



CHAPTER EIGHT

INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA)

Along with simulating the General Assembly Plenary and its First, Second, Third and Sixth Committee, AMUN will also be simulating the International Atomic Energy Agency (IAEA). IAEA will meet all four days of the Conference, and will report on its findings to the Combined General Assembly Plenary on Tuesday afternoon. IAEA's membership is open to all member-states, and as such, participation is open to one member from each delegation represented at the Conference. Requests for a second seat on this simulation should be directed to the AMUN Executive Office.

Purview of this Simulation

The IAEA was created in 1957 in response to the deep fears and expectations resulting from the discovery of nuclear energy. The IAEA Statute, which 81 nations unanimously approved in October 1956, outlines the three pillars of the Agency's work: nuclear

verification and security, safety and technology transfer. During the AMUN 2010 Conference, the simulation of the International Atomic Energy Agency will be a special session. For the purposes of this simulation, all UN Member States will be considered to have a seat in the special session. In order to facilitate a simulation in four days, the special session will focus on two issues: Nuclear Power & Iran and Nuclear Energy and Multilateral Approaches to the Fuel Cycle. The Assembly may, at their discretion, create either reports or resolutions to cover these issues. The IAEA will also present a final summary report on their work, including their resolution/reports, to the GA Plenary on the last afternoon session of the Conference. It is also possible, based on the results of the discussion, that a briefing to the Security Council may be necessary.

Website: <http://www.iaea.org/>

NUCLEAR POWER AND IRAN

Iran signed the Nuclear Non-Proliferation Treaty (NPT) on the day it was opened for signature, 1 July 1968, and ratified it on 2 February 1970. The Pahlavi regime, in power at the time, enjoyed an extremely cordial relationship with the West. The United States had already begun aiding the development of Iran's civilian nuclear operations in 1957 as a part of its "Atoms for Peace" program. The Shah continued this nuclear program until the Iranian Revolution of 1979, when the new Iranian regime experienced resistance in obtaining nuclear technology from states who were capable of providing it. Few nations were willing to provide Iran with substantial materials or data concerning nuclear development - largely because of US pressure - until an Iran-Russia cooperation pact concerning the development of peaceful nuclear activities was initiated in July of 1989. Significant nuclear cooperation from other states did not follow, however.

The current disagreement between Iran and the IAEA began in 2003 when the Board of Governors issued report GOV/2003/40, reporting that Iran had breached its Safeguards Agreement by not reporting significant nuclear development activity occurring since 1987 to the IAEA. Regardless of whether Iran's intentions were peaceful or military in nature, and despite Iran's subsequent and substantial cooperation with the IAEA to answer outstanding questions regarding its nuclear program, the withholding of this information until 2003 was still a clear violation of its Safeguards Agreement. While the IAEA has found that no declared nuclear material in Iran has been diverted for military purposes, Iran's history of not reporting nuclear activity is a major source of many nations' distrust of its nuclear intentions today.

These suspicions of Iran's intentions by other Member States are mirrored by Iran's distrust of others' intentions towards its national security. Though the regime currently fears that domestic dissident movements are being aided by foreign governments, the Islamic Republic of Iran has been offered minimal international assistance towards its nuclear aspirations since the 1980s. The Iranian government argues that because it was denied access to peaceful nuclear technology when it initially tried to acquire the materials in a public manner, Iran was forced to work through alternative channels. The unwillingness, or inability, of many states to contribute to Iran's nuclear development was most recently demonstrated by the failure of the November 2004 Paris Agreement between Iran and the EU-3

(France, the UK and Germany). The Agreement's general conditions specified that in return for Iran's suspension of its uranium enrichment program, the EU-3 would implement substantial aid to support the nuclear program and security of Iran. The Agreement broke down in August 2005, with both sides alleging the failure was a result of the others' actions. Iran attempted to amend the agreement and proclaimed that it had no intention to permanently suspend its enrichment program. Similarly, Iran claims the EU-3 did not act swiftly to fulfill its obligations to support Iran's nuclear program.

After the breakdown of the Paris Agreement, the Iranian uranium enrichment program was restarted, causing the IAEA Board of Governors to report Iran to the United Nations Security Council in 2006. This was the first instance of the IAEA bringing Iran's nuclear program before the SC. The Security Council's first resolution concerning Iran's nuclear program, S/RES/1696, threatened sanctions if Iran refused to follow the IAEA's recommendations and cease enriching. By then the moderate President Khatami had left office and the more conservative President Ahmadinejad had been elected. Iranian-US diplomatic relations became more strained than at any other point in recent years.

The suspicion that Iran is concealing information regarding its nuclear program still instills distrust among many parties and contributes to the current predicament over Iran's nuclear program. The current, most contentious issue between Iran, and the IAEA and the Security Council is Iran's refusal to cease enriching uranium and constructing nuclear facilities, though these developments are allowed by the NPT. Despite continued verifications that no declared nuclear resources are being diverted for military uses, uncertainty remains as to whether all of Iran's nuclear resources are accounted for. This continued distrust of Iranian intentions has been perpetuated by the recent revelation of the existence of the Qom nuclear site in late 2009. In addition, a New York Times article published on 27 March 2010 which quoted the head of Iran's Atomic Energy Organization, Ali Akbar Salehi, as saying that President Ahmadinejad ordered work to begin soon on two more nuclear plants.

Late last year, Russia expressed interest in developing an arrangement with Iran, wherein low-enriched uranium would be shipped out of Iran in exchange for high-enriched uranium. Iran ultimately rejected the offer. However, in May 2010, a joint declaration issued

by Iran, Brazil, and Turkey detailed a similar diplomatic arrangement for a fuel supply exchange. At the time, the IAEA Director General Yukiya Amano heralded the deal as a confidence-building measure. Iran's subsequent declaration of its intent to continue its enrichment process, however, led the Security Council to demand once again that Iran suspend its enrichment activities. S/RES/1929, adopted in June 2010, imposed additional sanctions against Iran and called upon Iran to cooperate with the demands of both the IAEA Board of Governors and the Security Council.

Much of what determines a state's stance on Iran's nuclear program is whether or not that state accepts Iran's declarations that it only wishes to fulfill its right established by the NPT to develop nuclear technology for peaceful purposes and is not diverting any for military use. In 2003, there was a diplomatic rift over the discovery of highly enriched uranium (HEU) at the Natanz facility, which is indicative of nuclear weaponry. An IAEA report later concluded it to be residual contamination from machinery intended for peaceful purposes imported from Pakistan. Theoretically, if Iran had purchased the equipment through legal channels and the HEU had then been found, the IAEA would have had strong evidence of an Iranian nuclear weapons program; however, because the materials were purchased through the nuclear black market, the presence of the HEU did not necessarily provide indisputable evidence of a weapons program. It is intricate and complicated matters like this that dominate the debate over Iran's nuclear program and create ambiguity for all parties.

Questions to consider from your government's perspective include the following:

- Should the possibility that a nation might develop nuclear weapons be sufficient reason to require it to freeze its nuclear program?
- What kind of trust-building measures can be put in place to link Iran and the rest of the world?
- Are punitive actions needed to bring Iran into compliance? If so, what measures are needed, and how likely are they to succeed?

Bibliography

- Bâli, Asli Ü., "The US and the Iranian Nuclear Impasse," *Middle East Report*, No. 241, Iran: Looking Ahead, Winter 2006, pp. 12-21.
- "Chronology of Iran's Nuclear Programme, 1957-2007," Oxford Research Group, 26 March 2010, online.
- "Citing Iran's Failure to Clarify Nuclear Ambitions, UN Imposes Additional Sanctions," *UN News Centre*, 9 June 2010, online.
- "Iranian Nuclear Programme is 'Special Case,' says Head of UN Agency," *UN News Centre*, 7 June 2010, online.
- "Iran's New Nuclear Proposal Could be a Confidence-Building Measure – Ban," *UN News Centre* 24 May 2010, online.
- Linzer, Dafna, "No Proof Found of Iran Arms Program," *Washington Post*, 23 August 2005.
- Sanger, David E., "Agencies Suspect Iran Is Planning Atomic Sites," *New York Times*, 27 March 2010.
- "Transcripts," *CNN, Fareed Zakaria GPS*, 1 February 2009, online.
- "UN Chief Urges Iran to Desist from Vow to Enrich More Uranium to 20 Percent," *UN News Centre*, 28 May 2010, online.

UN Documents

GOV/2010/28
GOV/2010/10
GOV/2009/74
GOV/2009/55
GOV/2009/35
GOV/2009/8
GOV/2008/4
GOV/2007/58
GOV/2006/64

GOV/2006/15
GOV/2005/87
GOV/2005/67
GOV/2004/83
GOV/2003/81
GOV/2003/40
INFCIRC/796
INFCIRC/795
INFCIRC/793
INFCIRC/786
INFCIRC/779
INFCIRC/761
INFCIRC/749
INFCIRC/711
INFCIRC/628
INFCIRC/140
S/RES/1835 (2008)
S/RES/1803 (2008)
S/RES/1747 (2007)
S/RES/1737 (2007)
S/RES/1696 (2006)

Additional Web Resources

www.iaea.org/NewsCenter/Focus/IaeaIran/ - IAEA & Iran
www.globalpolicy.org/security-council/ - Global Policy: UN Sanctions Against Iran

NUCLEAR ENERGY AND MULTILATERAL APPROACHES TO THE FUEL CYCLE

International cooperation on the nuclear fuel cycle has a long and storied history. From the onset of the nuclear age, the international community has aimed to internationalize the development of peaceful uses of nuclear technology while securing and eliminating nuclear weapons. Recognizing the dangers that nuclear weapons pose and the awe-inspiring potential of nuclear energy, the United States led the charge with the 1946 Baruch Plan, which laid out basic principles of non-proliferation, disarmament, and the exchange of peaceful technology that the 1970 Nuclear Non-Proliferation Treaty (NPT) would later codify. Implementing these concepts, however, proved difficult as states used peaceful technology to develop weapons or illegally acquired weapons technology. Yet others have declined entirely to ratify the NPT, and have invariably developed nuclear weapons.

Multilateralization of the fuel cycle has long been discussed as a way to mitigate the risks associated with the use of nuclear energy. The processes used to produce nuclear fuel for peaceful purposes – enrichment, fuel production, reprocessing, spent fuel storage, and final spent fuel disposal – could also lead to further nuclear proliferation. A multilateral fuel cycle, in theory, necessitates a cooperative effort wherein no single country has complete control over the supply chain processes necessary to produce nuclear fuel.

Since the 1970s, the IAEA has discussed specific proposals for a multilateral nuclear fuel cycle. Proposals fall into two broad categories: front-end and back-end systems. Front-end systems, which focus on the procurement and assurance of a fuel supply, receive the majority of attention. Back-end systems instead focus on the transportation, storage, and disposal of spent nuclear fuel. There are also a limited number of proposals related to the construction of nuclear power facilities themselves, although the advent of successful market-based solutions seems to have lessened focus on this aspect. Most proposals to date focus on only one aspect of the fuel cycle, but a comprehensive plan will need both front-end and back-end solutions.

Early studies by the IAEA focused on the development of regional fuel centers and methods to ensure the adequate disposal of plutonium. More recent proposals included providing backup assurances of supply; establishing regional or IAEA-controlled, low enriched uranium (LEU) reserves; and setting up international uranium enrichment centers. Other front-end possibilities include placing all new enrichment and reprocessing activities exclusively under multilateral control, to be followed by the conversion of all existing facilities from national to multilateral control. Yet another approach would be to “lease” nuclear fuel to states, which would use the fuel and return the waste to a multilateral organization for long-term storage. Despite the plentitude of proposals, the IAEA has not reached consensus on any of them: either non-nuclear states were not confident that they would be adequately provided for, or nuclear states believed that the proposal would not prevent the illicit sale or exchange of nuclear secrets.

In part because of the difficulty of developing comprehensive agreements, the IAEA General Conference established a voluntary program in 2001 to test new ideas on how to best bring together technology holders and users to meet energy needs without compromising nuclear security. In addition to fostering collaboration among its 30 members, The International Project on Innovative Nuclear Reactors and Fuel Cycles (INPRO) also publishes numerous studies on the fuel cycle and innovative technology that can help meet the world’s nuclear needs.

With the increasing focus on diminishing fossil fuel resources and rising electricity needs in developing countries, there as marked resurgence of interest in nuclear power, and the debate over the nuclear fuel cycle has once again become urgent. Developing countries are interested in beginning sustainable nuclear power programs to meet rising demands for energy, and the continued distrust from nuclear countries threatens these efforts.

This resurgence began with former IAEA Director General Mohamed ElBaradei’s 2003 article on peaceful nuclear energy in *The Economist* and culminated in the February 2005 Expert Group Report on the multilateral fuel cycle, which summarized existing proposals and offered targeted suggestions based on the current political will of the international community. Discussion continued during a September 2006 IAEA Special Event on a new framework for the nuclear fuel cycle, which discussed current and potential proposals. Since 2006, at least a dozen, mutually complementary proposals for a multilateral approach to the nuclear fuel cycle have been put forward, many of which build upon plans submitted by IAEA experts over the last 40 years and draw heavily from the Expert Group Report. While developed states have offered strong support for many of the proposals, developing states feel that their needs have not been adequately represented thus far.

In March 2009, donations from Member States met the international financial target necessary to move forward with the proposal to create a multinational fuel bank. In November 2009, the IAEA Board of Governors approved the first international LEU reserve, operated by the Russian Federation under the IAEA’s auspices. This move proved to be controversial and has not been successful in resolving problems facing states. The bloc of developing states continues to allege a double standard, wherein nuclear states have access to all stages of the nuclear fuel cycle but seek to deny comparable access to other states. Consequently, some developing states urge a complete multilateralization of the fuel cycle. Second, the current fuel bank only provides fuel if existing supplies are cut off. It does not expand the fuel supply for states, nor does it include additional safeguards to prevent non-proliferation. Third, the IAEA has still not addressed the back-end of the fuel cycle. As recent U.S. counter-terrorism reports have highlighted, nuclear waste can be a devastating weapon.

The main challenge now is to find a framework which can garner consensus from the international community. Two key elements will need to be successfully addressed: Ensuring that states have adequate access to uranium fuel (low enriched uranium or LEU), nuclear reactors, and spent fuel storage facilities, and ensuring that none of these processes endanger the non-proliferation regime. Member States will need to build off existing complementarities between proposed frameworks and achieve a consensus that addresses these issues.

Questions to consider from your government’s perspective include the following:

- What are the non-proliferation risks associated with the existing multilateral fuel cycle proposals? How can these be mitigated?
- Within the multilateral fuel cycle, what measures will best foster the development of secure nuclear energy in developing countries?
- Which proposals are complementary and can be combined to create a comprehensive strategy? How can the concerns of states on all sides of the issue be resolved?

Bibliography

- Congressional Research Service, “2010 Non-Proliferation Treaty (NPT) Review Conference: Key Issues and Implications,” 3 May 2010, online.
- ElBaradei, Mohamed, “Towards a Safer World,” *The Economist*, 16 October 2003.
- International Atomic Energy Agency, “Chairman’s Report on New Framework for the Utilization of Nuclear Energy in the 21st Century: Assurances of Supply and Non-Proliferation,” 2006, online.
- “Multinational Fuel Bank Proposal Reaches Key Milestone,” *IAEA News Centre*, 6 March 2009, online.
- Müller, Harald, The Weapons of Mass Destruction Commission, “Multilateral Nuclear Fuel-Cycle Arrangements,” 2005, online.
- Rauf, Tariq and Fiona Simpson, “The Nuclear Fuel Cycle: Is It Time for a Multilateral Approach?,” *Arms Control Today*, December 2004, online.
- Rauf, Tariq and Zoryana Vovchok, “Fuel for Thought,” *IAEA Bulletin*, v. 49 no. 2, 2008, online.
- “Report on Possible New Framework for Using Nuclear Energy,” *IAEA News Centre*, 15 June 2007, online.
- Westall, Sylvia, “IAEA Governors Approve First Nuclear Fuel Bank Plan,” *Reuters*, 27 November 2009, online.

UN Documents

- INFCIRC/782
INFCIRC/760
INFCIRC/759
INFCIRC/758
INFCIRC/755
INFCIRC/728
INFCIRC/708
INFCIRC/667
INFCIRC/659
INFCIRC/640
GOV/INF/2006/10
NPT/CONF.2010/50 (NPT Review Conference 2010 Outcome)
Treaty on the Non-Proliferation of Nuclear Weapons
Baruch Plan

Additional Web Resources

- www.iaea.org/NewsCenter/Focus/FuelCycle/ - Multilateral Approaches to the Fuel Cycle
- www.iaea.org/INPRO/ - International Project on Innovative Nuclear Reactors and Fuel Cycles