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Documentation of the Work of the Non-Proliferation Treaty Review Committee (NPT) NMUN Simulation*



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Non-Proliferation Treaty Review (NPT)

Committee Staff

Director	Natalie Keller
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Agenda

- I. Strengthening Measures for Nuclear Security
- II. Practical Measures to Implement Article VI

Resolutions adopted by the Committee

Code	Topic	Vote
NPT/1/1	Strengthening Measures for Nuclear Security	Yes: 50 No: 6 Abstain: 3
NPT/1/2	Strengthening Measures for Nuclear Security	Yes: 41 No: 9 Abstain: 11
NPT/1/3	Strengthening Measures for Nuclear Security	Yes: 52 No: 4 Abstain: 3
NPT/1/4	Strengthening Measures for Nuclear Security	Yes: 47 No: 8 Abstain: 4
NPT/1/5	Strengthening Measures for Nuclear Security	Yes: 45 No: 8 Abstain: 6
NPT/1/6	Strengthening Measures for Nuclear Security	Yes: 51 No: 5 Abstain: 3

Summary Report for the Nuclear Non-Proliferation Treaty Review

The Nuclear Non-Proliferation Treaty Review held its annual session to consider the following agenda items:

- I. Practical Measures to Implement Article VI
- II. Strengthening Measures for Nuclear Security

The session was attended by representatives of 59 Member States.

On Wednesday, the committee adopted the agenda in the order of II,I, beginning discussion on the topic of “Strengthening Measures for Nuclear Security.” By Thursday evening, the dais received a total of 9 proposals with a wide range of sub-topics, including nuclear terrorism, smuggling of nuclear materials, education, information sharing, strengthening IAEA regulations, cyber-security and risk reduction. The debate of the committee was positive and collaborative throughout the conference, and delegates worked hard to build consensus in and across working groups, undergoing efforts to merge several working papers with complementary ideas.

Delegates worked together to combine their working papers with working groups collaborating and changing the number of working papers from 9 to 6. On Saturday, 6 draft resolutions had been approved by the dais, 1 of which had 3 amendments. The committee adopted all of the 6 draft resolutions through recorded votes. The body showed their creativity by proposing unique and innovative solutions to strengthen measures for nuclear security. It was clear, that delegates had not only done thorough research but had been inspired by our cultural tours, particular the visit to Hiroshima.



National Model United Nations • Japan

Code: NPT/1/1

Committee: Nuclear Non-Proliferation Treaty Review Committee

Topic: Strengthening Measures for Nuclear Security

The Nuclear Non-Proliferation Treaty Review Committee,

Noting the impact of effective training on the safe operation of nuclear power generation sites and the prevention of non-state actors accessing nuclear materials,

Asserting the importance of the third pillar in promoting developing Member States access to safe nuclear energy,

Bearing in mind the necessity for licensing at all levels of production in the peaceful uses of nuclear technologies,

Maintaining the importance of the International Atomic Energy Agency (IAEA) as the preeminent body for regulation and monitoring of nuclear facilities,

Recognizing the Specific Safety Guide of the IAEA that guarantees nuclear safety by ensuring that the recommendations, fundamental principles, and requirements are provided, and deeply concerned by the health and environmental hazards of uranium mining and production, which produce radon and cancer-causing radioactive elements,

Reaffirming the binding commitments made in the Treaty of Tlatelolco, Treaty of Rarotonga, Treaty of Bangkok, Treaty of Semi, and Treaty of Pelindaba to the peaceful uses of nuclear technology development, in compliance with the 3rd pillar of the Non-Proliferation Treaty (NPT),

Fully aware of the breadth of work of the IAEA, the high possibility of oversights due to a lack of manpower, and the importance of specific bodies to perform checks and balances in countries utilizing nuclear power,

Deeply concerned by the threat of radiation exposure and contamination posed by nuclear reactor power plants caught between armed conflict,

Bearing in mind the non-negotiable necessity of risk-informed decisions in the maintenance and establishment of nuclear power facilities, the importance of which is undeniable given the quickly rising number of nuclear power plants worldwide,

Emphasizing International Physical Protective Advisory Service (IPPAS) mission which compares a State's existing practices against relevant international instruments and IAEA nuclear security publications to further strengthen nuclear security,

Acknowledging that Israel's accession to the NPT would realize the goal of universal adherence to the Treaty in the Middle East by placing all of Israel's unsecure nuclear facilities under the International Atomic Energy Agency Safeguards,

1. *Recommends* the creation of regional workshops with relevant Member States in cooperation with the International Atomic Energy Agency (IAEA) and the United Nations Office for Disarmament Affairs (UNODA) to facilitate the training of nuclear energy personnel in nuclear security:

- a. Providing personnel with the training required to maintain a nuclear facility if it were to enter into a conflict zone:
 - i. Training local personnel in the ability to effectively prevent nuclear disasters and maintain nuclear materials;
 - ii. Training local personnel in deterring threats from non-state actors and the possibility of nuclear terrorism;
 - b. Discussing the modernization of security systems involved in protecting peaceful uses of nuclear energy in areas such as:
 - i. Preventing unauthorized access to nuclear facilities;
 - ii. Improving systems for early warning of accidents;
 - iii. Electronic surveillance and patrolling the perimeter of nuclear facilities;
 - iv. Bullet-resisting structures for protecting critical facilities on the territory nuclear facilities;
2. *Encourages* training provided by the IAEA in developing Member States to facilitate the safe pursuit of peaceful uses of nuclear energy:
 - a. Using the IAEA Regional Network for Nuclear education and technology (STAR-NET) as a foundational guideline for training and education efforts;
 - b. Suggesting that Member States enforce this guideline to persons that are responsible for the handling of nuclear energy and nuclear materials;
 3. *Strongly advises* any relevant safety licenses for all stages of development of nuclear facilities, including construction, enlargement, commissioning, operation, waste management, modification, shutdown, and decommissioning of nuclear operation:
 - a. Reviewing these licenses for timeliness and efficiency;
 - b. Licenses such as those included in the multilateral efforts of the Renovation of the Nuclear Applications Laboratories (ReNuAL) initiative which have shown to be widely effective;
 4. *Affirms* the authority of the IAEA, and commits to strengthening its operational ability by:
 - a. Strongly encouraging Member States to voluntarily submit to IAEA monitoring and supervision of their nuclear facilities and verification of their nuclear energy processes;
 - b. Emphasizing the extension of existing monitoring mechanisms to all weapons usable nuclear materials;
 - c. Prioritizing transparency and information sharing on the outcomes of nuclear weapons inspections;
 5. *Implores* Member States in the position to do so to increase their voluntary contribution to the Nuclear Security Fund, in line with IAEA's GC (65)/24 Nuclear Security plan 2022-2025;
 6. *Recommends* the improvement of IAEA safety standards, specifically in regards to safety guide no. SSG-64, for protecting people and the environment by:

- a. Ensuring that operators involved in mitigation operations are equipped with Personal Protective Equipment (PPE) and other protective measures including monitoring kits to track exposure of radiation levels;
 - b. Detecting nuclear particle doses through pre-emptive deterministic radiation assessments, surveys, and area monitoring;
 - c. Enhancing the 1997 IAEA Generic Assessment Procedures for Determining Protective Actions during Reactor Accidents based on the level of nuclear dosage released in the area;
7. *Encourages* all Member States to participate in preventive diplomacy and dialogues to ensure effective negotiations through multilateral treaties and conferences such as *The International Conference on Nuclear Security* being the main forum in which multilateral collaboration to achieve peaceful, safe usage of nuclear energy, especially the Member State of Israel and its allies in order to promote nuclear security in the region:
 - a. Addressing biological and environmental threats caused by nuclear weapon testing, in order to cease and mitigate the proliferation of nuclear arms testing, recognizing the destructive and detrimental effects such have on the environment and humanity;
 - b. Implores Member States to participate in the creation of effective protocols including the concept of Negative Security Assurance (NSAs), which is guaranteed by nuclear weapon states so that Member States are legally bound to not use or threaten to use nuclear weapons;
 - c. Suggests that signatories of the international community collaborate and observe conference as well as all nuclear-wielding Member States in order to share information in furthering non-proliferation, disarmament, and peaceful use of nuclear energy;
8. *Calls on* Member States to consider the creation of separate regional bodies under the jurisdiction of the IAEA that are explicitly in charge of monitoring nuclear power plants and energy sources, nuclear risk reduction, and disaster recovery in cases of nuclear accidents:
 - a. Recommends risk reduction and management efforts, such as the development of nuclear waste storage plans;
 - b. Stresses the importance of creating nuclear disaster recovery measures to address situations such as, but not limited to, nuclear fires, water contamination, and explosions;
9. *Recommends* the following protocol for Member States hosting nuclear power plants who are engaged in potential armed conflict within the region:
 - a. Member States to implement IAEA standardized training to establish proper emergency nuclear power plant deactivation protocol, preliminary to the activation of backup generators;
 - b. Member States to obtain secondary backup generators to mitigate meltdowns during times of plant dysfunction, supported by the resources provided by the IAEA;
10. *Urges* all Member States to improve the implementation of the Nuclear Security Detection Architecture (NSDA), covering nuclear security systems and legal strategies addressing conceivable threats against the creation and maintenance of atomic facilities;

11. *Suggests* that the IAEA broadens the definition of the Design Basis Threats to mitigate threats against each Member State by:
 - a. Coordinating with Member States utilizing the data of International Nuclear Security Advisory Service (INSserv) and IPPAS regarding individual security of countries;
 - b. Conducting an annual report to expedite the process of discerning threats specific to a Member State;
 - c. Including regional classifications and a tiered approach to the design basis threat per the country's nuclear security;

12. *Further emphasizes* that all Member States' nuclear facilities should fall under full compliance of the IAEA standards and regulations:
 - a. Understanding that the IAEA, under revision of this treaty, would greatly benefit the development and safety of nuclear facilities;
 - b. Acknowledging that all Member States' sovereignty should not be infringed upon even in cases of nuclear technology verification.



National Model United Nations • Japan

Code: NPT/1/2

Committee: Nuclear Non-Proliferation Treaty Review Committee

Topic: Strengthening Measures for Nuclear Security

The Nuclear Non-Proliferation Treaty Review Committee,

Acknowledging with deep gratitude the efforts made by Member States at this committee,

Gravely concerned about the ongoing invasion of Ukraine by the Russian Federation, a nuclear weapon state,

Deeply disturbed by the ongoing threats due to shelling by the Russian Federation on the Zaporizhia Nuclear Power Plant (ZNPP) and other facilities in Ukraine,

Deeply concerned for the well-being of personnel of the ZNPP due to working in both unbelievable pressure and constant shelling, creating anxiety among the staff which can increase human error, thus violating pillar 3 of nuclear security and safety of the Nuclear Energy Agency (NEA) which states all staff must be able to fulfill their safety and security duties and be able to make decisions without undue pressure,

Acknowledging the Exercise Coherent Resilience 2017 to support resilient critical energy infrastructures in light of the Russian physical attacks on nuclear power plants and possible acts of cyberattacks,

Reaffirming the principle of the benefits of peaceful applications of nuclear technology in both nuclear-weapon or non-nuclear-weapon states,

Recognizing the important role of highly skilled workers in ensuring the safe and efficient operation of nuclear facilities and the crucial role of quality education in training skilled workers,

Noting the important role of science and research in the further development of nuclear energy on a safe basis,

Aware of the need for more effective infrastructure and research programs to assist developing countries in their transitions to nuclear power,

Concerned about the growing threat of cyberattacks on critical infrastructure, in particular, nuclear facilities,

Acknowledging the moral responsibility of developed countries to support the development of other regions,

Firmly convinced that one of the solutions to climate change is a global transition to nuclear energy, which means its wider use and the need to improve nuclear energy security,

Noting also that nuclear energy security is subsequently of paramount importance to many Member States,

Believing in the importance of sustainable energy generation as an important element for development,

Acknowledging that the effects of non-regulated nuclear energy can result in devastating effects,

Guided by the principles and operations of the International Atomic Energy Agency (IAEA),

Acknowledging the efficacy and effectiveness of nuclear security training programs from the IAEA,

Having reviewed the current IAEA practices, level of Member State funding, and noting their successes and shortcomings,

Considering the resistance to IAEA inspection by some Member States, and the 190 nuclear items that they have deemed unsafe,

Deeply concerned by the potential risks that the current nuclear fuel cycle in nuclear power reactors, research reactors, and naval reactors can pose to public health and the environment,

Having considered the contributions of the Nuclear Threat Initiative (NTI) in mitigating nuclear and biological threats in the global community,

Guided by the NTI's Nuclear Materials Security Programs which promotes advancements in the nuclear fuel cycle and encourages sustainable energy growth,

Having considered the Nuclear Waste Management Organization (NWMO)'s initiatives in ensuring proper safe and long-term management of nuclear waste to ensure nuclear safety and security across the global community,

Alarmed by the threat of Nuclear Terrorism and Diversion,

Upholding pillar three of the Non-Proliferation Treaty (NPT)—peaceful uses of nuclear technology—, allowing developing nations to have access to nuclear energy,

Deeply concerned by the lack of joint cooperation and confidence building in regional maritime detection measures especially in the Indian Ocean, as a major smuggling route,

Recognizing the role of the International Criminal Police Organization (INTERPOL) in training and providing Member States with monitoring services and personnel to prevent Small Arms, Light Weapons, and possible Nuclear Material Smuggling,

Recalling the concern of the global community towards the Indian Ocean Maritime Smuggling Route and the role of Indian Ocean States (IOS) in preventing nuclear materials from being smuggled,

Keeping in mind the tragedies nuclear disasters have caused in the past,

Recognizing that highly enriched uranium (HEU) is a dangerous material that has the potential to be used for malicious actions,

Alarmed by the fact that the global HEU stock is estimated to be equivalent to 55,000 nuclear weapons as of 2021, as stated by the International Panel on Fissile Materials in Global Fissile Material Report 2022,

Noting with approval that as of 2022, the Reduced Enrichment for Research and Test Reactors (RERTR) program has been contributed to the conversion of more than 70 research reactors from HEU-driven into LEU-driven by designing and safely analyzing,

Recognizing the importance of the IAEA's School of Nuclear Knowledge Management, which provides specialized education and training on nuclear science and technology,

Noting with approval that the IAEA's School of Nuclear Energy Management that has been contributing to the education of qualified personnel by providing knowledge on nuclear energy such as nuclear fuel cycle and security and safeguards,

1. *Suggests* the innovation of the nuclear fuel cycle for nuclear research reactors, power reactors, and naval reactors in collaboration with the International Atomic Energy Agency, NTI, and the NWMO by:
 - a. Utilizing nuclear waste transmutation by repurposing spent fuel reduce risks of:
 - i. Proliferation;
 - ii. Environmental damage;
 - iii. Threats to health;
 - b. Preventing possible leakage of stored nuclear waste and the plutonium separated from reprocessed spent fuel that could be utilized for the production of nuclear weapons;
2. *Suggests* the creation of a Task Force under the General Assembly First Committee, voluntary for all Member States, called the *Nuclear Prevention Task Force* (NPTF), which will help create safeguards to prevent nuclear materials from getting into the hands of non-state actors (NSAs) by:
 - a. Creating a cybersecurity database and partnering with the IAEA Incident and Trafficking Database that will help track nuclear materials of willing Member States to secure materials and log them to the database as well as protect the data from getting stolen;
 - b. Using the cybersecurity systems to track phones of terrorist organizations in areas with nuclear materials to prevent the NSAs from smuggling them;
 - c. Providing training courses for members who want to adopt nuclear energy systems:
 - i. Funding for the facilitation of the required training;
 - ii. Regulate intervals of training on a monthly basis;
 - iii. Mandatory training segment refresher on all IAEA protocols at the start of every session;
 - d. Creating safe practices for Member States who have nuclear materials and energy:
 - i. Maintain adequate level of manpower required to start nuclear power plants and transition to nuclear energy;
 - ii. Rotation of shifts of all personnel to ensure there is no human error from the constant workload pressure at all facilities;
 - iii. Training and research through the database to develop nuclear facilities;
 - iv. Acquiring grants to develop safe nuclear facilities;
 - e. Potential funding for the program from willing Member States and the Legal Services Corporation, for prior funding of task forces;
 - f. Implementing a partnership with the Counter Terrorism Committee and the Office of Counter Terrorism for prior work with task forces and halting terrorist activity;

3. *Calls for* the immediate withdrawal of Russian troops from ZNPP and other nuclear facilities to enable the IAEA to carry out its verification activities within Ukraine:
 - a. Also calling for the safety of all personnel working at ZNPP due to the kidnapping of over 200 ZNPP workers, in accordance with pillar 3 of the NEA;
 - b. Urging for the Russian State Atomic Energy Corporation “Rosatom” to withdraw from ZNPP in order to decrease Russian interference with IAEA operations as outlined in the Nuclear Safety, Security, and Safeguards in Ukraine;
4. *Recommends* the prioritization of nuclear fusion research and development as objectives for the IAEA and the Organisation for Economic Co-operation and Development Nuclear Energy Agency (NEA):
 - a. Encouraging collaboration between Member States towards the objective of nuclear fusion;
 - b. Alongside the creation of a new collaborative research project between the IAEA and NEA dedicated to nuclear fusion development;
 - c. Calling for increased scientific missions and international research cooperation towards fusion technology among all Member States;
 - d. Recommends willing signatory states to the NPT to ascend to membership of the NEA;
 - e. Calling for Member States to provide increased voluntary research funding to both the NEA and IAEA;
5. *Further invites* IAEA inspections to take increasingly objective measures in technological and physical safety, science and technology, and safeguards:
 - a. Greater funding to be allotted to the IAEA by Member States, which will specifically go towards upgrading nuclear items that the IAEA deemed unsafe;
 - b. Urging all Member States to fully submit to IAEA regulations and inspections;
 - c. Biannual occurrence of inspections;
6. *Calls on* the increased counter terrorism actions by Member States to prevent non-state actors have access to any kind of nuclear technology, or nuclear materials;
7. *Recommends* Member States, on the basis of bilateral and multilateral cooperation, to exchange new achievements, experience, research, and successful practices in matters of nuclear security by:
 - a. Organizing regional and international conferences and exhibitions for interested Member States and representatives of governmental and non-governmental organizations specializing on nuclear security and energy under the supervision of the IAEA;
 - b. Cooperating between Member States in the scientific and educational sphere through:
 - i. Joint educational courses and programs within universities and other educational institutions;

- ii. Joint scientific research between educational and scientific institution;
 - iii. Strengthening and developing exchange programs and academic mobility for students;
 - iv. Joint short-term programs, in particular, summer/winter programs within educational institutions;
8. *Encourages* all Member States to participate in IAEA training programs on nuclear security:
- a. Using the IAEA developed nuclear training program, Regional Network For Education and Training in Nuclear Technology (STAR-NET) as a guideline for the safe handling of nuclear energy;
 - b. Suggesting the STAR-NET guidelines be implemented by each Member States' government policies for all those who are responsible for wielding nuclear energy;
9. *Suggests* the establishment of a Maritime Cargo Detection System in the Indian Ocean through the usage of Pulsed Photonuclear Assessment systems which will ensure that:
- a. Zero-knowledge proofs are integrated which safeguard the sovereignty of the country;
 - b. Atomic energy will be utilized for peaceful purposes in connection to the usage of the PPA System for nuclear material detection;
 - c. The gap in Maritime Route Monitoring regarding Nuclear Smuggling will be properly bridged;
10. *Recommends* increasing Cooperation with IOS states in Establishing Small Vessel Voluntary Reporting Systems where Member States, especially around the vicinity of the Indian Ocean can voluntarily submit their shipping details to the ports of other IOS;
11. *Further recommends* calling for cooperation with the INTERPOL and the IOS coastal guards for maritime security exercises, bridging the confidence building gap between Indian Ocean States with connection to the possibility of Nuclear Material Smuggling;
12. *Encourages* the IAEA to possibly integrate a partnership with INTERPOL and the International Monitoring System in connection to certifying the packaging of individual containers that will establish the following security procedures at the point of embarkation, a consolidated system of in-transit monitoring, and post-debarkation measures;
13. *Proposes* Member States of the NPT begin creating an international framework for the search of possible sites for international Geological Deposit Facilities for Radioactive Waste and collaboration regarding construction and operation:
- a. Collaboration with the IAEA should occur based on IAEA and national safety regulations concerning the safety of their surrounding environment;
 - b. Member States and the IAEA should work together to find sites for those repositories and begin construction on the facilities;
 - c. Disposal facilities should be operational before putting newly constructed Nuclear Reactors into service;

14. *Encourages* Member States to enhance cyber security of nuclear facilities through:
 - a. Development of cyber security culture among employees:
 - i. Teach about common attacks and vulnerabilities through short-term training programs, including online programs;
 - ii. Familiarize with the rules of cyber security through short-term educational programs, in particular, online programs, and through the educational work of managers of nuclear facilities;
 - iii. Train personnel on how to respond to cyber-attacks and act in such cases through short-term joint training programs, in particular, online programs, and through the educational work of managers of nuclear facilities;
 - b. Adopting general means of protection against cyber-attacks in nuclear infrastructure facilities:
 - i. Regularly install the latest software on work tools that can scan devices and detect and destroy threats;
 - ii. Use data encryption on devices;
 - c. Engaging cyber security consultants to work within nuclear facilities;
 - d. Regular audit of devices and software and hardware, as well as a general assessment of system risk to identify problems that may negatively affect the system in the future and be vulnerable to cyber attacks;
 - e. Endorsing the advice of the IAEA and other international organizations regarding the cyber protection of nuclear installations:
 - i. Conducting research on potential threats;
 - ii. Gather information on the latest tactics and tools of cyber-attacks;
15. *Encourages* Member States to contribute to increasing the number of highly qualified personnel working at nuclear facilities in the cooperation with IAEA's School of Nuclear Energy Management and School of Nuclear Knowledge Management by:
 - a. Improving the qualifications of nuclear facilities workers through:
 - i. Organization of short-term programs within educational institutions for employees to familiarize them with new technologies and approaches to work with nuclear facilities;
 - ii. Creation of online courses for employees to familiarize them with new technologies and approaches to work with nuclear facilities;
 - iii. Mutual visits between employees of different nuclear facilities to exchange experience;
 - b. Attracting more students to studying nuclear security, energy-related engineering nuclear

science, nuclear materials science, radiochemistry, and other nuclear areas within universities and colleges through:

- i. Increasing the number of places and scholarships for studies in these areas;
 - ii. Development of new educational programs and courses in these areas;
 - iii. Improvement of the infrastructure of educational institutions specializing in these areas of education;
 - iv. Conducting presentations for potential entrants about the importance of this profession and its advantages;
- c. Strengthening the quality of education in the field of nuclear safety, nuclear energy, and nuclear science through the process of learning in practice by:
- i. Invitations to lectures and practical classes of practicing professionals in this field;
 - ii. The use of practical tasks in the educational process, in particular, based on local cases;
 - iii. Conducting educational visits and internships on nuclear infrastructure facilities;

16. *Endorses* the creation of a framework for irradiation experiments under the Nuclear Energy Agency (NEA):

- a. Use the Framework for Irradiation Experiments (FIDES-II) as a model for progress that can be expanded upon;
- b. Creation of a council to guide the fuel and material experimental needs of nuclear of technical support organizations and safety regulators:
 - i. Council will consist of a team of thirteen nuclear engineering academics:
 1. Requirements would include vast knowledge in the nuclear energy fields;
 2. Minimum of ten years of experience working for in a nuclear plant or at similar industrial capacity;
 3. Salary will be set at \$225,000 annually for each council member paid out from the NEA budget;
 4. Review for salary increase can be made every five years;
 - ii. Council will convene regularly to discuss progress:
 1. Council will meet yearly and determine if further regulations and safeguards are needed;
 2. If need for further regulations is decided upon, the council will reconvene after a period of six months recurrently until further safeguards can be established;

- c. Work with the nuclear energy industry through research institutions to develop safeguards on experimental knowledge;
 - d. Design new protocols that increase nuclear safety while still allowing for nuclear energy progress to be made:
 - i. New protocols will be agreed upon by a majority vote from the council and research institutions;
 - ii. New protocols will be in place for a minimum of three years, after which a review meeting will take place to determine how impactful the protocol is;
 - iii. If the new protocol is found to be not impactful a new vote will take place to reaffirm or deny the protocol;
 - iv. The impact of the protocol will be determined by the degree of progress made on peaceful nuclear technology and through a cost-benefit analysis;
17. *Encourages* Member States that have HEU-driven reactors to convert them into LEU-driven reactors with the support of RERTR program to prevent the potential attack at nuclear facilities.



National Model United Nations • Japan

Code: NPT/1/3

Committee: Nuclear Non-Proliferation Treaty Review Committee

Topic: Strengthening Measures for Nuclear Security

The Nuclear Non-Proliferation Treaty Review Committee,

Reaffirming the necessity of continued dedication towards the achievement of a global Fissile Material Cut-Off Treaty (FMCT),

Recalling General Assembly Resolution 56/24 (2002), entitled "Responsibility of States for Internationally Wrongful Acts," which aims to bolster collective action in times of crisis,

Gravely concerned about the absence of a comprehensive framework on the treatment of nuclear facilities in areas of conflict, to prevent nuclear disasters caused by current or future conflict,

Deeply concerned by the continued occupation and shelling of nuclear facilities in conflict zones,

Recognizing the failures of international law in preventing and persecuting attacks on nuclear facilities,

Urging Member States to adhere to the clauses presented in General Assembly resolution 49/60 (1995), entitled "Measures To Eliminate International Terrorism",

Recognizing that the International Atomic Energy Agency (IAEA) emphasizes the usage of nuclear materials should follow the safety standard,

Fully alarmed by the dangerous effects that both accidental and deliberate nuclear explosions have on both the well-being of civilians and the conservation of the environment,

Recognizing the role of the Nuclear Suppliers Group (NSG) in the flow of both nuclear materials and technologies between Member States that have a safeguard agreement,

Advocating for standardized nuclear safety provisions in all Member States in accordance with IAEA regulations to advance the knowledge and frameworks towards peaceful and secure usage of nuclear materials and technologies,

Deeply concerned that in case of accidents and attacks on nuclear facilities, civilians living nearby suffer and risk their lives,

Realizing that there exists an excessive amount of nuclear weapons, far more than necessary for mutually assured destruction, and being cognizant that nuclear weapons security is universally desired and easier to ensure and maintain when there are less nuclear weapons available throughout the world,

Further recalling the potential risks of improperly secured nuclear energy,

Acknowledging the risks of unauthorized actors manipulating nuclear materials that come with the peaceful use of nuclear materials for energy,

Noting the sustainability of coal and uranium for energy production in comparison to oil and other resources,

Recognizing the vulnerability of Nuclear Power Plants towards insider threats with regards to personnel training, and job satisfaction, and the need for more Regional Nuclear Safety Education in cooperation with various nuclear education networks such as the Regional Network for Education and Training in Nuclear Technology (STAR-NET),

Concerned by lacking preliminary, ongoing, and post-onboarding assessment systems regarding Nuclear Power Plant Operators,

Noting with appreciation that Nordic Nuclear Safety Research (NKS) has a valuable network that consists of younger and older researchers, various stakeholders, and Member States,

Upholding Article III of the Nuclear Non-Proliferation Treaty, stating lesser developed nations are educated about the uses of nuclear energy,

Emphasizing the importance of the Review Conference in calling the world to action on immediate issues regarding nuclear security, despite its suggestive nature,

Acknowledging the important role of the International Commission on Radiological Protection (ICRP) in setting standards for nuclear materials,

Recalling the success of previous multi-national nuclear energy cooperatives such as the WECAN pact,

Recognizing Security Council resolution 1540 (2004) and that some Member States may require assistance in implementing effective means of preserving nuclear security,

Affirming the destructive potential of any terrorist attacks on nuclear power plants and otherwise peaceful nuclear centers,

Highlights the need for strong cybersecurity practices in all nuclear facilities and critical infrastructure,

1. *Calls upon* all Member States to take part in negotiations and work toward realizing a Fissile Material Cut-Off treaty and taking steps towards its realization through:
 - a. Preparing for and eventually ceasing production of highly enriched uranium (HEU), in regards to nuclear energy applications;
 - b. Participation in programs like the Mobile Melt-Consolidate System to downblend HEU to low enriched uranium (LEU);
2. *Proposes* the establishment of an international framework on the treatment of nuclear power plants during an international and non-international armed conflict through the negotiation of an international treaty by:
 - a. Using the established concept of Neutralized Zones from Article 15 the “Geneva Convention Relative to the Protection of Civilian Persons in Time of War of 12 August 1949” to extend the protection they grant to shelter nuclear infrastructure, their workers, dependents, and people living in the vicinity from the effects of war;

- b. Requiring treaty parties in conflict to establish neutralized zones specifically for the protection of nuclear power plants in both parties' territory;
 - c. Establishing conventional rules on the location, size, and specific provision regarding the supply of humanitarian goods in the selected area;
 - d. Establishing conventional rules on the continued use of energy from the power plant in question strictly for civilian use, as well as preventing the use of energy of the power plant for military use;
 - e. Suggesting this treaty include a provision considering the neutralized zone an area of ceasefire and appealing to the United Nations Secretariat to follow established procedures and engage in initial consultation with relevant actors and initiate a technical field assessment in the relevant areas, creating a report then issued to the Security Council;
3. *Urges* Member States to adopt changes to established international treaties in accordance with Article 39 and Article 40 of the Vienna Convention on the Law of Treaties to increase protection of nuclear facilities in zones of conflict, specifically by:
- a. Striking Article 56 Subsection 2b of the "Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I)" to remove justification for attacks on nuclear power plants by referring to the exception it includes;
 - b. Amending Article 8 Subsection 2b of the Rome Statute of the International Criminal Court to include "(v) Intentionally launching an attack on a nuclear facility, with the exception of inactive or not yet active nuclear enrichment facilities, unless they harbor nuclear material," and moving up all following clauses one roman numeral, in order to reliably punish an attack on a nuclear power plant as a war crime;
 - c. Amending Article 8 Subsection 2b of the Rome Statute of the International Criminal Court to include "(xxiv) Utilizing nuclear facilities to render or military forces and equipment immune from military operations," and moving up all following clauses one roman numeral, in order to punish the use of nuclear facilities to shield forces from attack as a war crime;
 - d. Amending Article 15 "Geneva Convention Relative to the Protection of Civilian Persons in Time of War of 12 August 1949" by changing the language to "Any Party to the conflict may, either direct or through a neutral State or some humanitarian organization, propose to the adverse Party to establish, in the regions where fighting is taking place, neutralized zones intended to shelter from the effects of war the following persons and facilities, without distinction" to include protection of certain facilities in the protection of neutralized zones;
 - e. Amending Article 15 the "Geneva Convention Relative to the Protection of Civilian Persons in Time of War of 12 August 1949" by adding subsection c) stating "nuclear power plants and enrichment facilities, excluding inactive or not yet active enrichment facilities unless they harbor nuclear material, their staff and the staff's civilian dependents, and those living in the vicinity", in order to extend the protection of neutralized zones to protect nuclear facilities, their workers, and their families;

4. *Calls upon* other Member States to support the existing Global Initiative to Combat Nuclear Terrorism, in order to further:
 - a. Establish international binding standards to protect nuclear facilities from terrorism sabotage;
 - b. Develop an efficient international information-sharing system on acts of nuclear terrorism;
 - c. Identify high-risk locations and potential individuals involved;
5. *Encourages* Member States to prevent the deployment and testing of nuclear weapons on or within close proximity to any regions containing nuclear energy sites which would support the Comprehensive Nuclear-Ban-Test Treaty, and would strengthen measures export control regulations to ensure transparency and safety;
6. *Recommends* nuclear-using Member States to strengthen the security of civilians living in areas surrounding targeted nuclear facilities which can be done with support of IAEA by:
 - a. Conducting trainings of civilians on necessary actions in case of damage and attacks on nuclear facilities and surrounding residential areas;
 - b. Providing reliable shelters for civilians in crossfire of military action and accidents occurring at nuclear facilities;
 - c. Mitigating sustained environmental damage from effects of nuclear accidents in areas that cannot be inhabited due to lasting radiation damage;
 - d. Developing a detailed plan for the evacuation of the civilian population from dangerous zones in the case of an attacks and accidents on nuclear facilities and familiarize civilians with this plan;
7. *Calls upon* Member States to have transparent communication through utilizing existing reporting measures regarding cross border shipment of fissile materials to ensure the avoidance of non-state actor acquisition of those materials in accordance with Security Council Resolution 1540;
8. *Encourages* Member States to grant IAEA missions access to nuclear facilities, especially in threatening situations in order to prevent nuclear accidents and encourage safe operation of nuclear facilities;
9. *Calls on* Member States to become parties to the following international documents adopted under the auspices of the IAEA and to adhere to them through:
 - a. Joint Convention on the Safety of Spent Fuel Management and on Safety of Radioactive Waste Management;
 - b. Convention on Early Notification of a Nuclear Accident;
 - c. Convention on Assistance in the Case of a Nuclear Accidents or Radioactive Emergency;
 - d. Convention on Nuclear Safety;
10. *Invites* the IAEA in conducting Regional Training Courses on Preventive and Protective Measures that focus on Insider Threat Mitigation with the aid of the Nuclear Education Networks that will

exchange the best practices in characterizing the classification and identification of Insider Threats and Motivations towards the sabotage of Nuclear Facilities and shall consist of the following topic points:

- a. The Purposeful Insider - an employee in the NPP with deliberate intent to conduct a malicious nuclear act;
 - b. The Recruited Insider - an employee who was not originally a threat but was coerced or recruited to conduct the malicious act;
 - c. The Unwitting Insider - an employee in the NPP who has unintentionally invited a nuclear threat to the facility prompted by phishing emails and various viruses and malware software unwittingly installed in the software of the NPP;
 - d. Encouraging Member States to uphold pillar 3 of the Non-Proliferation Treaty (NPT);
11. *Welcomes* Member States to invite monitor bodies such as the International Atomic Energy Agency (IAEA) and the International Physical Protection Advisory Service (IPPAS) into their borders;
12. *Requests* Member States to implement effective security measures in regards to internal measures of nuclear energy locations by:
- a. Establishing semi-annual inspection facilitated by IAEA, to assure that Member States are abiding by regulations of the nuclear energy and the method of waste on site by:
 - i. Measuring radiation levels coming from the waste disposed and the surrounding environment;
 - ii. Ensuring that nuclear waste material is disposed of in a safe and proper manner away from potentially harming individuals;
 - b. Inspecting any potential areas of concern immediately for fixing;
13. *Calls upon* Member States to invite members of the Joint Inspection Units (JIU) from the biohazards section to check nuclear states that have endorsed the NPT to see and analyze if the Nuclear Energy is a risk for international safety;
14. *Suggests* the establishment of a three-stage credential plan with the Member States within the jurisdiction of NPT regarding the assessment of Nuclear Power Plant Operators that will be materialized as follows:
- a. A screening process for the prospective nuclear power plant employees and operators starting with the following assessment stages;
 - b. The following assessment form framework will be applied:
 - i. First stage: Hiring;
 - ii. Second stage: Current Performance;
 - iii. Third stage: Consideration for Promotions;

15. *Further suggests* a yearly, all-encompassing employee assessment and review form with regard to nuclear power plants, which will consist of biographical data, employment history, and mental assessments, as well as recommendations from valued members or sponsors of NPT;
16. *Recommends* to Member States to submit a request for an IAEA Integrated Regulatory Review Service (IRRC) to review and increase the effectiveness of their regulatory infrastructure for nuclear, radiation, radioactive waste, and transport safety;
17. *Suggests* the creation of a collaborative social media education campaign, potentially implemented and overseen by the General Assembly First Committee (GA1), entitled *Bringing Nuclear Security to the 21st Century* (BNSC) to educate civilians on nuclear threats by:
 - a. Collaborating with UN committees such as GA1, which has in-depth experience with knowledge sharing initiatives, and would provide valuable insight as to how to connect Member States with their civilian populations;
 - b. Using the social media presence—which would provide regular and easy to digest information on nuclear threats and current nuclear tensions—to act as a portal to the BNSC website, which would provide regular reports with accessible language on current data regarding nuclear threats;
 - c. Receiving funding from non-governmental organizations (NGOs), civil society organizations (CSOs), and private institutions such as the Legal Services Corporation, U.S. Nuclear Regulatory Commission Notice of Funding Opportunity (NOFO), and the University Nuclear Leadership Program (formerly the Integrated University Program), which regularly fund initiatives that seek to educate populations on nuclear threats and the ever salient necessity of nuclear security;
18. *Recommends* the collaboration of the NSG with the IAEA in furthering the establishment of a Nuclear Law framework within LDCs and Member States through:
 - a. Further funds from NGOs like, ANT-Hiroshima, Arms Control Association, and Global Zero, to stipulate candidates in the Nuclear Law Institute (NLI) training program of the IAEA;
 - b. Extension of participant slots within the NLI training program with a quota, per region, of personal to further representation and outreach of the course;
 - c. Supporting regional and international frameworks by sharing knowledge about transnational incidence preparations through the Nordic Manual;
19. *Proposes* Member States of the NPT begin creating an international framework for the search of possible sites for international Geological Deposit Facilities for Radioactive Waste and collaboration regarding construction and operation:
 - a. Collaboration with the IAEA should occur based on IAEA and national safety regulations concerning the safety of their surrounding environment;
 - b. Member States and the IAEA should work together to find sites for those repositories and begin construction on the facilities;

- c. Disposal facilities should be operational before putting newly constructed Nuclear Reactors into service;
- 20. *Encourages* states on the verge of conflict to form a UN-sponsored dialogue forum for peace in order to stop conventional conflicts that may place nuclear plants at risk of destruction and devastation;
- 21. *Urges* Member States to involve the IAEA in discussions on nuclear disaster preparedness in line with the IAEA Safety Standards and Arrangements for Preparedness for a Nuclear or Radiological Emergency by:
 - a. Further inviting the involvement of women in all discussions of disaster preparedness;
 - b. Recommending Member States to collaborate regionally with upholding the IAEA Safety Standards and Arrangements for Preparedness for a Nuclear or Radiological Emergency;
- 22. *Further invites* Member States to cooperate with the International Commission of Radiological Protection in order to standardize physical protections of nuclear materials;
- 23. *Urges* for developed nuclear nations to fulfill commitments to provide funding and guidance to Emerging Economies to ensure safe development, storage, and proper usage of Nuclear Energy:
 - a. Proposes the expansion of the WECAN Pact to include a greater variety of Developed Nuclear Energy Capable Nations in order to support and provide funding for the establishment of safe nuclear energy practices worldwide;
 - b. Proposes the expansion of the WECAN Pact to provide accessibility to a greater variety of Emerging Economies throughout different global regions via partnership with Developed Nuclear Energy Capable Nations;
 - c. Implement the use of incident response and business continuation planning to increase the resilience of all computer systems in critical infrastructure in conjunction with the UNOCT Cybersecurity and New Technologies Programme;
- 24. *Recommends* to Member States to submit a request for an Integrated Regulatory Review Service (IRRC) to review the regulatory safety framework for nuclear, radiation, radioactive waste, and transport safety in Member States asking about it in order to note areas for further improvements.



National Model United Nations • Japan

Code: NPT/1/4

Committee: Nuclear Non-Proliferation Treaty Review Committee

Topic: Strengthening Measures for Nuclear Security

The Nuclear Non-Proliferation Treaty Review Committee,

Cognizant of the remarks of the 2020 NPT Review Conference and its call for international cooperation of radioactive materials via maritime transport, while recognizing maritime freedoms and sovereignty under international law,

Deeply concerned by the acquisition of nuclear materials by non-state actors via procurement practices on international waters such as trafficking of nuclear and other fissile materials,

Concerned by the salient threat posed by the cross-border movement of nuclear materials thus enabling the nuclear capabilities of malignant actors,

Recalling the sentiments of United Nations Security Council Resolution 1540 and its commitment to deterring the non-proliferation of weapons of mass destruction,

Guided by the intentions of empowering developing countries to strengthen export, transit, and transshipment controls while ensuring undue burden is not placed on developing countries,

Encouraged by regional maritime security initiatives which consolidate the practical cooperation and trust building of maritime security partners,

Reaffirming the importance of Article IV of the Nuclear Non-Proliferation Treaty that specifies the pledge for Member States to not transfer nuclear weapon related material to nuclear aspiring states,

Recognizing the 1982 United Nations Convention on the Law of the Sea, pertaining its recognition of the sovereign rights of a state's territorial waters,

Affirming the importance of addressing the proliferation of nuclear trafficking in an integrated and comprehensive manner,

Recognizing the lack of progress in fulfilling the UN Security Council resolution 1540 (2004) that Member States may require assistance in implementing the provisions of the resolution and may respond to specific requests of Member States through its assistance mechanism,

Welcoming the efforts of the World Institute of Nuclear Security (WINS) that serves as an international forum for nuclear security professionals and stakeholders through producing programs that foster the nuclear security architecture and works closely with the International Atomic Energy Agency (IAEA),

Guided by the principles of Article III of the *Treaty on the Non-Proliferation of Nuclear Weapons*, regarding the prevention of the provision of fissile material to nuclear weapon aspiring states, and non-state actors,

Having studied the potential for nuclear infrastructure to achieve Sustainable Development Goals 7, 9, 11, and 13, as prescribed in the *2030 Agenda*,

Recalling the role of the Nuclear Suppliers Group (NSG) towards the monitoring and controlling the export of materials, equipment, and technology that can be used to manufacture nuclear weapons,

Deeply concerned by the lack of international security standards, mechanisms, and confidence building measures that cover 83% of global stocks weapons-usable plutonium or highly enriched uranium (HEU),

Affirming the role of the IAEA, promoting effective control and protection of nuclear materials and their facilities,

1. *Urges* Member States to monitor the source and material origins, transshipment route and destinations of nuclear related fissile materials to ensure the security of major transshipment hubs globally, through:
 - a. Maintaining detailed manifests regarding cargo in major transshipment hubs, with a regional, centralized, cooperative database of the shipment of materials;
 - b. Utilizing existing international and domestic organizations following the framework of the *International Convention for the Suppression of Acts of Nuclear Terrorism*, and the *Convention on the Physical Protection of Nuclear Material* at the discretion of the sovereign Member State as a template;
 - c. Welcoming cooperative efforts of Member States to engage in domestic joint-national operations to maintain the security of transshipment hubs Exclusive Economic Zones such as the *Strait of Malacca*:
 - i. Considers the possibility for military and economic attachés to engage in data-sharing of their operations to improve the efficacy of any and all operations;
 - ii. Underscores the opportunity for such operations to create greater levels of trust and co-operation among Member States regarding nuclear security allowing for levels of détente;
 - d. Developing a national task force with the purpose of enforcing the security of ports, with a focus on preventing nuclear contraband from passing through ports to protect national security;
 - e. Encouraging such task forces to work in tandem with the IAEA's Integrated Regulatory Review Service (IRRS) to ensure the quality of regulatory framework to supervise authorized personnel;
 - f. Endorsing these task forces to enforce random stop and search operations against vessels with undeclared cargo:
 - i. Encourages this to be extended to vessels travelling under suspicious circumstances at the discretion of the sovereign nation;
 - ii. Condemning the use of such measures in bad faith to apply more stringent measures to specific Member States or military vessels to ensure the preservation of the integrity of state sovereignty;
2. *Invites* the practical cooperation of Member States through forming bilateral and multilateral maritime security partnerships, while maintaining the strength of those in existence:

- a. Recommends Member States, particularly those who are developing states, to engage in regional and multinational maritime security exercises such as Exercise Saharan Express;
 - b. Encourages developed and capable Member States to assist developing maritime nations in such exercises via engagement, expertise sharing, and assistance;
 - c. Member States should further engage in mutual ship boarding agreements under initiatives such as the Proliferation Security Initiative (PSI) with bilateral partners as a trust building mechanism to deter vessels carrying illicit nuclear cargo at sea;
3. *Recommends* Member States to communicate with the Nuclear Forensics International Technical Working Group (ITWG) for advisory in regards to tracking lost fissile material from facilities with the help of the Proliferation Security Initiative:
 - a. Engage in risk assessments and advisory services of the ITWG;
 - b. Intervening in negotiations between state and non-state actors concerning the proliferation of fissile material and weapons-usable material;
 - c. Establish an information-sharing mechanism with further assistance from the Proliferation Security Initiative;
4. *Further recommends* that Member States commit and adhere to guidelines of the Nuclear Suppliers Group pertaining the cooperation of the export controls of non-nuclear weapon states:
 - a. Suggests the attention and notification of the movement of any and all nuclear materials through the IAEA's Incident and Trafficking Database (ITDB) and noting that the definition of "movement" entails shipment buying, selling, import, and export of any and all nuclear radioactive materials;
 - b. Promoting the sharing of information in order to monitor and regulate the transfer of goods via the sharing of information through databases including but not limited to the IAEA's Research Reactor Materials Property database;
 - c. Consolidate the reliability of the guidelines through a variety of selecting processes to ensure its success such as a through a trial-and-error program to ensure the best staff possible to oversee the operation at hand;
5. *Recommends* the recalibration of current safeguards agreements through the adoption of the framework of the Military Materials Security Study Group in improving the security of nuclear materials and securing weapons of mass destruction (WMD):
 - a. Utilizing the Convention on Nuclear Security (CNS) Global Incidents and Trafficking Database and the IAEA's Incident and Trafficking Database (ITDB) for assessment of poorly secured and vulnerable to theft nuclear facilities, and for securing and dismantling WMD and their associated infrastructure;
 - b. Working with the International Network for Nuclear Security Training and Support Centers to manage lab-to-lab programs such as improving security of nuclear warheads in storage and nuclear materials at civilian, naval, and nuclear weapon complex facilities;

6. *Encourages* the enhancement of verification systems using online nondestructive testing (NDT) process monitoring systems through the assistance of the International Atomic Energy Agency (IAEA) to aid in minimizing the risks of nuclear terrorism and securing national borders by supporting safeguards and augmenting operator's process control:
 - a. Utilizing online nondestructive testing (NDT) process monitoring techniques such as testing and imaging systems that measure radiation induced or emitted spontaneously from the nuclear material to detect abnormal plant operations and to prevent non-state actors from diverting weapons-usable nuclear material from these facilities;
 - b. Recommends including modules of cyber security in the training International Nuclear Security Education Network (INSEN) and International Network for Nuclear Security Training and Support Centers (NSSC Network),
 - c. Invites working in hand with Nuclear Suppliers Group with the monitoring of the import and export of nuclear materials;
7. *Invites* Member States to work towards collaboration to increasing nuclear intellectual capital in regard to creating sustainable nuclear infrastructure by:
 - a. Endorsing the creation of donor-recipient systems between developed and developing nations;
 - b. Encouraging the creation of scholarships at reputable engineering universities in developed countries dedicated solely for the recipients in developing countries, with such exchange supervised through the International Nuclear Security Network (INSEN):
 - i. Underlining the mutual benefit that can arise from this, increasing collective nuclear safety and security, whilst allowing developing countries to begin creation of their own nuclear capital;
 - ii. Recognizing the potential benefit to developing nations via migrant remittances and students returning home, helping increase the intellectual capital of nuclear infrastructure related industries;
 - iii. Further recognizing that many students may choose to remain in the country of study, establishing a quid pro quo relationship between both international parties;
 - iv. Encouraging the benefit of international trust and cooperation through the good faith exchange of knowledge, expertise, and labor;
 - v. Reassuring that nuclear aspiring states can be excluded at the discretion of the individual states to preserve state sovereignty;
 - vi. Advises Member States to acquire support and funding for such scholarships via United Nations and other international bodies such as UNESCO and the World Bank, or through the private sector;
8. *Encourages* all Member States who mine nuclear materials to designate specific transport routes for such resources:
 - a. Highlighting the benefit to the safety and security of these nuclear materials;

- b. Further encouraging all nuclear materials to be transported in specific internationally recognized vessels with the sole purpose of transporting nuclear materials;
 - c. Trusts the insurance of these vehicles to follow a designated transport route to ensure safe and secure transit of such commodities;
9. *Recommends* the reaffirming of the UN Security Council resolution 1540 “all states must provide effective nuclear security” through the enhancement of specifications for the level of security for facilities containing radioactive materials based on the framework of INFCIRC/225/Revision 5 under the guidance of the IAEA and WINS which encompasses an integrated physical protection system focusing on three areas:
- a. Recognizes the importance of early detection of facility breaches as the first response:
 - i. Suggests the utilization of varying illuminated detection zones and critical areas where the radioactive material is located monitored through Passive Infrared Motion (PIR) detectors;
 - ii. Recommends the use of Intrusion Detection systems and the application of the DBT as common basis for design of security systems and rule of 2-Guard Personnel located at each level;
 - b. Encourages the improvement of current response protocols when facilities have been breached:
 - i. Suggests the establishment of highly trained and well-armed security officers;
 - ii. Encourages Member States to cooperate with INTERPOL to build an effective prevention and deterrence program, through INTERPOL’s available workshops for risk identification and mitigation;
 - iii. Further suggests undergoing regular security assessments and the practices operated by the IAEA to ensure maximum protection;
 - c. Suggests the UN Security Council resolution 1540 Committee’s assistance mechanism to collaborate with the IPPAS and WINS in providing technical assistance in implementing the provisions of the resolution 1540.



National Model United Nations • Japan

Code: NPT/1/5

Committee: Nuclear Non-Proliferation Treaty Review Committee

Topic: Strengthening Measures for Nuclear Security

The Nuclear Non-Proliferation Treaty Review Committee,

Recognizing the crucial role that the International Atomic Energy Agency (IAEA) plays in all discussions of nuclear security and promoting the cooperation between Member States,

Acknowledging the resolution General Assembly report 71/38, adopted in 2016, which takes note of the international seminar on nuclear security by the IAEA,

Mindful of the General Conference 65/9 resolution, adopted in 2021, which emphasizes that nuclear security contributes to international peace and security,

Deeply regretting the advent of nuclear disasters in the past, such as the Chernobyl and Fukushima Daiichi disaster which resulted in numerous casualties and radiation-induced diseases,

Fully aware of the creation of the *Convention on Early Notification of Nuclear Accidents* in preventing and mitigating the effects of nuclear accidents,

Affirming the support and partnerships from United Nations (UN) agencies, such as the United Nations Development Programme (UNDP), in furthering progress in provided resources in case of disaster,

Expressing appreciation of the substantive work of the international seminar on Essential Elements of Nuclear Security by the IAEA in 2012 and in 2014 and the role of the Nuclear Threat Initiative in mitigating and reducing threats to nuclear security,

Having considered the role of the Convention on the Physical Protection of Nuclear Materials (CPPNM) and its amendment in safeguarding Nuclear Power Plants and various facilities,

Recognizing the role of the IAEA in assessing cybersecurity incidents, insider threats, and facilitating Member States' definitions of their Design Basis Threats,

Emphasizing the dangerous impact of natural disasters surrounding nuclear critical infrastructure which have made nuclear facilities even more vulnerable to meltdowns,

Noting the non-existence of consolidated IAEA guidelines regarding the mitigation of internal flood in the nuclear facility due to the increasing incidences of flooding that affects nuclear power plants,

Recalling the Stuxnet malware attack against nuclear facilities in 2010,

Upholding the right of Member States to pursue and develop nuclear energy for peaceful uses, and their well-intentioned interests in the many benefits resulting from the peaceful application of nuclear energy,

Considering the role of the International Physical Protection Advisory Service (IPPAS), and the International Nuclear Security Advisory Service (INSServ) of the IAEA in consolidating a Member States' confidential information regarding their nuclear capabilities or initiatives,

Guided by the IAEA's Nuclear Security Series regarding the physical protection of nuclear power plants,

Reaffirming the IAEA's Security and Safety Guide no. 64 and its focus on protecting the people and the environment from nuclear harm,

Deeply concerned by the potential of nuclear power reactor meltdowns due to insufficient security mechanisms, fail-safe measures, and additional protective technology in civilian reactors,

Alarmed by threats to public health and the environment posed by nuclear disasters, resulting in radiation-induced diseases, soil degradation, and waterbed contamination,

Noting with concern the increase of human displacement that occurs during nuclear power plant accidents,

Recalling the establishment of new nuclear energy plants in various emerging economies, and the importance of instilling stringent guidelines to protect the safety of facilities, and their roles in addressing energy shortages and promoting sustainability,

Keeping in mind Sustainable Development Goal 7 for affordable and clean energy, including the Small Modular Reactor (SMR) plan for energy transition in the Least Developed Countries (LDCs),

Appreciating the Global Threat Reduction Initiative (GTRI) which provides proactive initiatives regarding nuclear safety, analytics, and safe transport of Highly Enriched Uranium (HEU) globally and its conversion to Low Enriched Uranium (LEU),

Reaffirming the UN Security Council resolution 1540 (2004), which emphasizes that nuclear weapons constitute a genuine threat to international peace and security including nuclear terrorism and the risk of nuclear facilities being attacked by malignant actors,

Further noting the United Nations Office on Drugs and Crime (UNODC) International Seminar on Essential Elements of Nuclear Security on disseminating training tools to counter radiological and nuclear terrorism,

Acknowledging the disastrous environmental and humanitarian effects that would result from unauthorized actors exploiting nuclear materials being used in peaceful manners,

Underlining the significance of sharing information, knowledge, and best practices between Member States, and the importance of next generation professionals and experts in order to maintain nuclear security,

1. *Advises* Member States with more developed nuclear energy programs to follow the guidelines of the IAEA and to contribute to improving nuclear security in countries with less developed nuclear power knowledge by:
 - a. Sending experts from Member States with more developed nuclear energy programs, suggested by the IAEA, to those which are less developed to ensure nuclear security and provide on-site training to employers and workers;
 - b. Managing and assisting nuclear power plants with nuclear safety issues by sending provisional managers who are trained to handle those challenging circumstances;

- c. Taking part in the IAEA Global Nuclear Safety and Security Network to share knowledge and experience on how to prevent any danger to the global community;
 - d. Encouraging the further implementation of the International Physical Protection Advisory Service (IPPAS), and the International Nuclear Security Advisory Service (INSServ) of the IAEA in consolidating a Member States' confidential information regarding their nuclear capabilities or initiatives;
 - e. Suggesting the integration of nuclear energy information in university educational systems;
2. *Encourages* Member States to join conferences held by the IAEA such as the International Conference on Safety and Security Radioactive Sources and the International Conference on Computer Security in the Nuclear World in order to:
- a. Establish international protocols and standards of protection against cyber-attacks;
 - b. Establish an international assessment standard and system of nuclear security;
3. *Recommends* safe use of nuclear energy by:
- a. Requiring an IAEA issued license to any individual or organization wishing to participate in any activities involving radioactive materials or radiation sources, including but not limited to:
 - i. Nuclear medicine centers;
 - ii. Medical facilities particularly departments using X-rays by physicians or dentists;
 - iii. Irradiation infrastructures and facilities;
 - iv. Nuclear Research Laboratories as well as Universities Laboratories;
 - v. Industrial Radiator Facilities;
 - b. Inviting licensed individuals and groups to establish relevant standards in order to deal with every possible emergent case, while the emergency response plan might include but is not limited to:
 - i. Assessment analysis of the level of threat;
 - ii. Preparation of medical action plans;
 - iii. Measures to protect emergency workers;
 - iv. Procedures to tackle short-term and long-term nuclear consequences;
 - c. Requesting Member States with expertise on Nuclear Energy to train Member States with less experience to help communities in their region in case of accidents caused by nuclear power plants or resources by:
 - i. Providing emergency routes to a radiation-free underground or above ground shelter for those who are fleeing from nearby radiation;

- ii. Educating communities for an action plan in case of a nuclear disaster, depending on the amount of exposure of radiation, how long those affected should stay in shelters to reduce the potential dose of radiation;
 - d. Forming a technical group of experts within the IAEA which will:
 - i. Organize regional workshops and send advice to individuals as well as organizations in charge of nuclear substances to develop emergency preparation plans;
 - ii. Review proposals on emergency response plans and grant approval to those that meet the standards and contingencies;
- 4. *Suggests* the amendment of the IAEA's Nuclear Security Series guidelines focusing on the Specific Flood Protection Protocols through the integration of the correct application, categorization, and classification of Flood Protection Seals to prevent internal flooding, which will include:
 - a. Classifying the common types of flood penetration seals in a nuclear power plant that enumerates their specific attributes including:
 - i. Seal-related sealants in which the material can seal surfaces of facilities inside of the nuclear power plant;
 - ii. Penetration of seals used for safeguarding the surface around mechanical or electrical wiring;
 - iii. Penetrant seals for covering wires themselves;
 - iv. Barrier seals to protect water-tight doors to prevent water from leaking into nuclear power plants;
 - b. Following guidelines on applications of sealants, noting that:
 - i. Epoxies and liquid elastomers should be suitable for cracked surfaces, can be painted on the surface, and provides waterproofing;
 - ii. Waterproof foams that are based on silicone and urethane should be suitable for filling hollow cracked surfaces to fill in the small openings;
 - iii. Urethane foams should be able to mix with another sealant to fill in pipes with steel wiring as it expands in the shape of the receptacle;
- 5. *Endorses* Member States' employment of the environmental radiation monitoring systems through advisory of the IAEA on the assessment of the ecological and geographical conditions of the nuclear power facilities in order to ensure that there is no harmful effect on the surrounding environment through the implementation of a similar framework to the Nordic Nuclear Safety Research by:
 - a. Suggesting a set of activities based on competence building taking the form of research activities, test exercises, information collation, and review exercises such as the following:

- i. Collecting seawater, soil, and agricultural as well as sea products to measure and analyze them for radioactive material content and to ensure that power plants have no adverse impact on the surrounding environment;
 - ii. Conducting biodosimetry;
 - iii. Performing radioecological assessments;
 - iv. Analyzing dose assessments;
 - v. Evaluating the effect of radiation on the biosphere;
 - b. Expanding the IAEA verification systems through the development of nuclear satellite imagery technology to detect nuclear waste leakage and radiation, while also incorporating funding from the IAEA's regular operating budget fund to subsidize emerging economies' implementation of this program;
6. *Welcomes* the use of Small Modular Reactors (SMR) for emerging economies and LDCs to aid in both the transition to clean nuclear energy through the aid of the IAEA and collaboration with the United Nations Office for Disaster Risk Reduction (UNDRR) by:
 - a. Working in cooperation with the IAEA to assist emerging economies to move towards access to a commission of experts in different areas such as technology, and topology to see the feasibility of the project, and the proper foundation and infrastructure needed;
 - b. Providing a risk and ecological assessment of the environmental and ecological factors for potential areas to build SMRs on;
 - c. Implementing a comprehensive training and contingency plan of the plan;
 - d. Spreading and distributing knowledge and results through seminars, workshops, and educational/training courses for emerging economies;
7. *Recommends* certified International Monitoring Systems (IMS) such as radionuclide stations for detection of purposeful or unintentional nuclear explosions or meltdowns to aid in information-sharing and adopting a mechanism similar to Australia's National Exposure Information System (NEXIS) with data analysis enhanced by the IAEA, National Nuclear Security, EUs in nuclear facilities of Member States by:
 - a. Moving towards the minimization of HEUs through the aid and commitment of the GTRI in securing, removing, relocating, or disposing of nuclear and fissile material to make it suitable for storage and disposal;
 - b. Emphasizing the protection of the conversion process of transitioning from HEUs to LEUs within the facilities located at conversion facilities, reprocessing plants, and industrial sites through the framework of the GTRI to reduce and protect vulnerable nuclear and radiological material located at civilian sites worldwide;
8. *Encourages* all Member States to promote education of nuclear security with the IAEA's technical support by:

- a. Inviting Member States and non-Member States to become donors to support the IAEA by extra voluntary contributions to increase the number of Nuclear Energy Management (NEM) schools and strengthen nuclear security education among emerging economies which are planning or embarking on the development of nuclear programs;
 - b. Promoting through local schools and government to develop national educational programs to strengthen nuclear security in collaboration with NEM schools, as it is more constructive for the target countries to take the initiative in education;
 - c. Encouraging the IAEA to promote the employment of external lecturers from Member States who have successful experiences on the matter of nuclear safety and security at the NEM schools;
 - d. Prioritizing regional efforts of nuclear education and strengthening existing regional nuclear education networks with meaningful regional and interregional cooperation by sharing experiences and best practices;
9. *Further advises* all Member States to participate in the existing “International Seminar On Essential Elements of Nuclear Security” in cooperation with the IAEA and UNODC, which will provide the information including:
- a. Radioactive materials dispersal devices;
 - b. Response to incidents involving nuclear materials and terrorism;
 - c. Illicit trafficking in nuclear resources;
 - d. The latest technology and knowledge about nuclear security and assessment systems;
10. *Requests* Member States to share information in order to develop nuclear technology and realize peaceful nuclear development in cooperation with the IAEA by:
- a. Imploring Member States to utilize the IAEA’s Nuclear Education Networks in order to connect Member States with experience in the research and development of nuclear resources to those still developing nuclear power plants and research facilities by:
 - i. Endorsing the expansion of networks such as the Regional Network for Education and Training in Nuclear Technology (STAR-NET) to include emerging economies;
 - ii. Suggesting an increase of voluntary contributions from Member States to the IAEA in order to fund expansions of this program;
 - b. Focusing upon emerging economies that aim to rely on nuclear energy through:
 - i. Suggesting Member States to participate in international conferences similar to *The IAEA International Conference on Topical Issues in Nuclear Installation Safety* (TIC) in order to keep track of current issues and development of technology;
 - ii. Conducting continuous training by professionals from the IAEA for professionals in each Member State at their workplace to update their knowledge and skills;

11. *Recommends* to Member States a framework on adopting the Global Cybersecurity Association (GCA), a set of computer security guidelines designed for corporate security requirements with a comprehensive risk-based approach providing both prescriptive and performance based measures with the help of the International Nuclear Security Education Network to integrate into the IAEA's cybersecurity educational program for further expansion of its scope, which shall:
 - a. Involve information on the General Data Protection (GDPR) that is considered to be the toughest privacy and security law of the European Union;
 - b. Focus on a multifaceted approach in regards to the elements of Govern, Protect, Detect, and Respond;
 - c. Involve an array of guidelines highlighting handling ICT equipment, Security Documentation, Physical Security, Cyber Security Roles, System Hardening, software development, and database management;
12. *Promotes* the establishment of self-sufficient, independent nuclear security training processes within Member States by:
 - i. Encouraging the effective establishment of Nuclear Security Support Centres (NSSCs) utilizing the guidelines provided in the revision of IAEA-TECDOC-1734, Establishing and Operating a National Nuclear Security Support Centre;
 - ii. Calling on Member States with existing NSSCs to participate in the International Network for Nuclear Security Training and Support Centres (NSSC Network);
 - iii. Further encouraging Member States interested in becoming part of the NSSC Network to request membership via the IAEA;
13. *Highlights* the need for strong cybersecurity practices in all nuclear facilities and critical infrastructure, which includes:
 - a. Cybersecurity training programs, which encompass the proper handling of nuclear materials to ensure containment and that it remains within the IAEA regulations, which are oriented towards the development of cyber personnel as well as opening opportunities for those people;
 - b. The use of educational and awareness platforms such as MITRE ATTACK which informs both the technical cybersecurity personnel as well as informing the general public about the current threats faced by critical infrastructure;
 - c. The use of incident response and business continuation planning to increase the resilience of all computer system in critical infrastructure;
 - d. The use of zero trust architecture, which gives stronger confidentiality, integrity, and availability of data;
 - e. The use of United Nations 6 official languages in all shared documents and information between Member States in regards to emergency response;
 - f. The use of penetration testing as a way to check the security of critical infrastructure;

14. *Encourages* the installation of Filtered Centered Systems in reducing the possibility of containment-building explosions, and mitigating the effects of the release of radioactive gasses to the atmosphere should an accident occur;
15. *Calls for* the protection of public health and workers at power plants from airborne radioactive gasses and particles that could be produced or discharged by the nuclear reactor, during the manufacture of fuel, or during radiochemical or laboratory operations through the utilization of high-efficiency particulate air and carbon filters;
16. *Invites* the Member States to legislate their own multiple-year nuclear disaster emergency response, risk reduction, mitigation, and consequent capacity-building plan in the surrounding areas of their nuclear power reactors, research reactors, and naval reactors, following the framework of the Nuclear Regulation Authority's Three-Year Emergency Response Plan for Disaster Prevention, Disaster Mitigation, and Building Resilience;
17. *Emphasizes* the advancement in the fail-safe systems and the implementation of shutdown systems which will strengthen physical restraints and analog security systems to reinforce disaster prevention mechanisms;
18. *Invites* Member States to engage in partnerships with UNDP to ensure the equitable implementation of cyber security systems to all Member States harnessing nuclear power;
19. *Strongly advises* Member States to reevaluate and further develop their Nuclear Security Detection Architecture (NSDA), or the State-based guidelines on legal strategies and security systems to address potential hazards and risks that threaten nuclear energy infrastructures by:
 - a. Performing a nuclear risk assessment in any nuclear energy infrastructures;
 - b. Developing or redeveloping and applying the NSDA, taking note of the risks found during the assessment;
20. *Supports* facility personnel in understanding the infrastructure that may be damaged by cyber-attacks by preparing the staff to reduce facility damage during disasters and assist staff in comprehending infrastructure that might be harmed by cyberattacks;
21. *Advises* Member States to work closely with the United Nations Office of Counter-Terrorism and UN Department of Energy, to further the implementation of cyber security equitably to all regions by:
 - a. Advancing the development and deployment of technologies and tools in the case of the use of nuclear materials for nuclear energy;
 - b. Accelerating information sharing of cybersecurity through information systems to spur situational awareness concerning nuclear plant attacks;
22. *Recommends* Member States to create stronger physical structures to protect nuclear material and infrastructure from damage in the event of natural disasters by:
 - a. Urging all Member States to engage in the development of early warning systems for natural disasters in areas surrounding nuclear infrastructure in order to prevent nuclear disasters;

- b. Approving the mass dissemination of natural disaster warnings to civilians in the surrounding areas of nuclear infrastructure so that they have enough time to flee in preparation for natural disasters to avoid the harmful effects of nuclear radiation.



National Model United Nations • Japan

Code: NPT/1/6

Committee: Nuclear Non-Proliferation Treaty Review Committee

Topic: Strengthening Measures for Nuclear Security

The Nuclear Non-Proliferation Treaty Review Committee,

Reaffirming the commitment to the achievement of the *2030 Agenda for Sustainable Development* in the General Assembly Resolution 70/1 with a focus specifically on Sustainable Development Goals (SDGs) 7, 16, and 17, in regards to nuclear usage,

Understanding the potential that safe and regulated nuclear energy holds for a sustainable future and the fight against climate change,

Noting with deep concern the lack of robust and legally binding frameworks in certain Member States regarding the regulation, supervision, and sufficient protection of nuclear, fissile, and radiological materials,

Reiterating the Nuclear Non-Proliferation Treaty's commitment to the sovereignty of its State parties,

Concerned about illegal acquisition and trafficking of fissile materials by terrorists, extremists, and other non-state actors,

Recalling that the countermeasures for terrorism have been taken as the adoption of the *Convention on the Physical Protection of Nuclear Materials* (CPPNM) (1987), its Amendment (2005), and the *International Convention for the Suppression of Acts of Nuclear Terrorism* (2005) which notes the importance of taking measures to address root causes of terrorism and extremism, and in which Member States should be responsible to regulate the management of fissile materials to seek the enhancement of nuclear security,

Expressing concern for the security risks that come along with utilizing highly enriched uranium due to its potential use for producing nuclear weapons, such as unauthorized actors manipulating reactive materials,

Having studied the Reduced Enrichment for Research and Test Reactors Program's mechanisms in enabling a smoother transition to the usage of low-enriched uranium in order to promote non-proliferation of high-enriched uranium in nuclear power reactors, research reactors, and naval reactors,

Noticing Ukraine's commitment to the *1977 Protocol I Additional to the Geneva Convention*, and reminding all Member States committed to the Protocol until 2022, which protects critical infrastructure such as nuclear energy facilities,

Viewing with appreciation the comprehensive nature of the *Nuclear Security Plan 2022-2025* by the International Atomic Energy Agency (IAEA), especially with provisions to promote the increased uptake of peaceful uses of nuclear materials by developing nations,

Fully aware of the need for African states to have proper regulation and law about the management of nuclear materials since according to the IAEA, about 30 African countries stated that they are interested in having nuclear power plants in the future,

Stressing the importance of the role of the IAEA in promoting the safety and security of radioactive sources, in particular, by establishing technical guidelines, and supporting Member States in

improving infrastructure through tools such as the Integrated Regulatory Review Service (IRRS) and in strengthening the security of these nuclear activities,

Believing that countries with the materials to use nuclear energy must follow educational plans set forth by the IAEA with goals to strengthen information sharing, identify good practices, and promote cooperation through the established Nuclear Security Support Centres (NSSCs) in order to safely employ this renewable energy,

Further recognizing the capability of the International Atomic Energy Agency (IAEA)'s advisory body and Handbook on Nuclear Law to guide Member States in drafting their own nuclear laws in order to better monitor how nuclear energy and technology are used within their own jurisdiction,

Acknowledging the IAEA's Standing Advisory Group for Nuclear Energy's initiatives in regulation and policymaking for nuclear fuel cycle and nuclear waste management in order to mitigate the nuclear security risks that come with both the open nuclear fuel cycle and closed nuclear fuel cycle due to inefficient mechanisms for nuclear waste disposal and storage,

Noting current circumstances across the globe are delaying necessary nuclear safety inspections by the overworked IAEA is in turn buttressing nuclear security,

Acknowledging that over 3,600 nuclear-unauthorized activities were reported by Incident and Trafficking Database (ITDB) since 1993 there is a need for Member States to implement a methodical tracking system for the life cycle of nuclear energy being utilized in civilian reactors,

Cognizant of the responsibility of Member States to conduct national risk assessments of both physical and computer-based security,

Having reviewed existing frameworks, such as the Cybersecurity and Cyber Crime Action Plan (CARICOM) and the Law of Nuclear Energy Protection, to safeguard and add needed security to critical infrastructure, such as nuclear power plants,

Recognizing that 85% of weapon-usable material is not subject to any international security standards or oversight mechanisms, as pronounced in the 2016 Nuclear Security Summit,

Reaffirming the Global Threat Reduction Initiative's significant role in the protection of nuclear and fissile materials in civilian reactors,

Noting with deep concern that the production and transport of nuclear materials by all Member States are lacking in terms of transparency and good faith, which produces a threat to nuclear security,

Having considered the Nuclear Suppliers Group's contributions to nuclear non-proliferation through its regulation of the export of nuclear materials,

Expressing nations rights and sovereignty to continue to develop nuclear energy more effectively with new innovation and education guaranteed by Pillar 3 of the NPT regarding peaceful uses of nuclear energy,

Acknowledging the overuse of radioactive materials and the high pollution levels causing the deterioration of the environment,

Acknowledging the success of the 1996 *Treaty of Pelindaba* within the African continent, which creates a cooperative unit in which nuclear material has limitations in transportation and creation within the territory of States parties to the treaty,

Underlining the need for the international community to communicate openly and in good faith in order to better understand each Member State's needs and worries when it comes to technological advancement and new nuclear infrastructure,

Recognizing that under the CPPNM and the amendment to the CPPNM (A/CPPNM), Member States need to have its proper regulations and laws to seek the safe use, storage, and transportation of nuclear materials,

Noting with appreciation that African states are showing their interests in ratifying the CPPNM and the A/CPPNM, as seen in the African workshop on A/CPPNM in 2021 co-sponsored by African Center for Science and International Security and Nuclear Threat Initiative made to broaden the understanding of the A/CPPNM,

Recognizing the precedent need for safe ways to dispose nuclear waste,

Realizing the need for the establishment and training of rapid reaction forces to counter nuclear threats or nuclear disasters,

Affirming the successful creation in 2021 of the Chemical, Biological, Radiological, and Nuclear Risk Mitigation Center of Excellence (CBRNCoe) Secretariat for Eastern and Central Africa (ECA) in initiating best practice sharing of securely managing hazardous chemical and biological products,

Further noting the central themes of transparency, accountability, and legitimacy as pursuant to Article 7 of the Convention, titled *Transparency Measures (2011)* under clause 10 which facilitates measures and frameworks providing risk reduction education and effective warning to civilians of any instance of a breach of nuclear security,

Acknowledging the importance of positive incentives for Member States, such as rewards, rather than negative incentives, such as punishments, in promoting the adherence of international regulations on nuclear security,

Noting with concern the increasingly arduous compliance burden placed on developing states attempting to establish peaceful uses of nuclear materials, especially when keeping in mind that, according to the African Development Bank Group, there are over 640 million African people without access to energy, who need a clean, renewable source of energy to address this challenge,

1. *Calls upon* Member States to enhance peaceful dialogue between the governments and different actors, continuing direct negotiation with terrorism or extremism, particularly those with interest in nuclear possession, in order to prevent them from acquiring nuclear weapons and prevent nuclear terrorism;
2. *Urges* the strengthening of developing Member States' capacity in combating nuclear terrorism through:
 - a. Combating multiple facets of terrorism by increasing collaboration between Member States and regional organizations to monitor industries in which nuclear materials are frequently used as to prevent the financing and unauthorized acquisition of materials used for nuclear proliferation;
 - b. Organizations under the IAEA such as the Forum of Nuclear Regulatory Bodies in Africa, as to:
 - i. Provide a forum in which the regional aspects of nuclear security can be taken into account;
 - ii. Promote the protection of peaceful applications of nuclear energy;

3. *Advises* Member States to comply with Security Council resolution 1540 by:
 - a. Increasing transparency of cross border fissile material shipments and reduce fissile material acquisition by non-state actors;
 - b. Ensuring non-state actors do not gain unnecessary influence through the expansion of the International Tracing Instrument (ITI) in the armament or production of nuclear materials or weapons;
 - c. Advising for increased safeguards through the IAEA to ensure fissile materials do not fall in the hands of terrorist organizations that would threaten world peace;
4. *Welcomes* an initiative to allow Member States to voluntarily create joint programs with regional partners to help alleviate IAEA workload:
 - a. World conflicts are over-taxing the IAEA and its resources, forcing it to delay much-needed inspections, safety training, and approval on non-conflict states allowing joint programs will help secure the safety and security of the programs and facilities being delayed by allowing much-needed services to be impeded;
 - b. Bilateral agreements, such as the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials (ABACC) extending to a Quadripartite Agreement (INFCIRC 435) establish transparency, build mutual trust, and foster effective cooperation between regional partners alongside the IAEA, ensuring the development of nuclear security while supporting innovation;
5. *Recommends* an acceleration in efforts for the research, development, and wider-scale utilization of low-enriched uranium for research reactors and naval reactors and the elimination of highly-enriched uranium usage and 90% enriched weapons-grade uranium-235 usage, as additional mechanisms to supplement the Reduced Enrichment for Research and Test Reactors Program, in potential collaboration with IAEA, Nuclear Threat Initiative, Fissile Materials Working Group, and Center for Arms Control and Non-Proliferation by:
 - a. Reconfiguring centrifuge technology of Member States with civilian reactors in order for the centrifuges used in research reactors and naval reactors to no longer be able to produce highly-enriched uranium and weapons grade U-235;
 - b. Incentivizing the private medical technology sector to promote a wider-range use of low-enriched uranium in the production of Molybdenum-99 and Technetium-99m;
 - c. Implementing a larger-scale utilization of high-density low-enriched uranium fuel for usage in Member States' naval reactors' pressurized water reactors;
 - d. Providing financial and technical support for developing countries to facilitate research and development processes into low-enriched uranium through the IAEA;
6. *Suggests* an amendment in the Nuclear Suppliers Group (NSG) guidelines to include criteria where State parties are to transition from utilizing highly-enriched uranium to low-enriched uranium in civilian reactors such as nuclear power reactors, research reactors, and naval reactors to ensure stronger mechanisms for nuclear security and non-proliferation, which shall involve aspects such as:
 - a. Successful compliance to the criteria leading to the continuation of nuclear material, technology, and equipment from the NSG chain of supply to Member States;

- b. Extended support for the Reduced Enrichment for Research and Test Reactors Program in producing and providing necessary nuclear technology;
 - c. Additional reinforcement for the Global Threat Reduction Initiative in the disposal of excess nuclear and radiological materials;
 - d. Creation of supplementary guidelines to serve as a foundation for state parties' transition to low-enriched uranium, drawing from the Global Threat Reduction Initiative's "Convert, Remove, Protect" framework;
 - e. Establishment of a contextualized and needs-based timeline for implementation of the transition ranging from 10 to 30 years, depending on the capability of each State party to completely eliminate the usage of highly-enriched uranium;
 - f. Provision of annual progress reports on the State parties' respective transitions to low-enriched uranium;
7. *Supports* Member States to minimize the risk of deviation of Highly-Enriched Uranium (HEU) and Plutonium to nuclear weapon production by:
- a. Adhering to the Global Threat Reduction Initiative and action 61 of 2010 NPT Action Plan striving to the full conversion of HEU to Low-Enriched Uranium (LEU);
 - b. Transitioning from HEU to LEU by fostering bilateral cooperations between nuclear and non-nuclear Member States with full compliance to IAEA safety and security standards;
8. *Strongly encourages* searching for peaceful uses of nuclear energy that will enable African Member States to sign new agreements pertaining to Africa by:
- a. Legislative assistance being provided from IAEA as needed;
 - b. Meetings being held once a year;
9. *Strongly reminds* Member States who ascribe to the *Geneva Convention* and its subsequent additional protocols, that they are party to the agreement, and have categorically agreed to ascribe to their principles by:
- a. Reiterating that *Additional Protocol I to the Geneva Convention* which explicitly protects critical infrastructure, of which nuclear energy facilities are categorized and subsequently protected;
 - b. Reminding all Member States, whether current or past, of their commitment to the *Geneva Convention*;
10. *Further suggests* that Member States both uphold and continue the mission of the monitoring capabilities of the international community in relation to nuclear security, which has ensured:
- a. The international community has the capabilities to ensure non-state actors are not testing illegally obtained nuclear materials;
 - b. A cooperative body of states is actively discussing and addressing the threat of maligned actors which seek to act with malintent regarding the safety of nuclear infrastructure;
11. *Further suggests* the extension of the IAEA's verification systems to include a designated tracking system for the monitoring of Member States' and State parties to the comprehensive

safeguards agreements' civilian reactors' nuclear fuel cycle which shall cover aspects such as:

- a. Assurance that the plutonium left in the open nuclear fuel cycles reprocessed spent fuel will not be acquired by non-state actors for the production of nuclear weapons and/or improvised nuclear devices;
 - b. Enhanced security and protection measures for the existing disposal and storage;
12. *Recommends* using funding from the Nuclear Security Fund for the implementation within the IAEA of an international nuclear advisory board, to review current and proposed national and international legislation regarding nuclear security, that is composed of:
- a. Already existing international and regional frameworks such as seen within the United Nations Office for Disarmament Affairs, IAEA, and Department of Energy including:
 - i. Advise on national policy and scientific aspects of nuclear issues;
 - ii. Periodic reviews of programs within consenting Member States regarding nuclear energy safety protocols and nuclear security;
 - b. A rotating board of members from relevant professional backgrounds that are:
 - i. Nominated by governments and elected by Member States;
 - ii. Comprised from each global region that is based on equitable geographical distribution and consists of:
 1. 5 African states seats;
 2. 5 Asia-Pacific states Seats;
 3. 3 Latin American and Caribbean states seats;
 4. 3 Western European and Other states seats;
 5. 2 Eastern European states seats;
 - iii. Limited to a 3-year membership and reelection once;
 - c. Three pillars of beliefs including:
 - i. Nuclear security;
 - ii. Nuclear legislation;
 - iii. Encouragement of adherence to current nuclear safety frameworks;
13. *Suggests* the expansion of the IAEA legislative assistance program focused on guiding Member States in creating and implementing their own legislations regarding the regulation, monitoring, and protection of nuclear and fissile materials, including provisions on matters such as:
- a. Mechanisms for regulation and monitoring the usage of nuclear energy in civilian reactors, such as:
 - i. Personnel in charge of regulation and monitoring;

- ii. Technology to be used in regulation activities;
 - b. Definitions on the protection of nuclear and fissile materials, such as parameters of ensuring the security of the storage systems of nuclear and fissile materials;
- 14. *Advocates* for Member States to consider the implementation of a strengthened legislative framework within their territories to mitigate dangers involving nuclear security through:
 - a. The expansion and elaboration of existing nuclear energy safety protocols;
 - b. Periodic reviews of current legislation regarding nuclear security conducted by the IAEA's Standing Advisory Group for Nuclear Energy (SAGNE);
- 15. *Urges* all Member States and regional groups to work more closely with the IAEA both bilaterally and multilaterally:
 - a. To develop national frameworks to take responsibility to physically protect against unauthorized removal of nuclear materials, mitigate sabotage and radiological incidents, and avoid computer-based risks;
 - b. To share scientific expertise for nuclear power capacity building;
 - c. To receive an assessment of the quality of their nuclear supervision institutions and regulatory frameworks through IAEA inspections and IAEA's Integrated Regulatory Review Service (IRRS);
 - d. To strengthen safe and proper protocols for the disposal of nuclear waste through elevated compliance with the *Comprehensive Safeguard Agreement (CSA)* which promotes the peaceful use of nuclear technology;
- 16. *Recommends* Member States to increase United Nations (UN) funding to the IAEA to:
 - a. Enhance development of security measures for facility management;
 - b. Fund studies investigating nuclear technology and infrastructure safety;
- 17. *Endorses* all Member States to collaborate with the IAEA to strengthen the international Emergency Preparedness and Response (EPR) framework including the *Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency* and the *Convention on Early Notification of a Nuclear Accident* in the event of nuclear explosions:
 - a. Recommends all Member States to include women in the discussion of the EPR framework as women are disproportionately impacted by nuclear explosions as it relates to higher risk of cancers and infertility from radiation exposure;
 - b. Calls upon the IAEA to increase its funding for an expansion to the existing EPR framework for rebuilding cities after nuclear disasters including health care facilities, education, and transportation systems;
- 18. *Strongly recommends* that geological deposit facilities for radioactive waste should be operational before putting newly constructed nuclear reactors into service;
- 19. *Proposes* State parties to the NPT begin creating an international framework for the search of possible sites for international geological deposit facilities for radioactive waste and collaboration regarding construction and operation:

- a. Collaboration with the IAEA should occur based on IAEA and national safety regulations concerning the safety of their surrounding environment;
 - b. State parties and the IAEA should work together to find sites for those repositories and begin construction on the facilities;
20. *Recognizes* the need for additional security measures for fissile materials to be regulated by expanding the IAEA's technical cooperation program and recommending to consider a nuclear energy monitoring service provided by Member States through guidance from the IAEA;
21. *Strongly suggests* that the IAEA keep a database of fissile materials contained within each Member State by:
 - a. Encouraging consenting Member States to cooperate with the IAEA for the sake of transparency in nuclear security;
 - b. Updating fissile nuclear compilation to discuss why such information is important in preventing dangerous use of nuclear energy and encourage Member States to join the newly updated compilation;
 - c. Utilizing the International Monitoring System to not only track nuclear incidents, but also work to prevent them from happening;
22. *Urges* all Member States to contribute to the Incident and Trafficking Database (ITDB) by investigating and tracking the purposes of exported uranium, all to ensure responsible use and accountability of countries wishing to engage in atomic energy cooperation to enter into nuclear cooperation agreements between states and the IAEA;
23. *Encourages* the advancement of the technology regarding cybersecurity systems in nuclear power reactors, research reactors, and naval reactors through research and development into the following areas:
 - a. Integrating cybersecurity digital infrastructure components with existing analog systems for the latter to act as a fail-safe in case of cyberattacks;
 - b. Converting from unidirectional to bi-directional communication lines in order to improve the tracking and response system of cyberattacks;
 - c. Configuring bi-directional communication systems to detect and absorb the algorithms of cyber threats to prevent them from re-entering the system and avoid future cyberattacks;
 - d. Utilizing the analog systems of security to ensure physical constraints in nuclear energy leakages and power reactor meltdowns in case of breaches;
 - e. Drawing on the Research Education Networks of the IAEA to educate facility personnel and build awareness of cyber security threats;
 - f. Calling upon nuclear technology possessing states to work in cooperation with the UN Office of Counter-Terrorism (UNOCT) for Member States to share guidelines and best practice experience, such as the Law of Nuclear and Radiological Control, on cyber security;

24. *Further calls upon* Member States to communicate gathered intelligence regarding the movement, transfer, or development of fissile material in order to prohibit non-state actors acquiring nuclear materials through:
 - a. Promoting the transfer of intelligence between Member States regarding nuclear technology research and development to enhance socio-economic development within regions;
 - b. Increased cooperation on the safety of existing nuclear materials to ensure they are not susceptible to capture by combatant states or non-state actors desiring weapons of mass destruction (WMDs);
 - c. Affirming the need for Member States to abide by the 2018 *IAEA Regulations on the Safe Transport of Radioactive Materials* on the reporting of the transportation of nuclear materials which could be insecure to maligned non-state actors;
25. *Encourages* Member States to strengthen cooperation with the International Physical Protection Advisory Service (IPPAS) to protect civilians and cities of Member States from the threat of nuclear attacks by non-state actors;
26. *Recommends* Member States to foster open communication and information sharing of operational nuclear expertise and security legislations while still maintaining national integrity and integrating cybersecurity, on-site physical protection, and protection of critical digital assets;
27. *Requests* for a biannual repetition of the IAEA International Ministerial Conference on Nuclear Power in the 21st Century with a specialized focus on strengthening nuclear security frameworks through multilateral cooperation and knowledge exchange;
28. *Stresses* the importance of direct communication between fissile material producers and consumers to ensure safe and ethical supply of fissile materials:
 - a. Renews its appeal to Member States to establish accountability of multinational corporations that consume fissile materials;
 - b. Calls for producer states to refrain from supplying fissile materials to parties with a history of unsafe and non-peaceful usage of fissile materials;
 - c. Invites all Member States to work together on Coordinated Research Projects (CRPs) with IAEA guidance on nuclear forensics so that Member States may make informed decisions on possessing nuclear materials;
 - d. Suggests the IAEA implement radiation sensor equipment for a monitoring system that ensures full global monitoring coverage of fissile material;
29. *Suggests* Member States to form cooperative agreements with experienced nuclear-technology possessing states to monitor fledgling nuclear energy programs, to ensure that accountability can be increased and provides developing states another alternative avenue to diversify its electricity production base;
30. *Further encourages* all Member States to accede to the CPPNM and A/CPPNM;
31. *Invites* African states, regardless of ratification status, to hold an annual workshop in Africa like the African workshop in 2021 where states can:
 - a. Discuss the potential obstacles in implementing the CPPNM and A/CPPNM;

- b. Attract existing or future business stakeholders by explaining the importance of the CPPNM and A/CPPNM;
 - c. Submit an annual report on the progress in the implementation of the obligation of the CPPNM and the A/CPPNM;
32. *Further encourages* the acceleration of the establishment of the voluntary match mechanism between states who require nuclear assistance with other states who offer assistance as outlined by the IAEA *Nuclear Security Plan 2022-2025* to reduce access barriers for peaceful uses of nuclear materials, whilst ensuring:
- a. The national sovereignty of states who require assistance is not impinged upon;
 - b. Full ownership of any peaceful use of nuclear materials is retained by entities within Member States who require nuclear assistance;
 - c. Strong levels of cybersecurity are maintained by the match mechanism with yearly penetration testing by the IAEA to ensure nuclear security is maintained;
 - d. Collaboration with regional organizations, such as the African Union, to promote a needs-based approach to ensure the most suitable matches between states that require assistance and those that are providing assistance;
33. *Requests* the IAEA and national nuclear regulatory bodies develop positive incentives, such as rewards for having strong nuclear cybersecurity demonstrated through black-box penetration testing, for developing countries who comply with nuclear security regulations, to promote good faith actions by developing Member States, through additional provisions such as:
- a. Financial support for the furthering of infrastructure related to peaceful uses of nuclear energy;
 - b. Technical support to provide nuclear technology expertise for the establishment of peaceful uses of nuclear energy;
 - c. Human resources support to increase training of the domestic workforce to further nuclear security of peaceful uses of nuclear materials;
34. *Further requests* any new regulations established by both national and inter-governmental organizations on the topic of peaceful uses of energy to avoid creating undue burden on developing Member States who may have limited resources, through the inclusion of a commencement clause outlining a gradual introduction of regulation, such as after a certain number of years post initial use of nuclear materials;
35. *Encourages* Member States to implement measures that secure the trade of nuclear materials and equipment through:
- a. Advocating supplier group Member States to slow production of nuclear materials to accommodate for current economic circumstances regarding energy production while implementing export controls;
 - b. Considering the implementation of national legislatures and effective policies that strengthen security mechanisms and for Uranium to be repurposed for peaceful uses of nuclear technologies following IAEA's standards;

- c. Ensuring safe border crossing of nuclear materials and preventing the deviation of nuclear material through bilateral agreements prior to the international transfer of nuclear materials or equipment in order to exchange data of inventories and track transportation;
 - d. Keeping inventory and tracking up-to-date to ensure constant real time tracking of all nuclear materials through:
 - i. Employing trained security personnel at every step of the mining and transfer processes, including but not limited to mining, transportation, storage, and processing;
 - ii. Providing developing Member States with the opportunity to formally request assistance in training of security personnel in areas including but not limited to intelligence gathering, weapons use, defensive driving, and general knowledge on how to best support developed Member States in bringing nuclear energy to developing Member States;
 - iii. Accounting full-time inventory and checking it anytime someone has access to fissile material and in case of nuclear material going missing a local governing body should be notified immediately;
36. *Urges* all Member States to focus on human resource development in nuclear material protection in order to enhance national capacities in response, detection, and facility management related to radioactive emergencies:
- a. Attract, recruit, and retain a high-quality nuclear workforce;
 - b. Education, training, and qualification of a nuclear workforce;
37. *Recognizes* the potential of conventional solutions such as capacity building as well as research and development for newer, safer nuclear technologies as a means to bolster nuclear security:
- a. Update the IAEA training program, to ensure qualified staff for all nuclear organizations can properly handle fissile materials and of all phases of the life cycle of a nuclear facility to build increased trust;
 - b. Utilizing the IAEA Systematic Approach to Training, which comprises of five basic phases: analysis, design, development, implementation, and evaluation as a means to improve and sustain operational readiness in response to evolving objectives, threats, and technologies;
 - c. Requesting Member States to consider researching and investing in alternative nuclear fuel sources such as Thorium as a safer option than current fissile materials such as HEU, reducing the potential for another fallout similar in magnitude of Chernobyl and Fukushima Daiichi;
38. *Invites* Member States to follow an educational “step by step” plan of how to get and use nuclear energy in the right way oriented in previous programs, such as the IAEA Milestones Approach, Nuclear Infrastructure Development Section, and Nuclear Power Engineering Section:
- a. To send a commission of experts to all Member States that wish for additional expertise on obtaining nuclear energy,

- b. To teach how to obtain nuclear energy;
 - c. To carry out training programs on the correct use of nuclear energy for governments with interest and experience;
39. *Encourages* Member States to establish regional models in relation to the IAEA's international EPR program, similar to China's Rapid Reaction Force, to counter nuclear threats and disasters in the nuclear programs of developing Member States through:
- a. Sharing expertise on training law enforcement personnel to carry out gold-standard responses to nuclear emergencies, such as terrorist attacks or nuclear meltdowns;
 - b. Sensitizing the population on the topic of what to do in case of a nuclear disaster, through nation level emergency exercises like the one conducted by China in 2015;
 - c. Training of emergency forces according to the Chinese domestic model solely dedicated to counter nuclear disasters with more competences;
40. *Asserts* Article 3 of the NPT and guaranteeing lesser developed nations the opportunity to gain more access to develop nuclear energy:
- a. Insuring that with the increase in nuclear energy production, Member States must follow guidelines to ensure the effective and safe use of nuclear energy:
 - i. With a training that should be completed by respective government officials and first responders, anyone with the responsibility of nuclear energy development and nuclear safety;
 - ii. Which can be found in the IAEA Regional Network In Education and Technology (STAR-NET);
 - b. Recommending an IAEA Steering Committee on Education and Training in Radiation Protection and Waste Safety to supervise the educational efforts are being completed:
 - i. With checks occurring every two years;
 - ii. Suggesting Member States with nuclear energy participate;
41. *Recommends* the 2025 Review Conference of the Parties to the Treaty to:
- a. Discuss nuclear security through Main Committee II;
 - b. Encourage Member States to incorporate updates on nuclear security progress in the next national report submitted to the Conference.