

Report to the The General Assembly on Nuclear Energy and the Multilateral Approaches to the Fuel Cycle

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Executive Summary

This complex issue requires our cautious consideration to ensure all of the associated technical, legal, economic, and political aspects are thoroughly addressed and taken into account before any decisions are made. As a body we encourage any future decision in this regard be taken by consensus, taking into account the views and concerns of all Member States.

 Following the impact of the global energy crisis throughout the world, this body recognizes nuclear power as an emerging primary energy resource. Because some claim that the rising demand for nuclear energy could also bring a proliferation risk any proposal should not hinder any states' ability to develop all aspects of nuclear science and technologies for peaceful purposes.

Recommendations to create an international fuel bank and database overseeing all nuclear-related transactions in an effort to guarantee a nuclear energy supply to all Member States were made. The Body also discussed the criterion that governs the choice of permanent members must be reevaluated to more accurately represent the needs and interests of developing states. Discussions included but were not limited to the pursuit of equality and fairness, that there should be an increase in the number of permanent members.

The issue of safe transportation of radioactive material was also considered. The IAEA has maintained a good record of civilian safety in the past and we thus believe these standards must continue to be endorsed. Furthermore, in order to ensure the maintenance of these safety standards, the creation of a transportation system under IAEA control and financing was proposed as a discussion topic.

93 Chapter I 94 95 A. Draft resolutions for adoption by the General Assembly 96 The International Atomic Energy Agency, 97 Affirming the right of all states under Article IV of the Nuclear Non-Proliferation Treaty 98 to possess nuclear technology for peaceful energy and scientific purposes, 99 100 Noting the inherent instability associated with the present state of the global nuclear fuel 101 cycle, 102 103 Further Noting the disproportionate distribution of nuclear fissile material for the 104 purposes of fuel for peaceful nuclear energy as well as expertise in the application of 105 peaceful nuclear technology, 106 Reaffirming the Universal Extraction Process (UNEX), as a safer and cheaper method of 107 108 reprocessing nuclear waste, 109 110 *Recognizing* the increased need for the furthering of regulation concerning the storage of 111 spent nuclear fuel to increase regional and global security and environmental 112 accountability, 113 114 Concerned by states unable to obtain peaceful nuclear technology due to lack of fair and 115 equitable access to nuclear fuel, 116 117 Further concerned that Member States possessing peaceful nuclear technology oppose 118 other Member States pursuing their legal right to obtain peaceful nuclear technology as 119 guaranteed in Article IV of the Nuclear Non-Proliferation Treaty, 121 1. Urges Member States who have not done so, to adopt and ratify the Nuclear Non-122 *Proliferation Treaty;* 123 124 2. Directs Member States to continue the peaceful acquisition of nuclear fuel, technology 125 and expertise in accordance with the Nuclear Non-Proliferation Treaty under the 126 supervision of the International Atomic Energy Agency; 127 128 3. Applauds the purpose behind the efforts of the International Atomic Energy Agency to 129 monitor states utilizing nuclear technology; 130 131 4. Encourages advanced nuclear member states to invest in Member States pursuing 132 nuclear technology for the establishment of local environmentally sustainable nuclear 133 power regimes for the safe disposal of nuclear waste; 134

5. Establishes an ad-hoc subcommittee within the IAEA to discuss and establish a safe,

fair, and equitable method for the secure and environmentally accountable containment

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137 138 139	of nuclear waste either between or within states that does not exploit the wealth gap between developed and developing member states;	
140 141 142 143	6. Calls for a summit to be held concerning the most appropriate method for fair and equitable storage and distribution of spent nuclear fuels known as the "back end" of the nuclear fuel cycle;	
144 145 146 147	7. Designates the International Atomic Energy Agency to establish criteria for access to nuclear technology fuel, and expertise for peaceful purposes including but not limited to: (a.) The freedom from political stipulations for states subject to the Nuclear Non-Proliferation Treaty;	
148 149	(b.) The sale at fair market prices equitable to all member states subject to the Nuclear Non-Proliferation Treaty;	
150 151	(c.) The freedom to determine the source of nuclear fuel, technology and expertise and how said resources will be obtained;	
	Passed, Yes: 34 / No: 19 / Abstain: 11	
	The International Atomic Energy Agency,	
152 153 154	<i>Recognizing</i> the continued globalization of the international political community has caused a shift towards the continued sharing of information, technology, and other aspects of fuel processing,	
155 156 157	Believing the multilateral aspects of the fuel process have become mutually beneficial to all sovereign states involved,	
158 159 160 161	Accepting that the continued globalization of nuclear technology requires increased cooperation between states for secure transport and storage of nuclear waste,	
162 163 164 165	<i>Understanding</i> the importance of continued multilateral cooperation until self-sustainability is a more feasible option, which is the overall goal of the IAEA and the Nuclear Non-Proliferation Treaty (NPT),	
166 167 168	Convinced that education is key to the implementation of any multilateral endeavor,	
169 170 171	Applauding the efforts and findings of the "Expert Group Report on the Multilateral Approaches to the Nuclear Fuel Cycle,"	
172 173 174	Observing the potential risks that nuclear waste storage could place on the infrastructure and environment of underdeveloped and developing states,	
175 176	Recognizing that spent uranium can be reprocessed into a usable nuclear fuel,	
177	Further recognizing that the reprocessed nuclear fuel can be enriched into	

178 weapons grade uranium, 179 180 1. Recommends the appropriate implementation of the recommendations of the 181 "Expert Group Report on the Multilateral Approaches to the Nuclear Fuel Cycle;" 182 183 2. Calls upon states with nuclear capabilities to implement measures to reduce 184 proliferation at the back end of the fuel cycle through means that include but are 185 not limited to: 186 (a) Using fissionable materials such as thorium, which is much more abundant and 187 efficient and that present less of a proliferation risk in the nuclear fuel cycle; 188 (b) Encouraging the growth of sustainable energy technologies such as wind and 189 solar power recognizing the limited amount of fissionable material globally 190 available; 191 192 3. *Invites* voluntary conversion of national reprocessing facilities into 193 multinational facilities through the brokering of an international consortium under IAEA 194 auspices: 195 196 4. Requests the Security Council and the IAEA make recommendation regarding 197 the security of the above; 198 199 5. *Endorses* the coordination of safe and relevant transfer of waste storage 200 technology with respect to relevant recommendations of the International Project on 201 Innovative Nuclear Reactors and Fuel Cycles (INPRO); 202 203 6. Affirms that safe storage of nuclear waste should be the responsibility of 204 individual states and that relevant UN organizations such as the United Nations 205 Environmental Program (UNEP) continue to provide appropriate data to assure the safety 206 of storage; 207 208 7. Expresses its hope that an international exchange of ideas and proper techniques 209 in regards to nuclear reprocessing as well as the transportation thereof will occur; 210 211 8. Welcomes training programs that emphasize the necessity of proper storage of 212 nuclear fuel and waste, taking into account the level of waste in each individual case. Passed, Yes: 36 / No: 22 / Abstain: 19 213 **B.** Other recommendations to the General Assembly 214 215 This complex issue requires our cautious consideration to ensure all of the associated 216 technical, legal, economic, and political aspects are thoroughly addressed and taken into 217 account before any decisions are made. Any future decision in this regard has to be taken 218 by consensus, taking into account the views and concerns of all Member States.

The environment must be considered when dealing with the issues of nuclear energy. The

environment will be directly affected by the location of the nuclear material.

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This body recognizes that not all countries have natural supplies of Uranium and other 222 nuclear materials; the nuclear materials would have to be procured from the countries that have them available. We must insist, however, that national sovereignty be protected at 224 all costs. Countries that supply the nuclear materials are just as important as the countries that process, transport, and store the nuclear materials.

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We recommend creating an international fuel bank and database overseeing all nuclearrelated transactions in an effort to guarantee a nuclear energy supply to all Member States. The body recognizes storage of such a large amount of material containing a propensity for great profit as well as destructive ability could potentially make the storage site a target for hostile action of many varying degrees. The body recommends steps be taken to address this concern. In order to ensure the maintenance of these safety standards, we recommend the creation of a transportation system. In order to ensure that there is no inflation of prices by states who provide uranium that goes beyond the actual demand, we suggest some measure for ensuring the free trade of uranium.

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Chapter II

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A. Deliberations

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Following the impact of the global energy crisis throughout the world nuclear power is emerging as one of the primary energy resources. Because some claim that the rising demand for nuclear energy could also bring a proliferation risk any proposal should not hinder any states' ability to develop all aspects of nuclear science and technologies for peaceful purposes. This body feels that this complex issue requires our cautious consideration to ensure all of the associated technical, legal, economic, and political aspects are thoroughly addressed and taken into account before any decisions are made. Any future decision in this regard has to be taken by consensus, taking into account the views and concerns of all Member States.

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This Body wishes to point out the initiative by the Gulf Cooperation Council in 2007 that would create the Uranium Enrichment Consortium (UEC), which was an effort by Middle Eastern countries to create neutral nuclear facilities in a neutral state. In this case, the state was the Russian Federation. This will guarantee that all members of the UEC can get access to nuclear fuel, but not the enrichment technology that could be used to create nuclear weapons. We recommend the IAEA should promote the idea because it will create regional consensus and mitigate the risks that come from nuclear energy. This body would also like to add that these optional regional organizations would support transparency and further development in less developed/interested states. For these reasons many states would be more inclined to join in the regional organizations. These organizations would report to the IAEA.

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With the interests of general concerns of developing states in mind when it comes to nuclear power there is concern in regards to waste disposal within developing states who simply have no funds to construct a site within which to store the refuse. Our second point is that we believe that we, being a third world state, will receive no support from the international community to fund research for nuclear power. This body is concerned that with the increase in atomic energy research that the developing states will be greatly affected on the back end of the cycle.

This body has long supported the Nuclear Non-proliferation Treaty (NPT). As a result of that commitment to the NPT, the IAEA strongly emphasizes clauses two and three of article three which call upon states with well developed nuclear facilities not to provide nuclear material to states that show contempt for international law and treaties such as the NPT. IAEA strongly discourages the use of nuclear energy to create weapons. Furthermore, the IAEA strongly emphasizes the protection of existent enriched uranium and other radioactive materials so that those materials cannot be used for the creation of further nuclear weapons. the IAEA also stresses that nuclear waste be placed in secure locations where said material cannot cause harm to the environment, animal life, and humanity.

The body is in support of the Multilateral Enrichment Sanctuary Project. This project would give the IAEA authority over a special territory in which it would exercise sovereign responsibilities, in particular, in the areas of export control and nuclear regulatory oversight. Within this territory a group of interested Member States and private companies could construct and commercially operate a uranium enrichment plant. The plant would operate on the market as an additional supplier of enriched uranium. However, it would not fall under the control of an individual state and would thus not be subject to outside political influence. In addition, it would be an optional project, and would seek to broaden the availability of nuclear energy to Member States.

India and Nicaragua remain skeptical that a regional fuel bank is an effective method to ensure that all states have access to nuclear technology for peaceful purposes. Adding non-national bureaucratic oversight to the process of exchange of nuclear technology will only hinder the flow of nuclear material and deprive developing states of nuclear technology that they desperately need for research and energy. Furthermore the creation of regional fuel banks will further aggravate regional tensions, not lessen them. Controversy over how these fuel banks will be run could become a flash point in already stressed regions. Instead of an international database India an Nicaragua instead strongly encourage all states to create their own thorough import-export monitoring system for the purpose of overseeing the exchange of nuclear material and nuclear technology. Do to the importance and controversy revolving around nuclear technology India fears that fuel banks will act as a hindrance towards allowing developing states' access to nuclear energy.

Kazakhstan, currently the world's largest producer of uranium, has proposed to the IAEA that a second be built within Kazakhstan itself. This has enormous potential not only for Kazakhstan, but for all members of the IAEA, which would have access to this large supply of fuel.

The African block is deeply concerned with the under representation of developing states in the IAEA. Furthermore, they are deeply distressed by the current state of affairs in the

Board of Governors. We believe that the criterion that governs the choice of permanent members must be reevaluated to more accurately represent the needs and interests of developing States. We also believe that in the pursuit of equality and fairness, that there should be an increase in the number of permanent members.

This body believes that the German Multilateral Enrichment Sanctuary Project (MESP) is the most practical, tentative step toward placing an existing national enrichment facility in a nuclear weapon state under some form of multilateral control. We recommend the MESP be taken under consideration by the General Assembly so that a future multilateral fuel cycle facility can be created in an international territory under IAEA jurisdiction. We recommend an already established facility would be better to fulfill this purpose. The IAEA will be in charge of controlling the materials whereas the state formerly in control of the territory will cede to the administration and certain sovereign rights of that area to the IAEA.

The body favors the fostering of economic relations between states in the trade of nuclear materials. It is the position of Azerbaijan that such an economic system would favor development of traditionally poorer parts of the world, preserve state sovereignty as well as the right of any States to pursue a peaceful nuclear program and allow for increased transparency.

This economic system involves transactions between states, for the transfer of nuclear material, to be done on an open market system. Transactions would take place between national banks of states thereby allowing the cataloging of transaction data between states concerning the trade of nuclear materials. By compounding this data, and comparing it with IAEA inspection data, we can ensure that any traded nuclear material is not being diverted, while allowing for economic relations between states to prosper.

The issue of safe transportation of radioactive material is an important one to consider. The IAEA has maintained a good record of civilian safety in the past and we thus believe these standards must continue to be endorsed. As the facilities will be under IAEA control, these regulations will be maintained, but we do acknowledge the concerns of smaller states. We encourage improving communication to increase security, using innovative ways to implement new technologies, and general cooperation between all parties involved.

This body suggests that fuel banks would provide secure transportation to different areas of the international community. These would include Southeast Asia, Middle East/Africa, the Americas, and Eurasia. The storage site, preferably underground for security purposes, will be developed in order to facilitate a means of transfer, testing, and long term storage for nuclear fuel materials.

Luxembourg disagrees with the use of multiple fuel banks. Instead, Luxembourg expresses the need for multiple transport sites. However, there should only be one fuel bank, administered by the IAEA, for storage of enriched uranium and nuclear wastes. The transport sites serve as checking centers to ensure that traded enriched uranium is not

enriched above 20%, and that the uranium will be reported for being traded between states. The fuel bank, in contrast, will serve as a pure storage facility.

Iran would like to ensure that all states have the right to the development of nuclear weapons as a prerogative that has to be pursued to the fullest extent. Iran completely rejects the notion that some states pursuing the development of nuclear technology should be hindered or subject to the inspection of other states. Iran respects every states' sovereignty in all aspects of energy development in relation to unhindered development of nuclear technology.

This body recognizes that there is no ideal method for permanent disposal of nuclear material. We suggest that the goals dealing with waste split into two categories, short term and long-term goals. In the short term we propose that the back end products be stored in secured underground locations; this will prevent exposure above the radiation levels deemed acceptable under current IAEA standards. Our long—term goals include continued research on reprocessing and reintroducing nuclear material into the fuel cycle. This body is completely supportive of research and implementation of new technology that will create a more ideal solution for nuclear waste.

The environment must be considered when dealing with the issues of nuclear energy. The environment will be directly affected by the location of stored nuclear materials. A lack of diligence regarding the environmental aspects could be devastating for the ecosystem, water and food supplies, along with other areas; the effect of radiation is not new to the international community. Therefore, the IAEA must insist that every measure be taken to secure the safety of the environment, and also ensure proper disposal of nuclear waste.

The Czech Republic and Luxembourg believe that resolution IAEA/II/5 should be reevaluated with greater scrutiny. We believe "Non Aligned Movement and other states" infers that the IAEA is endorsing NAM over another Member States. The addition of "other states" makes any changes irrelevant in our opinion. Because of the inclusive nature of the language used, any changes that are intended to alter the representation structure would in fact affect the body as a whole.

B. Recommendations for action by the IAEA

The IAEA has an important role to play in assisting all Member States to safely and effectively pursue nuclear energy programs. This report would like to see an increased effort by the organization to support these programs as well as to encourage the peaceful development of nuclear energy through the Technical Cooperation Program (TCP). As more states seek to include nuclear energy as a component of a sustainable means of domestic energy production the imperative for such cooperative efforts will only continue to grow. As such the need has arisen for this program to receive increased attention in the IAEA budget characterized by both a marked increase in available resources and a shift in priority from contributions on a voluntary basis to permanent and mandatory inclusion in the IAEA budget process. States with advanced capabilities should endeavor to work with states developing nuclear programs to lend their information and expertise through

forms of direct consultation and technical exchanges. These measures will work to promote safety and security among burgeoning nuclear powers. Such cooperation will also promote trust and good faith between developed nuclear powers and their emerging nuclear states. This is not meant to inhibit states' rights to individual development of nuclear technology. States looking for financial and/or educational assistance may still seek help from the IAEA. However, we encourage states to pursue regional cooperatives.

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Additionally, these centers will work to ensure that beneficiaries have developed sufficient capability and infrastructure to handle nuclear material. These facilities will 414 work under the supervision of the IAEA. Member States who receive the benefit of such facilities will be asked voluntarily accept full compliance of the IAEA safeguards and the additional protocols as a condition of their inclusion in regional cooperative initiatives. The operation and management of facilities will be divided among each of the beneficiary states. Assurances of supply will be maintained for all states regardless of individual 419 political disputes. In addition, this report looks to establish a central international fuel 420 storage bank for raw uranium to be supervised by the IAEA. States rich in uranium will be able to sell raw materials to this bank, and regions lacking natural resources will be able to purchase raw uranium from this bank, to be enriched in their own regional center. A goal of this system is to decrease the amount of transportation between Member States. 424 IAEA regulation of this proposed bank is necessary to prevent the monopolization of uranium trade. Possible storage methods for spent nuclear material will include incineration of low-level radioactive waste, dry cask storage for moderate-level radioactive waste, both of which Sweden has already implemented. Research of reprocessing methods will be a priority, and the controversial topic of deep geological storage of high-level radioactive waste will be open to examination by the Board of 430 Governors, in light of further research. The purpose of these centers is stressed in cooperation. It is the goal of this report to have three different facilities in each region: one to enrich resources, one to handle waste, and one resource storage base.

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This body suggests provide a framework for the safe transportation of enriched uranium and spent nuclear materials between Member States. It is necessary that Member States meet the requirements stated in this framework in order to participate in regional trade. In addition, the body recommends IAEA provide financial assistance to Member States.

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In the interest of maintaining international peace and security, we suggest that a criterion be established for the construction of regional facilities in states that have exhibited and enduring political stability and which are in good standing among countries within the specific region to be considered by the international community at large. Knowing that not all Member States possess sufficient capabilities to handle these dangerous substances due attention must be given to ensuring that all participants in regional centers, particularly the host state of such a center meets minimum standards of domestic stability and security. Areas of concern include those states which are experiencing large scale internal conflict or recent human rights transgressions that are considered particularly egregious.

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An important question lies in how these regional centers are to be effective in

451 accomplishing the goals stated above. It is this report's opinion that the Board of 452 Governors should ultimately decide the location of these regional centers. This report 453 seeks to accomplish this end goal by certain processes, the first is an IAEA commission to 454 determine suitable geopolitical boundaries to define a jurisdiction of a regional center. 455 These regions, determined by said commission, would then propose a voluntary host state 456 within each region for a location of several regional centers, subject to the approval of the 457 Board of Governors. Secondly, each State seeking nuclear energy has the right to do so 458 and will also apply to the discretion of the Board of Governors for candidacy to develop a 459 plant to produce electricity. This measure is intended to begin the process of IAEA 460 involvement with future states utilizing nuclear energy. States will work with the 461 voluntary centers to transport resources from center to plant and back again, and to and 462 from the appropriate centers. While these facilities are being established, this report

advocates that IAEA officials are present to guide the voluntary host states of these

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centers.

466 The IAEA would like to restate the finding of the Report of the Expert Group: 467 "Multilateral Approaches to the Nuclear Fuel Cycle" commissioned by the IAEA in 2005. 468 These approaches will address front-end and back-end nuclear facilities, fuel 469 reprocessing, disposal and storage of spent fuel and combinations thereof. To summarize 470 there were five key points this Expert Group was able to reach a consensus on from 26 471 Member States they include: Reinforcing existing commercial market mechanisms on a 472 case-by-case basis through long-term contracts and transparent supplier's arrangements 473 with government backing. Examples include fuel leasing, fuel take-back offers, etc. 474 Creating additional international fuel bank and database overseeing all nuclear-related 475 transactions in an effort to guarantee nuclear energy supply to all Member States. This is 476 to be administered by the IAEA which will guarantee confidentiality of any state specific 477 information from other Member States. Promoting conversion of existing facilities to 478 multilateral nuclear approaches (MNA) and pursuing them as confidence-building 479 measures, with the participation of all Member States, NPT or otherwise Creating MNAs 480 for new facilities based on joint ownership, drawing rights or co-fuel reprocessing, 481 disposal and storage of spent fuel (and combinations thereof) like integrated nuclear 482 power parks. Stronger multilateral arrangements by region or continent as opposed to an

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Furthermore, in order to ensure the maintenance of these safety standards, we propose the creation of a transportation system under IAEA control and financing. This system would both ensure safety protocols and allow the participation of states who would otherwise be excluded due to the inability to afford transportation.

individual state basis.

Resolutions passed by the International Atomic Energy Agency

The International Atomic Energy Agency,

	The International Atomic Energy Agency,		
489 490	Affirming a commitment to proper, peaceful nuclear energy proliferation and the goals of the IAEA,		
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492	Endorsing the partnership between the IAEA and the Non Aligned Movement in		
493	regards to achieving the Millennium Development Goals, peaceful nuclear energy		
494	applications, and sustainable economic development globally,		
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496	Bearing in mind an increased possibility of nuclear energy proliferation stemming		
497	from renewed interest in peaceful nuclear energy by states,		
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499	Recalling that the IAEA's safeguards system is vital to peaceful nuclear energy		
500	proliferation as it is the only internationally recognized instrument capable of determining		
501	the nature of a state's nuclear program and the possible diversion of nuclear material,		
502	declared and undeclared,		
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504	Emphasizing the importance of proper nuclear energy development for states		
505	regarding sustainable economic development and meeting the standards required in the		
506	Millennium Development Goals,		
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508	Alarmed by the under-representation of Non Aligned Movement member states		
509	and other states on the International Atomic Energy Agency's Board of Governors,		
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511	Further Alarmed by the resulting negative effects on the Non Aligned Movement		
512	member states and the world's ability to gain equal access to peaceful nuclear energy		
513	development,		
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515	1. Affirms the extremely important role the IAEA has in assisting Non Aligned		
516	Movement member states, other states, nuclear weapon states and non nuclear weapons		
517	states in the peaceful applications of nuclear energy;		
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519	2. Urges the Board of Governors to incorporate factors such as population levels		
520	and participation of States and states affiliated with the Non Aligned Movement within		
521	the International Atomic Energy Agency;		
522	2. Duran areas the IAEA improped the manufactor of goods excitable on the Doord of		
523	3. <i>Proposes</i> the IAEA increase the number of seats available on the Board of		
524	Governors to more accurately represent the interests of the Non Aligned Movement and		
525 526	other states;		
527	4. <i>Encourages</i> the IAEA to further research methodologies for the safe storage,		
52 <i>1</i> 528			
528 529	disposal and reprocessing of spent nuclear fuel. Passed, Yes: 41 / No: 17 / Abstain: 6		
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531 Chapter IV

The body adopted this report by consensus to be considered by the General Assembly.