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Documentation of the Work of the International Atomic Energy Agency (IAEA)

Conference B

International Atomic Energy Agency (IAEA)

Committee Staff

Director	Anke Schwarzkopf
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Chair	Nada Abdalla
Rapporteur	Katherine Malvé Brasa
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Agenda

I. Improving Science and Technology Activities through Technical Cooperation

II. Application of IAEA Safeguards in the Middle East

III. Nuclear Waste Management

Resolutions adopted by the Committee

Code	Topic	Vote
IAEA/1/1	Improving Science and Technology Activities through Technical Cooperation	Adopted without a vote
IAEA/1/2	Improving Science and Technology Activities through Technical Cooperation	113 votes in favor, 2 votes against, 2 abstentions
IAEA/1/3	Improving Science and Technology Activities through Technical Cooperation	75 votes in favor, 20 votes against, 22 abstentions
IAEA/1/4	Improving Science and Technology Activities through Technical Cooperation	Adopted without a vote
IAEA/1/5	Improving Science and Technology Activities through Technical Cooperation	Adopted without a vote
IAEA/1/6	Improving Science and Technology Activities through Technical Cooperation	98 votes in favor, 6 votes against, 13 abstentions
IAEA/1/7	Improving Science and Technology Activities through Technical Cooperation	104 votes in favor, no votes against, 13 abstentions
IAEA/1/8	Improving Science and Technology Activities through Technical Cooperation	106 votes in favor, 4 votes against, 7 abstentions
IAEA/1/9	Improving Science and Technology Activities through Technical Cooperation	96 votes in favor, 4 votes against, 17 abstentions
IAEA/1/10	Improving Science and Technology Activities through Technical Cooperation	80 votes in favor, 8 votes against, 29 abstentions

Summary Report

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

I. Application of IAEA Safeguards in the Middle East
II. Improving Science and Technology through Technical Cooperation
III. Nuclear Waste Management

The session was attended by representatives of 128 Member States. On Sunday, the committee adopted the agenda of II, I, III, and it began discussion on the topic of "Improving Science and Technology through Technical Cooperation."

During the following two sessions, the body discussed over 10 different thematic areas related to the topic on the agenda. These themes encompassed nuclear education, agriculture, the environment, sustainable development, healthcare, water, and nuclear safety. Early on, the committee formulated several ideas for action, which included initiatives to better tailor technical assistance to country-specific needs, form relationships with educational organizations to enhance training and development, and expand the technical cooperation fund through partnerships with new donors and funders. By Monday evening, the Dais had received a total of 18 proposals covering the previously mentioned thematic areas.

On Tuesday afternoon, the body worked diligently and tirelessly to merge ideas of similar substance. The delegates debated how to best utilize the existing mechanisms and resources within the IAEA, while deliberating how to pool and coordinate resources outside the IAEA that can strengthen technical cooperation, as it relates to science and technology. By Tuesday evening, the body had worked to merge almost half of their content and created 10 strong working papers.

On Wednesday, 10 draft resolutions had been approved by the Dais, 1 of which received a friendly amendment. The committee adopted 10 resolutions following voting procedure, 3 of which received unanimous support from the body. The resolutions represented a wide range of issues, including knowledge transfer of best practices related to nuclear technology, technical cooperation for agricultural practices, regional cooperation, financing technical cooperation, and strengthening the capacity of developing countries. After adopting the 10 resolutions, the body briefly addressed the second topic, "Applying IAEA Safeguards in the Middle East," within the committee agenda order.

Code: IAEA/1/1
Committee: International Atomic Energy Agency
Topic: Improving Science and Technology Activities through Technical Cooperation

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The International Atomic Energy Agency,

Acknowledging the inalienable right to utilize the peaceful uses of nuclear technology, and the need for developed countries and the International Atomic Energy Agency (IAEA) to promote Member States' access to peaceful uses of nuclear technology, as outlined in article IV of the *Treaty on the Non-Proliferation of Nuclear Weapons*,

Recalling that technical cooperation (TC) is a core principle of the IAEA as outlined in the *Statute of the International Atomic Energy Agency* (Statute of the IAEA),

Welcoming the United Nations Educational, Scientific and Cultural Organization (UNESCO) to work to further education on the peaceful applications of nuclear technologies,

Recognizing that through negotiations and collaborations between Member States, solutions to the topic at hand can be found,

Acknowledging the unique needs of post-conflict states, and that access to the peaceful uses of nuclear technology may provide them the resources to develop sustainably following conflict,

Guided by the principles set by the *Nuclear Security Summit* and the fundamental role that the United Nations Office on Drugs and Crime (UNODC) plays in regards to nuclear security,

Bearing in mind the Nuclear Suppliers Group (NSG) *Guidelines for nuclear transfers* and *Guidelines for transfers of nuclear-related dual-use equipment, materials, software, and related technology*, which compromise the NSG's guidelines for the transfer of nuclear-technology related equipment and technologies,

Guided by the Agency's successful implementation of both the Technical Cooperation Programme (TCP) and the Peaceful Uses Initiative (PUI),

Observing that all IAEA Member States are eligible to receive the IAEA's technical assistance, guidance, and cooperation,

Recognizing the need for peaceful uses of nuclear technology to be more accessible to all Member States, with emphasis on least developed countries (LDCs),

Acknowledging Sustainable Development Goal (SDG) No. 16 pertaining to the promotion of peace and security and that the achievement of the SDGs particularly in post-conflict states can be supported by access to peaceful uses of nuclear technology,

Further aware of the significant number of TC programs that remain unfunded, as well as a growing budgetary demand for TC programs, as evidenced by the lack of funds available in the *Agency's Programme and Budget 2016-2017*,

Deeply concerned by the lack of incentives to encourage Member States to increase funding or relevant assistance for TC,

Aware that the distribution of funds may be re-examined to improve the efficiency of TC projects and promote projects that may have the largest impact,

Observing the statutes and guidelines set by the *Revised Guiding Principles and General Operating Rules to Govern the Provision of Technical Assistance by the Agency*, prioritizing the funding and assistance to nations in need,

1. *Recognizes* the necessity of technical cooperation through South-South, North-South, and Triangular Cooperation and encourages the provision of equipment, technology, and training in order to support the inalienable right to the peaceful use of nuclear technology as a means to promote sustainable development;

2. *Calls upon* the IAEA Board of Governors to establish a minimum level of technical assistance directed towards Member States seeking to receive such assistance based on criteria, such as:

    a. Member States being in good standing;

    b. The need of basic infrastructure and training for nuclear professionals, including:

        i. The contingent on Board of Governors budgetary constraints;
        ii. The determination of assistance on an annual basis by the Board of Governors;

3. *Encourages* Member States to regionally share best practices in regards to applications of nuclear science in order to more effectively allocate resources, through means such as the *African Regional Cooperative Agreement for Research, Development and Training Related to Nuclear Science and Technology*;

4. *Calls upon* Member States to collaborate through the provision of technical and logistical support to the IAEA TCP to ensure that nations in need are receiving fundamental assistance;

5. *Endorses* the consideration of developing countries' national development plans, to address the unique needs of developing countries, when providing technical, logistical, and financial support for the safe and secure use of peaceful nuclear technologies;

6. *Recommends* the IAEA Board of Directors enhance the provision of the TCP to provide for the needs of regions in conflict through:

    a. Using medical expertise to assess nuclear incidents in conflict and post conflict zones;

    b. Supplying sheltered medical assistance through a reactionary team that will work with local medical authorities;

    c. Offering technical expertise to train local agents in safeguarding and restoring nuclear facilities during and post conflict;

7. *Welcomes* the IAEA TCP to partner with international and regional organizations, Member States, civil society, and corporations to specifically to provide financial, technical, and logistical support to developing countries to ensure their capacity to comply with the provisions outlined in the IAEA *Safety Standards Series* according to the unique needs of individual Member States in line with the *Revised Guiding Principles and General Operating Rules to Govern the Provision of Technical Assistance by the Agency*;

8. *Suggests* that the IAEA continue to collaborate with UNESCO to increase financial and technical support to international and regional workshops, trainings, and including through increasing the capacity of the Abdus Salam International Centre for Theoretical Physics to promote technical understandings of nuclear technologies for those working in the peaceful nuclear industry, especially in the developing world;

9. *Further encourages* the strengthening of relationships between business, political institutions, universities, and Member States with the express purpose of promoting scientific innovation through projects supported by the public scientific and technological institutes in hopes of creating a market for the applications of nuclear technologies in the developing world;

10. *Invites* the IAEA in consultation with the UNODC to partner for the promotion and distribution of radioactive detection technologies and training of customs officials to detect technologies that may be used for non-peaceful purposes at ports, borders, and within Member States to address:

    a. The prevention, detection, and response to terrorist or other malicious acts such as illegal possession, use, transfer, and trafficking;

    b. To protect nuclear installations and transport against sabotage;

11. *Calls upon* the NSG, as well as other multilateral export controls regimes and the IAEA, to further incorporate the needs of developing Member States, including through:

    a. Aspiring to including them within their membership in accordance with applicable membership requirements;

    b. Providing additional information regarding states' obligations relating to export controls to address disparities in access to peaceful uses of nuclear technology, with special emphasis on dual-use technologies;

12. *Recognizes* the importance of extra-budgetary assistance through bilateral nuclear, scientific and technical programs to promote peaceful uses of nuclear technology;

13. *Invites* all willing and able Member States to contribute funds on a voluntary basis through government cost-sharing mechanisms to the IAEA Technical Cooperation Fund, while recognizing that government cost-sharing is a sovereign decision;

14. *Encourages* the creation of a needs-based system to be established for the provision of technical assistance through country program frameworks by the IAEA TCP in consultation with, Member States, civil society, and corporations, with consideration for energy, health, food, water and infrastructure with special consideration for:

    a. Conflict and post-conflict states;

    b. Small island developing states;

    c. LDCs;

    d. Fragile states;

15. *Further asks* the IAEA Office of Internal Oversight Services establish a digital platform for the real-time dissemination of information relating to TC projects to reevaluate strategies and make adjustments to developments within ongoing projects.

Code: IAEA/1/2
Committee: International Atomic Energy Agency
Topic: Improving Science and Technology Activities through Technical Cooperation

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The International Atomic Energy Agency,

Referencing the *ASEAN Resolution on Environment and Development* which states that Member States shall work collectively towards the improvement of environmental quality, harmonization of standards, and jointly promote the application, transfer and development of appropriate environmental technologies,

Recognizing the importance of the International Atomic Energy Agency (IAEA) Learning Platform which works towards assisting Member States implement framework about emergency preparedness and response to nuclear disaster,

Reaffirming Sustainable Development Goal 7 to ensure access to affordable and sustainable modern energy for all,

Understanding the danger of the brain drain, as stated in the Economic and Social Council Resolution 2009/8, that results from students leaving their countries for educational opportunities abroad and not returning after completion,

Keeping in mind the danger of the production of nuclear energy, also visible in past accidents, such as Chernobyl and Fukushima Daiichi,

Recalling the benefits of the transfer of technical knowledge to Least Developed Countries (LDCs) and the Middle East region as stated in resolution General Conference (GC) Resolution (59)/11,

Bearing in mind articles 3.3 and 3.4 of the IAEA Statute, which advocates for the exchange of scientific and technical information as well as encouraging the training of scientists and experts in the field of peaceful uses of atomic energy,

Emphasizing IAEA GC resolution (59)/12, which acknowledges the multiple uses of research reactors as valuable tools for education and training and are essential for Member States that are considering the introduction of nuclear energy,

1. *Encourages* all IAEA Member States to work together to make sure that all countries have access to these peaceful uses as well as proper training as it is of utmost importance to all Member States and will work towards the accomplishment of our Sustainable Development Goals;

2. *Suggests* the IAEA to expand the Logical Framework Approach (LFA) and make it more accessible to all Member States so they can adopt it and share expertise, research and criteria about their accomplishments or projects in the field of nuclear energy technologies;

3. *Recommends* the establishment of the Peaceful Uses for Nuclear Technology Fellowship Program, with the purpose of being conducted in host Member States on a voluntary basis in which candidates would be selected by participating states to attend training in host states, and which will:

    a. Be available to students and professionals in Member States who are pursuing nuclear technologies for peaceful purposes and activities in the areas of health and energy;

    b. Expand funding in-part through the Technical Cooperation Fund (TCF) to provide young professionals opportunities to study fields of nuclear technology in public-private partnerships with research facilities and universities in capable member states;

c. Invite Member States to note the importance of female access to technological education and participation in the fellowship;

d. Include a follow-up opportunity after their graduation from the Peaceful Use for Nuclear Technology Fellowship Program that will encompass:

i. The opportunity to participate in the IAEA technical cooperation projects regarding nuclear technology development;
ii. PhD graduates to receive low interest loans in order to share technological knowledge and applications in medicine and agriculture to their home countries;

4. *Encourages* close work with the World Nuclear University by:

a. Establishing a multilateral exchange initiative known as the Co-Operation for Educational Exchange (COFEE) which provides students, academics, and professionals diverse innovation, research, and training through partnership opportunities established within Member States universities with the purpose of pursuing the peaceful uses of nuclear energy;

b. Hosting two-week workshops concerning the implementation of technical cooperation in the respective Member States for:

i. Governmental officials of each department related to nuclear activity;
ii. Young professionals of the private sector, who will likely take a lead role in academia and aim to lead in research and educate in the field of nuclear activity;
iii. The creation of a separate and secure intergovernmental channel within the CLP4NET Platform which is monitored by the IAEA Board of Governors to prevent the misuse of sensitive nuclear information;

c. Utilizing the World Nuclear University as a collection point that will refine and edit as well as analyze and assess data for:

i. The advocating of academic and scientific institutions in the field of nuclear activity to submit data to the World Nuclear University;
ii. The World Nuclear University to select and upload information to CLP4NET Platform;

d. Creating the Youth for Development (Y4D) academic competition and funded by the TCF with the purpose of hosting college students to debate and discuss innovative programs in areas such as water desalinization, food security and sustainable energy development, and later on be submitted to the Agency to evaluate its implementation in Member States who do not have nuclear infrastructural design and which will consist of:

i. Fulfilling a proficiency to determine their eligibility to the program and in which area;
ii. Three days of oral debate and examination in front of a panel of experts in the field who will determine who passes to the next level of discussion and;
iii. Awards given to recognize the students who excelled in the program;

5. *Further resolves* the dilemma of the brain drain through voluntary sponsorship of Internet Reactor Programmes (IRP) for host states to establish a software package that is based on a country's capability and needs while capturing reactor displays and signals to transmit over the internet to remote sites in demonstrations or real time by:

a. Allowing the IRP to consider young professionals who do not have the opportunity to travel to research reactors to participate in online or electronic programs without leaving their country of origin;

b. Facilitating the technological cooperation fund and the World Nuclear University;

6. *Welcomes* the assistance of developed Member States to provide essential aid by contributing equipment, facilities, and training professionals to the World Nuclear University, in order to further nuclear training and education in developing Member States;

7. *Highlights* the importance of the World Nuclear University in facilitating the online exchange information to provide a global platform for future leaders in nuclear energy, radioisotope production and applications of ionizing radiation in medicine and industry;

8. *Invites* support to and for the fund on Project D2.1 to support IRP by the peaceful uses Initiative to help expanded trainee programs at research reactor sides and emphasizes the need for TC in Neutron Activation Analysis for further educational cooperation on the 120 reactors capable of the detecting elements at levels of parts per billion to assist with agricultural studies at a cost-effective rate;

9. *Further recommends* developing nations to submit reports every five years that outlines how the practices and technologies that they have learned in the previous years through the program have been applied in their countries and how they hope to continue to improve;

10. *Emphasizes* working in conjunction with Distance Assistance Training (DATOL) to help provide online training to not only young professionals working in research reactors, but also in the nuclear medicine and science fields for further development in food and agriculture, pest and cancer control, and other areas of human health and development;

11. *Strongly encourages* the DATOL programme be available in all UN languages to provide accessibility to all Member States.

Code: IAEA/1/3
Committee: International Atomic Energy Agency
Topic: Improving Science and Technology Activities through Technical Cooperation

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The International Atomic Energy Agency,

Guided by Sustainable Development Goal 7, ensuring access to affordable, reliable, sustainable, and modern energy for all,

Considering the sentiment expressed in article IV of the Non-Proliferation Treaty of Nuclear Weapons, authorizing and encouraging all Member States to develop nuclear technology for peaceful uses,

Recognizing that peaceful uses and technical cooperation can improve the lives of impoverished populations and aide in global security,

Believing that the 2017 budget for the Technical Cooperation Fund was 89 million USD, and total donations to the Peaceful Uses Initiative since its inception in 2010 totaled 105 million USD, and that expanded funding could considerably accelerate the growth of nuclear technologies,

Conscious of the important role of helping states break the debt cycle by establishing standards for fair relations between Member States and creditors,

Reaffirming the importance of establishing standards for financing the development of developing states,

Inviting the IAEA to continue its designated role of overseeing the fixing of interest rates and loan criterion as stated in Economic and Social Council C.2/42, which authorizes the IAEA to act as a mediator between corporations and Member States,

1. *Authorizes* the Technical Cooperation Fund (TCF) to provide credit extensions determined by the Board of Governors of the International Atomic Energy Agency to Member States, Non-governmental Organizations (NGO), regional lenders, and private corporations, with the intent of engaging in nuclear technologies, development, and research projects prioritizing Least Developed Countries;

2. *Calls for* a working group to meet one year following the passage of this resolution, to determine initial capitalization from 2017 Technical Cooperation Fund and Peaceful Uses Initiative contributions, where:

    a. The working group shall be responsible for assessing amount of capital needed in order to begin the initial implementation of the programs established under clause 1;

    b. The working group shall issue a report to the IAEA Board of Governors in order to inform the body of the amount of capital required to begin the initial implementation of the programs established under clause 1;

3. *Instructs* the TCF to apply for an endowment guarantee from the World Bank Multilateral Investment Guarantee Agency for all programs initiated as outlined in clause 1;

4. *Proclaims* that the TCF shall be authorized to extend credit and administer all technical cooperation operations according to the following principles:

    a. Future funding solutions of the TCF and budgetary concerns;

b. Need for funds of the requesting Member State or NGO, or the need of Member State for which benefit the funds will be utilized, as well as projected estimates of the effectiveness of the requested funds;

c. Compliance with IAEA safeguards and business practice standards established under clause 7;

d. Progress undertaken by the project towards the implementation of the Sustainable Development Goals;

5. *Encourages* Member States and private actors, such as corporations, NGOs, and investors, to make voluntary contributions to TCF through the Peaceful Uses Initiative to enlarge overall donations;

6. *Further Recommends* the establishment of a permanent working group to assess the operations, general performance of the TCF, and effect of investment, to which aim the working group shall:

a. Establish standards of interaction between the TCF, investors, and Member States, in order to maintain fairness to LDCs when dealing with private investors;

b. Be authorized to delay the credit reimbursement of Member States TCF when payment would irreparably damage the economy of said Member States;

c. Assess and establish rating standards for private developers of nuclear technology, in order to better protect LDCs from potentially predatory investors;

d. Present to the Board of Governors of the IAEA, and shall publish in a publicly acceptable forum, both online and in print, a report of the interactions between Member States and private developers of nuclear technology, assessing the compliance of both parties to the standards established under clause 6a;

7. *Affirms* that Member States receiving credit extension-aid through the TCF may only import nuclear material from Member States adherent to the standards of the Nuclear Suppliers Group, and that all said imports will be monitored by the International Atomic Energy Agency Safeguards Division, in order to ensure that imports of nuclear material are not used to produce nuclear weapons or aide in the development of weapons programs;

8. *Authorizes* IAEA officials to oversee all agreements and criterion to assure feasibility of payment in accordance with IAEA General Conference resolution (58)/12 which establishes payment standards for public-private partnerships and emphasizes the need for a secure payment schedule;

9. *Recommends* the creation of a database to connect public, private and philanthropic organizations to become involved in nuclear technology projects posted on the platform that are not directly financed by but within the mandate of TCF and would facilitate the completion of Sustainable Development Goals 9 and 17, where the database shall:

a. Be accessible to the public through an online platform service, and shall be distributed, along with the reports issued by permanent working group established in clause 6, to Member States applying for TCF assistance;

b. Be administered by a committee of experts on nuclear technology and technical cooperation appointed by the Board of Governors of the International Atomic Energy Agency.

Code: IAEA/1/4
Committee: International Atomic Energy Agency
Topic: Improving Science and Technology Activities through Technical Cooperation

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The International Atomic Energy Agency,

Confident that the International Atomic Energy Agency (IAEA) will play a critical role in helping achieve the Sustainable Development Goals (SDGs) by having a direct impact on SDGs 2, 3, 6, 7, 9, 13, 14, 15, and 17,

Emphasizing the *Statute of the IAEA* that seeks to promote the safe, secure, and peaceful use of nuclear technology through technical cooperation programs by emphasizing knowledge sharing and transfer of skills,

Referencing the fact that implementing technical cooperation programmes directly contribute to an increase in Member States' capabilities concerning nuclear sciences and technology including successful programs such as the North American variation of the Technical Cooperation Program (TCP) and TTCP symposia headed by Australia, Canada, New Zealand, The United Kingdom and the United States,

Recalling Article 5 of the *Statute of the IAEA* that states that the body shall adopt its own rules of procedure that will be utilized to facilitate technical cooperation,

Noting the Revised Guiding Principles and General Operating Rules To Govern The Provision Of Technical Assistance By The Agency (INFCIR/267) for its guiding principles in the provision of Technical Assistance by the IAEA,

Recognizing that the current TCP Frameworks, including the Logical Framework Approach, which was created in 1969 and are in need of updating to increase overall efficiency and transparency to increase cooperation,

Noting that the Logical Framework Approach in place to encourage Technical Cooperation Programme (TCP), Coordinated Research Projects (CRPs), and Country Program Frameworks (CPFs) established within the TCP under the IAEA contain multiple different processes including six different levels of research validation that lead to redundancy,

Highlighting the necessity for Member States to formulate National Action Plans (NAP) in order to implement and/or transform theoretical concepts into concrete projects,

Convinced that the international community can create a more streamlined approach to facilitate technical cooperation that eradicates redundancy and bolsters partnership,

Further convinced that updating the existing framework coupled with the implementation of the Agency-Wide Implementation System for Programme Support and the adoption of the energy resource planning system the IAEA will take a significant step in streamlining the functioning of the IAEA,

Reaffirming the United Nations Special Rapporteur as a means to bridge the gap between Member States and regional frameworks that have implemented successful technical cooperation programs and those that have yet to,

Acknowledging the need for regional TCPs such as the Cooperative Agreement for Arab States in Asia for Research, Development and Training related to Nuclear Science and Technology (ARASIA) which contribute to the effort of strengthening and enlarge the contribution of nuclear science and technology to socioeconomic development in different regions of the globe,

Keeping in mind the ever-tightening budget of the IAEA,

1. *Emphasizes* the role the IAEA plays through the TCP in fostering international cooperation and helping achieve the SDGs through promotion of safe, secure, and peaceful use of nuclear technology, and lauds the Board of Governors and their efforts to modernize the TCP Framework in its current form;

2. *Supports* the inclusion of an additional component that focuses on external validity in the Logical Framework Approach that is the current framework utilized to implement CRPs and TCPs, that would enable the Agency to more effectively utilize the lessons of previous research projects to utilize their resources on region-specific approaches rather than spending energy on redundant procedures;

3. *Calls upon* the Board of Governors of the IAEA to exercise its powers of modifying the rules of procedure of the IAEA to further streamline the processes of the CRP and TCP by:

    a. Expanding and strengthening existing mechanisms such as the IAEA Annual Report to include best practices on:

        i. Human health and nutrition;
        ii. Agricultural Productivity and Food Security;
        iii. Water and the environment;
        iv. Radiation Technology and Industrial Applications;
        v. Energy Planning and Nuclear Power;
        vi. Safety and Security and any other areas of focus deemed necessary by the Agency;

    b. Selection of best practices relevant to different regions in question through projects that are:

        i. Focusing on National projects where nuclear technology is essential for achievement of national objectives;
        ii. Focusing on Regional projects that provide a framework for pooling resources, sharing knowledge, and technology, for networking and cooperation among Member States;
        iii. Focusing on Interregional projects to facilitate technical cooperation between Member States globally;

    c. Development of a knowledge database on all facets of the TCP that would be accessible to the Member States participating in the program;

4. *Endorses* the amendment of the currently established processes of the CRP and the TCP by limiting the redundancies in the research process and amendment of the six steps of independent research validation to only include the processes of:

    a. Initiation of research in laboratories;

    b. Distribution of findings to independent laboratories to test the validation of research followed by distribution to include a two-step validation process whereby only a second set of analyses would validate findings and an additional set, if necessary;

    c. Publication of research results and best practices and opening them up to independent critique from the scientific community to prove that the technologies are ready to be safely transferred to ensure that sensitive materials are handled and transported with due care;

    d. Collaboration with the relevant parties to assist in the transfer of technology and;

    e. Dissemination of the Technology to Member States to aid socioeconomic development;

5. *Recommends* the implementation of checkpoint-based evaluation mechanisms by the Department of Technical Cooperation (DTC), instead of annual monitoring mechanisms during the implementation phase of the CRPs and the TCPs to ensure that the transferred technology and related activities are consistently meeting safety regulations;

6. *Emphasizes* the inclusion of an additional component that focuses on external validity in the Logical Framework Approach that is the current framework utilized to implement CRPs and TCPs that would enable the Agency to more effectively utilize the lessons of previous research projects to utilize their resources on region-specific approaches rather than spending energy on redundant procedures;

7. *Encourages* the DTC to ensure transparency in the TCP Framework through collaboration with the Strategy and Partnerships Division and Finance and Information Management program from the Division of Programme Support and Coordination as a way to ensure both good governance and the empowerment of citizens' ability to examine the document and act accordingly by:

    a. Publishing a five-year review of each willing Member State participate in order to inform the needs of every Member State regarding Nuclear Energy and Development;

    b. Encouraging every Member State to inform the DTC in the previously mentioned five-year review that they are using the nuclear technologies provided by the TCP to further promote the goals stated in the IAEA mandate;

    c. Promoting the assessment of each CPF by completing an in-depth analysis, conducted by IAEA engineers, and include in the five-year review, that clearly assesses the effects of the different CPFs based on a set of criteria, such as, but not limited to:

        i. General Impact, including whether the project reveals to be sustainable for the future;
        ii. Costs, including whether the project's impact is worth the funds spent on it;
        iii. External Validity/Universal Applicability, including whether the project can be applied to other regions or why it cannot;
        iv. Link with the SDGs, including whether the project works to improve the objectives set in the SDGs;
        v. Any other relevant criteria;

8. *Further recommends* the formulation of templates for Country Programme Frameworks, Regional Programme Frameworks and NAP based on the existing frameworks and NAPs of current TTCP members:

    a. To increase the self-reliance of Member States, mobilize resources, build partnerships and enhance collaboration and cooperation;

    b. To develop strategies, guidelines and procedures, carry out financial monitoring and control, as well as produce and manage data and information management systems;

    c. To ultimately transform theoretical concepts into concrete projects that are decided by individual Member States;

    d. To take into special consideration a Member State/region's relevant demographics such as: socioeconomic, sociopolitical, geographic, and/or regional factors;

9. *Encourages* further cooperation between the Finance and Information Management of the TCP and Member States in systematic collection of data on specified indicators from the Member States at predetermined intervals to further assess the success and/or the opportunities at the end of CRP terms to encourage evaluation and transparency after the technical cooperation programs have been implemented in Member States;

10. *Suggests* that the Board of Governors work closely with the North American variation of the Technical Cooperation Programs by requesting IAEA members be granted honorary TTCP membership and/or observer status dependent upon the following criteria:

    a. Whether the Member State in question has signed and ratified the relevant treaties;

b. Whether the Member State in question has violated international law or the aforementioned treaties;

c. Whether the Member State in question has currently or in the past acted aggressively towards any other sovereign Member State;

d. Not to be misconstrued as overriding the authority of the TTCP;

11. *Welcomes* the IAEA to seek admittance of Member States to TCP symposia to aid in efforts to disseminate knowledge on technical cooperation;

12. *Insists* that the office of the Secretariat to employ a Special Envoy for the administration and implementation of Technical Cooperation as it pertains to nuclear science and technology, and establish the Country Programme Management Team (CPMT) which will report to the Rapporteur to build upon the currently existing country programme frameworks and/or national action plans to:

    a. Determine the best practices and utilization for nuclear science and technology within each state while taking into account regional particularities;

    b. Assess and evaluate the ongoing projects within each state;

13. *Welcomes* more efficient work through expansion of the existing regional frameworks on Technical Cooperation by creating a Central-Asian cooperative agreement for research, science and technology related to nuclear science and technology (CARN) which will:

    a. Be based upon the existing framework outlined in the Cooperative Agreement for Arab States in Asia for Research, Development and Training related to nuclear science and technology;

    b. Enlarge the contribution that nuclear science and technology can make towards socio-economic development in Central Asia and, through this, shall achieve the SDGs;

    c. Unite Central-Asian Member States in the collaboration on Technical Cooperation through science and technology activities;

14. *Further endorses* the Board of Governors to utilize all available resources and collaborate with willing, interested and able Non-Governmental Organizations (NGOs), specifically IAEA approved NGOs with observer or consultative privileges, to assess a State's ability to implement assistance from the TCP and the assessing entity should provide a report detailing the steps necessary for the Member State to update their peaceful nuclear technologies along with suggestions on how they can achieve these goals;

15. *Asks* Member States working with TCPs to include various funds or organizations specialized in the area targeted by their desired project, to increase international cooperation and lowering the burden put on the Technical Cooperation Fund, and base the collaboration on successful examples such as, but not limited to:

    a. The partnership between the International Agency for Cancer Therapy and the IAEA to further cancer research;

    b. The partnership between the IAEA and the Food and Agricultural Organization to combat viral pests;

    c. Any other relevant examples of successful cooperation between the IAEA and other organizations;

16. *Addresses* the current funding difficulties of the TCP and the IAEA by promoting cooperation between the IAEA, national nuclear energy agencies, pertinent United Nations bodies and other organizations that could provide funding and expertise for every Member State's CPF, through organizations such as but not limited to:

    a. World Associations of Nuclear Operators;

b. Institution of Nuclear Power Operations;

c. Nuclear Energy Institute.

Code: IAEA/1/5
Committee: International Atomic Energy Agency
Topic: Improving Science and Technology Activities through Technical Cooperation

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The International Atomic Energy Agency,

Guided by articles VIII and X of the *International Atomic Energy Agency (IAEA) Statute*, as well as the importance of science and technology in technical cooperation,

Recognizing (60)/RES/12 for its emphasis on nuclear science contributing to agriculture, and welcomes the collaboration between the Food and Agriculture Organization of the United Nations (FAO) with the IAEA, towards implementing nuclear energy applications within food and water security such as pest infestation,

Noting with appreciation the goals of the R4 Rural Resilience Initiative to aid rural agricultural populations to ensure food security in a rapidly changing climate,

Reaffirming the need for close cooperation through efforts made by the Commission on Science and Technology for Development, between less developed countries and the IAEA through increased Technical Cooperation,

Expecting the development of genetic experimentation of crops by the use of hydroponic technology and their possible agricultural applications,

Expressing concern that crops are at risk for various environmental and climate related disasters which has led to famines and crop failures drastically affecting global citizens and food security as indicated in Food and Agriculture Organization's Climate Change and Food Security,

Recalling General Assembly resolution 66/222 that in collaboration with governments, the United Nations Development Programme, and the International Fund for Agricultural Development places great emphasis on family farming as important to societal and economic development and strengthening cooperation between FAO and IAEA,

1. *Approves* Member States to intensify relationships with the Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture, to assist in developing projects with the use of nuclear techniques in food and water security applications, while:

    a. Further supporting the implementation of the Sterile Insect Technique (SIT) through the use of ionizing radiation with the joint effort of FAO;

    b. Applying the seed irradiation technique in farming stages for better crop resistance toward disease, pathogen infection and infestation;

    c. Directing greater attention to the isotopic techniques used to quantify the magnitude of soil erosion and identify sources of arable land desertification;

    d. Hoping for greater contribution from Member States to Major Programme 2 of the Regular Budget concerning Nuclear Techniques for Development and Environmental Protection;

2. *Calls upon* Member States to adopt nuclear and isotopic techniques to combat land degradation and meet the standards of the Desertification Convention by creating an inclusive sampling campaign to train professionals in using soil moisture neutron probes throughout all Member States possessing a climate at least 50% arid or semi-arid;

3. *Suggests* that Member States collaborate with the IAEA to study aquifers through isotopes and hydrogeochemical desalination techniques such as utilizing artificial groundwater recharge to combat desertification and promote the highest quality of water;

4. *Encourages* immediate partnership between Member States and their respective public institutions that employ nuclear technology, public and private agricultural organizations, and academic institutions via a set of region-specific conferences that:

    a. Allow experts, professionals, and academics to convene and share research and information while building effective partnerships, and address specific issues;

    b. Provide a platform for collaboration between nuclear institutions and agricultural organizations;

    c. Promote cooperation between nuclear and agriculture-focused organizations by focusing on the continuing the establishment of mutually-beneficial facilities to increase access to technology and promote innovation between these distinct fields;

5. *Also encourages* the development of research centers run by the IAEA with the purpose of developing hydroponic agricultural products, already in use by the IAEA for the primary purpose of the adaptation of crops and the detection of genetic mutation in plants, while:

    a. These centers would assist in IAEA implementation of hydroponics technology focusing primarily on providing aid to developing nations experiencing climate or weather related disasters;

    b. Developing nations would be the primary recipients of this technology as hydroponics require sealed environments in order to function, with the construction of underground or otherwise sheltered hydroponic facilities serving as a safeguard for developing nations primarily dependent on agriculture maintain food security in the face of climate or other natural disasters affecting crop yield;

6. *Recommends* that Member States become parties to IAEA Technical Cooperation programs in the development of secure and productive agricultural programs including radiation induced mutation in order to attain larger crop yields along with further investment into genetically modified crops through:

    a. The development of drought-resistant and water-retaining crops;

    b. The improved comprehension of radiation-induced gene therapy within the application of increased specific crop yields;

7. *Calls for* the establishment of the Regional Gateway for Agricultural Modernization (RGAM) within developing countries, which will increase accessibility to existing technical knowledge on agricultural applications of nuclear technology for small, rural farmers by:

    a. Aiding developing Member States to initiate a concerted regional agricultural strategy using emerging or existing nuclear technology;

    b. Promoting the education of rural farming families to explore and apply different agricultural and water treatment practices incorporating nuclear technology;

    c. Increasing awareness among rural farming families and nongovernmental organizations about the agricultural and human health impacts of remnants of uranium tailings.

Code: IAEA/1/6
Committee: International Atomic Energy Agency
Topic: Improving Science and Technology Activities through Technical Cooperation

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The International Atomic Energy Agency,

Recalling the importance of the *2030 Agenda for Sustainable Development* adopted through the General Assembly resolution 70/1,

Committed to the fulfillment of the Sustainable Development Goals, especially goals 2, 3, 6, 7, 9, and 13 which focus on improving food security, health, access to clean water and sustainable energy, infrastructure, and climate change,

Recalling International Atomic Energy Agency (IAEA) resolutions General Conference (GC) resolution (60)/11 on "Strengthening of the Agency's technical cooperation activities",

Reaffirming the objectives of the IAEA, as stated in Article II of the *Statute of the IAEA* "to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity around the world" as well as article IV of the *Treaty on the Non-Proliferation of Nuclear Weapons* and its commitment to the inalienable right to develop nuclear energy for peaceful purposes of each Member State,

Cognizant of regional differences concerning nuclear technology capabilities, development and knowledge in connection to the IAEA,

Emphasizing the IAEA's predominant position as a leading expert in nuclear technology,

Concerned with the widening of the development gap regarding nuclear technologies and capacity between Least Developed Countries and Highly Developed Industrialized Countries and the negative effect it produces on the former,

Conscious of the potential of nuclear power for the sustainable production of electricity, and of the need for sustainable development, including environmental protection, and of the need for the application of the IAEA safety standards and safeguards concerning all uses of nuclear technology in order to protect humankind and the environment, and noting the IAEA's support aimed at human resources and nuclear power infrastructure development,

Acknowledging that the Technical Cooperation Fund (TCF) is funded by voluntary donations but thus far has never reached 100% funding and therefore the Technical Cooperation Programme has fallen short in reaching its goals,

Aware of the substantial funds already raised by the TCF and the Peaceful Uses Initiative (PUI) that 150 countries have benefited from and how a significant number of projects remain unfunded,

Reminding Member States of the importance of establishing a network of regional experts, especially security experts, in the hopes to facilitate the advancement of all science and technology and that this goal cannot be achieved without proper training,

Recognizing the successes of the Regional Cooperative Agreement (RCA) methodology for knowledge management to build transparency between Member States and to adopt proper and inclusive methodology within the international community,

Acknowledging the importance of compliance with the terms of the Treaty on the Nonproliferation of Nuclear Weapons (NPT), Comprehensive Safeguard Agreement (CSA) and having the Additional Protocol in force as preconditions to receive support from Technical Cooperation projects,

1. *Encourages* all Member States to work towards a more efficient allocation of funds and implementation of projects by:

    a. Developing Regional Action Plans (RAPs) that will identify the thematic areas in line with budgetary constraints to be implemented by regional institutions such as the Arab Atomic Energy Agency, the Regional Cooperation Agreement for the Promotion of Science and Technology in Latin America and the Caribbean (ARCAL), the Caribbean Community (CARICOM), the European Union (EU), the African Union (AU), the Regional Cooperative Agreement for Research, Development and Training Related to Nuclear Science and Technology for Asia, and guaranteeing their accountability before the IAEA to ensure the plan's efficiency and transparency;

    b. Assigning supervision of the implementation process of RAPs to the regional IAEA offices in cooperation with the aforementioned regional institutions in order to strengthen the nuclear capabilities in all regions;

2. *Recommends* Member States establish Public-Private Partnerships (PPP) under the supervision of regional bodies of the TCP to ensure that the PPP projects and results comply fully with IAEA Safeguards;

3. *Suggests* the creation of a Fund Opportunity Raising Taskforce (FORT) that will use funds from, among other sources, the Peaceful Uses Initiative (PUI), and the United Nations Development Fund (UNDF) in order to:

    a. Supplement the voluntary donations to the TCF to reach 100% funding;

    b. Mobilize private investment parties for PPPs through the provision of guarantees that will correlate with the size of investments made;

    c. Ensure that funds are being allocated and invested on a basis of need thus prioritizing LDCs;

    d. Examine the viability of a portion of the TCF being allocated from the regular IAEA budget going forward;

4. *Emphasizes* the significance of a common data-sharing mechanism, that includes an internet database as well as universal data standards that can assure a safe and efficient nuclear technology transfer through:

    a. Transferring of interregional information such as new nuclear technologies and atomic research materials;

    b. Making it accessible to the Member States and their regional organizations that have been entitled to use it for peaceful purposes and the good of humanity;

5. *Calls upon* IAEA experts to restructure the permanent region-specific developmental mentor teams, supporting Member States in person by request, or online services to facilitate the:

    a. Organization of voluntary workshops by request, to educate and encourage the safe use of nuclear technology such as applications in the further advancement of food and water availability, medicine, and medical technology;

    b. Training of officials and employees at the national level to understand the latest protocols in safety and security of nuclear materials;

6. *Further calls upon* regional organizations to develop globalized frameworks assisting LDCs with agricultural and health related projects to be achieved through technical cooperation between Member States by:

    a. Formulating the logistics of this calling and recording progress for the purpose of further developing ideas that would minimize the possibility of toxic radiations such as exploring the nuclear water storage methods, implementing sampling campaigns to educate and distribute nuclear agricultural

technology, desalination of water by nuclear reactors, establishing environmental laboratories focusing on nuclear and isotopic techniques, and the adoption of agriculture related safeguards;

b. Addressing nuclear medicine and pharmacy related research projects efficiently through measures such as the increase of funding for subsidized nuclear medicine and further research into radioactive material in pharmaceutical development;

7. *Suggests* the 61st session of the IAEA General Conference to focus on the topic of nuclear technology cooperation by:

a. Encompassing relevant stakeholders including, but not limited to: interested Member States and affiliates, relevant UN bodies, programmes and organizations, non-governmental organizations, international organizations, regional organizations, and experts in the field;

b. Discussing the current and potential subtopics that are necessary to promote nuclear technology cooperation such as public-private partnerships, regional collaboration, and inter-regional collaboration to enhance nuclear technological cooperation.

Code: IAEA/1/7
Committee: International Atomic Energy Agency
Topic: Improving Science and Technology Activities through Technical Cooperation

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The International Atomic Energy Agency,

Guided by the statutory functions of the Agency, as established in article III of the *Statute of the International Atomic Energy Agency*, which promotes the safe use and exchange of nuclear technology among Member States in order to ensure that peace and international cooperation are achieved,

Alarmed by the fact that multiple states have not fully implemented the necessary measures for their reactors to comply with the IAEA safety standards, and not utilizing non-governmental organizations that are accredited and compliant with IAEA safety standards to ensure maximum reliability,

Recognizing the urgency to prevent future nuclear catastrophic incidents through the Agency's Technical Cooperation Programme which promotes shared technology research and innovation,

Acknowledging the fact that many nuclear reactors still lack the proper technology to ensure the safety of each facility in case of emergencies and other risks,

Remembering the Agency's *Medium-Term Strategy 2012-2017* stating the need for enlarged attention to Least Developed Countries (LDCs) that can benefit from Technical Cooperation,

Acknowledging the fact that even with proper safeguards in place, a contingency plan is critical for the continued safety of Member States in case of a nuclear disaster or emergency,

1. *Recommends* the IAEA Board of Governors to enhance the mandate of the division of Technical Cooperation Programme by setting up Technical Cooperation Development Committee (TCDC) to advocate for the technological and scientific needs of less developed countries;

2. *Suggests* collaboration with non-governmental organizations that adhere to IAEA safety standards to assess a state's sole ability to remedy aging reactor issues and provide detailed reports on possible updates to nuclear technologies and suggestions as to the attainment of those goals;

3. *Calls upon* Member States to abide by IAEA standards and to implement said standards in the modernization of their reactors by:

    a. Utilizing resources such as the IAEA and other willing, interested, and able Non-Governmental Organizations, specifically Non-governmental Organizations (NGOs) that adhere to IAEA safety standards and standards of practice, to assess a Member State's sole ability to remedy aging reactor issues;

    b. Providing Member States the opportunity to request the IAEA to conduct a two-week review of their regulatory systems for nuclear safety which highlight each respective system's most effective features and suggested areas of improvement;

    c. Expanding upon IAEA publication frameworks involving independent assessments and self-assessments regarding safety culture and leadership for safety by the Member States' nuclear management agencies, whose results shall be communicated in an open and transparent manner, to all levels in the organization and be acted upon to ensure improvements and to promote a learning organization;

d. Recommending that Member States explore the use of thorium as an alternative fuel source for nuclear reactors as thorium has proven to be safer as it cannot be weaponized and produces significantly less nuclear waste than conventional nuclear fuel;

4. *Welcomes* the creation of an Alignment Team for the Operations of Nuclear Science (ATONS) as part of the IAEA Department for Technical Cooperation that will:

    a. Establish new annually-meeting region-specific conferences and peer-reviewed oversight sessions in order to oversee the facilitation of cooperative information sharing in the development of new reactor technology, and that conferences would be divided into a tripartite model, with the pillars being:

        i. Research, with a focus on educating prospective nuclear specialists and nuclear industry workers through various visitations by a regional coalition of experts to assist in the modernization of reactors, ensuring that new technology is efficient and secure;
        ii. Sustainability, concentrating on the role of new technology in the mitigation of the effects of climate change;
        iii. Safety, with emphasis on the development of ever-safer nuclear technology and practices to be adopted by Member States who lack adequate facilities;

    b. Be implemented as a project-based initiate for the encouragement of self-reliance, development, and the growth of intellectual capital of Member States;

    c. Make use of the existing networks and expertise of the agency, whilst searching for local talent and new network opportunities;

    d. Be explored in all six main topics of the Technical Cooperation Strategy, including human health, agricultural productivity and food security, water resources management, environmental protection, physical and chemical applications of radiation and radioisotopes and sustainable energy development and develop these where possible;

5. *Recommends* Member States to consider participating in the Global Nuclear Response Network (RANET) in order to better coordinate international assistance in case of a radioactive incident or emergency.

Code: IAEA/1/8
Committee: International Atomic Energy Agency
Topic: Improving Science and Technology Activities through Technical Cooperation

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The International Atomic Energy Agency,

Emphasizing Sustainable Development Goals (SDG) 4, 7, 9, 12, and 17, the mission of the IAEA School of Nuclear Energy Management, and the potential of nuclear technology to ensure global prosperity in terms of education promotion through the assistance of young professionals of Member States, in order to better understand the energy needs of their own countries as well as within the global context,

Echoing the IAEA statute, which seeks to accelerate and enlarge the contribution of atomic energy for peace, health, and prosperity throughout the world, to foster the exchange of scientific and technical information on peaceful uses of atomic energy between all the Member States, and as well as working to collaborate to achieve the SDGs,

Guided by the potential advancements that innovative educational and training programs have by their ability to create medicinal advancements to combatting global health concerns of vector borne diseases, such as cancer and malnutrition,

Acknowledging that, according to the World Health Organization (WHO), more than 38 million deaths per year account for 68% of all deaths worldwide to non-communicable diseases,

Drawing the attention of Member States to continue working on technology transfer and partnership facilitation to promote the practices of management, monitoring, and evaluation of medical care,

Deeply concerned that not all regions have access to quality nuclear medicine data and the shortage of properly trained and qualified human resources in nuclear medicine and the need to effectively implement Technical Cooperation projects in this sector,

Taking into consideration the lack of access of the Programme of Action for Cancer Therapy (PACT), the estimated shortage of about 5,000 radiotherapy machines in developing countries, and that 70% of cancer patients living in these regions cannot benefit from this essential curative or pain relieving treatment,

Welcoming the utilization of science and technology to further improve a variety of health issues, such as the IAEA's nutrition programme, in cooperation with UNICEF and WHO,

Stressing the importance of financial commitments by Member States to increase the accessibility of medical-related research and technologies,

Recognizing the importance and the benefits of Technical Cooperation on health programs between nations,

1. *Aims towards* an extension of training and development programs for promoting technical cooperation among regional areas for nuclear energy engineers from Member States pursuing long-term atomic energy projects within their respective state or region:

    a. Through the creation of regional IAEA facilities that provide informational resources for the implementation of nuclear technology for medical uses in surrounding states to provide a continual support system for the Member State, should a massive health crisis arise within the region;

    b. By way of additionally sponsoring and hosting developmental programs abroad in other internationally-recognized nuclear technology and research-specializing states that voluntarily offer training in conjunction with the IAEA-trained officers, which would be hosted and presented through voluntarily offered training in conjunction with the IAEA-trained officers;

c. Along with the formation of regionally-based forums and scientist-guided sessions to assist in the generation and sharing of new information for purposes of cooperative technical research, these forums would follow an annually-determined course of discussion that seeks to accomplish goals in the fields of:

    i. Collaborating on new initiatives that are interested in implementing nuclear technology at local levels;
    ii. Creating reports for the subsequent global conferences under the IAEA, in which more developments will follow internationally;

d. Along with the formation of regionally-based forums and scientist-guided sessions to assist in the generation and sharing of new information for purposes of cooperative technical research, in which these forums would follow an annually-determined course of discussion that seeks to accomplish goals in the fields of:

    i. Education, with a focus on educating prospective nuclear specialists and nuclear industry workers through various visitations by experienced professionals;
    ii. Sustainability, concentrating on the role of new technology in the mitigation of the effects of climate change;
    iii. Job opportunities, expanding suitable working conditions for scientific and technological talents; particularly fresh graduates and women to be able to produce possible nuclear technologies;

2. *Further invites* the international community to become involved in "You(th) Propel Sustainable Development," an annual academic competition guided by UNESCO and funded by the SDGs Fund, targeted to innovative university students within developing countries, in order to develop project designs of nuclear infrastructure that will provide innovative nuclear application initiatives that are not yet being implemented within the country, aimed to increase the Technical Cooperation provided by the IAEA in said countries that is comprised of:

    a. A group of experts of the IAEA that will act as the judges in the different stages of this competition and will determine the winner of this, testing:

        i. The rate of attainment of the projects;
        ii. The technical aspect of the initiatives;
        iii. The logistical benefits to the participant's country;

    b. The financial support of the TCF once the winner is chosen;

    c. The technical assistance from the IAEA in the execution of the project selected, followed by the Technical Cooperation Program, which will elaborate its respective frameworks that will ensure the sustainability of the project;

    d. The special attention paid to the students of developing nations to promote the involvement of incoming generations to enhance the sustainability of the nuclear technology programmes and further improve their nation's development status;

    e. An invitation extended to Member States to emphasize the benefits of nuclear energy and technologies inside of high school programmes;

3. *Suggests* the creation of international cooperative working and training programs through the IAEA Nuclear Energy Management Institute (NEMI) working towards development of professional careers by:

    a. Presenting a communication plan campaign to the Strategic Communication Division (SCD) to promote available opportunities and programs for nuclear medicine or nuclear educators;

b. Providing leadership opportunities for youth populations and gender vulnerable groups of disenfranchised regions by the NEMI;

c. Recommending the establishment of an e-learning platform known as NUCLEUS that will:

i. Be provided for elementary, secondary, and university-level students aimed to introduce a clear definition and the use of nuclear energy;
ii. Be utilized as an essential website for university students and professionals, that will help them to know about the researches and which countries are involved in the researches at a precise moment;

4. *Encourages* Member States to commit to the Peaceful Uses Initiative to create collaborative solutions to medical-related advancements under the Sustainable Development Goals through the aid of the IAEA, and prioritizing it as a resource to:

a. Increase research and accessibility to the Sterile Insect Technique for Member States with unique need by incentivizing Member States through prioritizing them during shared practices and technical cooperation;

b. Calls upon Member States to promote research to further advance technologies to mitigate diseases such as Zika to increase IAEA capabilities;

c. Promote groups, such as the Royal College of Pathologists, to further advance pathology groundwork and nuclear techniques including radiotherapy and imaging;

d. Expand nuclear pharmacy research, to develop new alternatives to existing drugs;

e. Further developing the deuterium-dilution technique to provide accurate data to highlight occurrence and frequency of health practices affecting a variety of health issues through:

i. Sponsoring the adoption of a program in which stable isotopes using the technique are utilized to research the body composition of infants under two years old in all IAEA Member States classified as less developed;
ii. This will project the risk of malnutrition and other diseases later in life, since the first two years of a person's life are essential for the optimal development and growth of the person;

5. *Recommends* the Education and Training programme of the World Health Organization (WHO) to establish community nuclear technological educational medical facilities following the model of IAEA Verification Offices to accomplish these certain goals:

a. To offer training services through the assistance of the Joint Research Centre following the IAEA Curricula for Nuclear Medicine Professionals (ICNMP);

b. To provide additional training under the Inter-Agency Committee on Radiological and Nuclear Emergencies (IACRNE) in handling these nuclear medicine;

6. *Suggests* the expansion of IAEA databases from the NUCLEUS platform to be utilized for academic research and as a basis for the effective practices to improve and provide education to local and national governments and private businesses by:

a. Enhancing transparency of new advancements in technology through the above proposed medical facilities, collaboration with universities as well as the regional and global conferences;

b. Further recommending the centralization of nuclear technology databases to establish a rudimentary database for less developed countries elevating nuclear capacities;

7. *Encourages* the technical cooperation of the IAEA with the CSW and NGOs such as Doctors Without Borders, and the Cancer Aid Society that can utilize nuclear technology for treatment programs like radiotherapy, teletherapy, and brachytherapy in developing countries and invites medical institutions to immediately employ nuclear technology for diagnostics, such as mammograms, and treatment, while increasing accessibility of techniques by:

    a. Starting more imPACT missions on providing the groundwork for cancer treatment infrastructure:

        i. With an increased recognition to countries with existing nuclear development infrastructure that host "Collaborating Centers" as a new type of mission to the PACT;
        ii. By improving the demonstration projects to gain support from the Member States that can sustain national cancer control programs;
        iii. To push for extensive research on radioisotopes to diagnose and treat cancer;

    b. Specializes the equipment, infrastructure and standardized training methods based on country specific needs, for example, language, technical data, safety procedures (Radiation exposure, proper equipment maintenance);

    c. Standardized the procedures and equipment used throughout the nations that form part of the initiative to ensure same level treatment amongst all members;

    d. Increasing PACT's involvement, with the support of funds from investments by Member States and the review of missions from imPACT in Africa, such as those in Rwanda and Kenya, by reworking the plan RLA/6/067 from the resolution General Conference resolution (57)/12.A.2 on "Establishing a Sub regional Plan for Cancer Prevention and Integral Cancer Care in Central America and the Dominican Republic (ARCAL XCIII)" to make this resolution more inclusive for African nations;

8. *Suggests* that the Member States expand the deuterium-dilution technique to provide accurate data to highlight occurrence and frequency of health practices affecting a variety of health issues;

9. *Further suggests* the adoption of a program in which stable isotopes are utilized to research the body composition of infants under two years old in all IAEA Member States classified as less developed;

10. *Reminds* Member States of their financial commitments to the international community in order to achieve health-related advancements in accordance with SDG 3 by:

    a. Promoting an increase of efficiency of funding for medical funding such as:

        i. Strengthening the TCF;
        ii. Ensuring the security of funding toward scientific research centers and programs;
        iii. Foster healthy multi-lateral partnerships and relationships to prevent the loss of financial assets to corruption within Member States;

    b. Recognizing the possibilities of public private partnerships to fund Member States health advancement with atomic and nuclear energy;

11. *Encourages* Member States to take part in similar agreements to the bilateral agreement signed by Argentina and Brazil (ABACC) in 1991 that:

    a. Implement the exportation of reactors and radioisotopes for socioeconomic outcomes for the possibility of increasing the tax base through incremental differences in the tax rates within local communities to propel the economy's strength in the region;

    b. Open possible dialogues between Member States with few economic and political ties to build conversations and partnerships;

c. Extend technical cooperation activities with the goal to increase the number of research laboratories in all willing Member States.

Code: IAEA/1/9
Committee: International Atomic Energy Agency
Topic: Improving Science and Technology Activities through Technical Cooperation

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The International Atomic Energy Agency,

Recalling article 2 of the International Atomic Energy Agency (IAEA) Statute, which states that the purpose of the Agency is to foster the exchange of scientific and technical information, and encourage the exchange of training of scientists and experts in the field on peaceful uses of atomic energy,

*Bearing in min*d the IAEA implementation guide, *Establishing the Nuclear Security Infrastructure for a Nuclear Power Programme* (2015), which lays the foundation for safely and sustainably developing Nuclear programs, including waste management, transportation of fissile materials, and safety standards,

Recalling General Conference (GC) resolution (60)/12 which emphasizes the increasing importance of the IAEA in providing information on good practices in the safe and efficient uses of nuclear technologies for peaceful purposes including providing information and education for the general public,

Bearing in mind GC resolution (60)/12 which recognizes the importance of ensuring qualified human resources and cooperation for the purposes of safe, economic, and secure uses of all available nuclear technologies for peaceful purposes,

Recognizing the immense benefits that collaborations between the IAEA, universities, national laboratories, and government institutions play in sharing and developing knowledge for the successful achievement of technical cooperation,

Recalling General Assembly resolution 32/50 and Article II of the IAEA Statute that the objectives of the Agency are for the promotion of nuclear energy to ensure that the technical assistance and cooperation are used for peaceful purposes,

Guided by the standards set in place by GC resolution (60)/9, which emphasizes the importance of technical cooperation and education in the field of nuclear safety and transportation,

Recalling the acknowledgment in GC resolution (60)/11 that technical cooperation is the major vehicle for Least Developed Countries (LDC) to advance their development in the nuclear field,

Deeply conscious of the IAEA publication on Climate Change and Nuclear Power (2016) which outlines the need for technical cooperation and the ability to educate countries about nuclear energy,

Deeply concerned with Sustainable Development Goal 6, that includes availability and sustainable management of water, and that accordingly to the IAEA Department of Nuclear Energy, 30% of the world will not have access to clean water by 2025,

1. *Encourages* Member States to adopt a national education and training program which follows the guidelines of the Agency and the Global Nuclear Safety and Security Network, this will ensure:

    a. That a larger population will be able to access this vital information and be able to focus specifically on the skills and information pertinent to their nation;

    b. The national sovereignty of all Member States;

2. *Calls upon* Member States to establish regional agreements that promote effective and responsible education on the use of nuclear technology, following the example of the Regional Cooperative Agreement for Research, Development and Training Related to Nuclear Science and Technology for Asia and the Pacific;

3. *Encourages* Member States to maintain and improve nuclear safety and the imperative infrastructure considering nuclear power, technologies using radiation containment technologies and who are engaging in international technical cooperation, abiding by the relevant IAEA standards when applicable;

4. *Recommends* Member States work in conjunction with one another to follow the guidelines established in GC resolution (60)/9 to ensure responsible use of nuclear technologies and include but are not limited to uses for nuclear power, nuclear health, promotion of clean water, and food sustainability;

5. *Calls upon* Member States to collaborate and share advancements in technology to continuously improve their safety with the management of Spent Nuclear Fuel and radioactive waste, in accordance with the IAEA Safety Standards, including but not limited to, plans for decommissioning, storage and management of the disposal of this material through technical cooperation and advancement to establish a standardization of practices with the newest advancements in the nuclear field:

    a. By sharing the advancement in nuclear technology pertaining to containment and reduction of waste through technical cooperation with Member States by:

        i. Encapsulating non-reusable nuclear waste in a multi-layer case for cooling and containing nuclear radiation water to reduce temperature and offer the first level of radiation damping, encased in glass which further blocks radiation while allowing low level heat transfer, surrounded by concrete to further absorb heat transfer add rigidity and a final stage of steel which is impermeable for the radiation and furthering the strength of the overall structure;
        ii. Suggesting to bury nuclear waste in a radiated zone in Kazakhstan or the regional repositories who wish to participate later and further Encourages technical cooperation for environmentally friendly waste management through these regional nuclear waste repositories;

    b. Cooperating with Member States to recycle the 90% reusable material found in nuclear waste;

    c. Recommending Member States to participate in domestic policies similar to the European Union protocol, European Communities (Carriage of Dangerous Good by Road and Use of Transportable Pressure Equipment) (Amendment) Regulations (2013), outlining the need for safety, inspection, and regulation of the transportation of fissile material by field experts in accordance with the safe transportation guidelines as laid out by the implementation guide, *Establishing the Nuclear Security Infrastructure for a Nuclear Power Programme*;

    d. Collaborating in transportation methods for nuclear waste to be used in this program will operate within the regulations and safeguards as affirmed in GC resolution (60)/9;

6. *Further recommends* that technical cooperation be used to deliver and share educational advancements in nuclear technology with lesser developed countries as a means of low-carbon emission energy to tackle the growing concern of climate change in accordance with General Assembly resolution 32/50 and IAEA publication *Climate Change and Nuclear Energy* (2016), to:

    a. Partner with Member States with advanced nuclear technology to give regional scientists updated education on advancements made in the nuclear field to enhance the safe applications of nuclear energy;

    b. Fund this educational program through voluntary extra budgetary contributions as well as pre-established IAEA education funds;

7. *Encourages* Member States who have the technological advancements in nuclear water desalination research to cooperate, in accordance with the guidelines in GC resolution (60)/12, section 4, in desalination projects such as:

    a. Using joint nuclear plants that use leftover and recycled nuclear waste to boil ocean water;

    b. Utilizing Nuclear power plants that reduce the environmental consequences of fossil fuel powered desalination and increasing the economic benefits;

    c. Implementing technical cooperation and the sharing of plans to facilitate construction of these plants while reducing overall cost to make it accessible for the largest number of member states, especially LDCs.

Code: IAEA/1/10
Committee: International Atomic Energy Agency
Topic: Improving Science and Technology Activities through Technical Cooperation

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The International Atomic Energy Agency,

Believing that many countries require aid in building a regulatory and an economic infrastructure for peaceful uses of nuclear technologies,

Recognizing the fact that, despite common interests of many countries, each Member State requires a unique approach in dealing with the advancement of nuclear technology to suit the needs and particularities of each developing state,

Emphasizing the difficulties of access to nuclear and radioactive materials for countries with little to no nuclear capacity,

Recalling the guiding principles and general operating rules governing the provision of technical assistance in Article 1 Section D of the Revised Guiding Principles and General Operating Rules to Govern the Provision of Technical Assistance by the Agency (INFCIR/267) which states the need for allocation of resources to developing countries,

Noting with regret the deplorable infrastructure or lack thereof in less developed nations,

Acknowledging the need for private and public partnerships between nations to achieve nuclear development and joint cooperation according to the United Nations Economic Commission for Europe and their objectives for public-private partnership,

1. *Supports* the creation of Nuclear Development Partnership Programs for Inexperienced States (NDPPIS) to provide aid in building infrastructure to sustain nuclear activities within countries that have specifically little to no experience with nuclear and radioactive materials;

2. *Approves* the role of the IAEA as the mediator between the investor third parties such as Member States, NGOs, and non-state actors and developing countries that require assistance in capacity-building and infrastructure for nuclear activities in order to keep the interests of the Agency in accomplishing the Sustainable Development Goals (SDGs);

3. *Calls upon* the IAEA Secretariat to direct the Coordinated Research Activities (CRA) to establish a database that will compile project proposals from countries with little to no experience with nuclear and radioactive materials;

4. *Designates* the IAEA Secretariat and its capable offices to search for compatible third-parties that are interested in funding and supervising alongside with the IAEA technical cooperation projects that focus on building infrastructure within countries that can sustain nuclear activities and development;

5. *Encourages* the Secretariat to continue implementing the Programme Cycle Management Framework (PCMF) in a manner of phases, and to work towards simplifying the program and making it more user-friendly in the effort of allowing Member States to use these tools effectively;

6. *Invites* third parties, such as private institutions, Non-governmental Organizations (NGO) and Member States, to provide assistance to countries with little to no nuclear capacity under the assumption that they cooperate with the host states in order to attain:

    a. Nuclear technological cooperation;

b. Work expertise;

c. Infrastructure;

d. Structural and legal support;

7. *Notes* that preliminary sessions will be mediated by the IAEA Department of Technical Cooperation between states that qualify for the program and third parties to ensure agreement among the parties involved and make sure that:

    a. These sessions and partnerships will not be only focused on nuclear technologies, parties can also agree on nuclear-derived technologies or equipment that use radiation energy to achieve sustainable practices;

    b. Sessions mediated by the IAEA Department of Technical Cooperation will be held to supervise the project's progress as well as compliance with global safety guidelines and frameworks;

    c. Sessions mediated by the IAEA Department of Technical Cooperation will be held to supervise the project's progress as well as compliance with global safety guidelines and frameworks;

8. *Promotes* the implementation of regulatory provisions in project countries that are not members to the Agency or partied to the safeguard agreements to ensure the safe application of nuclear technology programs within states receiving aid from the NDPPIS by the Division of Programme Support and Cooperation whose responsibilities include:

    a. Collaborating with governmental bodies of each project state to provide statistical information on the advancement of nuclear technologies under the NDPPIS;

    b. Making recommendations for appropriate implementations and uses of nuclear technologies within each project state, suitable to each country's needs and weaknesses;

    c. Creation of objectives regarding the protection of individuals, groups, and environments from the possible dangers of nuclear activities;

9. *Advises* the creation of a resource allocation program that provides nations with the necessary material needs for the development of nuclear activities for third parties to invest and direct nuclear and radioactive materials, or resources for nuclear infrastructure for which:

    a. The Division of Programme Support and Coordination of the IAEA will manage the allocation of resources;

    b. The funding for administrative and management costs will come from donations made by member states, as well as projects organized by the IAEA;

    c. The division will also oversee the flow of capital goods that are being invested in the technical cooperation and partnership process between parties;

    d. The Agency will not directly contribute in the form of donations to this program;

    e. The Division will engage in a tracking process of materials and goods through a set of bi-monthly reports:

        i. The reports will be managed by the Nuclear Safety and Security Department;
        ii. Non-compliance with the IAEA standards and the conditions of the investing nation will cause the withdrawal of investments and cease of operations;

f. Third-party investors will abide by the IAEA standards for safety while allocating resources through the Agency;

10. *Supports* the establishment of an assessment team working under the IAEA Department of Technical Cooperation to examine the current nuclear capabilities of each state proposing a project under the NDPPIS for which:

    a. The assessment team will cooperate with third parties that are investing in the NDPPIS by providing information on whether a project state can maintain nuclear technology for a long term following the end date of a project;

    b. The assessment team will keep the IAEA, the third parties, and the project states informed on the progress and estimated date of completion of a technical cooperation project;

    c. The assessment team will also make recommendations to the third-party investors as to which nuclear technologies are best suitable within a project state;

11. *Requires* the project states not partied to the agreements to allow the IAEA to provide security and proper safety frameworks over nuclear materials given by third parties to avoid nuclear leakages or accidents in the development of the technology which will increase the chances of success during technical cooperation projects with the following recommendations:

    a. Project states should allow the IAEA to implement legal instruments regarding the peaceful uses of nuclear technology that are stated under the:

        i. Safeguard Agreements;
        ii. *Convention on Physical Protection of Nuclear Materials*;
        iii. *Code of Conduct on the Safety and Security of Radioactive Sources*;

    b. The IAEA may assist project states at the discretion of the Board of Directors in transportation and storing of nuclear and radioactive materials which:

        i. Is based on the assessment team's evaluation of a state's weaknesses relating to nuclear infrastructure;
        ii. Consists of an examination period of 30 days will be in place to ensure that all materials arrived correctly and no further assistance is necessary;

    c. A risk evaluation will be done by the assessment team to ensure that the nuclear materials used in project states cannot be utilized in dangerous means;

12. *Emphasizes* that all physical facilities needed for effective implementation of nuclear technology are to be established in compliance with the codes, standards and regulations or by using the best engineering and organizational practices as best expressed by the goals of the International Nuclear Safety Centre that look to achieve capacity-building through technical cooperation in the field of nuclear technology with objectives to:

    a. Award construction permits and during the construction and commissioning, the IAEA agency must review and approve the plans set up by the project sponsor to establish these facilities;

    b. Advance important elements of infrastructure, such as physical facilities or site locations, must take into account required characteristics such as:

        i. Appropriate geological and seismic conditions;
        ii. Access to adequate cooling water;
        iii. Proper location on the grid;

c. Use nuclear technology for other purposes, such as medicine or agriculture, have more specific requirements such as:

    i. Laboratories that meet regulations;
    ii. The required nuclear scientists and engineers;
    iii. Personnel qualified to handle radioactive materials;
    iv. Equipment that meet the current safety standards;

13. *Recommends* the IAEA Board of Governors to prioritize the Technical Cooperation Funds (TCF) for proposed projects under the following qualifiers so that:

    a. A project state must have little to no experience with nuclear technologies and activities, for which the assessment team will step in and evaluate the qualifier;

    b. A project state will have poor state infrastructure that lacks the conditions in which nuclear materials can be transported and stored safely;

14. *Resolves* that funds from the TCF can be included in a multilateral program package alongside third parties to ensure an ample amount is provided for projects that advance a countries nuclear and radioactive capabilities which complement the goals of the SDGs, particularly goals 6, 7, and 9, whereby:

    a. The assessment team reports the evaluation of project proposals by states to the IAEA Board of Governors;

    b. The IAEA Board of Governors will be responsible for the approval of project prioritization regarding the TCF based on the evaluation from the evaluation team.