NMUN•GERMANY 2019

27 – 30 NOVEMBER 2019

Documentation of the Work of the International Atomic Energy Agency

International Atomic Energy Agency (IAEA)

Committee Staff

Director	Asra Shakoor
Assistant Director	Markus Bianchi

Agenda

I. Strengthening Safeguards and Verification
II. Using Nuclear Technology to Achieve the Sustainable Development Goals

Resolutions adopted by the Committee

Code	Topic	Vote
IAEA/1/1	Strengthening Safeguards and Verification	39 votes in favor, 5 votes against, 7 abstentions
IAEA/1/2	Strengthening Safeguards and Verification	Adopted by Acclamation
IAEA/1/3	Strengthening Safeguards and Verification	30 votes in favor, 6 votes against, 15 abstentions
IAEA/1/4	Strengthening Safeguards and Verification	40 votes in favor, 3 votes against, 8 abstentions
IAEA/1/5	Strengthening Safeguards and Verification	44 votes in favor, 1 vote against, 6 abstentions
IAEA/1/6	Strengthening Safeguards and Verification	44 votes in favor, 1 vote against, 6 abstentions
IAEA/1/7	Strengthening Safeguards and Verification	28 votes in favor, 6 votes against, 17 abstentions

Summary Report

The IAEA held its annual session to consider the following agenda items:

I. Strengthening Safeguards and Verification
II. Using Nuclear Technology to Achieve the Sustainable Development Goals

The session was attended by representatives of 51 Member States. On Wednesday, the committee adopted the agenda of I, II, beginning discussion on the topic of “Strengthening Safeguards and Verification.”

By Thursday, the Dais received a total of 11 proposals covering a wide range of sub-topics including cybersecurity, research and education, improving transparency and strengthening safeguards measures. Delegates used many different negotiation methods to collaborate and produce innovative solutions to address the topic. The delegates were eager to start discussion and were full of excitement for the upcoming visit of the Federal President who inspired their work through the conference.

On Saturday, 7 draft resolutions had been approved by the Dais, 0 of which had amendments. The committee adopted 7 resolutions following voting procedure, 1 of which received unanimous support by the body. The resolutions represented a wide range of issues, including South-South Cooperation and regional safeguard approaches and strengthening inspections, cybersecurity and accountability. And finally reuniting the global community by stating the establishment of a Nuclear Weapon Free Zone in the Middle East and bringing the region and its people one step closer to peace. The delegates engaged in a challenging merging process and through hard negotiations always adhering to their role as diplomats they finally succeeded.

Code: IAEA/1/1
Committee: International Atomic Energy Agency
Topic: Strengthening Safeguards and Verification

The International Atomic Energy Agency,

Reaffirming the efforts of the International Atomic Energy Agency (IAEA) and Member States to work toward the goals of the *Treaty on the Non-Proliferation of Nuclear Weapons* (NPT) in order to ensure the universal safe, secure and peaceful use of all nuclear material,

Further acknowledging Security Council resolution 1887 adopted in 2009 emphasizing the necessity of universal adherence to the NPT,

Emphasizing the importance of General Assembly resolution 70/1 of 2015 on "Transforming our world: the 2030 Agenda for Sustainable Development" (2030 Agenda) as a vital leading document of the United Nations (UN),

Understanding the threats climate change poses for nuclear facilities, such as an increased amount of natural disasters including water scarcity and the rising water temperature affecting cooling systems, as well as floods and rising sea levels,

Appreciating the IAEA report on *Climate Change and Nuclear Power 2018* recognizing the aforementioned threats among others,

Realizing that IAEA *Comprehensive Safeguard Agreements* (CSAs) and *Additional Protocols* (APs) provide critical safety provisions in maintaining nuclear safety,

Noting with appreciation IAEA resolution 62/10 of 2018 reaffirming the importance of further facilitation of CSAs and APs especially by increased communication between the IAEA and Member States,

Taking into account that as of November 2019 only 136 Member States have an AP in force, with another 15 Member States having signed an AP which has not yet entered into force,

Referring to the *Model Protocol Additional to the Agreement(s) between State(s) and the International Atomic Energy Agency for the Application of Safeguards* (Model Protocol) released in 1997 as a guideline for Member States to implement APs and especially the need for inspections of nuclear facilities,

Highly appreciating the work of the IAEA Inspection Centre and their annual on-site inspections of nuclear facilities,

Reaffirming that IAEA Safety Standards provide essential safety guidelines for nuclear programs and facilities as established in the IAEA Statute,

Appreciating the widespread prevalence of surveillance already established in nuclear facilities and recognizing the possibilities this holds for more comprehensive inspections,

Recognizing the rising demand for IAEA safeguards and inspections caused by an increase of nuclear material under safeguards by 24% and an increase of facilities under safeguards by 12% since 2010,

Taking note of the 1.3% decrease of the IAEA regular budget affecting safeguards, as listed under "Major Programme 4: Nuclear Verification" of the Agency's Programme and Budget 2020-2021, and threatening their effective implementation,

Reaffirming the achievements already made by the *Modernization of Safeguards Information Technology* and the Novel Technologies Project and the future possibilities they hold for IAEA,

Noting with appreciation the progress made on the development of the next generation surveillance system (NGSS) that IAEA is currently working on with Member States and has already been installed in several nuclear facilities,

Acknowledging the importance of the *Plan of Action to Promote the Conclusion of Safeguards Agreements and Additional Protocols* in 2018,

1. *Requests* the Director General to prepare, in cooperation with Member States, an amendment of Article 3 clause 6 of the Statute of the IAEA to give the IAEA the possibility to adopt Safety Standards that are a minimum requirement for Member States, to be voted upon at the next General Conference in accordance with Article XVIII A of the Statute;

2. *Adopts* the goal to conclude an AP with every Member State by 2030, aligning the timeline with the 2030 Agenda;

3. *Declares* the need to adjust the IAEA budget to pay respect to the rising amount of nuclear facilities under IAEA safeguards and recommends to directly connect the budget allocated to safeguards to the number of facilities for future IAEA budgets;

4. *Decides* to further investigate the possibilities offered by remote inspections as a cheaper and more instant option of inspecting nuclear facilities as specified below;

5. *Instructs* the IAEA Inspection Centre to collect various sets of data already gathered on-site in the facilities to conduct remote inspections and foster transparency, recommending this data to include, but not be limited to:

    a. Video surveillance data;

    b. Records of incoming and outgoing nuclear material;

    c. Technical protocols recorded by internal digital surveillance technology;

6. *Insists* on the expansion of the NGSS to contribute additional data for inspection purposes;

7. *Suggests* to the IAEA Inspections Centre to change their inspection schedule to biennial on-site inspections complemented with biannual remote inspections;

8. *Suggests* to the Board of Governors to revise the Model Protocol to take into account recent developments in the field of nuclear technology, paying special attention to:

    a. The possibility of on-site interviews with experts;

    b. The results of the Novel Technologies Project to provide access to a wider range of methods and instruments to inspectors like:

        i. Optically stimulated luminescence;
        ii. Laser-induced breakdown spectroscopy;
        iii. Light Detection and ranging;
        iv. Sampling and analysis of atmospheric gases;

    c. The potential shortening of the notification periods for inspections;

    d. Remote inspections as specified above.

Code: IAEA/1/2
Committee: The International Atomic Energy Agency
Topic: Strengthening Safeguards and Verification

The International Atomic Energy Agency,

Guided by Article 1 of the *Charter of the United Nations*, which states that "the purpose of the United Nations is to maintain international peace and security, and to that end: to take effective collective measures for the prevention of threats to the peace,"

Recalling the IAEA report, Milestones in the Development of a National Infrastructure for Nuclear Power (2007), which outlines the development and safety progressions to which Member States must adhere while undergoing an Integrated Nuclear Infrastructure Review (INIR),

Reaffirming the importance and effectiveness of the Comprehensive Safeguards Agreements in preventing the mishandling of nuclear technologies in order to guarantee regional safety,

Keeping in mind the IAEA report All-Source Information Acquisition and Analysis in the IAEA Department of Safeguards (2010), which states that "all nuclear material in a state should be declared and subject to IAEA safeguards,"

Noting the Brazilian–Argentine Agency for Accounting and Control of Nuclear Materials (ABACC) as the world's first and only binational safeguard organization in the world that ensures the implementation of safeguards and verifications as set by the IAEA,

Recognizing the importance of the Global Nuclear Safety and Security Network (GNSSN), a web-based IAEA data exchange network defined as a legal and technical framework to ensure the safety of all nuclear installations, in bridging the gap between developing and developed Member States through information transfer of research and knowledge,

Emphasizing the value of North-South, South-South and Triangular Cooperation for developing Member States with recently established nuclear program to maintain sustainability of national safeguards and inspection systems, as evidenced in the 2019 South-South in Action joint report by the IAEA and the United Nations Office for South-South Cooperation,

Acknowledging the mission of IAEA Collaborating Centers which promote the practical use of nuclear techniques worldwide by facilitating the integration of nuclear technologies through sharing resources, knowledge, and technical expertise,

Noting the successes of IAEA Regional Cooperative Agreements which emphasize and coordinate cooperative research, development, and training projects in nuclear science and technology,

Bearing in mind the IAEA's Safety Standards which function as fundamental principles for safeguards as well as the safe construction and operation of nuclear power plants,

Drawing attention to the Nuclear Security Summits (NSS) and Regulatory Cooperation Forums (RCF), such as the Association of Southeast Asian Nations and the Regional Network for Education and Training in Nuclear Technology, which meet bi-annually to provide knowledge concerning nuclear security standards and protocols for safe utilization of nuclear technology,

Recalling the *Convention on Nuclear Safety* (CNS) (1994) which established the application of internationally recognized safeguards on nuclear technology and the presentation of an annual report on the implementation of those principles at the request of the IAEA, which was last revised in 2015,

Recognizing the unique security challenges facing developing Member States, including but not limited to heightened risk of proximal conflict in their respective regions, reduced access to necessary financial resources, and marginalization within the international community in their pursuit of peaceful nuclear technology to accommodate the basic energy needs of their citizens,

1. *Suggests* that Member States join or create and adopt regional cooperation programs modeled after the ABACC, the Memorandum of Understanding on Nuclear Energy Cooperation with the United Kingdom and the United Arab Emirates, and other model nuclear programs which would function as:

    a. An intermediary between the IAEA and Member States in the verification process through facilitating verification processes before the IAEA carries them out to expedite the process;

    b. A platform for determining region specific short-term and long-term goals for meeting safety guidelines and regular verifications on the accomplishment of these goals;

    c. A means of disseminating diplomatic information between newly established regional cooperative agreements;

    d. A source for standardized procedures for nuclear energy capabilities which include providing education on the safety protocols through training programs in accordance with IAEA standards for all employees who utilize nuclear energy to prepare employees for the verification process;

2. *Encourages* the partnership between the GNSSN and the Committee on the Safety of Nuclear Installations to enhance pre-existing databases and information sharing resources that are accessible to Member States by including an analysis of the shared information by a committee of senior scientists, engineers, and researchers from the CSN, regarding risk assessment and regulatory procedures that would:

    a. Build the capacity of the IAEA to identify new and upcoming trends in nuclear technology to increase the efficiency of nuclear verification instruments such as INIRs;

    b. Facilitate cooperation between Member States with developed nuclear programs and those who are developing new nuclear programs;

    c. Annually update the database to ensure that the relevant knowledge, experience, and lessons learned related to nuclear safety and security are shared with Member States;

3. *Calls upon* Member States to increase North-South, South-South and Triangular Cooperation through a consistent exchange of nuclear capacity building expertise between developed and developing Member States via Regional Collaborating Centers which address region specific issues across the global south;

4. *Recommends* Member States to partner with the UN Technology Innovation Labs to develop regional ledger communication technology to:

    a. Allow for nuclear technology updates and information sharing among Member States within any particular region promoting collaboration to accomplish region specific goals;

    b. Establish a collective report from each region to be submitted to the IAEA for verification of nuclear technologies;

5. *Endorses* the regional transfer of nuclear materials and infrastructure among Regional Cooperative Agreements in conjunction with bilateral nuclear material transfer agreements of Member States while abiding by the most current IAEA Safety Standards, especially in regards to nuclear power plant design and construction;

6. *Invites* Member States to incorporate a regular attendance agreement to the NSS and RCF as part of their Country Program agreements with the IAEA;

7. *Supports* the expansion of the CNS and the safeguards established by the body in 2009 to include a licensing system for nuclear installations developed either with the IAEA through an organization-wide licensing system or internally provided by Member States in conjunction with the IAEA that would function as a regulatory system which would ensure that nuclear power capable facilities meet safety and operational standards;

8. *Endorses* the creation of a Nuclear Security Development Fund (NSDF) as a collaborative effort between the IAEA's pre-existing Nuclear Security Fund (NSF) and the New Development Bank (NDB) to provide targeted support for developing Member States in meeting nuclear safety standards by:

    a. Utilizing a framework for creating country-specific timelines through collaboration between the Nuclear Security Development Fund and Member States aspiring to develop peaceful nuclear energy programs, in order to ensure the timely implementation of security measures in accordance with The IAEA Nuclear Security Series;

    b. Requesting that funding for the NSDF is sourced from the NDB, the IAEA's NSF, and the Asian Infrastructure Investment Bank;

    c. Administering the fund through a working committee composed of representatives from the IAEA's NSF, NDB, and the Asian Infrastructure Investment Bank;

    d. Inviting Member States to make financial contributions to the NSDF on a voluntary basis.

Code: IAEA/1/3
Committee: International Atomic Energy Agency
Topic: Strengthening Safeguards and Verification

The International Atomic Energy Agency,

Deeply concerned about the existence of nuclear weapons in the Middle East,

Applauding Member States that have achieved full nuclear weapon disarmament,

Convinced of the possibilities that a peaceful use of nuclear technologies can contribute to a prosperous development of United Nations (UN) Member States,

Recognizing the process the continent of Africa has undergone to enable the creation of a Nuclear Weapons Free Zone (NWFZ) in the region and commending the work of Member States across the world in helping achieve that goal,

Emphasizing the importance of Article VI of the *Treaty on the Non-Proliferation of Nuclear Weapons* (NPT) on complete nuclear disarmament encouraging participating Member States to move forward in multilateral nuclear disarmament negotiations as well as involving civil society organizations in processes involving total disarmament,

Recognizing the urgent need to establish a NWFZ in the Middle East, as repeatedly highlighted by the General Assembly, most recently in General Assembly resolution 73/28 of 2018, titled "Establishment of a nuclear-weapon-free zone in the region of the Middle East,"

Further recognizing the International Atomic Energy Agency's (IAEA) General Conference resolution 13 from September 2019, titled "Application of IAEA safeguards in the Middle East," dealing with the establishment of a NWFZ,

Acknowledging General Assembly resolution 73/74 of 2018 "Convention on the Prohibition of the Use of Nuclear Weapons" and General Assembly resolution 73/57 of 2018 "Universal Declaration on the Achievement of a Nuclear-Weapon-Free-World" which highlight the fatal dangers created by nuclear weapons and further demonstrate the necessity for a multilateral safeguard system,

Underscoring that the NPT and *Comprehensive Safeguard Agreements* (CSAs) are the primary international framework upon which NWFZs have been created across the world,

Remembering the success of Security Council resolution 2231 of 2015 on the *Joint Comprehensive Plan of Action* (JCPOA) in ensuring the fair application of safeguards in the Middle East,

Recalling the *Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean, The South Pacific Nuclear Free Zone Treaty, The Southeast Asian Nuclear-Weapon-Free Zone Treaty, The African Nuclear Weapon Free Zone Treaty, The Central Asian Nuclear-Weapon-Free Zone Treaty, The Mongolia Nuclear Weapon-Free Status Treaty, The Antarctic Treaty, The Outer Space Treaty, and The Seabed Arms Control Treaty* as examples of successful NWFZs, which can be used as templates for the Middle East region to create its own,

Noting with approval the potential of nuclear technology to achieve strong progress towards the Sustainable Development Goals (SDGs),

Especially noting the necessity of using nuclear technology to achieve SDG 7 on affordable and clean energy,

Noting with concern illicit trafficking of nuclear material across borders,

1. *Calls for* the establishment of a NWFZ in the Middle East (MENWFZ), that requires Member States to:

    a. Renounce the use of nuclear explosive devices;

    b. Refrain from the stationing of nuclear explosive devices within their respective sovereign territories;

    c. Prohibit the testing of nuclear explosive devices;

    d. Prohibit the dumping of radioactive waste;

    e. Use nuclear technologies for peaceful uses only;

    f. Submit to the verification of all uses of nuclear technology, as will be specified in this resolution;

2. *Calls upon* all other IAEA Member States to voice their support for a NWFZ in the Middle East;

3. *Confirms* the right of UN Member States that have signed and ratified the NPT to acquire low enriched nuclear material from other signatories of the treaty and peacefully use nuclear technology towards the achievement of the SDGs;

4. *Urges* for the universal adoption and equal application of the NPT;

5. *Recommends* Member States to accept the implementation of CSAs to enhance peacebuilding in the Middle East;

6. *Asks* Member States in the region to collaborate on the creation of a committee that enables the exchange and implementation of ideas, resources, and materials for the purpose of the creation of a NWFZ in the Middle East by:

    a. Requesting the Secretariat to oversee the logistics of hosting annual summits for the discussion of:

        i. Committee membership;
        ii. Verification measures on nuclear material;
        iii. Regional missile control limits;
        iv. Transparency and education initiatives;
        v. Resource and information sharing programs such as IAEA Connect;

    b. Suggesting the formation of a subsequent Middle Eastern-African committee to expand upon the foundations created during the initial aforementioned meeting;

    c. Designating that membership for the committee shall consist of Member States within the political/geographic region of the Middle East as classified by the Economic and Social Commission for Western Asia. Those in attendance may request the presence of experts and advisers outside the aforementioned range, including representatives of other nation states;

7. *Decides* that the official name of the treaty, hereafter referred to as the JCPOA+/MENWFZ, shall be decided upon its signing in the first committee session, after whichever city the parties of the treaty convene in;

8. *Endorses* the cooperation between members of the JCPOA+/MENWFZ in the areas of, but not limited to, establishing nuclear power plants, using the technical expertise behind nuclear technologies, by:

    a. Engaging in bilateral and multilateral cooperation with the goal of exchanging knowledge about nuclear technology using assistance and the structure of the Nuclear Knowledge Management Section of the IAEA;

b. Sharing knowledge between nuclear capable states and states that have ratified the NPT that want to become one;

c. Utilizing exchanges between all professionals and students willing to work on achieving SDG 7 on affordable and clean energy, SDG 2 on no hunger, and SDG 3 on good health and well-being;

d. Asking Member States to utilize IAEA peer review services to increase transnational transparency and enable further communication between governmental and non-governmental bodies;

e. Inviting countries to adopt education-based programs centered around nuclear technology and safety to encourage the peaceful use of nuclear energy;

f. Promoting nuclear power sources as a carbon free way to generate energy to achieve SDG 7 on affordable and clean energy;

9. *Calls upon* JCPOA+/MENWFZ Member States to protect the right to exchange nuclear material for peaceful use to other Member States;

10. *Invites* all States of the Middle East to join the JCPOA+/MENWFZ to enjoy the benefits outlined above;

11. *Requests* using measures such as those outlined in the JCPOA to build trust and ensure the peaceful use of nuclear technology, through an agreement called the JCPOA+/MENWFZ, which includes:

a. Limiting uranium enrichment levels to 3.67%;

b. Limiting uranium stockpile to 300 kg;

c. Limiting the heavy water stockpile to an amount depending on the already existing amount of uranium in the Member State and defined by the IAEA safety standards;

d. Convening summits on the NWFZ in intervals of 5 years, with a mandatory summit after 15 years;

12. *Emphasizes* that the limits outlined above shall be enforced by submitting enrichment facilities to regular audits as specified by IAEA norms;

13. *Further requests* the establishment of a seventh program within the IAEA regular budget, designated to support Member States facing economic drawbacks and limitations in their efforts towards achieving the SDGs after commitments of the JCPOA+/MENWFZ or other similar Treaties within the international community fail as a result of a one-sided withdrawal:

a. Designating 5% of the annual regular budget to this program;

b. Providing this budget to Member States signing such contracts, complying to their commitments but facing one sided withdrawal from any safeguard agreements, including the JCPOA+/MENWFZ and sanctions;

c. Making up for all financial and economical drawbacks evoking from mentioned withdrawals and sanctions for the period of time any sanctions are in place;

d. Declaring that the distribution of this budget will be decided about by an independent board of international arbitrators as outlined below in clause 12 at the moment of a one-sided withdrawal from this agreement;

e. Promoting increased voluntary contributions by the Member States to fill gaps evoking from the newly created seventh budgetary program;

f. Also calling upon the IAEA budget committee to utilize unused funds to fund the seventh program for a 'rainy-day' fund;

g. Calling on Member States to consider restricting economic relations with the Member States withdrawing without justification from the JCPOA+/MENWFZ, subject to a decision of the board;

14. *Requests* that the JCPOA+/MENWFZ treaty authorizes an independent board of international arbitrators and elected officials to verify whether repercussions as a reaction to alleged breaches of the JCPOA+/MENWFZ treaty have been justified, through:

a. Electing judges of international courts through a special mandate from the IAEA plenary;

b. Adhering to international standards of fair trial and the Vienna Convention on international treaties;

c. Ensuring regional proportionality of judges, both within the MENWFZ, but also taking into account the proportionality within the IAEA;

d. Evaluating the proof behind accusations of breach of contract;

e. Inviting experienced officials from the IAEA to assist in the board's evaluation process;

f. Recognizing that this provision shall not be construed so as to interfere with the mandate of the Security Council;

15. *Recommends* cooperation between JCPOA+/MENWFZ members national police forces in exchanging information about threats of trafficking of nuclear material to prevent intrusion of said material into the NWFZ by:

a. Requesting every member of the JCPOA+/MENWFZ to install a nuclear liaison officer in their border patrol forces;

b. Further requesting the IAEA to implement a training seminar every two years for local border patrol officers from all JCPOA+/MENWFZ Member States on techniques concerning the procedure and necessary tools to effectively combat illicit trafficking of nuclear material;

16. *Proposes* tackling such trafficking by:

a. Encouraging Member States to increase border controls;

b. Apportioning funds from the IAEA's Technical Cooperation Fund to Member States' border patrol forces to support the purchase of neutron detectors at border crossings for the purpose of detecting hidden illicit nuclear material;

c. State support for the IAEA and INTERPOL effort harmonization process on border patrol standards, as outlined in *The Detection of Radioactive Materials at Borders*;

17. *Further proposes* that the Member States utilize the agreement JCPOA+/MENWFZ as a model to other regions;

18. *Asks* IAEA Member States to sign the NPT and the Additional Protocols with IAEA as well as other treaties and agreements that they are not party to yet after the entry into force of a NWFZ in the Middle East.

Code: IAEA/1/4
Committee: International Atomic Energy Agency
Topic: Strengthening Safeguards and Verifications

The International Atomic Energy Agency,

Alarmed by the fact that traditional networks currently utilized by the International Atomic Energy Agency (IAEA) have considerable, well-documented weaknesses that stem from their centralization and absence of data immutability that must be improved upon,

Guided by past research conducted by bodies within the United Nations (UN) concerning the greatly improved cost efficiencies and ease of implementation of blockchain technology as opposed to traditional networking technologies, as explained in *The Future is Decentralized,* a publication by the UN Development Programme,

Noting further the necessity to acquire data servers for the purpose of establishing a decentralized database,

Expressing concern with the lack of streamlined and modernized information technology (IT) systems the Nuclear Security Support Centers (NSSC) and the Escal Institute of Advanced Technologies (SANS) Institute is at the forefront with communicating data, reinforced by the report of the IAEA 54/L.21 which reaffirms the need for good regulatory practices with nuclear materials,

Realizing that the logistics of continuously operating such a platform will require constant engagement, while having low budgetary requirements,

Guided by the principle of Article IV of *The Statute of the IAEA* stating the principle of the sovereign equality of all its members,

Emphasizing the need for financial security through the National Cybersecurity Awareness Grant Program, Swiss Agency for Development and Cooperation (SDC), and United States Aid for National Development (USAID) in order to establish multilateral cybersecurity programs and IT networks,

Acknowledging the important role the research of non-governmental organizations (NGOs), Member States, and private research plays in developing and expanding peaceful nuclear programs in both the industrialized and developing world, as noted in General Assembly resolution 69/8, titled “Cooperation Between the United Nations and the Central European Initiative” and applied by the French Alternative Energies and Atomic Energy Commission and allowing for updated research to be accessible via the Internet,

Recognizing the success of multilateral solutions such as the Brazilian-Argentine Agency for Accounting and Control of Nuclear Material in promoting mutual accountability, transparency, and ensuring regional security,

Recognizing the need for further modernization of information technology capabilities of the IAEA in order to minimize unnecessary resources spent on physical information sharing and maximize safeguard and verification efficiency and accuracy,

Distressed about the further advancements of technologies in areas of encryption such as the development of quantum computers that could jeopardize the security of this system,

Acknowledging radiation protection institutions such as The Danish National Institution for Radiation Protection (NIHR) and their ability to provide a secure and safe network to combat radioactive materials,

Taking note that network strength testing has the ability to provide Member States with assurance of data security and find possible flaws detrimental to the system,

Recalling the slow and inefficient response to the Chernobyl nuclear disaster that resulted in an estimated 4,000 deaths within regions of high exposure and an additional 5,000 deaths due to low level exposure in Ukraine, Belarus, and the Russian Federation,

Noting the potentially devastating effects nuclear terrorism would have and the need to ensure probable harmful nuclear materials are carefully monitored, as discussed in the *International Convention for the Suppression of Acts of Nuclear Terrorism*, which was unanimously ratified by the General Assembly,

1. *Recommends* the creation of a decentralized network utilizing blockchain technology, hereafter referred to as The Platform, for the purpose of securing data transmission and ensuring the immutability of transferred data across the network, noting that:

    a. The immutability of data ensures the secure exchange of information across networks;

    b. The Platform enables Member States to have sovereignty concerning the storage of the data as the decentralization of the network ensures that there is no single point of failure within the network;

    c. The Platform shall be managed by the IAEA's Information & Communications Systems under the Department of Safeguards;

    d. The Platform will employ an opt-in system to guarantee sovereignty for participating Member States, and there is not a requirement to contribute any data to the network, though it is highly recommended;

2. *Requests* the Asian Infrastructure Investment Bank and the New Development Bank to allocate investments on the development of global servers to host The Platform;

3. *Recommends* the establishment of regional online NSSCs to provide a clear and transparent database of information regarding safety, education, training, and infrastructure in reference to the handling of nuclear materials, secured and hosted on The Platform:

4. *Emphasizes* the need to provide clear, transparent data to all Member States in order to ensure environmental and human health as a top priority;

5. *Emphasizes* a worldwide commitment to safety and education regarding handling dangerous nuclear materials and waste;

6. *Recommends* integrating a database of comprehensive legislative acts into The Platform in order to organize the standards of field use and safety regarding nuclear technology in collaboration with the SANS Institute;

7. *Recommends* that the General Assembly establish a data governance committee, the subcommittee for the Integrity of Nuclear Data Sovereignty (INDY), that will develop comprehensive policies that ensure data security and guarantees Member States' ability to access all relevant information existing within The Platform, that shall assemble only during atomic catastrophes and impending threats to global security, while also ensuring that the nuclear data of all Member States are kept confidential unless approved by the INDY by:

    a. Assessing the status of The Platform and address any concerns of Member States during the Nuclear Security Summit, acknowledging that participating Member States will be able to call for an emergency session of the committee whenever necessary;

    b. Monitoring the status of nuclear materials and facilities as they are being transported and used throughout the world, as this information will not be made available to Member States unless the materials are owned by that state;

8. *Recommends* the INDY, made up of vetted nuclear experts, to oversee the approval for releasing pertinent nuclear data;

9. *Recommends* allocating funds from the National Cybersecurity Awareness Grant Program, SDC, and USAID in order to provide a monetary basis for developing The Platform for universal cybersecurity and data sharing;

10. *Urges* Member States to consider a federal, state, and local government entity driven research strategy that focuses on specific programs that can be utilized in order to develop these ideas to their full potential;

11. *Encourages* Member States to consider further training with NGO Swiss Web Academy in order to provide sufficient knowledge regarding cybersecurity practices with radioactive materials and infrastructures;

12. *Suggests* Member States implement tax incentives for multinational companies that are utilized in the development of The Platform whilst ensuring all nuclear data remains secure and inaccessible;

13. *Recommends* the integration of existing information sharing and monitoring systems, such as the IAEA Incidents and Trafficking database, to The Platform to provide an improved security and safety for these already effective systems, for example the NIHR and its effectiveness in monitoring nuclear facilities around the world with special focus on low waste repositories, oversight of nuclear installations with regards to safety and environmental aspects and emergency management;

14. *Urges* the international community to adopt the existing NIHR and its database for a more secure and safe oversight of nuclear facilities and radioactive materials;

15. *Recommends* that Member States utilize The Platform to prepare for and respond to nuclear disasters immediately and effectively by:

    a. Allowing Member States to opt into 24/7 surveillance of nuclear facilities, both for safety and security reasons, and recognizing that this data would be accessible only to the independent third-party committee mentioned above, except in the case of an incident where information would be provided to previously consenting relevant parties;

    b. Communicating with the relevant national and international bodies;

16. *Recommends* using The Platform to optimize human capital by:

    a. Providing a hub for NGOs, Member States, and private researchers to voluntarily share existing and new discoveries and innovations and access the work being done by others across the globe;

    b. Providing access to educational courses and databases focusing on secure nuclear facility operations, the safe handling of nuclear materials, and the correct procedure for conducting tests on facilities;

    c. Wherever necessary, integrating existing databases covering educational material relevant to nuclear technology, such as the IAEA learning management system;

17. *Encourages* Member States to utilize The Platform in pursuit of multilateral accountability agreements by:

    a. Communicating safeguard related topics on a routine basis to optimize national support;

    b. Creating a monitoring system regulated by all participants which ensures that each Member State is abiding by regulations set in existing multilateral agreements;

18. *Calls upon* Member States to establish regional agreements in cooperation with the IAEA, utilizing The Platform, to:

    a. Facilitate communication between Member States concerning the transportation and status of nuclear materials, which will be of importance as nuclear programs are established throughout the developing world, so as to ensure that they are not stolen by terrorist organizations or other non-governmental actors;

b. Prevent the information from being attained by terrorist organizations or other non-governmental actors by encrypting the data so that it cannot be accessed other than by the IAEA subcommittee;

19. *Establishes* regular cybersecurity penetration testing, funded by the IAEA's Nuclear Security Fund, for nuclear facilities worldwide in order to test for potential vulnerabilities within The Platform which can then be updated and revised;

20. *Suggests* the participation of Member States in the International Conference on the Theory and Application of Cryptology and Information to advance the global development in cryptology and encryption of nuclear technology.

Code: IAEA/1/5
Committee: The International Atomic Energy Agency
Topic: Safeguards and Verifications

The International Atomic Energy Agency,

Emphasizing the need for Member States to support nuclear safeguard and verification obligations as stated by the *Comprehensive Nuclear Test-Ban Treaty* (1996),

Recognizing the key role of the 1968 *Treaty on the Non-Proliferation of Nuclear Weapons* (NPT) in establishing the International Atomic Energy Agency (IAEA) as the international nuclear inspectorate,

Acknowledging not all UN Member States are currently privy to the NPT and the danger this presents to the international community in securing the safe, secure, and peaceful use of nuclear technologies globally,

Guided by General Assembly resolution 70/1 (2015), "Transforming our world: the 2030 Agenda for Sustainable Development," which established the Sustainable Development Goals (SDGs), and acknowledging the risks and concerns associated with the disposal and established tracking processes for partially spent nuclear waste,

Recognizing that deployment of recent advancements in the area of recycling partially spent nuclear waste for second stage energy production to fulfill demand in developing nuclear states imparts a unique solution,

Highlighting the importance of the *Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency* that recognizes the events of Chernobyl and Fukushima,

Acknowledging existing regional and international tensions as well as the definition of Nuclear Weapons Free Zones (NWFZ), in accordance with General Assembly resolution 72/24 (2017), on establishing a NWFZ in the Middle East, while referring to the lack of political will within the international community to implement the 1995 resolution on the establishment of a NWFZ in the Middle East,

Considering the lack of well-trained human resources in continuously advancing IAEA safeguards, such as monitoring nuclear activities,

Seriously concerned that the IAEA cannot discover undeclared nuclear weapons and activities as stated by the IAEA safeguards: *Staying Ahead of the Game* (2007),

Recognizing the possible increase in conflicts within developing Member States through the establishment of nuclear technology as well as encouraging Member States to cease using nuclear technology for non-peaceful purposes,

Emphasizing Article II of *The Statute of the IAEA*, stating the use of nuclear energy to foster "peace, health and prosperity,"

Recognizing that the amount of nuclear material under safeguards inspection, worldwide has increased by 24% since 2010, as reported by the IAEA,

Emphasizing the rising demand of nuclear facilities with over 20 countries "considering, planning or starting nuclear power programs" until 2026 as stated by the World Nuclear Association in 2019, and in return the need for highly qualified experts, in regards to the proper development of nuclear energy,

Recalling SDG 16.6, which calls for developing effective, accountable, and transparent institutions and SDG 16.7 ensuring responsive, inclusive, participatory and representative decision-making at the domestic, regional, and international level,

Appreciating the IAEA Legislative Assistance Programme which ensures peaceful use of nuclear technology in all Member States by activities ranging from national and regional training courses and seminars to individual training for every Member State that establishes new national nuclear legislation, updating existing nuclear law, and improving national legal framework,

Acknowledging the importance of the *Plan of Action to Promote the Conclusion of Safeguards Agreements and Additional Protocols* (APs) in 2018 which shows insufficient national legislative infrastructure as one of the factors affecting Member States' consideration of the conclusion of APs,

Bearing in mind the statements made in the report of the IAEA 54/L.21 of 1999, which promotes the highest standards of safety in the design and operation of nuclear installations and good regulatory practices concerning nuclear energy following the example of the Operational Safety Review Team study,

Taking into consideration the relationship between Spain's Guardia Civil Explosives Deactivation – Chemical, Biological, Radiological, Nuclear (CADEX-CBRN), which is a designated collaboration center, and the IAEA in order to highlight the need for implementation of nuclear technology education for Member States and their citizens to promote transparency and accountability,

Expressing concern about the lack of transparency due to limited communication between Member States and the IAEA body regarding appropriate nuclear technology management, which includes but is not limited to the proper disposal of nuclear waste,

Identifying denuclearization as one of the best safeguards to protect the world from nuclear attacks, which is a fundamental idea of the UN Office for Disarmament Affairs (UNODA) as highlighted in *Securing our Common Future: An Agenda for Disarmament*,

Highlighting the importance of education and cooperation to bolster safety in Member States with less expertise in the nuclear field,

Calling attention to the 1995 *Shannon Mandate* connected to General Assembly resolution 48/75 (1994) that created the foundation for promoting a Fissile Material Cut-Off Treaty (FMCT) designed as a preventive measure against the development of nuclear weapons and deeply concerned with the lack of initiative towards implementing FMCT guidelines into safeguard agreements,

Noting the importance of more frequent and consistent physical monitoring presence by teams of the Integrated Regulatory Review Service (IRRS) to ensure the full implementation of safety and preventative measures such as FMCT and safe nuclear waste management practices within safeguard agreements,

Fully aware that the IAEA Certified Inspectors in connections with the IRRS go through a required six-month training process and acknowledging that there are additional more effective courses such as Fuel Fabrication Plant Orientation that should also be mandatory within the training process,

Concerned that the increasing amount of radioactive waste and spent fuel, in accordance with the continuous need for atomic energy, and the strong need for its safe and secure management,

Deeply concerned by the lack of maintaining the objectives of the 1997 *Joint Convention on the Safety of Spent Fuel Management and on the Safety of Waste Management* and having regarded the need for its sustainable implementation and widest adherence to the Joint Convention,

Keeping in mind the topic of safe management of high-level radioactive waste, which was discussed at the 6th review meeting of the Joint Convention in 2018, and *profoundly concerned* about the lack of universalized numerical criteria to specify the range of high-level radioactive waste in the IAEA's model classification of radioactive waste and spent fuel,

Recalling the NPT as the centerpiece of global efforts to prevent the increase of Nuclear Weapon States (NWSs) and to create the system of safeguards and verifications;

Noting the specific concerns within the NPT of Member States that have not yet joined and thus have not concluded safeguard agreements with the IAEA;

1. *Urges* all Member States to sign and ratify treaties that ensure verification and safeguards for nuclear energy, such as guidelines from the NPT and FMCT,

2. *Emphasizes* the need for the universalization of the NPT and IAEA safeguards and verification standards as adhering to these standards promotes the creation of collaborating centers such as education-based partnerships as a vital component of the NPT;

3. *Supports* increased measures of nuclear armament control for IAEA Member States surrounding all NWFZ as this poses a threat to the continuity of the NPT and further prevents endangering the regional peace by inviting non-NPT Member States to join;

4. *Encourages* collaboration between all Member States to establish partnerships between non-governmental organizations and research and development organizations to establish domestic measures to uphold the IAEA's safeguard principles to avoid nuclear incidents;

5. *Encourages* all Member States to work together to properly address this significant issue;

6. *Reminds* all Member States of the needed support for developing Member States, who are eager to use nuclear energy for national development and lack the access or knowledge on how to properly utilize this material;

7. *Recommends* that the Security Council discusses the implementation of embargoes or other such actions on Member States in breach of NPT regulations, in addition to considering the following changes to the NPT:

    a. Creating incentives for Member States to join the NPT such as further sharing of nuclear technology and support for implementing nuclear technologies to the end of reaching the SDGs;

    b. Amending the NPT to state explicitly that, should an NWS threaten a non-nuclear weapons state that is party to the NPT with a nuclear weapons attack, such action would be in clear violation of international law;

    c. Further amending the NPT to state that should a non-nuclear weapons state party to the NPT face a threat of the use of nuclear weapons from a NWS other NWSs have the obligation to offer their protection to that Member State;

8. *Calls for* the creation of a global conference to promote multilateral cooperation in the establishment of a NWFZ in areas experiencing instability such as the Middle East and therefore serve as a place where NWFZ's can come together to overcome challenges that may arise by:

    a. Promoting and encouraging to hold the first conference in Egypt while inviting surrounding Arab Member States to attend such conference;

    b. Expanding the ability for future host Member States who have a history of promoting the peaceful uses of nuclear energy to hold this conference;

    c. Collaborating with organizations, such as Organismo para la Proscripción de las Armas Nucleares en la América Latina y el Caribe, the *Treaty of Tlatelolco*, as well as the International Energy Agency, an autonomous organization promoting the use of non-weaponized nuclear power and ensure reliable, affordable and clean energy for its 28 Member States and beyond;

d. Discussing current trends of conflict within specific regions, and the necessary need for possible implementation of NWFZ, across the board;

e. Sharing and exchanging knowledge on the implementation of norms, rules, and regulations to either structure a future NWFZ or restructure an already existing NWFZ;

9. *Expresses hope* that the global conference will encourage NWFZs to provide a delegation, being those of unstable Member States, to participate in the conference, establishing permanent and temporary members in hopes to:

a. Establish a delegation composed of one elected representative from each NWFZ;

b. Invite the delegations of the five current NWFZs to serve as the permanent board of directors;

c. Fully support the expansion of the board, in implementing permanent members that have practiced the safe use of nuclear energy, following a period of two years, and that have passed IAEA inspections, in order to show non-nuclear weapon activity and full disarmament for five consecutive years; and require those permanent members to vote unanimously, in regards to all key issues discussed within the conference;

d. Encourage collaboration and negotiation;

10. *Endorses* the establishment of a NWFZ in the Middle East as a necessary step towards the universality of a comprehensive safeguard system while reiterating the importance of not utilizing nuclear weapons for the intention of mass destruction;

11. *Invites* financial and technical support from other Member States to create institutions in training experts, especially within developing countries that lack the funds and information needed to establish technical support;

12. *Appreciates* the importance of educating experts as well as civilians, in order to avoid the generation of mistaken public opinions on creating nuclear weapons to end wars and conflicts, specifically within developing Member States;

13. *Calls for* promoting the adoption of transparency mechanisms in border security regarding illicit nuclear activities in the prevention of nuclear arms trafficking;

14. *Calls upon* Member States to align with the objectives of UNODA in order to strengthen disarmament regimes, such as those outlined by the Vienna Center for Disarmament and Non-Proliferation in their 2017 conference “Cruise Control: Can we end Nuclear-Armed Cruise Missiles Globally?”, and *urges* all nuclear technology possessing Member States to remove and stop all explorations of weaponized Cruise Missiles such as Long Range Stand Off Weapons;

15. *Further calls for* the conversion of nuclear waste into products for green energy production in the interest of safe and efficient disposal which addresses transparency from all Member States through a centrally accessible tracking system in order to monitor these changes by:

a. Supporting the transparency via the amount of nuclear power under handling and conversion among all Member States;

b. Furthering the use of green energy by converting high enriched Uranium to low enriched Uranium in consideration of the SDGs;

c. Introducing a centrally accessible system in which the conversion between nuclear waste and renewable energy can be tracked in order to emphasize the importance of communication and

transparency among all Member States;

16. *Promotes* the implementation of a comprehensive legislative system, following the development of a NWFZ in the Middle East such as the IAEA Legislative Assistance Programme in order to encourage transparency through campaigns regulated by UNODA via:

    a. Raising awareness about the importance of the international legal instruments and adequate national legal frameworks;

    b. Supporting Member States to assess and develop nuclear legislation to acquire a better understanding of the international legal instruments;

    c. Sharing knowledge and information about useful international legal instruments for the safe, secure, and peaceful use of nuclear technology;

    d. Suggesting the Director General organizes individual consultations for Member States which have not yet ratified APs in order to support ratification on an individual level as needed;

    e. Requesting that participating Member States become more transparent with their nuclear energy activities to ensure trust between Member States;

17. *Recognizes* the need for a collection of transparent data in the form of an international network such as that of the Nuclear Security Support Centres (NSSC Network) in order to provide staff development and scientific support in order to sustain the security of radioactive plants and materials by:

    a. Urging for the development of a centrally accessible system for the tracking and monitoring of nuclear products globally and the publishing of IRRS data to ensure transparency and safety for all Member States;

    b. Suggesting that all Member States strive for effective cooperation in creating cost effective IT networks focusing on the further development of the NSSC Network to strengthen the safeguard system;

    c. Recommending that Member States contribute information regarding nuclear safety with handling radioactive materials in order to strengthen safeguards;

    d. Encouraging communication between Member States to foster a network of transparency and trust on the international platform;

18. *Promotes* Member States to build upon the partnership between IAEA and Spain's CADEX-CBRN training center to introduce educational programs for citizens, so that they have complete knowledge of the nuclear energy activities occurring in their Member State, such as:

    a. Basic information on nuclear energy;

    b. Information on what the Member State is planning to use nuclear energy for;

    c. Details on the changes that may happen within the areas surrounding the nuclear plants;

19. *Urges* all Member States that have not already done so to sign and ratify treaties such as the NPT that ensure verification and safeguards so as to further reinforce development in monitoring nuclear material including the 13,860 nuclear weapons globally according to the World Nuclear Weapon Stockpile in existence;

20. *Expresses hope* for Member States to consider incorporating FMCT into safeguard agreements that will serve as a preventative measure towards nuclear weapon development by:

a. Prohibiting the production of high enriched Uranium and Plutonium;

b. Allowing inspection teams to physically be present on a regular basis to monitor nuclear research centers and reactors to help guarantee that the FMCT will be upheld;

21. *Requests* Member States to devote more resources in the forms of volunteers, information, technology, and funding to strengthen the IRRS proportional to the yearly increases in facilities and material under supervision;

22. *Considers* the requirement of such advanced courses such as the Nuclear Fuel Cycle for Country Officers course that can be:

    a. Conducted by educational organizations such as the Japan IAEA Nuclear Management School;

    b. Funded by participating institutions and done in partnership with regional nuclear organizations such as the European Nuclear Education Network and the Asian Nuclear Safety Network;

    c. Promoted by UN organs such as the UN Institute for Training and Research and UNODA;

23. *Calls for* discussion within the framework of the Joint Convention, in order to create a uniform numerical standard in the IAEA's model classification of radioactive waste and spent fuel, especially between the high-level radioactive waste and intermediate level waste by:

    a. Requesting Member States to clarify the situation of management of radioactive waste and spent fuel in each national report, to be submitted in the next review meeting of the Joint Convention, which is held in 2021;

    b. Encouraging Member States to share this information, and discuss to create the numerical standard;

24. *Encourages* more Member States to participate in North-South, South-South, and trilateral relationships for workers who are involved in nuclear technology in order to share information about how to use it safely.

Code: IAEA/1/6
Committee: International Atomic Energy Agency
Topic: Strengthening Safeguards and Verification

The International Atomic Energy Agency,

Bearing in mind the International Atomic Energy Agency's (IAEA) Safety Standards' fundamental principles such as safeguards, safety of nuclear power plants, and design and construction, which include requirements and recommendations to ensure nuclear safety,

Acknowledging the need for safeguards and verifications since the Nuclear Threat Initiative reported that 57 nuclear accidents have occurred since the Chernobyl accident,

Acknowledging the advancement of safeguards and the prevention of the spread of illicit nuclear technological development with the creation of the *Treaty on the Non-Proliferation of Nuclear Weapons*,

Recognizing the need for Member States to improve educational nuclear security training programs to cover topics such as national inspection and facility management, within existing educational systems, such as Interregional Training Course on Sitting Nuclear Power Plants and Nuclear Energy Management School Programme,

Emphasizing the importance of compliance assurance through regular and open assessments as a necessary safeguard for nuclear non-proliferation and capability building outlined in the IAEA Safeguards Agreements and Additional Protocols - Verifying Compliance with Nuclear Non-Proliferation Undertakings,

Deeply concerned by the lack of content on the topic of 'Safeguards and Verification' within the existing IAEA learning management system which contributes to the education of security in nuclear facilities, and Member States' failure to utilize this online system,

Recognizing that in light of the *2030 Agenda on Sustainable Development*, especially Sustainable Development Goal 9.5 to enhance scientific research and the technological capabilities of industrial sectors, it is necessary for all Member States to address the lack of access to research and development training within the field of nuclear safety, radiation, radioisotope application, and radioactive waste management,

Acknowledging Articles III and IV of *The Statute of the IAEA*, which emphasize the importance of engaging scientists and experts in the field of nuclear technology,

Deeply disturbed by the deficit of human resources in the field of nuclear technology and the lack of practice and skills given to the workers in nuclear facilities and research reactors in particular, as these practices require the most thorough training and preparation,

Reiterating the goals of the IAEA to encourage safety, ensure compliance, promote knowledge sharing, engaging in research and development, and working to distribute nuclear technology solutions to Member States while promoting the peaceful use of nuclear technology,

Recalling the IAEA's *2019 Nuclear Safety Review*, which highlights the need for development of national personnel training and education provisions and the high demand for increased accessibility of Postgraduate Educational Courses in Radiation Protection and the Safety of Radiation Sources and emphasizing these trainings as essential for strengthen nuclear professionals skills to ensure continued sustainability,

Realizing that innovations in nuclear technology research and safety are necessary in order for Member States to seek out IAEA verification and Integrated Nuclear Infrastructure Review for nuclear capability implementation,

Stressing the need for the IAEA to review the topic of supporting clean and peaceful nuclear practices while encouraging Member States to initiate educational incentive programs that are beneficial to Member States' workforces at the upcoming 64th IAEA General Conference,

Noting with concern that 40% of events were reported to the Incident Reporting System of Research Reactors (IRSRR) in the reporting category of "deficiencies in design, construction, operation, including maintenance and periodic testing, quality assurance or safety evaluation, including experimental devices and isotope production facilities,"

Acknowledging the International Conference on Research Reactors in 2015, on the topic of Safe Management and Effective Utilization, and also recognizing the importance of discussing Research Reactor Spent Fuel Management and Decommissioning,

Further noting with concern the potential risk involved in the transportation and movement of nuclear materials which can result from accidents and exposure to the environment and local communities if IAEA safety regulations are not followed and properly implemented,

Recalling with appreciation the International Conference on Research Reactors in 2007 which stresses the minimization of the use of Highly Enriched Uranium,

Aware of the educational and technological value of nuclear research reactors and the potential for such reactors to act as foundation for the verified implementation of future nuclear capability in alignment with enhanced safeguards and security measures,

Emphasizing the importance of international cooperation between Member States to eliminate the communication deficit regarding nuclear science and research,

Declaring clean energy standards for developing countries through the use of Public-Private Partnerships (PPPs) by combining private sector and public sector incentives to complete large-scale government projects of nuclear technology through private funding,

Calling attention to the storage of nuclear waste as well as *expressing concern* about the harmful effects of nuclear waste on the environment,

Believing in the potential of thorium fuel, which is harder to weaponize and is significantly more stable than uranium in the improvement of safeguards for all Member States, which seek access to safe nuclear energy,

Acknowledging the benefits of Low Enriched Uranium (LEU) with enrichment levels of 3-5% in preventing nuclear weapons proliferation,

Affirming the need for increased transparency and openness with nuclear developments outlined in the IAEA's *2017 Safety Standard Guide for Communication and Consultation with Interested Parties by the Regulatory Body*,

Referencing the All-Source Information Acquisition and Analysis in the IAEA Department of Safeguards (2010) highlighting the need for Comprehensive Safeguard Agreements as "all nuclear material in a state should be declared and subject to IAEA safeguards,"

Recognizing the importance of the IAEA's Technical Cooperation Program (TCP) for its role in directing Member States to ensure the safe use of nuclear technology in a manner, which maintains the integrity of human and environmental health,

Observing the Nuclear Security Summits (NSS) and Regulatory Cooperation Forums (RCF), such as the Association of Southeast Asian Nations, which meet bi-annually to provide knowledge concerning nuclear security standards and protocols for safe utilization of nuclear technology,

Recognizing with satisfaction the role of expanding existing regional nuclear verification programs such as the Ibero-American Forum of Radiological and Nuclear Regulatory Agencies (FORO), Spain's Guardia Civil Explosives Deactivation – Chemical, Biological, Radiological, Nuclear (CADEX-CBRN), the Global Nuclear Safety and Security Network (GNSSN), the IRSRR, and the Modernization of Safeguards Information Technology (MOSAIC) programs play in their ability to improve safeguards and verifications, encourage safety programs, and promote technological monitoring solutions at a global, national, and regional level,

Keeping in mind the importance of the IRSRR and recognizing the participants' standard of IRSRR, which is open to all IAEA Member States who have a research reactor under construction or in commissioning stage in normal operation or in extended shutdown,

1. *Calls upon* Member States to further improve multilateral collaboration through information sharing programs and the utilization of the IAEA's TCP and Nuclear Energy Agency's newly developed Nuclear Education Skills and Technology framework to promote compliance with:

    a. Regular information sharing assessments through TCP agreements to fulfill compliance requirements allowing Member States to address key development priorities;

    b. Open inspection for the implementation and execution of information sharing programs such as MOSAIC and FORO;

2. *Encourages* Member States to provide free access to research and development training through:

    a. Creating an International Network for Nuclear Science and Technology through international organizations such as the European Organization for Nuclear Research, the World Nuclear Association, The African Regional Cooperative Agreement for Research, Development and Training Related to Nuclear Science and Technology, and the Latin American Network for Education in Nuclear Technology;

    b. Partnerships between Member States, regional development banks, and the private sector to ensure the creation of regional Nuclear Training Centers and the installation of laboratories such as the National Center for Research of Science and Technology;

    a. Education programs that assess reactor safety and radiation safety along with providing materials to assess environmental safety which includes:

        i. The IAEA's Technical Cooperation Project, Reactor Safety Development Programme for Enhancing National Capability in Reactor Safety Research;
        ii. The IAEA's Modelling and Data for Radiological Impact Assessment Programme;
        iii. The General Safety Guides such as Radiation Protection of the Public and the Environment;

3. *Encourages* all Member States to implement the existing IAEA online learning module courses to equip nuclear facilitators with technical expertise to ensure nuclear safety and proper nuclear waste disposal, and partner with Nuclear Energy Management Schools to host annual IAEA-sanctioned training workshops on all areas of nuclear security under the patronage of the New Development Bank and the IAEA;

4. *Suggests* all Member States share the knowledge and technology of waste management in research reactors in every biannual meeting, within the framework of the IRSRR, by inviting national coordinators of research reactors, appointed by each Member State;

5. *Further encourages* Member States to implement additional nuclear science postgraduate programs for universities sharing expertise from specialists and scientists from the IAEA Department of Nuclear Sciences and Applications to focus on educating and training students about radiation protection in a more integrated way and provide practice directly in nuclear waste management facilities giving necessary knowledge about crisis management, increasing the number of human resources in NT, and improving participants' professional skills by:

a. Making the practice in the facilities necessary and extending the training period for three years after graduation which encourages funding from the IAEA's voluntary Technical Cooperation Fund, New Development Bank, The UN Educational, Scientific, and Cultural Organizations (UNESCO), regional development banks, and civil societies;

b. Having a two-level examination and an examination directly taking place at the facility that would make sure that employees are prepared to act in emergency situations;

c. Implementing specialized courses providing professional experience for NT fields lacking personnel;

6. *Recommends* assistance from the Nuclear Energy Agency, the Agency-Wide Information System and the Energy Department to:

a. Conduct a detailed analysis of nuclear progress;

b. Verify clean development energy practices, and supporting necessary domestic labor forces, while influencing higher education programs;

c. Highlight the need for Member States to share information related to their nuclear development programs with the IAEA;

7. *Suggests* Member States appraise implementing checks and balance systems in partnership with the World Nuclear Association, The World Association of Nuclear Operators, which utilizes the information provided by the IAEA Reference Products for Environmental Trade to accomplish regional safeguard practices by observing the:

a. Categorization of nuclear material and specific usage of documented materials;

b. Member States' research objectives and progressions;

8. *Encourages* developing Member States to implement transportation safety guidelines following the standards set forth in the Regulations for the Safe Transport of Radioactive Material (2018) as part of capacity-building for attaining nuclear materials and nuclear technology for peaceful purposes and sustainable development;

9. *Suggests* Member States to actively participate in the International Conference on Research Reactors under the IAEA to:

a. Share best practices of utilizing LEU in Research Reactors including but not limited to:

i. The conversion of research reactor fuel;
ii. The utilization of LEU in newly established research reactors;

b. Discuss the common standards on research reactors' operations;

10. *Expresses* its support for the safety and proper use of nuclear material for developing Member States in order to establish nuclear technology, as well as assisting in the regulation to ensure they are meeting IAEA's comprehensive safeguards agreements and preventing wrongful use of nuclear technology, including but not limited to nuclear material used to construct nuclear weapons or nuclear explosive devices;

11. *Encourages* developing Member States to establish PPP which support funding for safety on clean nuclear technology with benefits of:

a. Promoting development in domestic engineering and construction companies;

b. Encouraging economic growth through capital investment into the public and private sector;

12. *Encourages* Member States to take preventative measures for nuclear waste storage, including but not limited to:

    a. Avoiding utilization of buoy storage facilities;

    b. Implementing research that indicates the safest storage options that minimize the chance of humanitarian complications;

    c. Finding alternatives to underground nuclear waste storage facilities in Member States that are prone to earthquakes;

13. *Recommends* Member States to collaborate with the IAEA Division of Information Management to develop central technical innovations to serve as a data reference for updates and achievements of nuclear technologies, particularly nuclear power plants serving the energy sector and other development opportunities such as health, food production, and environmental protection;

14. *Encourages* Member States, NGOs, and other stakeholders to collaborate in the research and development of thorium-based power generation technologies by:

    a. Engaging in PPPs with firms developing Thorium Molten Salt Reactors and other Thorium-based reactors;

    b. Considering the establishment of a multinational thorium research reactor project similar to the International Thermonuclear Experimental Reactor for nuclear fusion;

    c. Incentivizing the adoption of thorium reactors as an alternative to uranium to mitigate the risk of environmental damage and nuclear weapons proliferation;

    d. Implementing research programs, rigorous standards, and inspection protocols to prevent the misuse of uranium materials or of weaponizable thorium byproducts;

15. *Further* recommends the use of safe nuclear fuels such as LEU and thorium to mitigate the risks of weapons proliferation and harm to humans or the environment through meltdowns;

16. *Urges* the further development of nuclear research reactors in developing Member States with support from the World Nuclear Association through:

    a. Education and training of nuclear engineers to develop efficient processes for developing nuclear reactors in developing Member States;

    b. Providing a foundation for future nuclear research through radiation technology advances, such as medical diagnosis and treatment and agricultural enhancement;

    c. Establishing a gradual pathway to the implementation of nuclear capabilities and nuclear power generation and allow for developing Member States to more easily abide by strengthened IAEA safeguard procedures;

17. *Calls for* Member States to multilaterally share best practices, scientific breakthroughs, and other pertinent information to Member States who are looking to embark on peaceful nuclear programs through the use of the International Nuclear Information System;

18. *Highly suggests* that Member States expand existing regional frameworks for NT safeguards and verifications such as FORO, CADEX-CBRN, GNSSN, and MOSAIC for improved regional cooperation and information sharing providing:

a. Pre-tested improvements in standardization of safeguards and verification measures;

b. Streamlined efficiency of dissemination of educational training materials and information regarding recent advances in research and development;

c. Encouragement for the utilization of existing technological enforcement mechanisms developed in MOSAIC to improve standards verification for the continued advancement of safety in NT development and implementation;

d. Knowledge and expertise sharing through regional safeguard and verification agreements which focus on the consolidation of safeguard components from FORO to align approaches to the authorization and training of nuclear reactor personnel, GNSSN to ensure common development of nuclear installations, and CADEX-CBRN to host workshops and by providing nuclear security exercises;

e. Allocations of extra budgetary funds from the Peaceful Uses Initiative to developing and disseminating software verification solutions, and implementing research and development programs, such as the Global networking for improved radiological and nuclear emergency preparedness and response;

19. *Invites* Member States to incorporate a regular attendance agreement to the NSS to establish an international agreement on all aspects of nuclear security, as well as the RCF as part of their Country Program agreements with the IAEA;

20. *Requests* the IAEA collaborate with Member States to implement IRSRR standards encouraging the construction of research reactors with the specified IRSRR guidelines.

Code: IAEA/1/7
Committee: The International Atomic Energy Agency
Topic: Strengthening Safeguards and Verification

The International Atomic Energy Agency,

Reminding Member States of previous disasters that have occurred, such as Chernobyl and Three Mile Island, which demonstrate the importance of international cooperation concerning the topic of atomic safety,

Calling to mind peer review services such as the Integrated Review Service for Radioactive Waste and Spent Fuel Management, Decommissioning and Remediation (ARTEMIS) that can be utilized and improved by management and regulators for decision making,

Noting with acceptance General Assembly resolution 73/68 (2018) in highlighting the responsibility of Member States to maintain appropriate conduct in acknowledging and mitigating the risk of the use of nuclear technology for non-peaceful purposes,

Reflecting on the sponsored plans of the International Atomic Energy Agency (IAEA) such as the Integrated Nuclear Security Support Plan (INSSP), that ensures the security of all nuclear power plants throughout the world to guard against future breaches of nuclear facilities,

Noting with concern increased international tensions and the possibility of further nuclear weapon proliferation,

Affirming Article VI of the *Treaty on the Non-Proliferation of Nuclear Weapons* (NPT), which commits all parties to "pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control,"

Acknowledging the role of General Assembly resolution 73/83 (2018) in emphasizing the necessity that Member States accept IAEA safeguards and underlining the importance of the universal adoption of the NPT,

Recognizing the importance of the *Treaty on the Prohibition of Nuclear Weapons* (TPNW) for the purpose of eliminating the threat to international security caused by nuclear weapons,

Reiterates the request to commence negotiations in reaching agreement to prohibit the use or threat of nuclear weapons under any circumstances as stated in General Assembly resolution 73/74 (2018),

Calling attention to General Assembly resolution 73/57 (2018) which outlines the advisory opinion of the International Court of Justice on the legality of the threat or use of nuclear weapons and establishes the moral justification for the regulation of nuclear weapons and materials,

Recalling General Assembly resolution 73/70 (2018) which urges Member States to further implement their commitments to the NPT and to improve their implementation mechanisms,

Observing regional workshops in Member States which inform parties of the regulatory commitments of IAEA safeguard and verification agreements such as the NPT as well as how they can be implemented,

Noting with interest IAEA resolution 63/13 (2019) which reminds Member States of their obligation to establish Nuclear Weapon Free Zones and of the importance of complete regional nuclear disarmament,

Recalling Articles II and III of *The Statute of the IAEA*, which states that the IAEA shall "allocate its resources in such a matter as to secure efficient utilization and the greatest possible general benefits in all areas of the world, bearing in mind the special needs of the under-developed areas of the world,"

Noting the importance of IAEA Collaborating Centres as key components of strengthening Article III of the NPT,

Taking note of General Assembly resolution 66/33 (2011) which strengthens the review process for the NPT by requiring a review every five years,

Keeping in mind the accomplishments of the Trilateral Initiative (TI) (1996 – 2002), a bilateral agreement between the United States and the Russian Federation with the goals of identifying verification arrangements and necessary technologies to be utilized by the IAEA to identify plutonium and highly-enriched uranium from nuclear warheads or components,

Acknowledging one of the key guidelines of the imPACT Review created by the IAEA, in ensuring the establishment of safe, high quality radiation medicine services to combat radiation nuclear technology misuse and overexposure to patients and professionals in the medical community, due to outdated and rudimentary training of professionals which in turn creates increased opportunities of radiation therapy treatment accidents,

Noting further that the objectives of the IAEA, as stated in Article II of the Statute, are "to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world" and to ensure that both physical and capital assistance provided by it is not used "to further any military purpose,"

Acknowledging General Assembly resolutions 73/74 (2018) and 73/57 (2018) which highlight the existential threat posed by nuclear weapons and further demonstrate the necessity for a multilateral safeguard system,

Noting General Assembly resolution 56/94 (2002) which notes that a demonstrated global record of safety is a key element for the peaceful uses of nuclear energy and that continuous efforts are necessary to ensure that the human and technical elements of safety are maintained at the optimal level, and also noting that, although safety is a national responsibility, international cooperation on safeguard-related matters is indispensable,

Bearing in mind that highly enriched uranium and separated plutonium in all their applications require special precautions and safeguards to ensure their peaceful uses and that it is of great importance that they be appropriately secured and accounted for, by and in the relevant State,

Emphasizing IAEA resolution 63/9 of 2019 "Strengthening of the Agency's technical cooperation activities," that developing countries, including the Least Developed Countries, consider the technical cooperation (TC) programme as the major vehicle through which they benefit from this statutory function when attempting to follow IAEA directives including safeguards,

Recognizing IAEA resolution 63/8 (2019) that addressing challenges through crafting safeguards associated with cyber security technology, plays an increasing role in ensuring the security of nuclear and other radioactive material and their associated facilities,

Conscious of the fact that nuclear energy programs pose a potential security threat if not developed with the proper safeguards under the authority of the IAEA,

Notes with profound concern the growing challenges presented by the lack of cooperation, compliance, and funding in the status quo,

Mindful of the current safeguard traineeship program in place, and the continuing necessity of expanding the program to ensure that developed nuclear programs continue to follow the guidelines set by IAEA and developing nuclear programs have the resources needed to grow responsibly,

Appreciating the work done by the African Regional Cooperative Agreement for Research, Development and Training related to Nuclear Science and Technology, and their legislation in place as a primary example on how to properly develop nuclear techniques peacefully,

Expressing its deep appreciation for the voluntary extrabudgetary contributions from Member States to the Peaceful Uses Initiative (PUI), which makes the strengthening of nuclear safeguards and verifications possible,

1. *Calls for* Member States operating or pursuing nuclear technology to work together to create a plan to hold all Member States accountable for the safety of the citizens of the world by:

    a. Applying ARTEMIS as each Member State's standard for the disposal of nuclear waste for the purpose of mitigating the risk of future disasters;

    b. Installing the INSSP, which provides Member States with a framework for reviewing nuclear security and recognizing areas that need to be strengthened within nuclear facilities;

2. *Urges* all Member States, who have not yet done so, to sign and ratify the TPNW in order to reach the 50 Member State requirements for its entry into force;

3. *Appeals* for the General Assembly to reconsider how the NPT can be better utilized in our current global security situation considering the ambiguity of present provisions by:

    a. Considering how Member States can help to accomplish the central goals of nonproliferation, the peaceful use of nuclear energy and most importantly, the timely disarmament of Member States possessing nuclear weapons;

    b. Inviting suggestions from the application of the TI, concerning IAEA verification of weapon-origin fissile materials in relation to nuclear disarmament:

        i. Insisting against political limitations in accomplishing multilateral agreements concerning nuclear safety;
        ii. Noting with satisfaction the development of methods to place classified weapon-origin PU (nuclear warheads, warhead components, pits or secondaries) under permanent IAEA verification and monitoring, without risking state security;

4. *Calls* for the universal adoption and equal application of the NPT and IAEA safeguards and verification standards, reminding Member States that:

    a. Consensus is born out of homogenous foundational principles;

    b. This enables stronger safeguards and verification standards;

5. *Endorses* regional workshops that inform parties of the benefits of safeguard agreements in order to encourage compliance, utilizing them as not only a guide for future workshops but also as a call to action for other Member States to participate in by:

    a. Drawing the attention to examples of workshops produced by Indonesia in Jakarta, July of 2018, allowing participants to share knowledge, experiences and best practices on the implementation of IAEA safeguard protocols;

    b. Commending additional workshops established by Egypt with the help of the IAEA, such as the Egypt-IAEA nuclear energy management school, which focus on the managerial and technical competencies that are required to support national nuclear energy strategies;

c. Noting with interest IAEA engagement in delivering information about safeguard agreements and obligations through exercises and presentations, strengthening the possibility of a worldwide nonproliferation regime;

6. *Encourages* Member States to use the IAEA peer review services and make findings of such reviews public in a fast and efficient manner in order to:

    a. Allow the IAEA to further evaluate capacity building needs in the field of nuclear applications;

    b. Maintain honest practices;

    c. Set up a self-sustaining network of accountability;

    d. Enable the creation of projects that encourage education, training and knowledge transfers for activities sponsored by the IAEA;

    e. Expedite information sharing between Member States and the IAEA;

7. *Suggests* the creation of an evaluation process led by experts from within and outside the Board of Governors to update and expedite the process for cases of non-compliance;

8. *Calls for* further voluntary financial contributions to the Technical Cooperation Fund, the PUI and projects that directly affect the efficiency of the regular budget to ensure adequate funding of the aforementioned provisions and primary functions of the IAEA, including:

    a. Additional funding to revamp information technology and cyber security every ten years;

    b. Further funding for an increased number of qualified inspectors;

9. *Emphasizes* the implementation of information and communications technology training programs for medical professionals, focusing on proper and safe handling of nuclear technology usage in oncology for cancer treatment and prevention by endorsing safe, high quality radiation medicine services;

10. *Strongly Advises* each Member State that seeks potential acquisition of materials for the purpose of the construction of a civilian nuclear energy site, to submit an application to the IAEA Board of Governors for review once the Member State has gathered enough national support to begin the planning process, which shall consist of the following but not limited to:

    a. Containing a financial funding plan, including submissions for benefits from the IAEA TC programme;

    b. Including an infrastructural proposal, which shall consist of but not limited to Impact Assessments on:

        i. The local economy conducted by a national agency, or non-affiliated firm under the employment of the Member State under review;
        ii. The local biodiversity and environment conducted by a national agency, or non-affiliated firm under the employment of the Member State under review;

    c. Further containing an investment proposal consisting of but not limited to:

        i. Member State draft committing to investing economic aid into the local economy around the proposed site, for the purpose of bolstering the economic prospects of local residents;
        ii. Member State draft allocating a portion of money to help grow the Safeguard Traineeship Program for the purpose of creating a skilled local workforce than can properly maintain and operate the nuclear energy site in the long run;

iii. Special focus being put into Science, Technology, Engineering, and Math educational funding for women, as to close the gender gap within the profession and improve their average economic potential;

d. Upon delivery of said documents and proposals, the IAEA Board of Governors shall allow for a 6-month period for other Member States and NGOs to submit other information deemed relevant to the proposal:

i. Following this period, the IAEA Board of Governors may confirm or deny the application;
ii. Should a proposal be denied, the Member State in focus shall wait a minimum period of 2 years before re-submitting another application for that site;

11. *Further requests* Member States with existing nuclear energy sites that are in good standing with the IAEA, to request application towards an expedited process for an immediate review of the aforementioned application;

12. *Authorizes* that once construction begins upon the new nuclear energy site, IAEA inspectors will be given unrestricted access to the plant and plant property for verification of civilian purposes for the site, with a minimum of but not limited four visits per year:

a. The team of IAEA inspectors assigned to the construction location, shall be instructed to submit quarterly reports to the IAEA Board of Governors;

b. Should the Member State in question be found to be pursuing weapon-grade enrichment, the nuclear energy program shall be frozen for a minimum period of 6 months, to allow time for the IAEA to make subsequent recommendations to other UN bodies for evaluation:

i. Upon the completion of the 6-month freeze, the IAEA Board of Governors may choose to extend this freeze by three months on a continuing basis, based upon feedback given by internal investigators and the recommendations by other UN bodies;
ii. Should the program freeze be lifted, a probationary period of two years shall be enforced to ensure compliance. This shall include stricter supervision by IAEA inspectors and an increase to bi-monthly reports to the IAEA Board of Governors;

13. *Underscores* that following the acceptance of the proposed nuclear site, the Member State shall undertake the execution of the final version of the Infrastructure and Investment Proposals. Failure to enact these programs shall result in the freezing of TC benefits and other member states shall be discouraged from undertaking economic activities with the member state under scrutiny in the field of nuclear energy/weaponry technology and assistance;

14. *Strongly encourages* that upon completion of the new nuclear energy site, protection measures shall be taken to ensure the physical and cyber security of the site containing but not limited to:

a. Measures meant to guarantee the physical security of the plant, its subsequent property, workers and physical materials located on site;

b. Adherence to cooperative measures through the IAEA on the cyber security apparatus of nuclear energy sites;

c. An exchange program between nations with nuclear programs and nations who are looking to embark on peaceful nuclear programs through the Technical Cooperation Programme;

15. *Further encourages* that upon the completion of the nuclear energy site, enrichment levels within the facility shall not exceed classification of being low enrichment levels for Uranium-235, being between 0.7% - 20% enrichment:

a. Recommends reactor enrichment levels to be maintained in the 3-5% range;

b. Reactors with enrichment levels exceeded 20% will no longer be considered as being used for civilian purposes and shall be subject to program freezes described above.