**FORUM:** United Nations Commission on Science and Technology for Development

**QUESTION OF:** Promoting Safe and Sustainable Nuclear Technology for Energy and Medical Applications in Developing Countries

**MAIN SUBMITTER:** United States of America

**CO-SUBMITTERS:** Ukraine, Turkey

UNCSTD,

*Affirming* its participation in negotiations and initiatives aimed at reducing the threat of the misuse of nuclear technology,

*Calls upon* all states to promote safe and sustainable nuclear technology for energy and medical applications in developing countries,

*Aware* *of* the projected increase in global energy demand by 50% to 300% over the next five decades, particularly driven by developing countries,

*Also Recognizing* that fossil fuels currently supply about 90% of the world's energy but adversely affect the environment through greenhouse gas emissions and pollutants,

*Noting* with concern that developing countries face significant challenges in meeting their energy needs while transitioning to clean, low-carbon energy systems,

*Acknowledging* the potential of nuclear technology as a sustainable and stable source of energy that emits far fewer greenhouse gasses compared to fossil fuels,

*Emphasizing* the importance of nuclear technology in medical applications, such as diagnostics and treatment, which can significantly improve healthcare outcomes in developing countries,

*Recalling* the role of the International Atomic Energy Agency (IAEA) in promoting the peaceful use of nuclear technology and ensuring safety standards,

*Also Aware* of the technical challenges, safety concerns, and high initial costs associated with the implementation of nuclear technology in developing countries,

*Conscious* of past nuclear accidents, such as the Fukushima Daiichi disaster, which highlight the importance of strict safety measures and regulatory frameworks,

*Further Recognizing* the need for international cooperation, technology transfer, and capacity building to enable developing countries to safely harness nuclear technology,

1. Urges United Nations member states to support the development of nuclear energy technology in Less Economically Developed Countries (LEDCs) through measures including, but not limited to:
   1. Offering financial incentives and compensation to member states that contribute to nuclear technology initiatives,
   2. Encouraging partnerships with NGOs (non-governmental organizations) and NPOs (non-profit organizations) to organize fundraising campaigns aimed at assisting LEDCs in establishing sustainable nuclear energy infrastructure,
   3. Establishing international funds or grant programs to facilitate access to safe and modern nuclear technology for clean energy production in LEDCs;
2. Advises member states, international organizations, and relevant stakeholders to support developing countries in building the necessary infrastructure and human capacity for the safe and sustainable implementation of nuclear technology through measures, but not limited to:
   1. Providing comprehensive technical assistance and capacity-building programs, including:
      1. Establishing training centers and facilities for education in nuclear science and engineering,
      2. Offering scholarships, fellowships, and internships for students and professionals from developing countries,
      3. Organizing workshops, seminars, and conferences to facilitate the exchange of knowledge and best practices,
   2. Assisting in the development and strengthening of national regulatory frameworks and institutions by:
      1. Advising on the establishment and operation of independent nuclear regulatory authorities,
      2. Providing legal and technical expertise to draft or update nuclear legislation in line with international standards,
      3. Supporting the implementation of regulatory processes for licensing, inspection, and enforcement,
   3. Facilitating access to necessary technologies and equipment by:
      1. Providing grants or concessional financing for the acquisition of nuclear technology and equipment,
      2. Assisting in the localization of technology through technology transfer agreements,
      3. Encouraging partnerships with suppliers that include provisions for local manufacturing and assembly;
3. Encourages member states to establish and financially support comprehensive training programs for scientists and engineers, particularly in developing countries, to enhance their expertise in nuclear energy, including but not limited to:
   1. Encouraging nuclear power plants in both developing and developed countries to develop site-specific training materials and educational programs by:
      1. Implementing mandatory training programs within nuclear facilities to ensure all workers are thoroughly educated on nuclear safety protocols, operational procedures, and advancements in nuclear technology,
      2. Establishing visual aids, diagrams, and informational signage throughout nuclear facilities to support new and current workers in understanding and navigating complex systems effectively,
      3. Creating mentorship programs within nuclear facilities where experienced staff members can provide guidance and support to new employees,
      4. Partnering with international organizations to provide additional resources and training materials specific to the technology and operational practices of each facility,
   2. Integrating foundational courses on nuclear energy into existing science curricula at educational institutions, focusing on key aspects including but not limited to:
      1. Basic principles of nuclear science and technology, covering topics such as nuclear reactions, radiation safety, and waste management,
      2. Practical applications of nuclear energy in the medical field to demonstrate its value beyond power generation,
      3. Environmental and safety considerations associated with nuclear energy, to foster a holistic understanding of nuclear technology and encourage responsible use,
      4. Establishing partnerships between educational institutions and nuclear facilities to allow students practical learning opportunities,
   3. Promoting regional and international collaborations by:
      1. Encouraging knowledge exchange programs between nuclear scientists and engineers in developing and developed countries to share best practices and technological advancements,
      2. Creating scholarships or funding for scientists and engineers from developing countries to attend international conferences, workshops, and training sessions focused on nuclear energy and safety,
      3. Establishing a worldwide platform where nuclear experts can share research, training materials, and educational resources accessible to developing countries;
4. Further Encouraging member states and relevant stakeholders to prioritize public awareness and community engagement initiatives for nuclear energy projects in Less Economically Developed Countries (LEDCs) by:
   1. Launching public awareness campaigns and community consultations to educate communities on nuclear energy, including but not limited to:
      1. Highlighting the benefits of nuclear energy as a sustainable, low-carbon energy source, explaining environmental contributions and safety protocols, and addressing common misconceptions,
      2. Conducting accessible community forums in areas surrounding proposed nuclear sites, providing clear information on project goals and safety measures, and addressing concerns directly with residents,
      3. Utilizing a variety of media platforms, including television, radio, social media, and local newspapers, to reach and engage broader audiences,
   2. Collaborating with local leaders and influencers to build trust and promote understanding within communities, including but not limited to:
      1. Engaging respected community figures, such as religious and civic leaders, to relay accurate information about nuclear energy in ways that resonate with local cultural values and specific concerns,
      2. Developing culturally sensitive messaging in partnership with local leaders, ensuring it addresses local values and addresses specific community concerns,
      3. Offering resources and training for these local influencers to deepen their understanding of nuclear energy, enabling them to better communicate its benefits and safety,
   3. Developing educational resources and establishing feedback mechanisms to increase public literacy and community input, including but not limited to:
      1. Integrating basic nuclear science concepts into school curricula, using accessible materials to make the information broadly understandable,
      2. Partnering with educational institutions and media to produce documentaries, news segments, and interviews that educate the public on nuclear energy,
      3. Setting up dedicated helplines or online platforms for residents to submit questions, and receive timely responses that resolve concerns;
5. Calls for more engagement and negotiations between nations on nuclear energy to improve nuclear technology in ways, but not limited to:
   1. Increasing the frequency of conferences between nations, in ways, but not limited to:
      1. Tracking progress on nuclear technology to provide member states with more recent information and data,
      2. Making amendments that acquires unanimous agreement on changes made to nuclear power plants, technology, and energy,
   2. Promoting the communication between developing and developed countries to discuss potential improvements to nuclear technology;
6. Asking all countries using nuclear energy to assure the safety of citizens when producing nuclear energy through means such as but not limited to:
   1. Training citizens on how to protect themselves when nuclear energy incidents happen by:
      1. Conducting regular social media campaigns across platforms such as YouTube and X to share information about nuclear energy and safety precautions,
      2. Organizing evacuation drills and response simulations to prepare citizens for potential emergencies,
      3. Offering free educational activities and workshops to foster understanding of nuclear energy and its associated risks, funded by NGOs,
   2. Raising a fund to make up the damage caused when such incidents happen, through means such as but not limited to:
      1. Creating accessible online platforms to facilitate public donations toward nuclear disaster relief funds,
      2. Inviting financial support from the United Nations, relevant NGOs, and More Economically Developed Countries to bolster resources for nuclear safety and aid programs in LEDCs;
7. Recommends the establishment of international safety measures and regulatory oversight for nuclear power plants to ensure a safe working environment, including but not limited to:
   1. Establishing international laws and regulations governing nuclear power plant safety by:
      1. Defining minimum safety standards to protect plant workers, the environment, and surrounding communities,
      2. Outlining specific environmental protections that nuclear facilities must observe,
   2. Implementing a system of inspections and audits by independent regulatory bodies to monitor adherence to safety protocol, enforcing penalties for non-compliance, including but not limited to:
      1. Imposing fines for major safety violations,
      2. Mandating corrective actions within set timeframes,
      3. Shutting down facilities posing serious safety risks,
      4. Sending a group of safety experts to check the safety arrangements frequently,
   3. Promoting accountability by encouraging transparency and public reporting on nuclear power plant safety by:
      1. Requiring nuclear facilities to publish annual safety reports that detail compliance with safety standards and incident management,
      2. Creating public platforms for community engagement on nuclear safety issues, including forums and access to safety reports;
8. Emphasizes international cooperation by facilitating knowledge-sharing and collaboration, including:
   1. Organizing regular summits and workshops among nuclear safety experts from member states to discuss innovations and best practices in nuclear safety,
   2. Partnering with international organizations such as the International Atomic Energy Agency (IAEA) and the World Health Organization (WHO) for regulatory guidance and health impact assessments.