



SSN Model United Nations (SSNMUN) 2018

# **United Nations General Assembly: Disarmament and International Security Committee (UNGA: DISEC)**

Tackling the growing threat of nuclear terrorism

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## **Letter from the Executive Board (EB)**

Greetings, delegates!

We are proud to welcome you to the UNGA: DISEC simulation at SSNMUN 2018. The quality of the council depends on the quality of your contribution to it, and if that is to be ensured, then reading this guide is a must. We hope that you've done your part in preparing for the three days of intense debate that lies ahead.

Ahead of this kind of a committee, we expect you to have significant knowledge of your country and the policies your country has adopted over the years. Knowing the friends, enemies and geopolitical dynamics of your country goes a long way in being a key player in the committee. Seeing as this is a committee concerning nuclear terrorism, we expect you to have fundamental knowledge about **energy production, nuclear security, dual-use technology, and proliferation of fissile material**. This agenda has been strategically chosen to keep in mind the impact it has on the international community.

**Even though this is a disarmament committee leaning to the technicalities, it is a realistic one and we expect the delegates to be pragmatic in their debate.** However, this guide is nothing more than a starting point in your research and will in no way hold as a viable source in committee. If you choose to back up your research with substantial sources, please note that we will only be accepting reports from United Nations (UN) offices or bodies as credible sources of proof. Others will be treated as persuasive proof, depending on their legitimacy.

Over the three days of the conference, we expect you to display adequate diplomatic capabilities and come up with innovative and feasible solutions to the agenda under discussion. We're pretty sure that by the end of this simulation, you'll have tapped the diplomatic potential and the speaking prowess in you. We hope that you will enjoy this experience and demonstrate a greater interest in international politics.

Godspeed, y'all!

## **Introduction to the committee**

### **Mandate**

Every committee that is simulated in a conference has a very specific mandate. **The discussion of an agenda and proposal of solutions should be within the mandate of the committee.** The UNGA: DISEC is one of the six main standing committees of the United Nations General Assembly (UNGA). This committee is responsible for dealing with disarmament, global challenges, and threats to peace that affect the international community. It aims to seek out feasible solutions to the challenges in the international security regime.

This committee follows the mandate of the UNGA as detailed in Chapter IV (Articles 9 – 22) of the Charter of the UN.

### **Procedure**

The purpose of putting in procedural rules in any committee is to ensure a more organised and efficient flow of debate. Kindly take note that the committee shall follow the **United Nations Association-United States of America (UNA-USA) Rules of Procedure**. Although the Executive Board shall be strict with the Rules of Procedure, the discussion of the agenda will be the main priority. So, delegates are advised not to restrict their statements due to hesitation regarding the procedure.

### **Foreign policy**

Following the foreign policy of one's country is the **most important aspect** of a Model UN Conference. This is what essentially differentiates a Model UN from other debating formats. To violate one's existing foreign policy without adequate reason is one of the worst mistakes a delegate can make. However, a delegate must understand that certain justified compromises or extensions in foreign policy have to be made in order to reach a middle-ground.

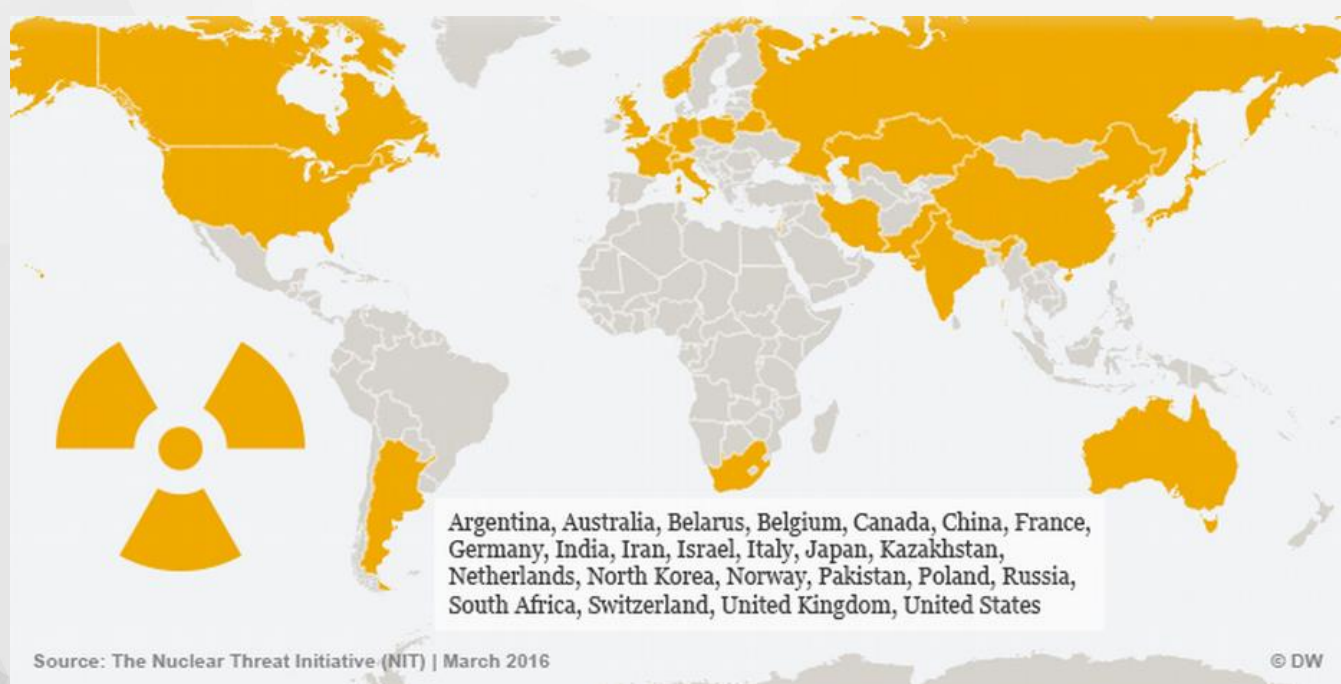
### **Role of the EB**

The EB is appointed to facilitate debate. **The direction and flow of debate shall be decided by the committee.** The delegates are the ones who constitute the committee and hence will be uninhibited while presenting their opinions/stance on any issue. The EB will only intervene, in a limited and strategic manner, in case of loss of focus and/or direction of the committee.

## Nuclear security

### Overview

Of all the terrorist threats facing the international community, perhaps the gravest is the possibility of terrorists constructing or obtaining a nuclear weapon and detonating it in a city. If a terrorist group exploded just one nuclear weapon, hundreds of thousands of people could die. Because there is no effective protection against a nuclear blast, one viable solution is to prevent terrorists from obtaining nuclear bomb materials or weapons in the first place.



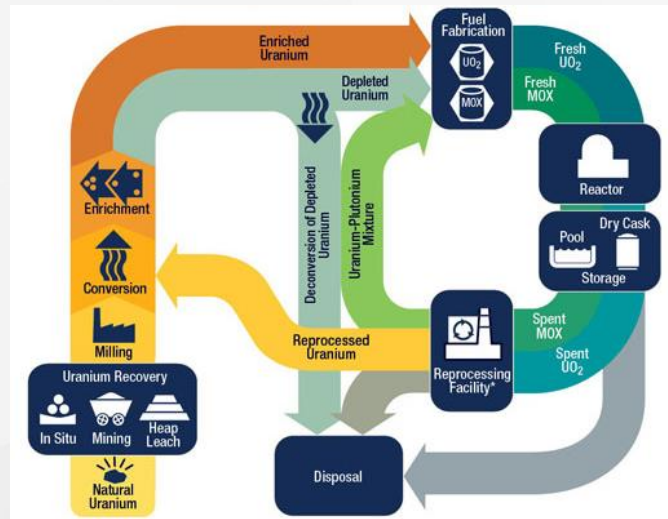
*Figure 1: Countries with weapons-usable nuclear material [Nuclear Threat Initiative (NTI)]*

A nuclear weapon requires either highly enriched uranium (HEU) or plutonium. Fortunately, these materials are not found in nature and are difficult to produce. This means there are only two plausible ways for terrorists to acquire nuclear weapons. First, they could steal an intact nuclear weapon from existing arsenals or purchase a stolen weapon. More likely, terrorists could acquire the material needed to build a nuclear weapon and the expertise to construct a workable bomb from this material. Because only a relatively small amount of HEU or plutonium is needed to build a bomb, terrorists could feasibly steal enough material to build one or more nuclear weapons.

A crude nuclear weapon would use 40-50 kilograms (88-110 pounds) of HEU; a more sophisticated design would require 12 kilograms (26 pounds) of HEU or 4 kilograms (9 pounds) of plutonium. The theft of HEU would be especially worrisome because it is relatively straightforward to make a bomb using this material.

### What is “dual-use”?

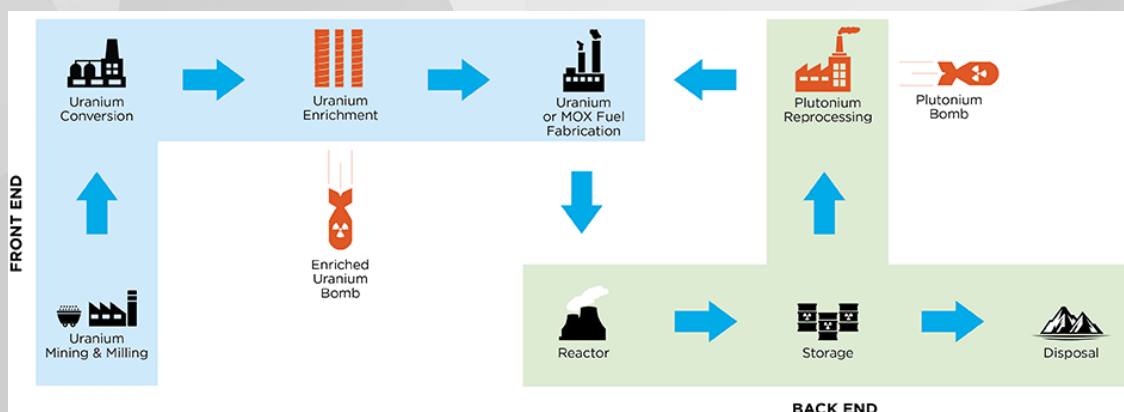
However, over the last couple of decades, there has been growing concerns revolving around the trade of nuclear-related equipment that could sometimes be diverted to non-peaceful uses. This is usually referred to as dual-use technology, with reference to nuclear technology.



*Figure 2: The conventional nuclear fuel-cycle [NTI]*

Dual use, in this sense, is a distinctly ethical concept. It is, at its core, about what kinds of uses are considered legitimate or valuable, and what kinds are destructive. When scientists and policy experts wrangle over how to deal with dual-use technologies, they tend to focus on the division between applications for good or evil. This is important as a nation does not necessarily want to hinder scientific progress without a valid reason because it provides substantial benefits in the fields of energy and healthcare.

In brief, dual-use technology refers to the possibility of civilian nuclear-power technology being used in the realm of the military. In particular, several stages of the nuclear fuel-cycle allow for the diversion of nuclear material for the production of weapons.



*Figure 3: Diverted nuclear fuel-cycle [NTI]*



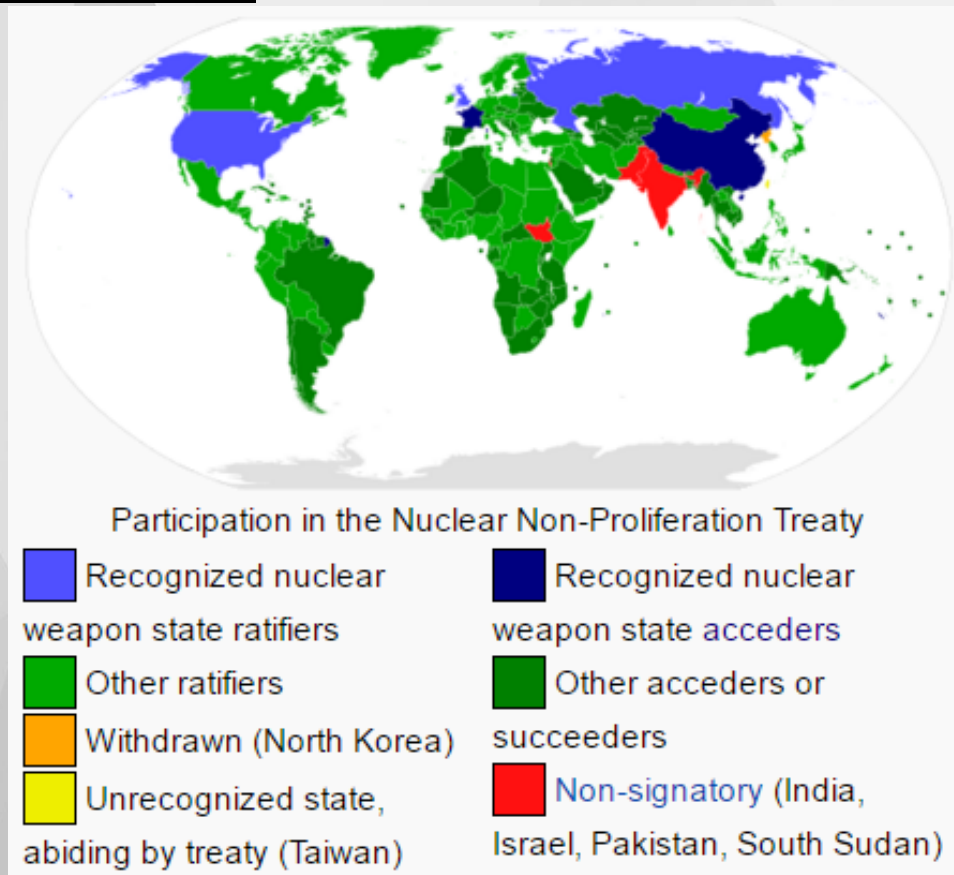
### Good governance guidelines

The above thereby opens up a route from peaceful energy production into possibly a weapons program. This, however, does not mean that the only solution is to stop the expansion of nuclear power production programs.

The alternative is to minimize the risk of proliferation that is usually associated with the expansion of nuclear power production programs. If the development of peaceful nuclear programs is poorly managed with a faulty risk-containment strategy, it will obviously lead to dangerous outcomes.

Some of the commonly pursued “good-governance” strategies include a decrease in levels of corruption, an increase in political stability, increase in governmental effectiveness, and a strong degree of regulatory competence. These strategies are usually policy-based and are aimed at effectively deterring the risk of proliferation at the grassroots level. However, these measures are ineffective in non-cooperative regimes, and that escalates the requirement for enforceable and verifiable measures to curb nuclear proliferation.

### An insight into safeguards



*Figure 4: The geographical distribution of the Nuclear Non-Proliferation Treaty (NPT) parties [International Atomic Energy Agency (IAEA)]*

In the 1960s it was widely assumed that there would be 30-35 nuclear weapons states by the turn of the century. In fact, there were eight – a tremendous testimony to the effectiveness of the NPT and its incentives both against weapons and for civil nuclear power, despite the baleful influence of the Cold War (1950s to 80s) which saw a massive build-up of nuclear weapons particularly by the United States of America (USA) and the Soviet Union.

The nuclear non-proliferation regime is much more than the NPT, although this is the pre-eminent international treaty on the subject. The regime includes treaties, conventions and common (multilateral and bilateral) arrangements covering security and physical protection, export controls, nuclear test-bans and, potentially, fissile material production cut-offs. The international community can apply pressure to states outside the NPT to make every possible effort to conform to the full range of international norms on nuclear non-proliferation that make up this regime.

- **Material Accountability** – Tracking all inward and outward transfers and the flow of materials in any nuclear facility. This includes sampling and analysis of nuclear material, on-site inspections, review and verification of operating records.
- **Physical Security** – Restricting access to nuclear materials at the site of use.
- **Containment and Surveillance** – Use of seals, automatic cameras and other instruments to detect unreported movement or tampering with nuclear materials, as well as spot checks on-site.

All NPT non-weapons states must accept these 'full-scope' safeguards, which apply to all nuclear facilities in the country. In the five weapons states plus the non-NPT states (India, Pakistan and Israel), facility-specific safeguards apply to relevant plants (see further section below). The IAEA inspectors regularly visit these facilities to verify completeness and accuracy of records.

Uranium supplied to nuclear weapons states is not, under the NPT, covered by safeguards. However normally there is at least a "*peaceful use*" clause in the supply contract, and in the case of Australia, a bilateral safeguards agreement is required which does cover all uranium supplied and all materials arising from it. Neither the peaceful use clause nor the bilateral treaty means that materials are restricted to facilities on the state's list of facilities eligible for IAEA inspection. The NPT is supplemented by other safeguards systems such as those among certain European nations (Euratom Safeguards) and between individual countries (bilateral agreements) such as Australia and customer countries for its uranium, or Japan and the USA. The terms of the NPT cannot be enforced by the IAEA itself, nor can nations be forced to sign the treaty. In reality, as shown in Iran and North Korea, safeguards are backed up by diplomatic, political and economic measures.



## **Nuclear terrorism**

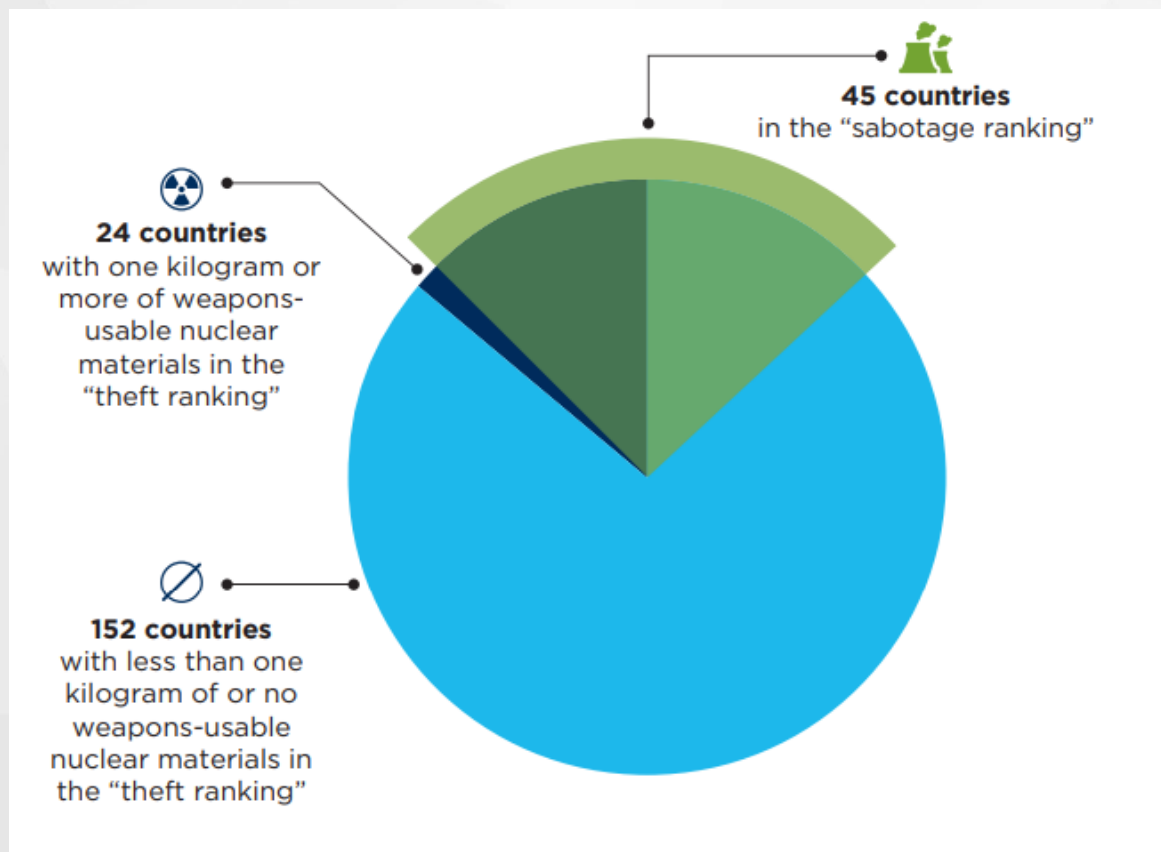
### **Overview**

There is still a real danger that terrorists might get and use a nuclear bomb, the possibility of which is the most immediate and extreme threat to global security. Keeping nuclear weapons and the difficult-to-manufacture materials needed to make them out of terrorist hands is critical to the world security – and to the future of nuclear energy as well. In the aftermath of a terrorist nuclear attack, there would be no chance of convincing governments, utilities, and the public to build nuclear reactors on the scale required for nuclear energy to make any significant contribution to coping with climate change.

But this will not be easy to achieve. At sites in dozens of countries around the world, the security measures in place for plutonium or HEU – the essential ingredients of nuclear weapons – are dangerously inadequate, amounting in some cases to no more than a night watchman and a chain-link fence. Changing that in a small period of time, broad international cooperation, a comprehensive plan, and adequate resources. The fundamental key to success will be convincing policy-makers and nuclear managers around the world that nuclear terrorism is a real threat to their countries' security, worthy of new investments of their time and resources to reduce the risks – something many of them do not believe today.

Theft of potential nuclear bomb materials is not just a hypothetical worry; it is an ongoing reality, highlighting the inadequacy of the nuclear security measures in place today: the IAEA has documented some 18 cases of theft or loss of plutonium or HEU confirmed by the states concerned (and there are more cases that the relevant states have so far been unwilling to confirm, despite the conviction of some of the participants). In virtually all of the known cases, no one had ever noticed the stolen material was missing until it was seized, suggesting that other thefts may have gone undetected.

Fortunately, there is no convincing evidence that any terrorist group has yet gotten the nuclear material or the expertise needed to make a bomb (though we cannot know what capabilities they may have succeeded in keeping secret). Also, fortunately, hostile states are highly unlikely to choose to provide nuclear weapons or the materials needed to make them to terrorist groups, because of the possibility that this would be traced back to them and that overwhelming, regime-destroying retaliation would follow. Moreover, making plutonium or HEU on their own is beyond the plausible capabilities of any terrorist group today. Hence, if the world's stockpiles of nuclear weapons, plutonium, and HEU can be kept under tight state control, nuclear terrorism can be prevented.



*Figure 5: Distribution of countries in the "theft" and "sabotage" rankings as determined by the NTI [NTI]*

Individuals or nonstate entities may attempt to acquire nuclear weapons or the materials and know-how to produce them. There is a considerable dispute over the use of the term "*terrorism*", which many believe should include actions intended to produce terror by nation-states ("*state terrorism*") as well as by nonstate entities. But we will use the terms "*terrorism*" and "*terrorist*", as they are commonly used, to refer only to nonstate entities.

Concerns have been raised about the potential acquisition of nuclear weapons by nonstate entities from nation-states that possess these weapons. For example, The Nunn-Lugar Cooperative Threat Reduction Program, designed to lessen the possibility that nuclear weapons could be obtained from Russia, has been only partially successful. In addition, there is concern about the possibility that nonstate entities will obtain fissile materials and the technical capability for producing nuclear weapons, and about the possibility of those entities making so-called dirty bombs—explosive or incendiary weapons purposely contaminated with radioactive materials.

Although dirty bombs are defined as radiological rather than nuclear weapons, they could nonetheless create widespread radioactive contamination and instil great fear in the general population.

## **Technology transfer**

As an advanced technology, nuclear know-how cannot possibly be developed globally in developing and conflict-ridden countries, so technology transfer is the only conceivable way for the terrorists to develop their own nuclear weapons. Technology transfer process accounts for three major steps, namely acquisition, assimilation and diffusion, so a serious nuclear terrorism program should comprise all of them with specific activities for each one.

The acquisition phase involves technology selection, feasibility study considering cash flow, vulnerability exploitation, to name a few. The assimilation phase deals with technology adaptation to specific conditions of the receptor terrorist entity. Finally, the diffusion phase consists of the technology generalization and deployment to the different terrorist-network branches. Backward engineering techniques and technology transfer centres play an important role in meeting this purpose.

Terrorists seeking a nuclear bomb or the materials to make one – or thieves seeking to supply them – will steal wherever they think they have the best chance of success in meeting their objectives. This means not only that the theft itself has to be successful, but that the terrorists have to be able to set off a nuclear bomb with what they get. The risk of nuclear theft from any particular facility or transport operation depends on:

- The quantity and quality of the material available to be stolen (that is, how difficult it would be to use it to make a nuclear bomb);
- The security measures in place (that is, what kind of insider and outsider thieves could the security measures protect against, with what probability); and
- The threats those security measures must protect against (that is, the probability of different levels of insider or outsider capabilities being brought to bear in a theft attempt).

## **Gaps in the current framework**

The overall risk of nuclear theft depends on the balance among these factors. The few sites where the tails of two distributions intersect – sites or transport routes with particularly weak security measures facing adversaries with particularly effective capabilities – dominate the global risk of nuclear theft, both because terrorists are more likely to target them and because they are more likely to succeed if they do. Because these factors interact, a one-size-fits-all approach to nuclear security will not work.

A security system effective enough to reduce the risk to a low level in a country like Canada, where it is highly unlikely that nuclear facilities would be attacked by dozens of well-armed outsiders or have to cope with conspiracies of al-Qaeda-linked insiders, might not be remotely sufficient for a site located in Pakistan, where both outsider and

insider threats are dangerously high. Unfortunately, the approaches in use today are not providing accurate and nuanced global assessments of any of these three critical parameters, leaving dangerous uncertainties over where nuclear security efforts should be targeted.

Assessing which nuclear sites and transport routes have the weakest security is not easy. Most countries regard the specific measures they have in place to protect nuclear weapons or nuclear materials from theft as closely guarded secrets, and any test or assessment that revealed particularly urgent vulnerabilities would be especially closely held. In Pakistan, to take one urgent example, the USA-Pakistani nuclear security cooperation has been greatly constrained by Pakistan's fear that the USA might be tempted to snatch Pakistan's nuclear weapons if it could. As a result, the experts from the USA are not allowed to visit the Pakistani nuclear sites to assess what problems need to be fixed, or even to know where the sites are. Thus, cooperation focuses on offering advice to Pakistan on how best to assess such vulnerabilities and design security systems to fix them, and on helping Pakistan buy and install security equipment. (The Pakistanis generally regard the USA-provided equipment with suspicion, fearing it might somehow be bugged.)

Even in Russia, where the USA has invested billions of dollars in nuclear security and achieved dramatic improvements as a result, it remains illegal for Russian experts to give their American counterparts the results of detailed assessments of remaining vulnerabilities at Russian sites. As a result, no country or institution in the world has a comprehensive global database assessing the effectiveness of the security measures for each nuclear site and transport route handling nuclear weapons or weapons-usable materials.

There is currently no common set of international standards or "*rules of the road*" that all states must follow to secure their weapons-usable nuclear materials because the two key mechanisms that come closest to providing international standards are not being used to their full potential. This gap in the system is extremely dangerous and undermines the credibility of efforts to secure all nuclear materials.

Terrorists bent on stealing nuclear materials will not distinguish between nuclear materials designated as civilian and those designated as the military. They will seek to obtain materials from the most vulnerable and least protected location. Effective global nuclear security requires that all weapons-usable nuclear materials be secured—including military materials.

## **Relevant international instruments**

While the issue of nuclear terrorism has become increasingly prevalent in the last two decades, the diplomatic channels of the international community have not been inactive on the issue. Towards understanding the role of the diplomatic cadre, of Nations and countries, of the UN and of other stakeholders, one has to only reflect on the relevant international instruments.

Before we move on to discuss this in detail, one must be clear on what an international instrument is. An international instrument is generally a treaty, convention, agreement, charter or official document that “...provides direction to State parties on how to meet their obligations to develop and implement legislation”. To be very simple, it is a document that all international stakeholders, or at least most, agree upon, that tells them the what’s, when’s, why’s, how’s, and sometimes who’s of a particular situation. For example, the most elementary international instrument in the UN is the Charter of the UN, a document which has been agreed upon and signed by every member of the UN (in effect, membership of a nation in the UN is a registration form of sorts to a not-so-exclusive club, where the “*I have read all the conditions and I agree*” button is their signature on the Charter). Thus, most of the international law (definitely all parts of it which are codified), and all treaties, conventions, agreements, and protocols, come under this description.

All such documents are generally executed by a treaty to govern all treaties (bear with me, for this shall eventually connect to the agenda) – the Vienna Convention on the Law of Treaties (VCLOT). While most countries have signed (116 of them), only a few have ratified it (35 of them, thus making it ‘codified international law’ for them). Many Nations have not ratified it, but that does not mean that they do not believe in it – some of these Nations, such as the USA, have recognized certain provisions of it as part of ‘customary international law’, which is to say that it is considered a “*general practice of law*”, and hence accepted as binding on them.

While there are 85 articles in the VCLOT, one of importance is that of Article 26 of Part III, Section 1 on the Observance of Treaties, which is called ‘*pacta sunt servanda*’ (Latin legal maxim that literally means “*agreements must be kept*”). Article 26 reads,

***“Every treaty in force is binding upon the parties to it and must be performed by them in good faith.”***

The implications of this are immense and shall be discussed in relation to the contents of this guide as and when the necessity arises. As you hold this thought, one must think about the basics associated with the agenda as well. A wholesome thought process on

this will include questions such as cross-national terrorism, prosecution of assailants, etc. To understand the more complex treaties and instruments, one must also understand the Charter of the UN, and of two very important concepts in the same. The first of which is that of Article 2, which asks Nations to maintain international peace and security, and foster cooperation and harmony, in accordance to the principle that all Nations have an equal right to their own sovereignty, and that no Member shall threaten or perpetuate the use of force against the territorial integrity or political independence of a State (the terms used to be open to interpretation). Another such very important axis in the Charter is one dubbed as the 'Right to Self Defence', wherein nothing can impair the right of a Nation from the protection of its own self (again, being open to interpretation), within their rights and keep in mind their duties to the international community, until the United Nations Security Council (UNSC) has taken steps to maintain peace.

### **Nuclear Terrorism Convention**

Having these three concepts in mind, the next natural question, of what the international community has done in an effort to address, curb and mitigate the threat of nuclear terrorism, must be addressed. The first such international instrument to be seen may be the International Convention for the Suppression of Acts of Nuclear Terrorism (often, and herein referred to as the Nuclear Terrorism Convention or ICSANT). The ICSANT was drafted in 2005 and effective from 2007.

The ICSANT is a document which aims at cooperation between nations in prevention, investigation, and most importantly, the punishment of the assailants (or alleged assailants) of a criminalized act of nuclear terrorism and has certain salient features that include:

1. A wide definition of radioactive materials and facilities,
2. The criminalization of planning, threatening, or carrying out acts of nuclear terrorism,
3. The requirement of States to criminalize these offences via national legislation and determine penalties for such crimes,
4. Jurisdiction of States over offences,
5. Extradition of accused assailants from other States, and measures of punishment and penalty, and
6. The requirement of States to take measures to prevent and counter offences inside or outside of their territories.

The treaty sets the basis of what a crime is, by first defining the terms related to the convention, and then defining the act of Nuclear Terrorism in the very beginning, (sic.),



***1. Any person commits an offence within the meaning of this Convention if that person unlawfully and intentionally:***

***a. Possesses radioactive material or makes or possesses a device:***

***i. With the intent to cause death or serious bodily injury; or***

***ii. With the intent to cause substantial damage to property or to the environment;***

***b. Uses in any way radioactive material or a device, or uses or damages a nuclear facility in a manner which releases or risks the release of radioactive material:***

***i. With the intent to cause death or serious bodily injury; or***

***ii. With the intent to cause substantial damage to property or to the environment; or***

***iii. With the intent to compel a natural or legal person, an international organization or a State to do or refrain from doing an act.***

The ICSANT thereby reflects on the possession of radioactive material or a deadly device which uses such material, and the use of such materials and devices as nuclear terrorism. But it clearly draws a distinction between the use of such implements in damaging facilities, and the rights that Nations have in using their armed forces in armed conflicts, and steers clear of the issue of the usage of their nuclear arsenals or the threat of the same, (sic.).

***1. Nothing in this Convention shall affect other rights, obligations and responsibilities of States and individuals under international law, in particular the purposes and principles of the Charter of the United Nations and international humanitarian law.***

***2. The activities of armed forces during an armed conflict, as those terms are understood under international humanitarian law, which are governed by that law are not governed by this Convention, and the activities undertaken by military forces of a State in the exercise of their official duties, inasmuch as they are governed by other rules of international law, are not governed by this Convention.***

***3. The provisions of paragraph 2 of the present article shall not be interpreted as condoning or making lawful otherwise unlawful acts, or precluding prosecution under other laws.***

***4. This Convention does not address, nor can it be interpreted as addressing, in any way, the issue of the legality of the use or threat of use of nuclear weapons by States.***

But the issues that the ICSANT face begin from the very basic conundrum – How does one define terrorism, or a terrorist, for that matter? As the famous saying goes, “*One man’s terrorist is another man’s freedom fighter*”. Therefore, the process of defining these terms has been hampered by a large extent by the fact that the interpretations (again, interpretations) to these are often politically, diplomatically and emotionally charged. In 1994, the UNGA condemned acts of terrorism through the following clause in one of its resolutions, (sic.),

***"Criminal acts intended or calculated to provoke a state of terror in the general public, a group of persons or particular persons for political purposes are in any circumstance unjustifiable, whatever the considerations of a political, philosophical, ideological, racial, ethnic, religious or any other nature that may be invoked to justify them"***

Because of its polarized nature, the universalization of this treaty is something which may never be realized. Nearly half of the world has not ascribed to the ICSANT, and that is something that may hamper the effectiveness of its provisions.

While the nature of the convention is one question, the content is quite another. While a major chunk of the convention deals with the jurisdiction of countries with respect to the prosecution of alleged assailants of an act of nuclear terrorism, in cases of the assailants being nationals of the State or not, and in cases of the assailants being in or belonging to another State or not, there is one school of thought that believes that the ICSANT is in violation of certain aspects of Article 36 of the Vienna Convention on Consular Relations (VCCR) of 1963, (sic.)...

- 1. With a view to facilitating the exercise of consular functions relating to nationals of the sending State:***
  - a. consular officers shall be free to communicate with nationals of the sending State and to have access to them. Nationals of the sending State shall have the same freedom with respect to communication with and access to consular officers of the sending State;***
  - b. if he so requests, the competent authorities of the receiving State shall, without delay, inform the consular post of the sending State if, within its consular district, a national of that State is arrested or committed to prison or to custody pending trial or is detained in any other manner. Any communication addressed to the consular post by the person arrested, in prison, custody or detention shall be forwarded by the said authorities without delay. The said authorities shall inform the person concerned without delay of his rights under this subparagraph;***
  - c. consular officers shall have the right to visit a national of the sending State who is in prison, custody or detention, to converse and correspond***

*with him and to arrange for his legal representation. They shall also have the right to visit any national of the sending State who is in prison, custody or detention in their district in pursuance of a judgement. Nevertheless, consular officers shall refrain from taking action on behalf of a national who is in prison, custody or detention if he expressly opposes such action.*

2. *The rights referred to in paragraph 1 of this article shall be exercised in conformity with the laws and regulations of the receiving State, subject to the proviso, however, that the said laws and regulations must enable full effect to be given to the purposes for which the rights accorded under this article are intended.*

...though Article 10(3) in essence is a summary of Article 36 of VCCR, (sic.)

3. *Any person regarding whom the measures referred to in paragraph 2 of the present article are being taken shall be entitled:*
  - a. *To communicate without delay with the nearest appropriate representative of the State of which that person is a national or which is otherwise entitled to protect that person's rights or, if that person is a stateless person, the State in the territory of which that person habitually resides;*
  - b. *To be visited by a representative of that State;*
  - c. *To be informed of that person's rights under subparagraphs (a) and (b).*

Reservations to the Convention include the fact that in cases of disputes in interpretation of the ICSANT, the primary prescribed method of settlement is through the International Court of Justice, while many countries do not prefer this method, given that the methods of the court include the ability to decide cases *ex aequo et bono* (deciding a law based on what is fair and equitable, rather than the law alone).

### **Convention on the Physical Protection of Nuclear Material (and Nuclear Facilities)**

Before the issue of nuclear terrorism by Non-State actors (NSAs) became prominent, the need to securely transfer nuclear material and technology was realized. It became imperative that after the NPT came into effect, the only nuclear movement, so-to-speak, which remained legal, was a trans-national and trans-continental transfer of material and technology for “*peaceful purposes*”, so to speak.

In the duration of this movement, the logistics of protection of this nuclear material from exposure to the external environment, from contamination, from physical and chemical factors, and from human factors such as mishandling, spillage, transfer losses, and most

importantly, security of the consignment, are rather delicate as compared to the provisions of security and protection afforded to stationary consignments.

In an attempt to codify a standardized set of norms for the protection of nuclear material during its transfer, the Convention on the Physical Protection of Nuclear Material (CPPNM) was adopted in 1979, with the depository body of the instrument being the IAEA. According to the USA' Department of State, (sic.), the CPPNM,

***“...provides for certain levels of physical protection during international transport of nuclear material. It also establishes a general framework for cooperation among states in the protection, recovery, and return of stolen nuclear material. Further, the Convention lists certain serious offenses involving nuclear material which state parties are to make punishable and for which offenders shall be subject to a system of extradition or submission for prosecution.”***

In 2005, a diplomatic convention was convened to strengthen the convention to its current form, wherein the cover of protection was extended to nuclear facilities as well. The amendment makes it legally binding for States to protect nuclear facilities and material during all times, including peaceful domestic use, storage, and transport. It also fosters increased inter-State cooperation for rapid measures in locating and recovering stolen or smuggled nuclear material, and in handling consequences of radiological sabotage, etc.

Ultimately, the legal arguments one has to handle in this matter include:

1. Whether Article 26 of the VCLOT is being upheld,
2. Whether Article 2(1) and 2(4) of the Charter of the UN is upheld in the context of spheres including but not limited to jurisdiction,
3. Whether the sanctity of Article 51, *ibidem*, is granted in the context of spheres including but not limited to jurisdiction.

### **Role of the IAEA**

Two of the major international organizations in atomic energy and weaponry are the UN and the IAEA. The IAEA is an independent body, outside the UN organisation with a view to “*serve as the world's central intergovernmental forum for scientific and technical co-operation in the nuclear field*”.

Its main purpose is to inhibit the use of nuclear technologies for military purposes, which is including but not limited to nuclear weapons. It aims at being the forum of cooperation on nuclear technologies and promotes the peaceful use of nuclear energy. Though technically an autonomous body, it advises and reports to the UNGA and the UNSC.

The IAEA was visualized in 1954 by the then-President of the USA, Dwight D. Eisenhower. The speech that would kick-start this idea was delivered in the UN, in the UNGA in 1953. This speech, famously dubbed ‘Atoms for Peace’ (AFP) brought about sweeping changes to the political status of nuclear weapons and brought forward the need to set protocols, culminating in the proposed creation of a body such as the IAEA.

Eisenhower’s famous tagline was “...to find a way by which the inventiveness of man is not dedicated to death, but consecrated to his life.” Such a body was imagined to be an agency that would collect and take control of all fissile material – a ‘nuclear bank’ of sorts. This idea was rejected by the Soviets, who wanted each nation to be able to possess its own fissile material. But the Soviets were open to such an international organization functioning as an office of clearances, i.e., an office that monitors and clears nuclear transactions.

The terms of the relationship between the UN and the IAEA is outlined in three agreements, signed in 1958, between these parties, namely:

1. Agreement-I:
  - a. Agreement Governing the Relationship Between the UN and the IAEA;
  - b. Protocol Concerning the Entry into Force of the Agreement between the UN and the IAEA;
2. Agreement-II: Administrative Arrangement Concerning the Use of the UN Laissez-Passer by Officials of the IAEA; and
3. Agreement-III: Agreement for the Admission of the IAEA into the UN Joint Staff Pension Fund.

Agreement-I is the most important agreement between the two entities, and lays out in detail the protocols to be observed during the sharing of confidential and public information, documents, resolutions, resources, statistical and technical services, reports to the UN, and reports of the Secretary-General of the UN, on nuclear agendas and inter-agency developments, including budgetary and financial arrangements, personnel arrangements, administrative facilities and. It also promotes reciprocal representation between the entities. Another interesting aspect is the relationship the IAEA shares with the International Court of Justice (ICJ), which is outlined as advisory to the ICJ.

Agreement-II, which is basically an exchange of letters between the Secretary-General of the UN and the Director-General of the IAEA, deals with the usage of the UN *laissez-passer* (travel document granting certain privileges and immunities to UN officials) by IAEA officials, and hence constitutes the Administrative Arrangements described in Article XIX(I) of Agreement-I.

Agreement-III is a separate agreement drafted so as to include officials of the IAEA in the Joint Staff Pension Fund of the UN.

While these agreements underline how the UN and the IAEA operate in unison, how does the IAEA help the UN in the upkeep of the ICSANT? The UNSC adopted two landmark resolutions, as precursors to the ICSANT, that address nuclear terrorism, and thereby, call upon States to improve national, regional and international cooperation to respond effectively to such threats to international peace and security. The IAEA “...provides, on request, assistance to the UN Committees established in relation to these two resolutions. The Agency also assists the Member States, where appropriate, in meeting their obligations under these resolutions.”

To aid these efforts, the 52nd General Conference of the IAEA instituted the World Institute for Nuclear Security (WINS), which offers a platform for States to share best practices in relation to the execution and enforcement of the CPPNM and in extension the ICSANT. While the organization itself is a non-governmental organization, it receives funding from governments, and works with the IAEA to achieve protection of nuclear material and facilities right from the grassroots level, providing certification to workers and experts, to cybersecurity-physical security integration solutions.

### **Role of the Nuclear Suppliers Group (NSG)**

One other way to deter proliferation is to have stringent controls on the export of the so-called dual-use technologies. It is not surprising that this forms the core ideology of many legally-binding treaties as well. These controls restrict the export of these technologies without the permission of the governments involved. There are multiple international arrangements within countries to harmonize this effort, and one such initiative is the NSG.

The aim of the NSG guidelines is to ensure that nuclear trade for peaceful purposes does not contribute to the proliferation of nuclear weapons or other nuclear explosive devices and that international trade and cooperation in the nuclear field is not hindered unjustly in the process. The NSG guidelines also facilitate the development of trade in this area by providing the means whereby obligations to facilitate peaceful nuclear cooperation can be implemented in a manner consistent with international nuclear non-proliferation norms.

The first set of NSG guidelines governs the export of items that are specially designed or prepared for nuclear use. The second set of NSG guidelines governs the export of nuclear-related dual-use items and technologies (items that have both nuclear and non-nuclear applications), which could make a significant contribution to an un-safeguarded nuclear fuel cycle or nuclear explosive activity.



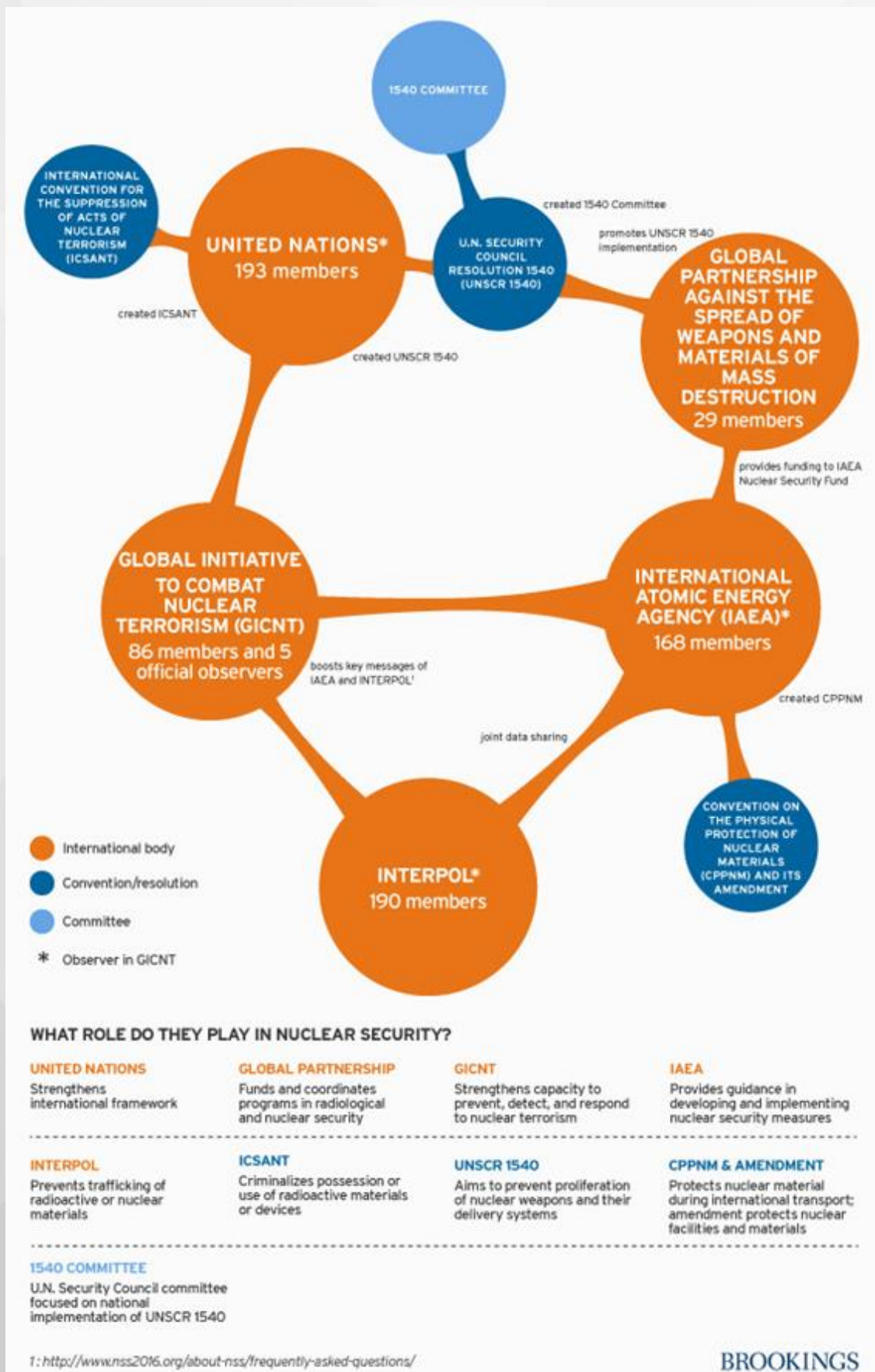


Figure 6: Key components of the nuclear security infrastructure [Brookings]

## Case studies

Before moving on to the provide examples of incidents and situations, the Executive Board of the UNGA: DISEC here at SSNMUN 2018 wishes to make it clear that these cases may or may not be interpreted by some or all parties as genuine cases of nuclear terrorism, given the overarching lack of coherent definitions. The purpose of this section is not in providing a path set in stone for delegates to follow, or even instilling even the slightest of biases of any sort in the minds of delegates. While the legitimacy of these events as cases of nuclear terrorism may be questioned, these can be raised in committee aptly.

## Natanz



**Figure 7: Location of Natanz, Islamic Republic of Iran**

Stuxnet is forever etched in the annals of history as the one case study that every delegate worth his or her salt in any simulation of the UNGA: DISEC knows; it is, in a way, synonymous with every nuclear agenda ever. Stuxnet is a plug-in malicious software that is said to have been of Israeli and/or American origin. It came to prominence when, in 2010, the Natanz Nuclear Power Plant, in Natanz in the Islamic Republic of Iran, was affected by the worm, which ultimately destroyed around a thousand uranium enrichment centrifuges, showing the possibilities of a cyber attack over a plant that was tightly separated from the public internet by means of ‘air-gapping’.

This worm also possibly contaminated an unnamed Russian power plant, according to Eugene Kaspersky, head of Kaspersky Labs, who warned that *"everything you do - it's a boomerang: it will get back to you."* The software spreads via several vectors, no doubt selected to ultimately allow it to infect the Programmable Logic Controllers

(PLCs) at the nuclear plant it targeted. It is capable of auto-updating so that it can update old versions of itself to newer versions if they are available on a local network. It communicates with command and control servers to provide information on its spread to its creators, while also providing it with another way for it to be updated. It conceals its presence and the source of its destructive effects from plant personnel, who may be totally unaware that it is the cause of unexplained problems.

While Stuxnet is itself transmissible through networks, the incident at Natanz was almost definitely an ‘inside job’ – the only other option was that it was a colossal blunder since nuclear plants are ‘air-gapped’ (a fancy way of saying ‘disconnected from all external networks’). Therefore, it was impossible to have let Stuxnet through, without the use of some storage device, like a flash drive. And the possibility that it was a random simple worm is very unlikely since the worm itself was very specific, its method of proliferation indiscriminate, and its code virtually inaccessible in computers across the world. While intentions cannot be proven, this incident gave the Iranians enough evidence to believe that they might have a mole in their midst.

### **Pelindaba**



*Figure 8: Location of Pelindaba, South Africa*

Pelindaba is the Republic of South Africa’s biggest and most sophisticated nuclear research centre. Run by the South African Nuclear Energy Corporation (NECSA), a government-owned concern, it is located about 35km from Pretoria. Historically, in the time of Apartheid, Pelindaba served as the centre for the development, construction and storage of the six atomic bombs that South Africa had created (and since disarmed completely). Pelindaba has been a rather unlucky facility, with many incidents dotting its history. A fire in 1986 that killed two and injured two; thankfully, there was no radiological leak. In 1996, an accident exposed several workers to radiation, exposure



to which killed them due to burns and cancer. But perhaps most alarmingly, Pelindaba has been subject to two cases of alleged/attempted nuclear terrorism.

The first one was back in 1994 when 130 barrels of enriched uranium residue were burgled from the facility, out of which the contents of 30 barrels worth were found dumped in the outskirts of the city, while 100 still remain missing. The other was in 2007, when four armed assailants raided the facility, trying to gain access to the control room in the eastern wing. These men were heavily armed and highly technically sophisticated and were able to disarm several firewalls and layers of security, such as a 10,000V electric fence. While a security officer triggered an alarm that alerted the nearest police station, he was shot by these men, who later escaped the way they came. They were in the facility for 45 minutes, and it is speculated that the triggering of the alarm did not allow them to fulfil all their objectives, but that these perpetrators were, in fact, able to steal laptops containing vital new information on an alleged new technology in nuclear power generation. Three alleged perpetrators were caught after about 8 days after the incident but were released later on. It has been suggested that the People's Republic of China is behind the attack.

## Mosul



*Figure 9: Location of Mosul, Iraq*

In 2014, ISIS militants raided and seized some nuclear material from Mosul University. While it is unclear as to how much was seized, Iraq's ambassador to the UN claimed that the material kept at the University "*...can be used in manufacturing weapons of mass destruction*". This claim though has been downplayed by most experts, including the IAEA, whose spokesperson Gill Tudor claimed that the seized material was "*low grade*" and "*...would not present a significant safety, security or nuclear proliferation risk*".

## **Questions a resolution must answer (QARMA)**

There are a number of questions that the committee must answer, in comprehension before delving into the documentation procedure. Some of them (**non-exhaustive**) are as follows.

1. What level of control regarding nuclear technology will prevent proliferation while not hindering technological progress?
2. Could the UNGA: DISEC play a bigger role in preventing proliferation risks at the domestic level (good governance)?
3. Should the nuclear security guidelines (IAEA, NSG) be regularly updated to keep in sync with the dynamic pace of technological progress?
4. What kind of verification and compliance mechanisms could be included, with respect to decisions of the UNGA: DISEC being recommendatory in nature?
5. Does the mere participation of a state in the NPT/ ICSANT/ CPPNM serve as a safeguard, given its gaps?
6. Is there an adequate amount of interplay between domestic legislation and international frameworks regarding nuclear security?
7. Can the mandate of pre-existing instruments be extended to effectively tackle state-sponsored terrorism?
8. Does an increase in regulation and oversight in nuclear trade adversely affect the economic condition of developing countries?

## **Conclusion**

As with all topics that the UN addresses, this issue can be viewed from a technical, political, legal, social, and economic perspective. While considering each perspective is vital to solving the problem at hand, it is important that delegates view the issue primarily from a disarmament and policy lens.

A reasonable knowledge of theoretical approaches to international relations will, thus, be useful in preparing for this council. Realism, liberal internationalism, constructivism, and so on, are a few ideas to brush up on because delegates will have to create a resolution from scratch.

These approaches, when informed by the tools, technical feasibility and the context of the nation you are representing, should help you narrow down the kind of policy that you will want to pursue because of this council. Delegates should also brush up on historical nuclear security and terrorism-related issues and how they were resolved.

Ideological clashes between nations must also be understood to attain a clearer picture of why countries cannot often easily surmount their rivalries even when they stand to gain from them.

For further clarification, feel free to contact any of us!

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