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BACKGROUND GUIDE

UNITED NATIONS GENERAL ASSEMBLY

Agenda:

Reviewing the disarmament of nuclear weapons in accordance with the recent nuclear weapon tests

Letter from the executive board

Dear Delegates,

It is an honour to be serving as a part of the Executive Board at the first committee of the General Assembly, at Jaypee Model United Nations 2018. Please consider that the following guide, as the name suggests, is merely to provide you with the background of the agenda and cannot serve as the credible source of information. Your real research lies beyond this guide and we hope to see some strong content and debate come our way.

The agenda at hand is both vast and complex, and a successful discussion on it would entail the collective participation of all of you. It shall be your prerogative to decide the direction in which you want to take this committee. This agenda demands to be seen from more than one perspective, one that covers the threat of use of Nuclear weapons in totality, the other could be use of the nuclear resources around the world from mines and weapons; and another could be the proliferation regime to build a nuclear weapon free world. At the outset, we would like to state that the agenda is to be analysed from a policy stand point as opposed to a technological one. However we do understand that the agenda is bound to have a technological aspect, we expect you to keep it limited, enough to structure your argument/content related to a policy. If you are doing an MUN for the very first time, we expect you to read the rules of procedure given in this hyperlink. Rest, the same aspect for research applies to you too. Do not feel taken aback on the research, foreign policy and other details of the allotted country.

Do read the questions that have been mentioned in the latter half of the guide. Those questions might shape the debate. At the same time, the agenda is open to interpretations and there shall be no direction of debate that shall be provided by the Executive Board. Delegates are required to direct the council at all stages, unless stagnation occurs. We hope to see a great level of effort and enthusiasm from you all, so that we all can take back a great experience.

This Background has been created one month prior to the conference and it is in best interest to stick to Reuters/CNN/BBC/UN News and documents to find more after you have researched. Do research the updated information on various news agencies but be careful of quoting the credible sources only while presenting arguments/points.

Happy Researching.

Varad Choudhary
Chairperson

PART I: Mandate

Source of proof

Documents from the following sources will be considered as credible proof for any allegations made in committee or statements that require verification.

A. Reuters: Appropriate Documents and articles from the Reuters News agency will be used to corroborate or refute controversial statements made in committee. (www.reuters.com)

B. UN Document: Documents by all UN agencies will be considered as sufficient proof. Reports from all UN bodies including treaty based bodies will also be accepted.

C. Government Reports: Government Reports of a given country used to corroborate an allegation on the same aforementioned country will be accepted as proof.

United Nations General Assembly DISEC

The General Assembly is the main deliberative organ of the United Nations. Chapter IV, Articles 9-22, of the UN Charter concern the General Assembly. All Member States participate in the General Assembly and each state has one vote.

The First Committee, one of the six Main Committees of the General Assembly, is allocated agenda items related to disarmament and international security.

DISEC covers a variety of different topics ranging from the illegal trade in weapons to conflicts dealing with non-proliferation of biological and chemical weapons. Like the other committees of the United Nations General Assembly, DISEC is unable to impose sanctions, authorize armed intervention or pass binding resolutions. That being said, DISEC has submitted recommendations to the United Nations Security Council and to the UN Secretariat on several occasions. DISEC has assisted in the production of several important treaties and conventions, including the Chemical Weapons Convention (1992), which outlaws the production, stockpiling and use of chemical weapons, and the Non-Proliferation Treaty (1968), which aims to prevent the spread of nuclear weapons and to promote peaceful cooperation in the field of nuclear energy amongst other things. Although DISEC was not directly responsible for the creation of these two documents, it certainly played an important role in laying the foundations thereof.

PART II: Agenda Overview

-Introduction-

The discovery of radioactivity by Henri Becquerel bestowed upon human beings an ultimate source of power. Nuclear energy not only provides a relatively non-polluting source of power but one that is virtually inexhaustible. With the rapidly increasing energy demand by the world's growing population, this share is likely to increase in the upcoming decades. As with any other source of energy there are both benefits and drawbacks; while nuclear energy provides a relatively non-polluting source of power generation this is at the cost of producing dangerous radioactive waste and creating opportunities for states to utilize the capabilities of their nuclear infrastructure for the production of nuclear weapons. The dual nature of this technology and its application for weapons production purposes has been at the very core of international security agenda. Today a number of countries with nuclear energy programs have the capability, if they choose, to manufacture nuclear

weapons within a matter of months if their security perceptions change, because they have mastered the critical technology - uranium enrichment and plutonium reprocessing. In the recent past, many states have been found to or suspected to pursue production of nuclear weapons. In order to maintain sustainable peace for the future, addressing weapon production threats inherent in nuclear energy infrastructures is of fundamental concern to the international community. It is indeed the task of the International Atomic Energy Agency (IAEA) to safeguard nuclear infrastructures from being misused for military purposes. No solution exists that can cleanly separate a full nuclear energy fuel cycle and the threat of proliferating nuclear weapons. Instead, the IAEA and the international community must pursue various approaches that aim to minimize proliferation threats.

- The Link Between The Nuclear Fuel Cycle And Weapon Production -

The processes of producing energy in a nuclear reactor and of exploding a nuclear weapon share the same underlying laws of nuclear physics, a nuclear fission reaction. It is therefore not surprising that the major industrial processes required for energy production and for manufacturing nuclear weapons are very similar.
Both rely on the nuclear fuel cycle, a set of complex nuclear facilities that each has a specific role in the acquisition, processing and usage of nuclear fissile material. In order to highlight the links between the nuclear fuel cycle and weapon production and to introduce the essential technical jargon, it is worthwhile to take a closer look at uranium enrichment, reactor fuel reprocessing and at the fundamental ingredients of a nuclear weapon.

- Nuclear Enrichment -

Naturally occurring uranium only has a 0.7% content of uranium-235 with uranium-238 roughly making up the rest. Yet nuclear power reactors generally require uranium enriched in up to 4% of uranium-235, also called low enriched uranium (LEU), as the fissile nuclear material to operate. Raising the uranium-235 content in uranium is a process called “enrichment.” It is a difficult process and requires large and highly sophisticated enrichment facilities, hence traditionally only technologically advanced states were able to master it.
As the nuclear enrichment cycle depicts, any facility that can enrich uranium for civilian purposes can be used to enrich uranium for weapon building activities. Here lies the importance of the Agency safeguards. The Agency monitors the enrichment activities and reports any irregularities. Before moving to the next section, it is important to consider a few definitions of uranium of different concentrations.

- Natural Uranium has a 235U concentration of less than 0.7%, as it exists in nature.
- Slightly enriched uranium (SEU) has a 235U concentration of 0.9% to 2%.
- Reprocessed uranium (RpU or RU) is a product of nuclear fuel cycles involving nuclear reprocessing of spent fuel. RpU recovered from light water reactor (LWR) spent fuel typically contains slightly more U-235 than natural uranium, and therefore could be used to fuel reactors that customarily use natural uranium as fuel. However, it also contains the undesirable isotope uranium- 236 which undergoes neutron capture, wasting neutrons (and requiring higher U-235 enrichment) and creating neptunium-237 which would be one of the more mobile and troublesome radionuclides in deep geological repository disposal of nuclear waste.
- Low-enriched uranium (LEU) has a lower than 20% concentration of 235U. For use in commercial light water reactors (LWR), the most prevalent power reactors in the world, uranium is enriched to 3 to 5% 235U. Fresh LEU used in research reactors is usually enriched 12% to 19.75% U- 235, the latter concentration being used to replace HEU fuels when converting to LEU.

• Highly enriched uranium (HEU) has a greater than 20% concentration of (235) U or (233) U. The fissile uranium in nuclear weapons usually contains 85% or more of (235)U known as weapon(s)-grade, though for a crude, inefficient weapon 20% is sufficient (called weapon(s)-usable).

- Nuclear Weapon (Ingredients) -

A nuclear weapon is an explosive device that derives its destructive force from nuclear reactions, either fission or a combination of fission and fusion. Both reactions release vast quantities of energy from relatively small amounts of matter. The first fission ("atomic") bomb test released the same amount of energy as approximately 20,000 tons of TNT. The first thermonuclear ("hydrogen") bomb test released the same amount of energy as approximately 10,000,000 tons of TNT.
The fundamental ingredient for a nuclear weapon is either one of the following nuclear fissile materials: uranium with an approximately 90% enrichment in uranium-235, called highly enriched uranium (HEU), or plutonium-239 with a low plutonium-240 content, called “weapon-grade plutonium”. Both these materials can be easily obtained from a nuclear enrichment plant or a reprocessing plant. Therefore, even if a country does not have the design to manufacture e nuclear weapon, they can hoard HEU or weapon(s)-grade plutonium for future purposes. The process of weaponization – turning the fissile material into a weapon – is in fact straightforward compared to the difficult processes of enrichment and reprocessing, particularly when HEU is to be used as the nuclear explosive.
From this technical introduction above, it follows that the two important intersections between operating a civilian nuclear fuel cycle and the production of nuclear explosives are uranium enrichment and reactor fuel reprocessing. LEU and HEU can be obtained from the same facility and it is also important to note that enriching the uranium-235 content from 0.7% to 4% for LEU requires much more time and energy than enriching it from 4% to 90% for HEU. The production of weapon-grade plutonium only requires a nuclear power or research reactor reprocessing facilities, because weapon-grade plutonium can easily be extracted there. Developing and operating enrichment and reprocessing facilities are the highest hurdles a state has to overcome in order to produce nuclear energy and to produce nuclear weapons indigenously. If states possess such facilities, they are able to conceal a military nuclear program in their civilian fuel cycle, thereby avoiding the costs of being punished by the international community.
The reasons why states choose to develop nuclear weapons are manifold. They may wish to obtain a strategic deterrent to increase their national security, the decision to go nuclear may arise from the internal politics of the state, or weapons may be acquired because they are seen as prestigious and give the state a higher status in international politics. In any case and as the following three approaches show, the key in reducing the proliferation risk inherent in nuclear energy infrastructures is to prevent states from misusing their facilities or from persuading them not to build enrichment and reprocessing facilities in the first place.

- IAEA Safeguards System -

The 1968 Non-Proliferation Treaty (NPT) is the foundation of the nuclear non-proliferation regime.
Article I sets out the legal obligations for the five nuclear weapon states (NWSs) not to help the non-nuclear weapon states (NNWSs) to acquire nuclear weapons and **Article II** prohibits the NNWS from taking steps to acquire that capability on their own. Article IV of the treaty grants all states the „inalienable right“ to develop their own nuclear infrastructures for peaceful purposes. Yet, under **Article III**, all NNWSs are required to conclude safeguards agreements with the IAEA. Such safeguards are any “measures through which the IAEA seeks to verify that nuclear material is not diverted from peaceful uses.” Now what do these safeguards include? They include, for example, taking measurements in enrichment facilities to verify that states do not produce HEU and surveillance systems in reprocessing facilities to ensure that weapon-grade plutonium is not diverted. Virtually every state that has nuclear facilities has operational safeguard

agreements with the Agency and maintaining these safeguards is the IAEA‟s primary way in ensuring that a state's nuclear infrastructure is not misused for weapon production. The Information Circular 66 of the IAEA mentions the Agency's Safeguards System.

The safeguards system clearly outlines: the Agency's obligations (Articles 9-14); the principles of implementation (Articles 15-18); nuclear materials subject to safeguards (Articles 19 & 20); exemptions from safeguards (Articles 21-23); and safeguards procedures including records, reports and inspections (Articles 29-68). It is generally well accepted that IAEA safeguards have made a fundamental contribution to sustainable peace, as the award of the 2005 Nobel Peace Prize to the IAEA for "their efforts to prevent nuclear energy from being used for military purposes" demonstrates. ***However, safeguards require constant updating*** to reflect the nuclear proliferation threat of their time. In the 1970s, the perceived proliferation threat was the misuse of nuclear material in indigenous nuclear fuel cycles. Hence, with safeguards agreements of type INFCRIC/153 (Corrected) (the Comprehensive Safeguards Agreements (CSA)) the Agency is limited to nuclear material accountancy and the verification of declared facilities only. ***The CSA remains the "standard" safeguards agreement today as this is the type of safeguards agreement that every state is required to conclude under NPT Article III, as noted above.*** The major weakness of the CSA is that they do not allow IAEA inspectors to visit undeclared facilities and to utilize verification methods that go much further than material accountancy. The international community was paying the price for limiting the scope of standard safeguards when it became clear that Iraq was able to establish an advanced clandestine nuclear weapon program – effectively "under the nose of the IAEA" – despite a CSA safeguards agreement being in force. The program's discovery after the Gulf War in 1993 showed that CSA agreements have become wholly inadequate.
The Iraqi discovery was also the catalyst in negotiating INFCIRC/540 (Corrected) type safeguards (the Additional Protocol, (AP)). **The 1997 Additional Protocol (AP) brought a revolution in multilateral nuclear verification by providing a new proactive safeguards methodology and enabling the Agency to employ the latest technologies when conducting inspections.** They were created as the perceived proliferation threat changed in the 1990s to proliferation through facilities not previously declared to the Agency. Concluding the AP with the Agency is voluntary for states, but many states have taken this step to demonstrate their peaceful intentions in maintaining their nuclear fuel cycle. This is one of the major drawbacks of the AP and hence the ratification process has been slow. It is argued that among the possible causes for slow ratification is that states feel they may be subject to discriminations should international attention shift towards them for whatever reason, as well as the indifference of governments about the threats of nuclear proliferation.
The AP comes with the cost of states having to compromise more of their national sovereignty to allow for more intrusive safeguards. For the IAEA to be able to officially conclude that there are no undeclared nuclear proliferation events occurring in a state, both the CSA and the AP must be in force. Therefore it is extremely imperative to accelerate the AP ratification process; otherwise the current IAEA safeguards regime will suffer.
It has become clear in recent years that the IAEA's tasks are growing much faster than its budget. The use of nuclear energy in the world increases, but the budget of the Agency's safeguards department remains comparable to the cost of running a police department of a medium-sized city, roughly $910 million. Compliance concerns with the ***Democratic People's Republic of Korea's (DPRK's) and Iran's programs, shortages in staff and technology could reduce the effectiveness of safeguards.*** The Safeguards Statement for 2009 mentions the number of states with both the CSA and AP, only with CSA, without any safeguards and reports any indication of the diversion of declared nuclear material from peaceful nuclear activities.

- A Few Pointers On The Safeguards -

International Atomic Energy Agency (IAEA) Safeguards is a system of inspection and verification of the peaceful uses of nuclear materials as part of the Nuclear Non-Proliferation Treaty (NPT), supervised by the International Atomic Energy Agency.
As the verification arm of the IAEA, the Department of Safeguard's primary role is to deter the proliferation of nuclear weapons by detecting early the misuse of nuclear material or technology, and by providing credible assurances that States are honoring their safeguards obligations. The Department also contributes to nuclear arms control and disarmament, by responding to requests for verification and other technical assistance associated with related agreements and arrangements.

What are Safeguards?

By definition, *the safeguards system comprises an extensive set of technical measures by which the IAEA Secretariat independently verifies the correctness and the completeness of the declarations made by States about their nuclear material and activities including those from the Additional Protocol, in order to achieve maximum effectiveness and efficiency within the available resources.*

Traditional Measures.
One set of measures relates to the nuclear material verification activities performed at facilities or other locations where States have declared the presence of nuclear material subject to safeguards. These measures are also referred to as "traditional safeguards".

Strengthening Measures.
Another set relates to the measures endorsed or encouraged by the IAEA Board of Governors since 1992 for strengthening the safeguards system. These measures fall into two categories. The first category comprises those measures to be implemented under the legal authority conferred by existing safeguards agreements. The second category comprises measures to be implemented under the complementary legal authority conferred by Additional Protocols concluded on the basis of the Model Additional Protocol.

Integrated Safeguards.
In 1998, the IAEA's Department of Safeguards embarked upon a program for the development and implementation of "integrated safeguards". The term refers to the optimum combination of all safeguards measures available to the Agency, including those from the Additional Protocol, in order to achieve maximum effectiveness and efficiency within the available resources.

Reference of IAEA Safeguarding System in NPT
ARTICLE III
1. Each Non-nuclear-weapon State Party to the Treaty undertakes to accept safeguards, as set forth in an agreement to be negotiated and concluded with the International Atomic Energy Agency in accordance with the Statute of the International Atomic Energy Agency and the Agency's safeguards system, for the exclusive purpose of verification of the fulfilment of its obligations assumed under this Treaty with a view to preventing diversion of nuclear energy from peaceful uses to nuclear weapons or other nuclear explosive devices. Procedures for the safeguards required by this Article shall be followed with respect to source or special fissionable material whether it is being produced, processed or used in any principal nuclear facility or is outside any such facility. The safeguards required by this Article shall be applied on all source or special fissionable material in all peaceful nuclear activities within the territory of such State, under its jurisdiction, or carried out under its control anywhere.

2. Each State Party to the Treaty undertakes not to provide: (a) source or special fissionable material, or (b) equipment or material especially designed or prepared for the processing, use or production of special fissionable material, to any non-nuclear-weapon State for peaceful purposes, unless the source or special fissionable material shall be subject to the safeguards required by this Article.

3. The safeguards required by this Article shall be implemented in a manner designed to comply with Article IV of this Treaty, and to avoid hampering the economic or technological development of the Parties or international co-operation in the field of peaceful nuclear activities, including the international exchange of nuclear material and equipment for the processing, use or production of nuclear material for peaceful purposes in accordance with the provisions of this Article and the principle of safeguarding set forth in the Preamble of the Treaty.

4. Non-nuclear-weapon States Party to the Treaty shall conclude agreements with the International Atomic Energy Agency to meet the requirements of this Article either individually or together with other States in accordance with the Statute of the International Atomic Energy Agency. Negotiation of such agreements shall commence within 180 days from the original entry into force of this Treaty. For States depositing their instruments of ratification or accession after the 180-day period, negotiation of such agreements shall commence not later than the date of such deposit. Such agreements shall enter into force not later than eighteen months after the date of initiation of negotiations.

Measures implemented under the legal authority already existing in comprehensive safeguards agreements

1) Agency collection of environmental samples at any place where Agency inspectors have access; and sample analysis at the IAEA Clean Laboratory and/or at qualified laboratories in Member States.
2) Agency use of unattended and remote monitoring of movements of nuclear material in facilities and the transmission of authenticated and encrypted safeguards-relevant data to the Agency.
3) Agency use, to a greater extent than previously, of unannounced inspections within the routine inspection regime.
4) Provision of enhanced training for Agency inspectors and safeguards staff and for State personnel responsible for safeguards implementation.
5) Closer co-operation between the Agency and State and regional systems for accounting for and control of nuclear material in States
6) Enhanced evaluation by the Agency of information derived from States' declarations, Agency verification activities and a wide range of open sources.
7) State provision of information about, and Agency inspector access to, all parts of a State's nuclear fuel cycle, from uranium mines to nuclear waste and any other location where nuclear material intended for non-nuclear uses is present.
8) State provision of information on, and Agency short-notice access to, all buildings on a site.
9) State provision of information about, and Agency inspector access to, a State's nuclear fuel cycle R&D activities not involving nuclear material.
10) State provision of information on the manufacture and export of sensitive nuclear-related equipment and material, and Agency inspector access to manufacturing and import locations in the State.
11) Agency collection of environmental samples at locations beyond those provided for under safeguards agreements.
12) State acceptance of streamlined procedures for Agency inspector designation and of requirement for multiple entry visas (valid for at least one year) for inspectors.
13) Agency right to use internationally established communications systems, including satellite systems and other forms of telecommunication.

14) Wide area environmental sampling, after Board approval of such sampling and consultations with the State concerned.
15) Revised standardized text and modified eligibility criteria for the Small Quantities Protocol.

PART III: Agenda Depth

- The International Nuclear Fuel Bank And Other Multilateral Approaches -

An approach that arguably tackles the issue more at its roots than safeguards do is to transfer parts of national nuclear fuel cycles into multilateral control. Multilateral approaches to the nuclear fuel cycle have been debated since the 1970s, but without producing any tangible results. The reasoning behind multilateral approaches is compelling: if guarantees can be given to states that nuclear fuel supply is maintained for their power reactors even when they are suddenly cut off from supplies due to a change in political or commercial circumstances, these states would lose any incentive to build their own enrichment or reprocessing facilities. Such guarantees, like the establishment of a multilateral nuclear fuel bank, would be able to cope with the continuing expansion of nuclear energy and it would also strengthen the non-proliferation regime.
Multilateral approaches could come in several phases. The first short term step could be to assure fuel supply for power reactors, such as by creating a multilateral fuel bank. Further long term phases could involve putting existing national enrichment and reprocessing facilities under multilateral operation. This would make nations who do not have indigenous supply of uranium to become completely dependent on the international community for nuclear power generation and hence ensure a greater level of transparency in terms use of imported uranium. Twelve suchproposals have been brought forward by the international community inrecent years. Yet the proposal that has advanced in negotiations the most is that of the Nuclear Threat Initiative (NTI), an independent think-tank. It envisages the creation of a LEU stockpile to dissuade states to invest in their own nuclear fuel cycle.22 The funding target of $150 million has been met in March 2009 and thus this project seems very promising. Among the states that have taken initiative and submitted proposals for multilateralizing the fuel cycle are Austria, France, Germany, Japan, the Netherlands, Russia, the United Kingdom and the United States of America.

Alongside the 2006 IAEA General Conference, a Special Event on multilateral approaches to the fuel cycle was held and it was attended by delegates from 61 Member States. The aim was to identify the strengths and weaknesses of the proposals that were on the floor at that time; it was not the aim to decide on any particular proposal. The Special Event discussed important issues such as supply conditionality, what kind of fuel should be assured by the fuel bank and what the possible roles for the Agency could be.

Under the IAEA Statue, the Agency has experience in providing nuclear fuel cycle related services and the Agency sees itself ready to facilitate and mange multilateral approaches. Problems with such approaches are that states may come under the impression that they need to surrender some of their national sovereignty to a multilateral organization, even though care was taken at the 2006 Special Event to communicate that a multilateral approach is not aimed at undermining the right of a state to make its own decisions regarding its fuel cycle.

Another important multilateral effort for non-proliferation and disarmament is the International Commission on Nuclear Non-proliferation and Disarmament (ICNND) which is a joint initiative of the Australian and Japanese governments. The Commission is co-chaired by former Australian foreign minister Gareth Evans and former Japanese foreign minister Yoriko Kawaguchi. Key goals for the Commission include undertaking preparatory work for the Nuclear Non-Proliferation Treaty Review Conference in 2010, including shaping a global consensus in the lead-up to the Review Conference. They have come out with a report titled “Eliminating Nuclear Threats – A Practical Agenda for Global

Policymakers" which provides a good insight on what the main problems are, from where the threats arise and what can be done both in policy and action. The conflict between Iran and other countries regarding Iran's nuclear policy, led to Russia coming in the spotlight. In November 2005, with an aim to convince Iran to contain their nuclear enrichment program Russia's Foreign Minister Sergey Lavrov proposed a joint ownership of a uranium enrichment venture. By this proposal, Iran could have used Russian facilities to enrich its uranium to LEU in order to power its power plants. This set the ball rolling for the IUEC or the International Uranium Enrichment Centre in the Russian government circles.

Although initially envisioned as a bilateral relation between Russia and Iran, Moscow's assured fuel supply proposal quickly grew to a multilateral nuclear fuel cycle enterprise. As the first pilot project, the IUEC in Angarsk was established between Russia and Kazakhstan. The project aimed at providing "access to uranium enrichment to interested parties without transferring the sensitive technology or restricting development of national nuclear fuel cycle programmes." The IUEC follows an open joint stock model with the IAEA as an observer so as to ensure independence from the independent government budgets.

In order to effectively function, there has to be trust and confidence in the integrity of the assured supply agreement between "supplier" and "recipient" states. The "recipient" states face the risk of having a political decision by "supplier" states cutting off supply of nuclear fuel for the "recipient's" power reactors. Russia however contented that, "the main assurance that the initiative should provide is that a country complying with its non-proliferation commitments must be sure that, whatever the turn of events, whatever changes take place in the international situation, it will receive the services guaranteed to it."The key objective of IUEC is the provision of guaranteed uranium enrichment services to its shareholders through guaranteed access to enrichment and conversion capacities of all Russian enterprises.

It is at this juncture that the role of the IAEA as a facilitator between nuclear suppliers and receivers comes back into focus. In the context of the agreement on setting up the IUEC as well as in response to the IAEA Director General's initiative on assurances of supply of nuclear fuel, Russia proposed creating a guaranteed reserve of low enriched uranium (LEU) in June 2007.
This LEU Guaranteed Reserve would be controlled by the IAEA and could be used by its Member States that find themselves unable to procure LEU from the open market for political reasons.At present, Ukraine and Armenia have joined the IUEC Agreement.
Following the IAEA's approval of the LEU Guaranteed Reserve initiative, a guaranteed reserve was placed under the IUEC storage facility in Angarsk in November 2010 and inaugurated in December 2010 after the first IAEA inspection. After completion of all formal procedures the agreement entered into force on 3 February 2011. From that date on, the LEU reserve in Angarsk has been available for IAEA Member States.Russian state nuclear energy company ROSATOM said that it had completed arrangements for the fuel store in the vault of the International Enrichment Centre at Angarsk. It will be managed under the auspices of the IAEA.

The establishment of the nuclear bank has elicited responses from the international community. The EU High Representative for Foreign Affairs and Security Policy Catherine Ashton said in 2010: "Following the creation of the LEU reserve in the Russian federation in collaboration with the IAEA, today's resolution constitutes the first decision on an assurance scheme under direct control of the IAEA." In the same year, World Nuclear Association director general and former US Ambassador to the IAEA John Ritch said, "Any mechanism that truly fortifies the nuclear non-proliferation system warrants support, both from the nuclear industry and from governments worldwide," but noted that "no-one has yet explained a scenario where a country is denied fuel by other governments even

though it is meeting its commitments - and then turns to the same governments to supply the fuel through the IAEA."

The concept of the nuclear bank, works to ensure that indigenous nuclear capabilities are not developed thereby eliminating the risk of dual-use. Therefore, by removing the need to possess enrichment technology, a nuclear bank acts as a deterrent to nuclear proliferation.
Since the Acheson-Lilienthal Report and the Atoms for Speech proposal the need to have a common international body or agency controlling global nuclear supplies and allocating the same to countries to pursue peaceful ends has been on the table. However, it is only in the Russian fuel bank under the JSC-IUEA that such an ideal has seen practical implementation. Although efforts in the past have been made towards this regard, only Russia seems to have reached such an extent of on-ground success. The proposal to establish a guaranteed reserve of low enriched uranium in Angarsk as the first step mechanism of guaranteed fuel supplies was outlined in the Communication of the Permanent Missions of the Russian Federation and the United States of America regarding a Joint Statement on Multilateral Nuclear Fuel Assurances.

The Russian fuel bank as of November 2010, announced that it had established a 120 tonne stockpile of LEU. The enrichment levels ranged from 2 per cent to 4.95 per cent and the expenses for creating and maintaining the reserve were borne by the Russian Federation. This stockpile is available to any IAEA member country in line with the principles of the NPT and not possessing reactors of its own. The decision on the release of a material from the LEU Reserve is to be made by the Director General of the IAEA.

The advantages of being a member of the IUEC and participating in the nuclear bank as proposed by the Russian Federation includes– guaranteed supply of goods and services thereby increasing energy security, diversification of supplies and optimum logistics, all rights of a joint stock company shareholder and most significantly, participation in an international project with a mission to reduce risks of sensitive technology proliferation.

However, the issue still remains as how to changes in the political environment would impact supplier-receiver relations. This concern is extremely legitimate especially when seen against the backdrop of the 1979 Iranian Revolution when countries such as Germany, Russia, China, US, France and Ukraine stalled their various supplies needed to maintain Iran’s nuclear power plants. Apart from this, there a number of questions that concerns a multilaterialized Nuclear Fuel Cycle and a Nuclear fuel bank regarding the access of material from such approaches for Non NPT states or Non NPT NSG states. NSG , here refers to the Nuclear Suppliers Group , which is multinational body concerned with reducing nuclear proliferation by controlling the export and re-transfer of materials that may be applicable to nuclear weapon development and by improving safeguards and protection on existing materials.

-Dual Use Technology-

Dual use technology as the term suggests is any technology which can serve both peaceful and military purposes. The European Commission, Trade Topics defines dual use goods as, “products and technologies normally used for civilian purposes but which may have military applications.” Dual technology has been prevalent in the international scenario since the Second World War when Germany converted its ability to make precision wind-up toys to produce shells and bomb fuses. Since then, at various moments in history, epochal advancements in technology have come burdened with the threat of being used for violent purposes. This holds true for the nuclear technology as well. The possibility of using nuclear energy for civilian purposes particularly in the energy and medical sector makes the prospective of acquiring the capacity of developing nuclear technology a lucrative idea for many countries. However, as predicted by many realist theorists, the

development of such a capacity by one nation creates a domino effect in the international arena simply because of the latent military potential in civilian nuclear technology. This is best exemplified as in the case of Brazil and Argentina, Israel and Iran and North and South Korea.The latent military possibilities of nuclear technology arise as a result of the enrichment process it undergoes to serve even civilian needs. There are two pathways for nuclear enrichment—Uranium Pathway and Plutonium Pathway. Natural Uranium contains 0.72 percent uranium-235 and 99.275 percent uranium-238 as well as a tiny fraction of uranium-234. Enrichment is the process that is undertaken to increase the percentage of Uranium-235. Weapon grade uranium is a subset of the larger Highly enriched uranium (HEU) category. It contains more than 90 per cent Uranium-235. Low enriched uranium (LEU) is used for fueling reactors but not for powering bombs and contains more than 0.72 per cent but less than 20 per cent uranium-235. The sticky point in the situation is that the same enrichment technology can be used to make HEU or LEU.

In the case of Plutonium Pathway, plutonium-239 is the isotope required to fuel bombs. Nuclear reactors produce this isotope when uranium-238 in the fuel mixture absorbs neutrons. The reprocessing process involves a number of physical and chemical reactions to extract plutonium. Currently, the PUREX technique is the only commercially available reprocessing mechanism. However, the PUREX reprocessing technique separates the plutonium from the highly radioactive fission products. The fission products actually provide a lethal barrier against the theft of unshielded spent fuel containing plutonium. Once separated, this fuel needs to be guarded as a nuclear weapon itself, as it is directly usable in such a weapon.

The Uranium Pathway poses a risk of dual use of nuclear technology from the governments of countries which possess such technology. Since the same process can be used to produce both HEU and LEU, the entire responsibility of ensuring that the LEU technology is not misused to produce HEU relies on a system of self-monitoring. The uranium enrichment process uses centrifuge technology. A centrifuge enrichment plant can be designed to allow the operators of the plant to alter the connections so as to intensify the enrichment process from LEU to HEU. Therefore, a LEU enrichment plant is a sleeping nuclear explosive material factory. Countries which come under the purview of the IAEA and have signed the NPT thus have the potential to reveal only the LEU enrichment plants and in the absence of an inspector carry out HEU enrichment processes. This has been previously been the cause for doubt over South Korea and Iran.

The Plutonium pathway however raises the equally (if not more) important issue of nuclear capabilities getting into the hands of non-state actors. While states are bound by some extent to certain regulations by the signing of international agreements and by coming under the scanner of regulatory agencies, non-state actors face no such qualms thereby intensifying the threat posed by them if they possess nuclear capacity.

-Role of Nuclear Weapon Free Zones-

Regional nuclear weapon free zones (NWFZs) are in effect in Latin America and the Caribbean (Treaty of Tlatelolco), the South Pacific (Treaty of Raratonga), and Southeast Asia (Treaty of Bangkok). A treaty establishing an NWFZ has been negotiated for Africa (Treaty of Pelindaba), but has not yet entered into force because the required number of ratifications is lacking. As discussed earlier, protocols on non-use of nuclear weapons ratified by the NPT nuclear weapon states are in effect for the Latin American and South Pacific NWFZs. They have been negotiated for the Southeast Asia and African NWFZs. In the case of the Southeast Asia NWFZ, their entry into force has been delayed by the objection of nuclear weapon states to the zone's application to bar deployment or transport of nuclear weapons in extensive regional waters. Efforts continue to complete negotiations on an NWFZ for Central Asia.

The NWFZs in general prohibit the manufacture, production, possession, testing, acquisition, receipt, and deployment of nuclear weapons within the zone. They therefore stand as an important reinforcement to the NPT, applying to most of the Global South. The NWFZs also have the effect of barring deployment by the nuclear weapon states, therefore precluding arrangements like the one between NATO and the United States in which U.S. nuclear bombs are deployed in NATO countries. They also contribute to confidence-building and consensus in the region.

For example, the Treaty of Tlatelolco provided leverage additional to the NPT for persuading Brazil and Argentina to abandon the option of nuclear weapons.

-The International Court of Justice advisory opinion-

The 1996 advisory opinion of the International Court of Justice on nuclear weapons was provided in response to the United Nations General Assembly, which asked the Court to address the question: "Is the threat or use of nuclear weapons permitted in any circumstance under international law?" In paragraph 2F of the "dispositif" setting forth its answers to the General Assembly, the Court unanimously held: "There exists an obligation to pursue in good faith and bring to a conclusion negotiations leading to nuclear disarmament in all its aspects under strict and effective international control." The International Court of Justice (ICJ) is the judicial branch, sixth organ of the UN, and the highest court in the world on general questions of international law. Endorsed by every judge on the Court, its statement of the disarmament obligation is now the authoritative interpretation of Article VI of the NPT, and is perhaps the most important result of the case. Its importance is underlined by the fact that it was not required by the request of the General Assembly for clarification of the legal status of threat or use of nuclear weapons, but rather was produced on the Court's own initiative. In the Court's view, elimination of nuclear weapons is the only adequate response to the dilemmas and risks posed by the nuclear age. Of special significance is the holding that Article VI requires states to achieve nuclear disarmament through good faith negotiation. Talking is not enough; the talk must lead to action. Also important is that the Court delinked the obligation to achieve nuclear disarmament from the objective of comprehensive demilitarization ("general and complete disarmament"). Nuclear weapon states can no longer plausibly rely on the rationale that elimination of nuclear weapons must await comprehensive global disarmament. Also significant is the clear implication that the obligation applies to all states, not only those who are party to the NPT, thus binding the nuclear-armed, non-NPT party states India, Israel, and Pakistan.

-Threat or Use of Nuclear Weapons and its Illegality-

At this point of time, 9 countries hold the possession to a total number of more than 16,000 nuclear weapons –

1. United States of America
2. United Kingdom
3. Russian Federation
4. People's Republic of China
5. French Republic
6. Democratic People's Republic of Korea
7. Pakistan
8. Israel
9. Republic of India

Many of the countries with smaller nuclear arsenals, such as India and Pakistan, are actively engaged in regional conflicts, making the possibility of regional nuclear war a concern. North Korea illicitly acquired nuclear weapons, and other countries, including Iran and Syria, have violated their nuclear safeguards commitments and are suspected of covertly pursuing nuclear weapons capabilities.

Meanwhile, the United States of America and Russian Federation, hold the largest number of world's nuclear weapons, and at the pre cold war era it stocked up to 93% of the world's nuclear weapons. In its advisory opinion, the International Court of Justice also concluded that
"the threat or use of nuclear weapons would generally be contrary to the rules of international law applicable in armed conflict, and in particular the principles and rules of humanitarian law."

The ICJ analysed the following factors to support the above conclusion –

1. Nuclear weapons have "unique characteristics," including "their destructive capacity, their capacity to cause untold human suffering, and their ability to cause damage to generations to come;" their "destructive power cannot be contained in either space or time;" a nuclear explosion "releases not only immense quantities of heat and energy, but also powerful and prolonged radiation," which "would affect health, agriculture, natural resources and demography over a very wide area," and "has the potential to damage the future environment, food and marine ecosystem, and to cause genetic defects and illness in future generations;"

2. "The cardinal principles contained in the texts constituting the fabric of humanitarian law are the following. The first is aimed at the protection of the civilian population and civilian objects and establishes the distinction between combatants and non-combatants; States must never make civilians the object of attack and must consequently never use weapons that are incapable of distinguishing between civilian and military targets. According to the second principle, it is prohibited to cause unnecessary suffering to combatants: it is accordingly prohibited to use weapons causing them such harm or uselessly aggravating their suffering. In application of that second principle, States do not have unlimited freedom of choice of means in the weapons they use."

3. Self-defense warrants "only measures which are proportional to the armed attack and necessary to respond to it"

4. The environment "represents the living space, the quality of life and the very health of human beings, including generations unborn," and "States must take environmental considerations into account when assessing what is necessary and proportionate in the pursuit of legitimate military objectives"

5. The nuclear weapon states failed to demonstrate that any use of nuclear weapons, including a "clean" use involving "low yield" weapons, could comply with legal requirements or avoid catastrophic escalation.

PART IV: SUMMARY

If the above content has to be summarised in brief, it talks about:

1. Non-proliferation treaty and its legality
2. What are IAEA Safeguards and its use?
3. How can nuclear resources be used?
4. Violation by DPRK and Iran

Though the background guide has been made very detailed but if you feel the background guide is long and not understandable, we'd request you to go thru the above pointers in detail on your own along with the following topics:

1. Recent Nuclear Weapon Tests by DPRK
2. NSG Guidelines and its implication

3. NPT review conference
4. What happened during the Cuban Missile Crisis

If you go thru the above topics in details, along with your foreign policy, you'll be able to guide the committee very easily.

PART V: Questions to be considered

1. What is your country's stand towards the current non-proliferation regime (NPT, CSA and AP)?

2. Is it necessary for the non NPT Nuclear Weapons States be brought under the non-proliferation regime so that the Non Nuclear Weapon States can be safeguarded?

3. Is the NPT complete or does it have flaws? What is the policy of each state over the use of Nuclear weapons?

4. Can non proliferation and the current agenda at hand be interlinked? How or how not?

5. What is the legality of the threat of use of nuclear weapons? Is it sufficient to hold back any nation from its use?

6. What is the most effective and acceptable way for multi-lateralizing the nuclear fuel cycle? Does multi-lateralizing the fuel cycle protect the interests of Non Nuclear Weapon States?

7. Considering international skepticism towards a comprehensive multilateral database of nuclear materials particularly from the non-weapons states, how feasible is this approach?

8. Can the Dual Use Technology be brought into question while talking of threats?