, what is needed now is not a mere symbol but a purposeful action towards an NFWF. Time is running out. It has been claimed that the FMCT would be the major policy driver to insert transparency and irreversibility in the disarmament process. Introduction of transparency and irreversibility into the START process, which is at present only a bilateral process, is certainly important in order to inspire confidence among the NWS with smaller arsenals and among the NNWS. But does this have to depend on an FMCT? If the intention of the START process is really to go down to stockpiles measured in hundreds, and smaller, and to draw in the other NWS at an appropriate stage, the process should any way become more transparent from now, with regard to both the dismantling of nuclear weapons and the disposal of all nuclear materials under international safeguards. As for a multilateral treaty aimed at the introduction of transparency in nuclear complexes, the importance of sequencing with other disarmament steps cannot be ignored. There is, however, nothing to prevent the N-5 from having such a transparency-and-irreversibility-promoting treaty among themselves. In his September address to the UNGA, when President Clinton pressed for "an international agreement that would ban the production of these materials forever", he made a special reference to "the danger of nuclear terrorism for all nations". This danger, however, will be difficult to deal with unless the possession of nuclear material and weapons, and the production of nuclear weapons are prohibited under a Nuclear Weapons Convention. The risk of terrorist theft, either of a weapon or of fissile material, is much greater while a large nuclear industry still exists, than in a world in which that industry has been dismantled, and there are much tighter safeguards over weapons yet to be dismantled and materials. In the meantime, it is sad to note the rejection by the N-5 of the Indian-Egyptian proposal at the Rome Conference in June to have the use of

nuclear weapons included in the list of crimes against humanity, and their threat to boycott a court whose mandate included the use of nuclear weapons. The question, however, is: The risk due to continued existence of nuclear weapons on the face of the earth is the major risk as perceived by the NNWS. That risk is not reduced. Such an argument is very much N-centric and ethno-centric. One should not forget the warning in the Pugwash Council Statement at the end of the Dagomys Conference in September , namely, that "even in an arms control regime that included deep cuts in strategic forces and a CTB, the maintenance of any nuclear arsenal whatsoever, and of doctrines of nuclear deterrence, would pose dangers of nuclear weapons use as well as logical inconsistencies for non-proliferation policy. The N-5 have huge stocks of fissile materials, accumulated over decades, and have, therefore, either stopped production of fissile materials for weapons purposes, or are in the process of doing so. So they do not need an FMC for themselves.

Chapter 3 : Proposed Fissile Material (Cut-off) Treaty (FMCT) | Treaties & Regimes | NTI

x The Fissile Material Cut-Off Debate A kind mention is due to Christopher Fitz, John Lepingwell and Atila Yavuz from the Center for Nonproliferation Studies in Monterey, California, for.

It is under this backdrop that arms control measures such as the Fissile Material Cut-off Treaty FMCT have made a comeback on the international negotiation table. The present article attempts at explaining the current willingness within the United States for negotiating such a treaty based on two factors: The idea to ban their production for nuclear weapons capability was given by the Clinton Administration; followed by the UN General Assembly Resolution , which recommended an international body to negotiate such a treaty. However, for achieving this, the United States had to consistently push towards such a measure. This would mean one step forward in the right direction of nuclear disarmament. The Obama Administration has indeed set the tone for the United States towards engaging the international community in deliberating on the issues affecting nuclear security. Many nuclear experts also view this time as a ripe moment to negotiate long pending treaties such as the FMCT and Comprehensive Test Ban Treaty CTBT that are aimed at delivering the twin goals of nuclear disarmament and nuclear non-proliferation. The treaty is viewed as a key mechanism within the nuclear non-proliferation regime. All this would construct a strong foundation for further non-proliferation goals. In the longer run, the conclusion of such a treaty would also add a positive environment, facilitating the larger goal of a world without nuclear weapons. The American nuclear non-proliferation policy, in fact, for a long time had sought to prevent the misuse of these sensitive materials, domestically as well as internationally. The main objective of this programme implies a gradual elimination globally of HEU even for civilian purposes. The HEU minimisation programmes plays an important role in preventing the diversion of civilian nuclear fuel. These threat reduction programmes are responsible for the return of US origin HEU fuel from countries that have been engaged in nuclear commerce with the United States. Also, by , around reactors around the world have been targeted under the GTRI initiative to be converted into LEU fuel research reactors. This year too, the the United States. This has become more evident since President Obama came to the White House. It was argued that the conclusion of the START might invite similar arms reduction moves by other countries. In the recent Conference of Disarmament 2. Web], accessed on November 22, , <http://www.un.org/News/Press/docs/2000/20001122.cd20001122.html>: The idea was to offer an alternative solution to ease repeated deadlocks in the CD. These instances suggest a consistent willingness in the United States to push for efforts aimed at achieving concrete progress with regard to the nuclear non-proliferation regime. The NPR , 4. In international politics, the behaviour of the big powers matters. It matters not because it may or may not transcend into a stringent foreign policy action, but because it could be useful in anticipating a probable scenario that might emerge in the due course of time. The behaviour of the United States in this respect matters, as it could be interpreted as a way of implicit norm setting for the near future, which the other states might be expected to abide by. As the world energy demand in the form of electricity is expected to grow at an exponential rate, combined with the global shift towards low carbon technologies, the prospects of nuclear energy making a contribution towards generation of electricity today, have indeed become brighter. The green clean energy argument driven by the climate change lobby has also favoured the development of nuclear energy worldwide. The switch towards nuclear energy as clean energy has offered itself as an attractive 7. Knowledge World, , p. Climate change being conceivably damaging would require all absolute means to reduce greenhouse gases. This has added a sense of preventive responsibility which is likely to push countries to maximise efforts that would encourage the growth of nuclear power. The international trend in generating electricity globally through the nuclear energy route has been catching up, especially in the Asian countries. It is noteworthy that despite the Fukushima accident, India and China have decided to go ahead with their civilian nuclear power development. Both countries have acknowledged the need to address the safety of their nuclear plants, but, at the same time, they plan to continue investing in nuclear power. Over the last one year, countries such as China, India, South Korea, and France have shown enthusiasm towards the development of their nuclear industry to boost their energy mix, despite the Fukushima disaster. Other countries such as Switzerland, Italy, and Germany⁹ that

have planned for a phase-out of nuclear power could be seen as more of an exception rather than the rule. The Fukushima accident has indeed pushed the countries to review their safety standards but it would be misleading to suggest that this would ultimately lead to the collapse of the nuclear industry. The end of the nuclear industry that was predicted by many commentators post Fukushima is far from reality. Nuclear power generation has been increasing continuously as a result of improved performance. For instance, the share of nuclear power in global generation of electricity increased from 7. For details, see Charles D. Eastern and North African countries such as Jordan have expressed interest in nuclear power plants. In Southeast Asia as well, the demand for nuclear power has been raised by countries such as Indonesia, Philippines, Thailand, and Vietnam. Energy, Electricity and Nuclear Power: Web] , accessed on November 18, , http: The Japanese nuclear accident has indeed affected public opinion regarding nuclear safety, and the cost at which the nuclear industry ought to be expanded. Under this backdrop, it is likely that the larger nuclear non- proliferation goals such as the FMCT will be met. Since onwards, one of the key elements of the US nuclear non-proliferation policy has been the prevention of access to sensitive material by potential proliferators. The cut-off treaty also in a way contributes towards this goal. The fact that precisely one year later, Washington held a successful nuclear security Web], accessed on November 23, , http: All in all one, may conclude that the institution has not been a success due to a number of reasons. Besides political problems, practical monetary constraints have crippled the effective working of the Agency. It was envisioned by the progenitors of the institution that the spread of dual technology for a non-military purpose would serve as a means to ultimately achieve global disarmament. Today, numerous factors hinder the effective functioning of the IAEA. Experts have argued that the NPT itself indirectly guides the states through a peaceful proliferation cycle of activities by providing them with the right to develop civilian nuclear technology. This had been used by states such as Iran as a cover to convert dual use technology into military ends. The institutionalisation of the nuclear regime is done in a manner that allows the seepage of strict surveillance of the proliferation activities globally. A number of small steps in the arms control mechanism would advance the non-proliferation regime, leading to the ultimate goal of disarmament. Many nuclear strategic experts like Stewart Patrick view the failure of the FMCT negotiations as a critical gap in the US led non-proliferation regime. Safeguards help deter a country from diverting nuclear technology and materials from peaceful to military programmes. The major concern is that safeguards capabilities have not kept up with the increased use of nuclear power and the projected expansion of nuclear power to many countries. The failure of the IAEA in effectively keeping a check Web], accessed on August 30, , http: Without a check provision on any sort, the treaty would be meaningless. However, the procedure of on-site inspection might have a drawback as conducting the inspection requires the site environment sampling method. For instance, the power level at which production reactors had operated and how much plutonium the reactors may have produced in the past, especially in the case of reprocessing and enrichment facilities placed side by side. This would mean a potential loss of information that would necessarily not have to be declared under the FMCT. Thus, some nuclear states could worry that sensitive information at their defence-related nuclear processing sites about past plutonium production activities might be revealed. This would be logically unacceptable to other states and strongly against the principle of the supremacy of law. Moreover, one of the prerequisites of the FMCT emanating from the Shannon Mandate demands that the treaty be multilaterally negotiated so that it may be made non-discriminatory in nature. American arms control experts such as Christopher Ford have argued that the FMCT ought to be negotiated bearing the views of all the discussants. It might be Also, the provision of multilateral negotiations has added a number of overlapping and antagonistic arguments preventing the actualisation of the treaty. Thus, keeping its security considerations in mind, it could not possibly give in to this arrogation. Web] accessed on November 4, , http: Web], accessed on November 2, , http: Web], accessed on November 8, , http: This, in turn, would raise perpetual limbo; the security concern for India, the reaction to moving from one which would only invite Pakistan to augment its contradiction to nuclear deterrence; thereby leading to a vicious another, unless circle. Ultimately, the cycle of action and reaction a compromise is would further strengthen the need to press for achieved on the two the FMCT on the negotiation table. If the world is important facets. It is under this backdrop that the FMCT negotiations would remain in perpetual limbo; moving from one contradiction to another, unless a compromise is achieved on the

two important facets. Web], Accessed on November 8, , [http:](http://) In addition, there is the availability of consistent American will and support. As the world moves towards diversifying energy needs, nuclear energy would sustain its place with an appropriate percentage in the energy mix of countries. As long as countries seek nuclear energy, the dangers related to it being diverted for other purposes would prevail. This would, in turn, facilitate an environment that would invite more stringent control mechanisms. The need for the FMCT that emanates out of the need to bulwark diversion and nuclear proliferation is increasingly evolving; parallel to that are evolving the inherent contradictions of the FMCT. Sure, the consistent will of the United States would continue and that would push towards an FMCT; however, compromises ought to be sought even by the United States itself on any of the issues. The deadlock between the US and Pakistan ought to be solved before negotiations can proceed any further. Once again, the FMCT would be left at the negotiation table. Despite these shortcomings, one conclusion could be derived as certain. The will of the United States towards the eventual realisation of the Fissile Material Cut-Off Treaty under the backdrop of nuclear disarmament has come out clearly in the last two years.

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The Chair of the High-level Fissile Material Cut-off Treaty Expert Preparatory Group briefed the Committee on the work of the body, which was tasked by the United Nations Secretary-General.

Many states have long been calling for a ban on the production of these materials. Nevertheless, in , for the twelfth year in a row, the CD was unable to establish a committee to begin formal negotiations on an FMCT. From early on, a major obstacle to launching negotiations has been the issue of existing stocks. While some states, including the United States, United Kingdom, and Japan, favour a treaty which only limits 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. This would require nuclear weapon states to irreversibly downblend existing stocks of weapons-grade fissile materials, ensuring they could never be used for weapons purposes again. Some states also think an FMCT should include mechanisms for the management of fissile material. Another contentious element is the scope of any potential fissile materials treaty. Although most experts agree that an FMCT would most certainly ban the production of plutonium and highly-enriched uranium, it is not likely that the treaty would include other elements such as tritium, for example, which is used to amplify the explosive power of nuclear weapons. Given that tritium has a radioactive half-life of 12 years, the inclusion of it in an FMCT would, over time, limit the destructive power of nuclear weapons that contain this element because states would be unable to replace the decaying tritium in existing weapons. Other materials, such as depleted uranium, neptunium, natural uranium, plutonium and , americium, curium and californium, though not fissile, are also used in nuclear weapons programs. On 25 January , the CD appointed a Special Coordinator, Ambassador Gerald Shannon of Canada, to investigate the views of member states on the most effective way to negotiate a fissile materials treaty which met the requests of the UN General Assembly. Ultimately, efforts to establish the committee failed, but many states continue to refer to the Shannon Mandate as the basis for future negotiations. Pakistan has been by far the strongest advocate for requiring an agreement to include existing stocks in any fissile materials treaty as a prerequisite for commencing formal negotiations on an FMCT. Regrettably, the CD was unable to implement its programme before the end of the session—primarily due to reservations by the Pakistani delegation. This opposition continued during the First Committee meetings, where there was nothing to indicate that the impasse on this issue would be broken. Several speakers and delegations, both in the Conference on Disarmament and at the First Committee meetings in , highlighted the inconsistency of Pakistan blocking progress in the CD while joining consensus on the Canadian resolution calling for negotiations of a treaty dealing with fissile materials in . Consequently, several delegations at First Committee in including those from the United States, Japan, Liechtenstein, and Australia announced they would support moving negotiations for a fissile materials treaty to another forum if the deadlock in the CD continued. Key players Whatever the scope of the eventual FMCT, most of the non-nuclear weapons states that are party to comprehensive safeguard agreements associated with the NPT will already satisfy the requirements of an eventual FMCT. These states have undertaken not to produce or acquire nuclear weapons or other nuclear explosive devices, and to accept International Atomic Energy Agency IAEA safeguards on all their nuclear material to verify this. India, Pakistan, and Israel. Other states that also will be affected by such a treaty are those which produce the greatest amount of fissile material for non-military purposes, such as Canada, Australia, and Japan. Critical issues of FMCT The concept of a cut-off of the production of fissile material for nuclear weapons has been discussed for a long time, and the agreement on a mandate known as the Shannon Mandate to begin negotiations in the Conference on Disarmament CD broke down in . Since then, there has been very little formal progress. An FMCT will require many technical issues to be resolved, from actually defining fissile material to ensuring that the treaty is effective by developing specific procedures for verification. There are a number of different approaches to these issues ranging from a simple approach to a more comprehensive one. Definitions How fissile material is defined is important as it has direct implications on the scope of the treaty. But it is not only fissile material that has to be defined - production, civilian use, and military use also need

clarification. Material that can sustain an explosive fission chain reaction - notably highly enriched uranium or plutonium of almost any isotopic composition. A heavy isotope with an atomic nucleus that can undergo fission when struck by a neutron. Uranium is a fissionable isotope, in that it can be fissioned by high-energy neutrons. Unlike uranium, which is fissile as well as fissionable, [uranium] cannot sustain a fission chain reaction. Some delegations argue that a treaty should only include those materials most likely to be used in nuclear weapons; others have argued that it should focus on wider range of weapons-grade materials. Their draft treaty also had specific definitions for weapon-usable, weapons-usable plutonium, weapons usable uranium, production, separation, processing, enrichment plant, laser isotope separation, controlled storage, and fuel elements. Existing Stocks Differences on the question about existing stocks were one of the main reasons that negotiations stalled in There are still great differences between positions on this matter. The United States and the Russian Federation have the largest stockpiles, and most other states are waiting for these two to take the lead. The nuclear weapon states have either stated or indicated that existing stocks will not be included in the treaty. The point of the treaty is, according to those states, to quantitatively freeze the maximum level of nuclear material around the world. Many other states, however, including Pakistan, South Africa, and Brazil strongly urge that this treaty include existing stocks. The Pakistani delegation, for example, argues that it is necessary to include past production of fissile materials to prevent the expansion of existing global power inequalities. Likeminded states affirm that there is enough existing fissile material in the world to create new and more sophisticated nuclear weapons. A fissile materials treaty which does not address existing stocks is seen by many as useless and weak. The question is whether to go along with a streamlined cut-off that at least is a cut-off or to have no treaty at all? Thus, the production of all nuclear material for civil and military purposes would need to be put under effective safeguards. This brings us to yet another critical issue of an FMCT: Verification While the non-nuclear weapon states that are party to the NPT have already agreed to accept comprehensive safeguards by the IAEA, the nuclear weapon states and the states which are not party to the NPT are not legally obligated to accept such safeguards. Many states believe that a cut-off verification regime should be used as a means to rectify this situation and impose a more equal safeguards standard on the nuclear weapon states. Supporters of this idea argue that comprehensive safeguarding would foster greater transparency among nuclear weapon states, thereby decreasing mutual suspicions, and enhancing wider confidence in their compliance. The United States has stated in the past that even with extensive verification mechanisms confidence in the ability to monitor compliance with an FMCT would not be high. The US had also said that not only would negotiating verification provisions prolong an already difficult task, but it would actually provide a dangerous false sense of security. Other states are of the opinion that a verifiable FMCT will effectively control the spread of nuclear materials by enhancing the proportion of weapons-usable material under international safeguards, strengthen nuclear export control, and reduce the perceived discrimination of the present NPT regime by some states. Moreover, many states argue that one of the greatest benefits that would come as a result of the adoption of an FMCT with a strong verification mechanism is that terrorist acquisition of fissile material would be significantly harder. How to move forward The issue of an FMCT is often referred to "ripe for negotiations" and touted as the most likely next step for the Conference on Disarmament. States with much at stake will not sign a treaty unless they played an active role in shaping the agreement. Creating an ad hoc committee through the General Assembly is possible and has benefits. Unlike the CD, which is limited to only 65 member states, the General Assembly is open to all states, making it possible to build momentum and generate political from many more actors in order to put more pressure on those states opposing an FMCT. Furthermore, the General Assembly can simply put an issue to a vote without struggling to achieve consensus. In its report, the Commission strongly recommended that the CD abolish the rule requiring consensus on procedural itemsâ€”a notion supported by many states.

Chapter 5 : The Fissile Material Cut-off Debate

This treaty is commonly known as a Fissile Material Cut-off Treaty (FMCT). Since then, the immediate commencement and early conclusion of FMCT negotiations in the CD has been endorsed by all states party to the NPT at the , , and NPT Review Conferences.

The impasse in the Conference on Disarmament CD with respect to negotiations on the issue which had developed in , has finally been, momentarily at least, somewhat resolved with India, Pakistan and Israel agreeing to participate in the negotiations. It is, therefore, pertinent at the present juncture to examine the debate on the issue of fissile material cut-off, scrutinise the proposal under study for the conclusion of a treaty and understand the compulsions of various countries or groups of countries that are involved in the ongoing process. The term fissile material includes those materials that are fissionable when irradiated by both slow or thermal neutrons. The remainder is the fertile convertible into plutonium isotope U By various means, the proportion of U to U is increased. This proportion is raised to between two to four per cent to produce fuel used in light water reactors. In practice, however, the proportion of U in a nuclear explosive device must be of the order of 90 per cent or more. Plutonium of any isotopic composition is weapon-usable. The international community, for a long time now has been contemplating putting an end to the production of fissile material as one way of tackling nuclear proliferation—both horizontal as well as vertical. The logic is that if no fissile material is available to countries that are already non-nuclear, they would not be able to produce bombs at any time in the future either. At the same time, since the fissile material available with the nuclear weapon states NWS would also be limited with no scope for any further production, the number of weapons that they could build would also be limited. This paper seeks to examine what the proposed FMCT would actually be able to do. It also identifies the related issues that should be of concern to India and urges their careful scrutiny so that a coherent stance can be formulated that does not compromise national security in any way.

The Evolution of the Concept The concept of fissile material cut-off had first been proposed as a measure aiming at controlling American and Soviet nuclear arsenals by President Eisenhower in . However, perceiving it as an American tactic to freeze the USSR into a quantitatively inferior status, Moscow had rejected the proposal. Notwithstanding the rebuttal, from upto the end of the s, the cut-off remained the "centrepiece of arms control proposals of the USA". Throughout this period, the Soviet inventory of fissile materials remained less than that of the US. Hence, the American push for a fissile material production cut-off and the Soviet resistance are understandable. Of course, a token gesture was made in April when the two superpowers did announce cuts in fissile material production. For instance, at the First Special Session on Disarmament in the Canadian Prime Minister tabled a proposal aimed at a prohibition of all production of all fissionable material for weapons purposes as part of a "strategy of suffocation. Viewed from hindsight, it is now clear that these attempts were being made at a time when the world was in the midst of the Cold War and neither side was in a mood to place any limits on its nuclear arsenal. In fact, by the s, when the Soviets had not only caught up with the Americans but overtaken them in terms of their strategic nuclear forces, Moscow reversed its earlier refusal to consider the fissile material cut-off and rather began to appeal for it even as the US began to oppose the freeze. Consequently, President Bush failed to endorse the repeated calls of President Gorbachev for a ban on production of fissile material in , or October . Even until December when the UN General Assembly had overwhelmingly requested the CD to pursue "its consideration of the question of the cessation and prohibition of such production", it had not met with a favourable US response. The turnaround in the American position came about only a few years after the end of the Cold War and especially after the realisation had sunk into the American and Soviet psyche that a nuclear war was unwinnable and, therefore, must never be fought. Thereafter, the military credence attached to nuclear weapons was reduced somewhat and once again, talk of a fissile material ban started. President Clinton then announced that the US "will undertake a comprehensive approach to the growing accumulation of fissile material. It, therefore, announced its intention to "propose a multilateral convention prohibiting the production of HEU or plutonium for nuclear explosives purposes or outside of international safeguards. On January 18, , the Presidents of the two countries reiterated their support

for a cut off in their Moscow Declaration. Within a week of this, the CD included the ban on its agenda and appointed a Special Coordinator in Ambassador Shannon of Canada to seek the views of the Conference members on the most appropriate arrangement to negotiate a non-discriminatory, multilateral and internationally verifiable treaty banning the production of fissile material of nuclear weapons or other nuclear devices. By the time the US and the USSR came around to getting serious on the ban, not only both of them, but the other three NWS also had amassed enough stocks of fissile material to feel no need for further production. In fact, the USA had stopped producing HEU for weapons in 1976, though plutonium production was not stopped until 1980. However, its plutonium production was halted only on October 1, 1980. Britain too has not produced HEU for many years, having shut down its military enrichment facilities. More recently it has also announced the cessation of production of plutonium for weapons. France and China, however, present a different case. Although France does not produce plutonium for weapons any longer, it does continue with its HEU production and has refused to agree to a moratorium. While it may be conceded that France could be needing the HEU for naval or tritium-production reactors, yet their use in weapons cannot be discounted. As far as China is concerned, the situation is even more ambiguous. In fact, Beijing is even believed to have privately informed Washington that it is no longer producing fissile material for weapons, but has made no formal public announcement to this effect. With little information being available on the status of its reprocessing and enrichment plants, it cannot be ascertained whether fissile material is still being produced in China or not. However, irrespective of the availability or non-availability of this information, the point that needs to be highlighted is that the NWS have accumulated sufficient stocks and no longer feel threatened by a ban freezing the stockpiles at present levels. Consequently, before the crucial NPT Extension Conference in May 2000, Washington had tried to orchestrate a joint announcement by the five NWS that they were halting the production of fissile material for weapons. But China and France declined to join in even though China had informed the US privately that it had stopped production and France had announced in May 2000 that it had halted the production of plutonium for weapons. Considering that the NWS that possess facilities for production of fissile material and a need for them for their arsenals have already declared their closure in their own way though not through a joint announcement, and that the NNWS that are already members of the NPT have their nuclear facilities under IAEA safeguards, one may well question the need for such a treaty. But, on scraping the surface, one can discover that for the NWS, the conclusion of the treaty attains two objectives: Implications of a Fissile Material Cut-off Treaty A treaty on fissile material cut-off encapsulates a proposal for the prohibition of the production of fissile material for nuclear weapons. An FMCT would, hence, imply a set of three commitments on the part of its member states: Thereby, the FMCT endeavours to achieve multiple objectives that may be seen differently from different perspectives. Firstly, it would limit the size of potential nuclear arsenals except where surplus stocks of such material already exist as in the case of the USA and Russia. Secondly, it would make reductions irreversible if the fissile material is transferred from dismantled weapons and other unsafeguarded stocks to non-weapons use or disposal under international safeguards. Thirdly, it would strengthen the non-proliferation regime by opening nuclear facilities in all states to international inspections. Therefore, it would reduce the discriminatory nature of the non-proliferation regime. Also, it would increase the moral, legal and practical constraints on production of nuclear weapons by non-NPT states. However, there are some issues that have surfaced during the several rounds of discussions as being contentious enough to divide the international community on the scope and terms of the treaty. For instance, the countries that have weapons capabilities but are outside the purview of the NPT have perceived the FMCT as an attempt at trying to rope them in to accepting full-scope international safeguards. India, Israel and Pakistan have, therefore, been wary of any such treaty for the simple reason that it would mean opening their nuclear facilities to international monitoring mechanisms, a move that they have fervently resisted over the years. The fact that this has been one of the primary motives behind the American push for an FMCT cannot be denied. According to estimates published in the Rand report, these seven countries combined were believed to have enough sensitive nuclear material to manufacture bombs per year. On June 9, 2000, the Pakistani representative at the CD sought a schedule for the progressive transfer of those stocks to safeguards, so that unsafeguarded stocks are "equalised" at the lowest possible level. In the last couple of years, some Western

countries too have come to support the inclusion of stockpiles because of the concern about nuclear smuggling. The third issue over which problems have cropped up involves the position of the FMCT in the larger nuclear disarmament objective. The standoff had originally developed over the issue of the extent of relationship between the FMCT and nuclear disarmament. Most non-aligned states have perceived the FMCT as an element of a larger programme of action for the elimination of nuclear weapons and have sought to ensure that the CD deals with the issue in that context before agreeing to begin negotiations on a cut-off. Although the CD had agreed in to establish an ad hoc committee with a mandate to negotiate a treaty banning the production of fissile material for nuclear weapons and that the mandate would not preclude any delegation from raising issues relating to scope, negotiations were not begun because the establishment of that committee became linked with the establishment of a committee on nuclear disarmament. India and Pakistan argued that the "fissban" committee should be linked to a committee to negotiate nuclear disarmament. Others, however, including France and the UK, demanded the establishment of a nuclear disarmament committee with the establishment of a conventional disarmament committee. This wrangle prevented the very establishment of a fissban committee and talks remained deadlocked. Having identified the issues on which reservations have arisen from different quarters, it would be logical to examine the positions of different countries on the scope of the treaty. Expectedly, a very complex scenario emerges. The US, Canada, UK and France view the mandate as being confined only to future production of fissile material for weapons besides insisting on a delinking of the issue with that of disarmament. The UK and France also insist that the treaty must not limit their production of plutonium and HEU being put to civilian use. Meanwhile, the ranks of the NNWS are not united on the linkage either. Some seek not only the linkage as an essential condition but also want to target the issue of existing stockpiles. Brazil, for instance, has insisted upon the second condition as being essential for the success of the treaty. Its representative has questioned, "How can a ban on fissile material be effective without adequate knowledge and accountability of the amount of material already in existence? Amongst the proponents of broadening the scope of the FMCT to include past stocks, it is easy to discern certain vested interests. For instance, Iran, Egypt and Algeria have found in this an opportunity to denuclearise Israel. Meanwhile, Pakistan hopes for a bare-all revelation of Indian fissile material stockpiles and a cap on their future production. It is amply evident that the stance of every country shields its own political compulsions and India will have to tread its path cautiously and intelligently on the matter. However, the Indian position on the subject must be based on the consideration of a few facts that are outlined in the following paragraphs. At the outset, it needs to be highlighted that what India is seeking is a non-discriminatory treaty that proposes to tackle the issue of fissile material in its totality. Secondly, the Indian position is very clear that the FMCT is not an end by itself but one step on the road leading to the eventual realisation of a nuclear weapon-free world. India needs to read the text concerning plutonium production even more carefully than of HEU since it shall be the endeavour of the FMCT to check the production of this nuclear material. Therefore, New Delhi must be cautious in the commitments it undertakes on this, particularly because the Indian nuclear power programme as envisioned by Bhabha details a role for plutonium in the long-term adoption of the thorium cycle. But then, if this is accepted, it will be a provision applicable to other countries as well and the dangers of plutonium being available to several states need to be understood given the mercurial nature of this fissile material. It has been established that once plutonium has been separated from highly radioactive spent fuel, it is not difficult or time consuming to convert it into metal, the chemical form that is most appropriate for weapon use. Construction of facilities for carrying out this conversion can be done either in the garb of conducting research or even clandestinely without their detection since they would essentially be simple and small. The purpose of this would be, according to Pakistan, to have a "binding programme for the elimination of asymmetry in the possession of fissile material stockpiles by various states. A third consideration that India must carefully study is the fact that the proposed FMCT is not going to prohibit further production and stockpiling of fissile material for some military uses not related to nuclear weapons, e. Also, the treaty does not intend to reduce existing inventories or even necessarily to eliminate production capabilities. It only suggests a first step towards preventing future fissile production that is unsafeguarded and acknowledged to be for the purpose of making nuclear explosives. But nuclear disarmament is necessary as a simultaneous measure for the actual

success of the FMCT. Common sense too dictates this since such a restraint as the FMCT proposes will be acceptable to states with smaller arsenals only when there is a concrete even if long-term likelihood of all states being free of their nuclear arsenals at some point of time. Yet another related issue that needs to be attended to is that of the physical protection of the safeguarded stockpiles. Yet the role of an international safeguards monitoring and verification agency cannot be discounted. It will also have to be debated whether international storage sites will be required to keep the fissile material. This becomes important given that no monitoring agency would be able to prevent the host country from siezing the fissile material within its own boundaries or using the existing facilities to produce material for nuclear weapons in the event of a crisis. At the same time, it is necessary to factor in the costs of monitoring and verification, besides that of building and maintaining international storage sites, if it is so decided.

Chapter 6 : Fissile Material Cut-off Treaty - Wikipedia

Debate ; Help Me Fissile Material Cutoff Treaty in outer space if and only if the People's Republic of China signs the Fissile Material Cutoff Treaty.

Chapter 7 : Critical issues

States in favor of including stocks tend to call for a Fissile Material Treaty (FMT) while States favoring a ban on production often refer to a Fissile Material Cut-Off Treaty (FMCT). The designation FM(C)T, used by the International Panel on Fissile Materials (IPFM), makes this disagreement explicit.

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Fissile Material Cut-off Treaty (FMCT) Provisions / Analysis Negotiating some type of fissban - a Fissile Material Cut-off Treaty (FMCT) or a more comprehensive Fissile Material Treaty (FMT) - has been part of the work deadlocked for over a decade in the United Nations' Conference on Disarmament (CD).