



Documentation of the work of the **International Atomic Energy Agency (IAEA)** NMUN simulation*



Radical empathy,
—
Peace reimagined

NMUN•NY 2023
Conference B
10 – 14 April 2023

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International Atomic Energy Agency (IAEA)

Committee Staff

Director	Ryan Prieto
Assistant Director	Kieran Leigh
Chair	Nico Remmert

Agenda

1. Nuclear Waste Management
2. Strengthening Safeguards for the World's Nuclear Facilities

Resolutions adopted by the Committee

Code	Topic	Vote (For-Against-Abstain)
IAEA/1/1	Nuclear Waste Management	40-21-27
IAEA/1/2	Nuclear Waste Management	59-10-19
IAEA/1/3	Nuclear Waste Management	Adopted without a vote

Summary Report

The International Atomic Energy Agency held its annual session to consider the following agenda items:

- I. Nuclear Waste Management
- II. Strengthening Safeguards for the World's Nuclear Facilities

The session was attended by representatives of 81 Member States.

On Monday, the committee adopted the agenda of topic I, followed by topic II, beginning discussion on the topic of "Nuclear Waste Management." By Tuesday, the Dais received a total of nine proposals covering a wide range of sub-topics such as nuclear security of underground facilities, creating frameworks for education, research and expanding safety standards, supporting less developed countries in handling nuclear waste, expanding recycling technology and information sharing to developing countries, proactive and reactive solutions for nuclear waste management, regional cooperation under IAEA supervision, establishing deep geological repositories worldwide, and proposing a six-step plan for global nuclear waste management. The tone in the committee was peaceful, and the debate was fruitful with productive discussions. Despite differences in opinions, the representatives diplomatically talked about the issues and identified areas for compromise.

On Wednesday, three draft resolutions had been approved by the Dais, and all three had amendments. The committee adopted all three resolutions following voting procedure, one of which received unanimous support by the body. The resolutions represented a wide range of issues, including the need for accountability and cooperation, additional support for the least developed countries, value of education and research in promoting a culture of nuclear safety, and exploration of more closed fuel cycles, emerging technologies, and new deep geological repositories.



Code: IAEA/1/1

Committee: The International Atomic Energy Agency

Topic: Nuclear Waste Management

The International Atomic Energy Agency,

Reaffirming its commitment to General Assembly resolution 2373 (1968), on the “Treaty on the Non-Proliferation of Nuclear Weapons,” especially Article 3 which outlines proper safeguards about handling fissionable materials,

Guided by the principles of Article 1 of the *Charter of the United Nations* (1945), which promises to uphold peace and security,

Bearing in mind Sustainable Development Goals (SDGs) 7 (affordable and clean energy), 11 (sustainable cities and communities), and 12 (responsible consumption and production), calling for the sound management of hazardous waste,

Approving of close multilateral cooperation between Member States and regional actors,

Alarmed by the half-life expectancy of high-level radioactive waste (HLW), calling for the mitigation of long-term risk,

Concerned by intra-transparency in current national policies and measurements regarding the storage and disposal of nuclear waste,

Recognizing the global threats posed by inappropriate waste management and permeable storage and disposal of nuclear waste,

Expressing serious concern about the long-term safety of deep borehole disposal,

Recalling that deep geological repositories (DGR) bear great potential for permanent disposal of waste, especially of high-level waste in suitable geographical regions,

Emphasizing that recycling and reusing nuclear waste holds many opportunities to be more safe and environmentally friendly by reducing the total amount of nuclear waste,

Recognizing that safe and sustainable storage and disposal of nuclear waste can only be ensured by collaborating as a global community,

Further recognizing that the transportation of nuclear waste is a safe process when proper regulations and protocols are followed,

Expecting Member States to store and dispose of their created nuclear waste, especially HLW, on their own soil whenever possible,

Expecting Member States unable to dispose of their own waste to seek fair and equal solutions within the

Statute of the International Atomic Energy Agency (1956) specifically Article IV.C, guaranteeing the principle of sovereign equality,

Recognizing that Least Developed Countries (LDCs) and non-nuclear nations face unique challenges in their waste management and require equitable solutions,

Referencing the International Atomic Energy Agency General Conference resolution 50/10 (2006), on “the importance of proper management of nuclear waste to prevent the spread of harm towards human populations and natural ecosystems,”

Taking into consideration the Comprehensive Capacity-Building Initiative for SSACs and SRAs (COMPASS) in the collaboration between developed Member States and least developed Member States,

Acknowledging that, according to the *World Nuclear Waste Report* from the Green Political Foundation, no Member State in the world has found a real solution for the radiating legacy of nuclear power in the last 70 years,

Reflecting upon the progress in international development especially International Atomic Energy Agency General Conference resolution 45/10 (2001), on “Measures to strengthen international co-operation in nuclear, radiation, transport and waste safety,” which has served as a transnational agreement to effectively manage nuclear waste,

Acknowledging the lack of sufficient scrutiny surrounding medical nuclear waste and echoes the need to ensure a reduction in low radioactive waste discharged into the ocean outlined by General Assembly resolution 76/35 (2021) on the “Prohibition of the dumping of radioactive wastes,”

Cognizant of the benefits of sharing information about technologies to ensure the installation of all the safe facilities,

Noting with interest the education of how to properly dispose of nuclear waste and the risks Member States face if not disposed of appropriately,

Deeply alarmed for the low-income communities that are expected to handle nuclear waste without having access to the proper resources,

Noting with approval the *Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management* (1997), particularly the limitations of the convention that have become apparent with time,

Fully alarmed by the shortcomings in regards to protecting nuclear waste management and storage facilities from attacks, including the *Protocol I amendment to the Geneva Conventions* (1977),

Aware of SDG 12, target 12.4, and the plausible negative ecological impacts which may occur should it not be achieved,

Bearing in mind the distinct lack of DGRs and the necessity for them on all populated continents,

Mindful of the potential of nuclear waste to be weaponized leading to it fall under the purview of the *Treaty on the Non-Proliferation of Nuclear Weapons*,

Being cognizant of the plausibility of nuclear terrorism in a globalized world, given the increasing quantities of nuclear waste produced and lack of storage solutions,

Emphasizing the existence utility of the International Atomic Energy Agency inspection team which

currently performs randomized, annual checks on various nuclear facilities,

Highly valuing the efforts of the United Nations and the International Atomic Energy Agency, to address and improve the management of nuclear waste,

Recognizing that many storage facilities have been in operation for over 50 years and that decreased performance could cause potential contaminations in the future,

Understanding that nuclear waste must be handled properly to avoid placing an undue burden on future generations,

Recognizing that preventing contamination of the environment by nuclear waste is key to achieving SDG 3 (good health and well-being) of promoting healthy living and well-being of all ages, through avoiding preventable deaths caused by such contaminations as part of target 3.9,

Acknowledging the ongoing Coordinated Research Project: Performance Assessments of Storage Systems for Extended Durations (2022), with the aim of determining the effectiveness of facilities performance after long periods of operation,

Recognizing the need for assistance for nations that are geographically disadvantaged and those that are considered LDCs with establishing and managing nuclear facilities,

Noting that the Technical Cooperation Programme benefits LDCs and other disadvantaged nations greatly with regards to construction of facilities and knowledge sharing for applications of nuclear power,

Deeply convinced that poorly managed shipment and transportation of nuclear material can lead to an environmental catastrophe affecting flora and fauna on all levels must be prevented by all means in reference to General Assembly resolution 75/216 (2020) on “Disaster risk reduction”,

Concerned with the interests of less influential states who do not have robust nuclear energy programs, create excessive volumes of nuclear waste, nor have investments in nuclear facilities,

Alarmed and concerned with the damage caused to vulnerable ecosystems by previous irresponsible nuclear waste ocean dumping practices,

Dismayed by member states attempting to ease dumping restrictions in direct contrast to SDG 12 and SDG 16 (peace, justice, and strong institutions),

Noting the severity of the necessity for geological diversity as it pertains to the location of DGRs similar to the Onkalo site in Finland, while understanding the need for increased funding for lesser developed nations in regions lacking in necessary reserves,

Agreeing with the increase of practical training as it pertains to nuclear waste facility managers, as it is imperative that workers within these facilities require intensive training to reduce errors with storage and processing,

Cognizant of regulations set forth by the International Atomic Energy Agency and standards specific to nuclear waste management that require full financial support from Member States to achieve full compliance,

Understanding the potential of certain developing technologies with regards to reducing the quantity and severity of nuclear waste,

Reminds every Member State about its ability to adequately aid those who require assistance with construction and knowledge sharing with regards to nuclear waste management,

1. *Suggests* that Member States ensure and further improve the safe management of nuclear waste, and provide support to assist those without the capacity to do so;
2. *Recommends* further global cooperation between Member States in the matters of safe storage and transportation of nuclear waste, along with rigorous regular inspection and precautions of treatment, waste reprocessing, storage, and disposal facilities;
3. *Invites* Member States and non-governmental organizations (NGO) to cooperate on DGRs by providing financial assistance and resources including, but not limited to, education and training of waste storage personnel, and sharing of findings regarding DGRs;
4. *Supports* expanding collaboration between Member States within the International Atomic Energy Agency to implement treaties such as the *Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management* (1997);
5. *Proposes* that Member States draft a treaty prohibiting the targeting of nuclear waste management and storage facilities;
6. *Calls upon* those who are most responsible for ecological damage that is directly tied to irresponsible disposal of nuclear waste to be at the forefront of and take a proportional responsibility in the restorative efforts in accordance with SDG 12 target 12.1, for example through:
 - a. Gathering information on origin and volume of waste gathered by reports submitted to the International Atomic Energy Agency at time of contamination or discovery of damages from previous unsecured dumps/spills;
 - b. Instituting a subcommittee to tabulate unsecured waste percentage for each Member State and NGO;
7. *Recommends* the promotion of multinational cooperation for exploration of potential sites for deep geological disposal facilities for nuclear waste globally while minimizing travel time for waste, which can be done by managing shipments of nuclear material to be handled by transport on a multinational level to minimize the probability of radiation exposure by:
 - a. Establishing further implementation measures and review services which are in line with the Integrated Review Service for Radioactive Waste and Spent Fuel Management, Decommissioning and Remediation (ARTEMIS);
 - b. Recommending Member States begin the process of discovering and utilizing tectonically inactive zones for the purpose of the construction of DGRs by partnering with various regional, national, and international NGOs with a focus on geology which could aid in the process;
 - c. Stressing that the end goals are to establish DRG's where appropriate purpose of ease and security of transport and minimize the ecological impact of improperly stored waste;
8. *Emphasizes* the need to evaluate and monitor HLW disposal policies and practices in order to assure full transparency and security in reference to *The Statute of the International Atomic Energy Agency* (1956);

9. *Encourages* the creation of new common safeguards for HLW disposal sites, to enable Member States, with the support of experts, to survey potential disposal sites that are supported by the IAEA;
10. *Calls upon* nations and facility operators to heed conclusions of the Coordinated Research Project: Performance Assessments of Storage Systems for Extended Durations, to ensure that the facilities currently constructed for nuclear waste are up to relevant safety standards after long periods of time;
11. *Requests* an increase in the amount of practical training on the ground in Member States where nuclear waste management is present, similar to the work done by the Nuclear Energy Institute and the European Atomic Energy Community (EAEC);
12. *Advocates* for the International Atomic Energy Agency inspection team to carry out semi-annual, randomized inspections of the waste and disposal facilities of Member States, prioritizing inspections following a state of emergency, including access to those facilities which are located in conflict zones, all following the standard operating procedures and guidelines of the inspection team;
13. *Considering* the formation of a consulting body comprised of members from any Member State for the purpose of conducting a review of funding initiatives, in order to ensure development, inclusivity and long-term efficiency;
14. *Seeks to* advance research on existing nuclear reactors to utilize their life expectancy by:
 - a. Continuing to extend the lifespan of existing nuclear reactors by replacing components with a predetermined lifespan;
 - b. Reducing the overall amount of nuclear waste produced by operating nuclear reactors past their 40-year expectancy;
15. *Encourages* the strengthening of existing multilateral networks between relevant actors such as, but not limited to, medical specialists, nuclear experts, and other professionals in this field to strengthen research efforts, education and cooperation;
16. *Emphasizing* the longevity of nuclear waste and therefore the importance of observing and ensuring safety of DGRs over periods of time longer than 100 years;
17. *Recommends* the creation of the Comprehensive Capacity-Building Initiative for Nuclear Waste Management that would utilize the Nuclear Waste Management Conference to provide recommendations and expertise support;
18. *Endorses* the expansion of multilateral sharing of nuclear waste data among Member States through NGOs such as the World Association of Nuclear Operators (WANO), including:
 - a. The location and quantity of medical nuclear waste;
 - b. The production of waste in nuclear facility;
 - c. Transporting of nuclear waste both internationally and domestically;
 - d. Location and quantities of nuclear waste in repositories;
19. *Further recommends* the creation of a nuclear waste tracking scheme (NWTTS) to track the existing HLW, the production of HLW, and the storage capacities of existing and planned DGRs, that ensure that HLW in circulation does not overcome the storage capacities in

DGRs;

20. *Expresses hope* to create universal guidelines and educational systems that promote the safe and effective management of nuclear waste across the board by:
 - a. Providing universal knowledge, support, and recommendations to Member States, as it pertains to building repositories within their region, specifically through successful examples, developing research, and the reference of NGOs;
 - b. Further requesting strict adherence to the specific parameters, as outlined in each Member State's safeguards agreement and additional protocol agreed upon with the International Atomic Energy Agency on the correct and incorrect ways to handle nuclear waste in order to ensure safe management;
 - c. Emphasizing the importance of ensuring all entities have the proper resources and support to safely and effectively manage their nuclear waste;
21. *Further invites* Member States to consider reevaluating the *Joint Convention on the Safety of Spent Fuel Management and the Safety of Radioactive Waste Management*, in conjunction with the *Treaty on the Non-Proliferation of Nuclear Weapons*;
22. *Urges* Member States to create a framework for nuclear waste byproducts within other Member States and the creation of guidelines to ensure that the needs of all Member States are not overshadowed;
23. *Suggests* Member States and NGOs submit reports every fiscal year to the International Atomic Energy Agency itemizing the location and capacity of all their nuclear waste storage within that year, in addition to all documentation of agreements regarding waste storage;
24. *Further urges* Member States to remember their voluntary financial commitment to the International Atomic Energy Agency, particularly with regards to the Technical Cooperation Programme (TCP), which benefits LDCs and geographically disadvantaged countries greatly with regards to expertise and development of nuclear facilities;
25. *Strongly encourages* the creation of the RFRB (Repository Funding Review Board) which would serve as a subsection under the International Atomic Energy Agency, to focus on submitting recommendations to funding groups and NGOs for Member States who apply to be reviewed, specifically targeting LDCs and nations in regions where there is a lack of DGRs or nuclear waste management;
26. *Requests* that a working group of relevant International Atomic Energy Agency funds, programs, and agencies, such as the Peaceful Uses Initiative (PUI) and the Nuclear Energy Agency (NEA) be established in order to develop standards and best practices, and streamline the funding application process while taking into account various needs and capabilities of Member States and other stakeholders by employing the help of international NGOs that cater towards providing LDCs with assistance and resources for the purpose of making funds more accessible such as the National Nuclear Fund;
27. *Encouraging* the International Atomic Energy Agency request funding from the General Assembly Fifth Committee for the purpose of funding the development of nuclear energy in LDCs and nations who are geographically disadvantaged through Small Modular Reactors (SMR) by creating the conditions to enable the funding and construction of SMRs and Sodium-Cooled Fast Reactors (SFR) in consenting LDCs that would like to utilize nuclear energy.



Code: IAEA/1/2

Committee: International Atomic Energy Agency

Topic: Nuclear Waste Management

The International Atomic Energy Agency,

Considering an article from the World Nuclear Association noting that 10% of the world's energy production is covered by nuclear sources,

Keeping in mind the need to respect the sovereignty of nations with regard to their peaceful nuclear program,

Reiterating its conviction towards the *Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management* (1997),

Keeping in mind the dangers nuclear waste poses to human life and the environment, and General Assembly resolution 76/35 (2021), on the "Prohibition of the dumping of radioactive waste,"

Referencing the International Atomic Energy Agency's responsibility to support Sustainable Development Goals (SDGs) 3 (good health and well-being), 7 (affordable and clean energy), 12 (responsible consumption and production), 13 (climate action), and 17 (partnerships for the goals),

Recognizing the International Atomic Energy Agency's mandate to facilitate peaceful development of nuclear power and protect future generations from the risks posed by radioactive waste,

Acknowledging the importance of existing funding solutions for innovative methods of reducing nuclear waste,

Highlighting the vast benefits coming from universal recycling of nuclear material such as waste mitigation, improving efficiency in power production, and reducing strain on waste storage facilities,

Referring to the success of the closed fuel cycle system of Member States in recycling their nuclear material,

Recognizing the importance of innovation in nuclear waste recycling methods, specifically the process of vitrification of spent fuel,

Convinced that recycling radioactive waste is the most sustainable way of developing nuclear power for future generations,

Emphasizing the globally shared responsibility for the management of nuclear waste and the significance of enhancing responsibility of Member State actors in properly administering nuclear waste within their own borders,

Further acknowledging the logistical challenges that Member States face in constructing or transporting nuclear waste to geological repositories, especially over open waters,

Taking into consideration the challenges of permanent nuclear disposal and the threats for global environment,

Understanding the potential of certain developing technologies pertaining to both the disposal of waste and reduction of waste production in reducing the quantity of nuclear waste and improving its ease of containment,

Recognizing the need for awareness and recognition of orphaned nuclear sources from abandoned or decrepit radio medicine machines and power generators,

Noting the value of information sharing and the benefits of furthering education of Member States in regards to nuclear waste management,

Reiterating its appreciation for the efforts accomplished in the *London Convention (1975)* which condemns ocean dumping practices,

Acknowledging the need for the sharing of best practices, knowledge, and expertise between Member States to support the management of nuclear waste on an international level,

Cognizant that many of the Member States pursuing nuclear power are geographically disadvantaged or considered Least Developed Countries (LDCs) which lack infrastructure, funding, and knowledge to best handle and store waste produced from atomic energy,

Welcoming Member States of the International Atomic Energy Agency to update and contribute to pre-existing International Atomic Energy Agency databases such as the Nuclear Data Services (NDS) and the Spent Fuel and Radioactive Information System (SRIS),

Appreciating the use of blockchain technology to increase efficiency and security in future databases,

Welcoming the upcoming session of the Conference on the Safety of Radioactive Waste Management, Decommissioning, Environmental Protection and Remediation in early November 2023,

Further noting the success of the 2019 Conference on the Management of Spent Fuel from Nuclear Reactors and the Emerging Technologies Workshop,

Recalling the potential for funding from the International Atomic Energy Agency's preexisting Peaceful Uses Initiative (PUI) on a range of programmes,

Commending the fruitful success of the *International Atomic Energy Agency's Action Plan on Nuclear Safety (2011)* regarding nuclear waste from submarines in the Arctic Ocean,

1. *Advocates for* the expansion of closed fuel cycle strategies in nuclear power plants among all Member States to decrease nuclear waste by 25-30%, and increase efficiency by up to 20%, according to World Nuclear Association by:
 - a. Proposing an international standard for the implementation of the closed fuel cycle strategy in the construction and development of nuclear plants;
 - b. Calling for non-governmental organizations (NGOs), as well as Member States, to contribute to the funding of closed fuel cycle technology in emerging nuclear facilities where necessary;
2. *Urges* Member States to adopt robust nuclear waste recycling programs by:

- a. Ensuring that recycling becomes a primary means of nuclear waste disposal;
 - b. Encouraging Member States to pursue research and development into nuclear waste recycling, including more advanced nuclear reactors that are capable of using existing waste for fuel;
 - c. Further relying on Member States with developed nuclear waste recycling technology to process waste from countries lacking the resources to do so;
3. *Suggests* the construction and use of safe long-term storage methodology for circumstances where recycling is not appropriate, at locations in environmentally stable regions, including the use of physical and chemical barriers, Purex Process, Urex Process, Pyroprocessing, and Hydraulic Cages;
4. *Endorses* the research and investment by the International Atomic Energy Agency and Member States into vitrification of low level and medium level radioactive spent fuel waste into glass by:
 - a. Encouraging Member States with experience in the use of vitrification to share knowledge and expertise with LDCs;
 - b. Requesting further funding from the General Assembly Fifth Committee specifically towards vitrification research and processes and their uses in sustainable infrastructure and building materials;
5. *Encourages* the research of in-development, low-waste technology systems including fusion reactor systems, thorium-based reactor systems, small modular reactors, and other low yield reactors, funded through the PUI;
6. *Recommends* Member States to collaborate with leading organizations and the Nuclear Energy Agency (NEA) and consider the usage of borosilicate glass in the making of nuclear waste containers, in order to combat High Level Waste longevity, in deep geological disposal, and borehole methods;
7. *Encourages* the formation of a coordinated research project supported by the IAEA's nuclear research department into the usage of chirped-pulse-amplification (CPA) to decrease the half-life of intermediate-level and high-level waste to minutes in an effort to potentially solve the issue of nuclear waste entirely;
8. *Creates* the International Nuclear Waste Transportation Database (INWT), employing block chain technology and using a log system to track nuclear waste shipments, for the purpose of providing safety recommendations and categorizing waste;
9. *Suggests* that Member States in regards to their respective production of nuclear waste establish an efficiency target with the advisement of the International Atomic Energy Agency, for the total nuclear waste emissions, taking into account both the amount of waste produced, its level of radioactivity, and nuclear waste stored or recycled by:
 - a. Sending annual reports to the International Atomic Energy Agency, reporting efficiency targets set and the goals met;
 - b. Receiving additional funding and support from the General Assembly Fifth Committee and the PUI when Member States meet their efficiency target, for example:

- i. Funding from the General Assembly Fifth Committee will be allocated for developing and maintaining nuclear power programs and nuclear waste storage facilities;
 - ii. Support will be given in the form of equipment and training from the PUI;
 - iii. Extra funding and support are determined by an overall rating scored on the efficiency target;
 - c. Encouraging nuclear power plants that produce less waste to adopt more environmentally friendly waste disposal methods that could increase efficiency;
- 10. *Recommends* reconvening the Conference on the Management of Spent Fuel from Nuclear Reactors, the Emerging Technologies Workshop, and the upcoming Conference on the Safety of Radioactive Waste Management, Decommissioning, Environmental Protection and Remediation to meet every two years in order to:
 - a. Discuss environmental protections, regional strategies for repositories, such as geological, and emerging nuclear based technology;
 - b. Prepare for the reconvening of the Spent Fuel Conference, regional organizations are encouraged to meet and discuss with regional experts to encourage best practices for knowledge sharing of nuclear waste management;
 - c. Encourage Member States to ensure diversity and inclusion are taken into account when electing representatives, considering SDG 5 (gender equality), target 5.5, and SDG 10 (reduced inequalities), target 10.2;
- 11. *Advocates* for the expansion of the International Atomic Energy Agency's Nuclear Data Services (NDS) and the Spent Fuel and Radioactive Information System (SRIS) databases to include information about best practices associated with the processing and transportation of nuclear material as well as adoption of an International Atomic Energy Agency framework on borehole implementation for the disposal of low to mid-level waste by Member States;
- 12. *Recommends* that the International Atomic Energy Agency create a Commission for Nuclear Waste Management (NWMC) comprised of Member States as a sub-committee of the International Atomic Energy Agency nuclear inspections and safeguards board that is specifically focused on nuclear waste management and promoting best practices through shared knowledge and expertise by:
 - a. Requesting all Member States regardless of nuclear capabilities in the NWMC that work collaboratively to reduce the risk of nuclear waste, as well as to promote inclusivity, knowledge sharing, and expertise;
 - b. Allowing Member States to voluntarily request both joining the NWMC and hosting inspections of their nuclear waste storage facilities to improve risk management and disaster mitigation;
 - c. Working with Member States preemptively and after the presence of nuclear waste to reduce or eliminate the risk of unmanaged nuclear waste by creating a specific plan for the Member State on how to address and deal with its waste management problem based on best practices, shared knowledge, and expertise;
- 13. *Calls* for the creation of standardized robust practices in the techniques for Member States to utilize in the transportation of nuclear waste and other radioactive material

across international waters by:

- a. Accepting voluntary funds to be available for the implementation of safe means of nuclear waste transport with a focus on the health of international waters and the global commons;
- b. Making sure all nuclear waste transportation be made in accordance with clauses 4 and 27 of the *Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management* (1997);
- c. Encouraging Member States to voluntarily submit to International Atomic Energy Agency audits of radioactive waste transportation infrastructure and practices to ensure the safety of vulnerable ecosystems and dependent markets;
- d. Urging Member States to implement policy in order to protect nuclear waste;
- e. Advising Member States to mitigate the transportation of nuclear waste outside of their sovereign territory;

14. *Calls upon* all Member States to promote education about nuclear technology and waste management through:

- a. Education initiatives for young nuclear scientists from Member States without proper institutions and capacity to provide the necessary knowledge, through programs like seminars, conferences, scholarships, scientific visits, and higher education study abroad opportunities;
- b. Creating an annual symposium similar to that of the one in 2015 by the International Atomic Energy Agency, focusing on knowledge sharing between Member States who lack the necessary data and proficiency in radioactive waste management;
- c. Calling for increased funds from the PUI, United Nations Development Program, the General Assembly Fifth Committee, Member States, and private investors towards an expansion of existing initiatives such as the Asian Network for Education in Nuclear Technology, Latin American Network for Education in Nuclear Technology, Regional Network for Education and Training in Nuclear Technology, and the School of Nuclear Energy Management;
- d. Seeking active support, aid, and participation in the Technical Cooperation Programme, International Atomic Energy Agency's main educational mechanism for delivering nuclear technology to Member States;
- e. Disseminating further education and awareness on the existence and proper disposal of orphaned nuclear sources including but not limited to abandoned radio medicine equipment and RTG sources;

15. *Expresses its support* for the creation of a funding initiative for Member States which have been affected by past negligent practices concerning nuclear waste that would:

- a. Request reports through an outside agency such as the National Oceanic and Atmospheric Administration that would help identify qualifying affected Member States;
- b. Uphold standards set forth in the *London Convention* (1975) in order to prevent any further ocean dumping practices;

- c. Accept voluntary donations from Member States, national NGOs, and regional organizations which would be effectively allocated by the International Atomic Energy Agency to affected Member States;
- 16. *Recommends* the creation of voluntary Joint Nuclear Waste Facilities for the purposes of developing cooperative projects between Member States that help provide safe and sufficient radioactive waste disposal facilities through:
 - a. Forming regional cooperative agreements between willing Member States that takes into account the planning of safe means of transportation for spent fuel to achieve closed-cycle strategies;
 - b. Encouraging written agreements between consenting Member States to allow temporary storage of nuclear waste and spent fuel in already existing facilities until an agreed upon date when the original State that has the facilities to store this waste safely long term;
 - c. Incentivizing consenting Member States to temporarily store the nuclear waste and/or spent fuel of countries who are working towards the creation of nuclear waste storage facilities by adjusting their NWECS threshold accordingly;
 - d. Having annual independent inspections that ensure that Member States who temporarily send the nuclear waste and/or spent fuel are consistently working towards creating nuclear waste storage facilities;
 - e. Demanding Member States to abide by safety standards for nuclear storage treatment and containment in outside Member States in order to not impose unsafe conditions on other Member States;
- 17. *Highlights* the necessity of strengthening the collaboration between Member States with operation of nuclear power plants in supporting and sharing with developing partners safe nuclear waste practices (closed fuel cycle) and innovative techniques for underground disposal facilities and waste clean-up projects via joint commissions between Member States through nuclear security cooperation between Member States, for example those with capable facilities and those with financial compensation and in need of waste management;
- 18. *Reviews* funding for pre-existing major programs of the Technical Cooperation Projects (TCP) such as:
 - a. Nuclear Power, Closed Fuel Cycle, and Nuclear Science for the disposal and management of their waste as well as research and development of new waste disposal technologies;
 - b. Nuclear Techniques for Development and Environmental Protection for the uses of strengthening and developing nuclear energy infrastructure;
 - c. Nuclear Safety and Security for the purposes of creating long-term storage of HLWs;
- 19. *Endorses* the expansion of the Net-Enabled Radioactive Waste Management Database (NEWMDB) that would:
 - a. Establish an information hub system with regional Member States that would provide technical training and site information for nuclear waste storage facilities to Member States;

- b. Be supervised by the International Atomic Energy Agency through biannual inspections utilizing:
 - i. Open-source data sharing pertaining to all research and development in the fields of nuclear waste recycling, waste storage facilities, and advanced nuclear reactors;
 - ii. A list of all Member States who have the capacity to house deep geological repositories;
20. *Encourages* the body to build upon the existing Technical Cooperation Programme to reaffirm a model for cooperative partnerships on an international scale between Member States with a view towards facilitating the spread of best practices as it relates to nuclear waste management from nuclear Member States to non-nuclear Member States, basing such a model on pillars including:
- a. Developing joint research and education programs for new technology for waste management, especially in developing states who may be interested in pursuing nuclear energy;
 - b. Encouraging Member States with significant pre-existing nuclear expertise to take on an educational role in mentoring Member States who lack nuclear expertise in waste management techniques.



Code: IAEA/1/3

Committee: The International Atomic Energy Agency

Topic: Nuclear Waste Management

The International Atomic Energy Agency,

Deeply concerned that the world has produced more than 260,000 tons of nuclear waste according to the new International Atomic Energy Agency (IAEA) *Status and Trends in Spent Fuel and Radioactive Waste Management* publication, causing a threat to neighboring Member States and developing countries,

Reaffirming the *2030 Agenda for Sustainable Development*, especially Sustainable Development Goal (SDG) 3 (good health and well-being), 4 (quality education), 7 (affordable and clean energy), 8 (decent work and economic growth), 9 (industry, innovation, and infrastructure), 11 (sustainable cities and communities), 12 (responsible consumption and production), 13 (climate action), and 16 (peace, justice, and strong institutions), with the strong intention of leaving no one behind,

Reconfirming the importance of the *Joint Convention on the Safety of Spent Fuel Management and the Safety of Radioactive Waste Management* (1997), which is an international legally binding instrument that addresses the safety of spent fuel and radioactive waste management,

Emphasizing the work done at the 5th United Nations (UN) Conference on the Least Developed Countries (LDC5) in 2023 aimed at assisting Least Developed Countries,

Concerned about the report of the Secretary-General 44/480 on “Effects on the Environment of the Dumping of Nuclear Wastes,”

Desiring cooperation with non-governmental organizations, which work with partnered United Nations delegations, to ensure further organization and funding internationally within Member States,

Approving of The Treaty of Pelindaba (1996) to control the dumping of nuclear waste to support climate-resilient services to decrease the carbon footprint, in support of the climate goals of the United Nations,

Seeking cooperation from larger Member States, to support the funding of education, licensing, and government regulation within LDCs,

Calling attention to the multiple incidents of nuclear waste disasters such as the Goiânia accident (1987), the Kyshtym Disaster (1957), the Waste Isolation Pilot Plant Collapse (2014) and Ciudad Juárez Cobalt-60 Contamination Incident (1984),

Frustrated with the multiple nuclear accidents such as Fukushima (2011), Chernobyl (1986), and Three Mile Island (1979), that endangers the natural ecological system and deeply affects the surrounding human population,

Noting the importance of international cooperation and assistance in sharing best practices and promoting capacity-building in nuclear waste management, by welcoming potential new hard and soft approaches to managing environmental safeguards, as well as prospective results of new nuclear plants in the 2030–2050 period,

Bearing in mind the NUCLEUS Information Resources which is the portal providing the scientific, technical, and application material, especially databases, training materials, and official publications,

Further recalling the need for IAEA to take into account the existing policies of regional organizations and the priority that they take in dictating certain policies for a select few Member States,

Having examined the need for linguistic diversity within UN initiatives and documents by translating to all Member States' official languages to accommodate the citizens of the nations who are deeply affected by nuclear waste,

Providing support for the improvement of nuclear safety in various countries by both establishing and promoting new informational, educational, and technological resources for Member States to utilize,

Further emphasizing the need for proper training within national strategies for the personnel who handle nuclear waste, transportation, and further technological measures,

Recognizing the importance of preserving shared ecosystems and environments as well as the need for negotiation platforms in managing nuclear waste facilities to Member States' neighboring borders,

Referring to the negotiations structure within the European Commission regarding risks such as cross-border contamination associated with nuclear disposal facilities near borders,

Convinced of the right of a Member State to prohibit illegal nuclear waste entering their borders,

Distressed by the lack of a common nuclear waste policy on the location of nuclear waste facilities related to a Member States' neighboring country,

Concerned with the increased efforts to create nuclear storage facilities within Member States who do not have high nuclear capabilities or nuclear waste,

Acknowledging the results of the European Commission (EC) study *Cross-border nuclear safety, liability and cooperation in the European Union* calling for an expansion of accountability,

Affirming that the IAEA created a Memorandum of Understanding on the Third Country Training Program that aims to train participants from developing IAEA Member States in areas such as health, radiation protection, industry, and environment,

Guided by different international programs based on education, including IAEA's 12 online learning courses on spent fuel and radioactive waste management, decommissioning, and environmental remediation, which consists of 50 modules and almost 100 lectures,

Recognizing the importance of data dissemination in providing an avenue for Member States to acquire the sustainable disposal of Nuclear High-Level Waste (HLW),

Noting with deep concern many countries are taking major steps to dispose of all types of nuclear and radioactive waste, with more than 80% of all solid radioactive waste volume now in disposal according to the IAEA's *Status and Trends in Spent Fuel and Radioactive Waste Management*,

Acknowledging the need for sharing informative research and knowledge among the LDCs that make up around 880 million people in the international community,

Noting with regret the lack of mentorship, support, and high costs associated with research performed by developing countries,

1. *Calls upon* further research from able Member States dedicated to crafting safer nuclear energy sources utilizing thorium, which would benefit Member States by the increased

efficiency due to the 50% energy increase compared to uranium, as it functions as a safer alternative due to it being harder to weaponize and is more plentiful in the earth's crust;

2. *Encourages* isolating radioactive waste in deep rock volume to ensure stable confinement by:
 - a. Encouraging the United Nations Committee of Experts on Global Geospatial Information Management (UNGIM) to conduct a geological survey on safe, secure, and distant locations for geological repositories for nuclear waste disposal;
 - b. Properly conducting geological tests of potential deep geological repository sites based on historic geological activity, to mitigate the risk of nuclear waste incidents;
3. *Further calls upon* non-governmental organizations (NGOs) and Member States to dedicate their resources, including funding, to training initiatives, organized regionally, revolving around radioactive waste of medical origin and undergo proper training on the use, disposal, and transportation of said equipment based on IAEA standards by:
 - a. Increasing detailed educational plans on orphaned radiological sources, the effect of radiation poisoning and exposure with first responders, transportation, and waste safety;
 - b. Encouraging IAEA Member States to adhere to the IAEA Regulations for the Safe Transport of Radioactive Material;
 - c. Further requests that willing Member States, which benefit from the Peaceful Uses Initiative (PUI) as well as any other extrabudgetary funds, increase their support of these funds;
4. *Solemnly affirms* that Member States take full responsibility whenever possible for the nuclear waste within their nations' borders by:
 - a. Advising that IAEA Member States notify neighboring states if nuclear waste is disposed of or transited near linked environments to avoid border tension and requests will be made available by the IAEA to generate a moderated negotiation request from the IAEA to the affected Member States;
 - b. Recommending regional organizations to reference structures analyzed in European Commission study *Cross-border nuclear safety, liability and cooperation in the European Union*;
 - c. Encouraging a strong method of communication between Member States alongside an annual report to ensure that transnational nuclear waste depositories are not being abused;
5. *Recommends* the improved education of all Member States and specifically, LDCs in nuclear waste management through:
 - a. Utilizing existing Technical Cooperation Programme (TCs) in Africa, Asia and the Pacific, Europe, Latin America, and the Caribbean;

- b. Encouraging more signatories to the African Regional Cooperative Agreement for Research, Development, and Training related to Nuclear Science and Technology (AFRA);
 - c. Proposing to create frameworks from the example of AFRA focused primarily on the research of nuclear waste storage;
 - d. Implementing and further promoting regional partnerships to form stronger frameworks targeted at sharing information and resources between states in order to allow current and future industry professionals to learn about how other Member States research, implement, and adapt nuclear technologies;
6. *Calls for* greater collaboration with Member States and the rest of the UN system to develop resources to underscore the importance of working to promote resource distribution to rural communities and other disadvantaged groups to ensure that all citizens have equal access to information related to nuclear waste, safety, and disposal by:
- a. Recommending the investment of programs with an essential framework for implementing the new knowledge found in the detailed plan;
 - b. Reiterating its call for cooperation of Member States as part of organizations such as the Association of Southeast Asian Nations (ASEAN), African Union (AU), European Union (EU), and Community of Latin American and Caribbean States (CELAC);
7. *Expresses its hope* that the United Nations General Assembly will establish World Nuclear Energy Education Day on July 29th, in honor of the anniversary of the founding of the IAEA, in order to further promote understanding of nuclear power and waste disposal by:
- a. Collaborating between IAEA resources, national regulatory authorities, Member States, and Non-Government Organizations aimed at promoting education regarding local, regional, and international nuclear efforts;
 - b. Encouraging voluntary contributions to programming within each Member State's borders to promote activities related to the international day of observance;
 - c. Inviting non-government groups to host related activities in observance of World Nuclear Energy Awareness Day in collaboration with local, regional, and international efforts;
8. *Notes with interest* an expansion on the 2021 Japanese Technical Cooperation Project (JTCP) to promote collaboration by:
- a. Noting with satisfaction that Japan will share its experiences and lessons learned from the accident with the international community and contribute to the improvement of international nuclear safety by disseminating information internationally on the situation of the Fukushima Daiichi Nuclear Power Plant accident and encourages international knowledge sharing;
 - b. Calling for voluntary funding from Member States and interested non-government organizations (NGOs) such as the Oak Foundation;
9. *Highly encourages* a panel of experts to be convened to review the effectiveness of the IAEA

Whistleblower system to ensure that the proper protections, resources, follow up, and attention is being given to reported instances of nuclear waste abuse or mishandling as well as ways to further promote the system to those who come into contact with nuclear materials on a regular basis;

10. *Admitting* that the current models are not sufficient to guarantee the safety of the storage of the waste, there is a subsequent need to reform the way we are stocking nuclear wastes by:
 - a. Creating an advisory board in order to help to think about how we can improve the safety standards. It would be composed of scientists and experts on the matter;
 - b. Raising funds to encourage the research for new technologies;
 - c. Proposing the share of new technologies to stock nuclear wastes between nations;
11. *Firmly emphasizes* the importance of the IAEA's annual Waste Management Conference in which experts discuss topics of radioactive and hazardous waste characterization treatment storage, and environmental remediation, and recommends further discussion of additional topics such as, but are not limited to, economics and medicine that:
 - a. Carefully evaluate the capacity of countries that are seeking to build nuclear storage facilities, and ensure that they have adequate disposal systems according to the IAEA's Safety Standards, resources and expertise to manage these facilities safely;
 - b. Work together to monitor and regulate the use of nuclear energy and the management of nuclear waste, in order to minimize the risks associated with these activities;
 - c. Expresses its hope that more developed Member States unilaterally provide research, resources, and advice to less developed states during the conferences with the goal of allowing all Member States to take advantage of new technologies;
 - d. Encourages Member States to technology information sharing and have discussions with other countries who do not have the geologic capacity for deep repositories;
12. *Further recommends* bolstering data dissemination initiatives by the Nuclear Data Services through cooperating with the International Union of Pure and Applied Chemistry (IUPAC), PUI, and National Energy Agency (NEA) in providing adequate nuclear information with regard to procedures in effectively handling HLW as well as opening dialogues for further enhancement of standards by:
 - a. Integrating voluntary participation among Member States to provide avenues for choice regarding the sharing of their method of safely handling High-Level Waste;
 - b. Including incentives for participating Member States and providing the opportunity to acquire different handling procedures of High-Level Waste as well as sustainable pathways by:
 - i. Collaborating with the International Renewable Energy Agency (IRENA) in articulating the discussion of nuclear waste procedures;

- ii. Inviting scientists, innovators, and nuclear experts from the World Energy Council (WEC) to aid in guiding Member States concerning the nuclear waste management processes;
 - c. Creating a multinational database to further communicate information and research on nuclear waste management to LDCs and all current nuclear states;
- 13. *Invites* all Member States to consider signing the *Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management* to make sure a framework is in place for all Member States safely to handle nuclear waste;
- 14. *Encourages* Member States to expand existing policy surrounding nuclear waste management, which will expand the abilities of Integrated Review Service for Radioactive Waste and Spent Fuel Management, Decommissioning and Remediation (ARTEMIS) to make inspections reporters available to Member States and nuclear energy research institutions;
- 15. *Proposes* that the PUI allocate funding to Member States to specifically research permanent high-level waste storage facilities and methods of storage besides deep geological repositories and boreholes;
- 16. *Endorses* a detailed plan for the support of developing nations in a mentorship program through NUCLEUS Information Resources, organized by the IAEA Secretariat, encompassing the steps of Research, Education, Vision, Foundation, Implementation, and Stability that accomplished the goal of the conference to make solutions more viable for all participating Member States;
- 17. *Suggests* implementing public education, new technologies, tools, and measurements of safeguards for the environment and recommends engaging the public in discussions and decision-making processes related to nuclear waste management as well as fostering awareness about the risks and challenges associated with nuclear waste, as well as the measures in place for its safe management by:
 - a. Implementing 3D visual illustrations to educate young adults on the environmental side effects of nuclear waste by providing online visuals of storage facilities, environmental impacts, and their progression over time, and historical events;
 - a. Collaborating with environmental non-profit organizations such as The World Energy Council (WEC), Woman in Nuclear (WIN), and International Energy Agency (IEA) to advance education on the devastating effects of nuclear waste;
 - b. Increasing communication with nuclear reactor operators and educational institutions to work towards SDG 4, SDG 13, and SDG 17 (partnerships for the goals);
 - c. Prioritizing the voluntary process of managing nuclear power and energy distribution thoughtfully and effectively with new technology, including cameras and Kodak film, has been installed to track the transit of radioactive material;
 - d. Applying educational agreements and features regarding the design of new civil nuclear plants, this can enhance the handling of nuclear material;
- 18. *Further recommends* the acceleration and enlargement of atomic energy research for long-term disposal practices in developing nations to ensure peace, health, and prosperity by

prioritizing the research of long-term depository sites and recycling mechanisms to reduce the amount of waste created;

19. *Underscores* the importance of combating misinformation, both written and online, to promote the spread of verified, scientifically-backed information to all citizens and by forming partnerships with NGOs, transnational advocacy networks (TANs), and National Regulatory Authorities (NRAs) when possible by:
 - a. Adding an educational panel such as electronic learning courses and an international school on nuclear and radiological leadership for safety on spent fuel and radioactive waste management, decommissioning, and environmental remediation that meets annually;
 - b. Having people affected by nuclear waste educate Member States about the repercussions they have faced by giving their testimonies;
 - c. Providing educational modules for medical students on nuclear medical facility waste;
 - d. Aiding radiation safety officers with better handling of radioactive waste;
 - e. Sourcing funding by any voluntary Member State within its private and public sector, such as the Ford Foundation and the Global Partnership for Education.