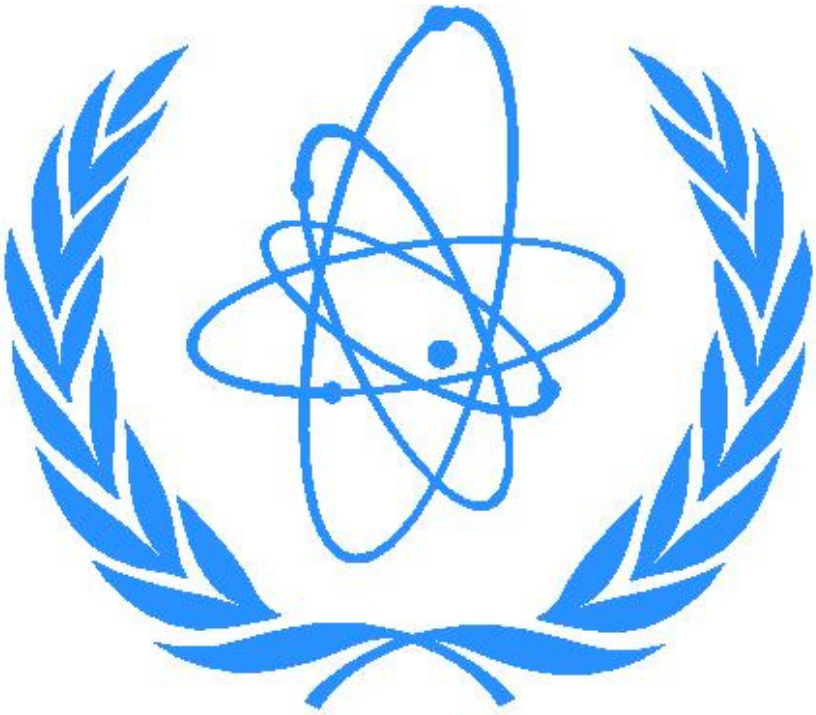
MIT MUNC

# International Atomic Energy Agency (IAEA)

## Background Guide

## On the Question of Elimination of Rogue Nuclear Programs



MIT Model United Nations Conference (MITMUNC) II
February 5-7, 2010
Cambridge, Massachusetts

# 1. Why does this fall under the purview of the IAEA?

The IAEA works for the safe, secure and peaceful uses of nuclear science and technology. Its key roles contribute to international peace and security, and to the World's Millennium Goals for social, economic and environmental development. Three main pillars - or areas of work - underpin the mission:

- Safeguards and Verification
- Safety and Security
- Science and Technology

In order to ensure safety and security, the IAEA must ensure that nations, organizations and agencies use nuclear technologies for peaceful purposes only. Therefore the IAEA must actively engage in the elimination of rogue nuclear programs.

# 2. What constitutes a Rogue Nuclear Program?

For the purposes of this conference any country, agency, organization or group that unlawfully possess nuclear materials (radioactive materials or materials of a fissile or fertile nature) and is not subject to IAEA safeguards or party to the NPT or the CTBT will be deemed to constitute a Rogue Nuclear Program. This definition encompasses Terrorist groups, organizations involved in the illicit trafficking of nuclear material or technologies and nations having covert nuclear programs.

# 3. What can the IAEA do?

- Impose safeguard measures and conduct regular inspections
- Formulate nuclear safety plans and ensure their implementation
- Take whatever measures necessary to prevent the illicit trafficking of nuclear materials
- Negotiating and mediating situations involving Rogue Nuclear Programs
- Report suspicious activities involving nuclear technologies and materials to the United Nations Security Council which can then take concrete measures to address such a concern.
- Use the weight of the opinion of the international community to prevent a nation or group from engaging in non-peaceful activities that involve the use of nuclear materials.

This background guide will elaborate on some of the above measures that the IAEA can take. It is left to the delegate to formulate and suggest other alternative measures that the IAEA could take to promote non proliferation and elimination of Rogue Nuclear Programs.

# 4. Safeguards

Safeguards are activities by which the IAEA can verify that a State is living up to its international commitments not to use nuclear programmes for nuclear-weapons purposes. The global Nuclear Non-Proliferation Treaty (NPT) and other treaties against the spread of nuclear weapons entrust the IAEA as the nuclear inspectorate. Today, the IAEA safeguards nuclear material and activities under agreements with more than 140 States.

Within the world's nuclear non-proliferation regime, the IAEA's safeguards system functions as a confidence-building measure, an early warning mechanism, and the trigger that sets in motion other responses by the international community if and when the need arises.

Over the past decade, IAEA safeguards have been strengthened in key areas. Measures aim to increase the likelihood of detecting a clandestine nuclear weapons programme and to build confidence that States are abiding by their international commitments.

## 4.1. What verification measures are used?

Safeguards are based on assessments of the correctness and completeness of a State's declared nuclear material and nuclear-related activities. Verification measures include on-site inspections, visits, and ongoing monitoring and evaluation. Basically, two sets of measures are carried out in ac-

cordance with the type of safeguards agreements in force with a State.

- One set relates to verifying State reports of declared nuclear material and activities. These measures – authorized under NPT-type comprehensive safeguards agreements - largely are based on nuclear material accountancy, complemented by containment and surveillance techniques, such as tamper-proof seals and cameras that the IAEA installs at facilities.
- Another set adds measures to strengthen the IAEA's inspection capabilities. They include those incorporated in what is known as an "Additional Protocol" – this is a legal document complementing comprehensive safeguards agreements. The measures enable the IAEA not only to verify the non-diversion of declared nuclear material but also to provide assurances as to the absence of undeclared nuclear material and activities in a State.

## 4. 2. What kinds of inspections are done?

The IAEA carries out different types of on-site inspections and visits under comprehensive safeguards agreements.

- Ad hoc inspections typically are made to verify a State´s initial report of nuclear material or reports on changes thereto, and to verify the nuclear material involved in international transfers.
- Routine inspections - the type most frequently used - may be carried out according to a defined schedule or they may be of an unannounced or short-notice character. The Agency´s right to carry out routine inspections under comprehensive safeguards agreements is limited to those locations within a nuclear facility, or other locations containing nuclear material, through which nuclear material is expected to flow (strategic points).
- Special inspections may be carried out in circumstances according to defined procedures. The IAEA may carry out such inspections if it considers that information made available by the State concerned, including explanations from the State and information obtained from routine inspections, is not adequate for the Agency to fulfil its responsibilities under the safeguards agreement.
- Safeguards visits may be made to declared facilities at appropriate times during the lifecycle for verifying the safeguards relevant design information. For example, such visits may be carried out during construction to determine the completeness of the declared design information; during routine facility operations and following maintenance, to confirm that no modification was made that would allow unreported activities to take place; and during a facility decommissioning, to confirm that sensitive equipment was rendered unusable.

## 5. Nuclear Plans

The Agency's activities in nuclear security date back to the 1970s when the Agency began providing ad hoc training courses in physical protection. However, after 11 September 2001, it became clear that much more needed to be done to protect both nuclear and other radioactive material from malicious acts.

In March 2002, the Agency embarked on its first comprehensive programme to combat the risk of nuclear terrorism by assisting States in strengthening their nuclear security. Approved by the IAEA Board of Governors, the first three-year plan described a programme of work encompassing eight Activity Areas. The achievements of the first nuclear security plan were detailed in the Review of the Implementation of the Nuclear Security Plan of Activities: 2002–2005 which was submitted to the Board of Governors and General Conference in September 2005.

In September 2005, the Board of Governors approved a new Nuclear Security Plan covering the period 2006–2009. The new Plan builds upon the accomplishments of the first Plan, reviews the threat picture as it has evolved since the configuration of the priorities and approach set in 2002, and promotes strengthened international instruments to combat nuclear terrorism. Nuclear Security Plan 2006-2009 is currently in effect.

The Nuclear Security Plan 2006–2009 covers three activity areas:

- Needs assessment, analysis and

coordination

- Prevention
- Detection and response

Specifically, the new Plan prioritizes:

- providing advice concerning the implementation of binding and non-binding international instruments;
- development of guidance and documents;
- review and assessment of needs;
- providing support to States for the implementation of nuclear security recommendations; and
- outreach and information exchange through databases, conferences, workshops and fellowships.

Activities originally conceived for safeguards, and nuclear and radiation safety purposes, but which also support nuclear security objectives, are also covered in the Plan.

Furthermore, The Agency has taken steps towards consolidating States' nuclear security needs into integrated plans for nuclear security improvements and assistance. The Agency drafts, in consultation with the hosting State, the Integrated Nuclear Security Support Plan (INSSP), which is tailored to the State's specific needs on the basis of findings and recommendations from the Agency's range of nuclear security missions (INSServ, IPPAS, ITE , ISSAS, RASSIA) and supported and supplemented by other Agency information.

## 6. Prevention of Illicit Trafficking of Nuclear Materials

Established in 1995, the Illicit Trafficking Database (ITDB) is the IAEA´s information system on incidents of illicit trafficking and other unauthorized activities and events involving nuclear and radioactive materials. The ITDB is a unique asset helping participating States and selected international organizations in combating illicit nuclear trafficking and strengthening nuclear security. It is also an essential component of the information platform supporting the implementation of the IAEA's Nuclear Security Plan.

The ITDB facilitates the exchange of authoritative information on incidents among States. As of 1 September 2009, 107 States participate in the ITDB Programme. In some cases, non-participating Member States have provided information to the ITDB.

The scope of the ITDB information is broad. It includes, but is not limited to, incidents involving illegal trade and movement of materials across borders. The scope covers incidents involving unauthorized acquisition (e.g. through theft), supply, possession, use, transfer or disposal of nuclear and other radioactive materials, whether intentionally or unintentionally, with or without crossing international borders. The scope also covers unsuccessful or thwarted acts of the above type, the loss of materials and the discovery of uncontrolled materials.

It is recognized that many States lack the necessary technical capabilities to detect unauthorized movement of nuclear and other radioactive materials. Through nuclear security and technical cooperation programs, the Agency provides States, to a limited extent, with equipment for detection of smuggling of radioactive substances at borders. The IAEA also facilitates provision of such equipment through the bilateral support programs.

## 7. Current Situation

Under the terms of the NPT, which went into effect in 1970, only five countries were allowed to have nuclear weapons. The nuclear powers at that time :the United States, the Soviet Union, Britain, France, and China,agreed not to proliferate weapons technology to other countries and to work toward their own eventual nuclear disarmament. Some 190 countries ratified the treaty. But 36 years later, the world faces a problem. There are now nine nuclear weapon states, four of them outside the NPT. Several other countries that have civilian nuclear programs have the capabilities to develop military nuclear programs simply by channeling existing civilian nuclear technology. Fortunately most of the nations with civilian nuclear programs are stable democracies and have not expressed any desire to use nuclear technology for defense purposes. However the situation with the middle eastern countries and DPRK (Democratic Peoples Republic of Korea) continues to

remain unresolved.

## 7.1. IAEA and DPRK

IAEA inspectors at the Yongbyon nuclear facilities removed safeguards equipment and left the country on 16 April 2009, following the DPRK decision to cease all cooperation with the IAEA. The international community needs the assistance and guidance of the IAEA to address this situation.

## 7.2. IAEA and Iran

Iran continues to argue that it has the right to use nuclear technology for peaceful purposes and the generation of power in the face of looming energy crisis. Segments of the international community however continue to doubt Iran's motives and this was reflected in the recently passed resolution "Implementation of the NPT safeguards agreement and relevant provisions of Security Council resolutions 1737 (2006), 1747 (2007), 1803 (2008) and 1835 (2008) in the Islamic Republic of Iran". This resolution was adopted by the IAEA board of governors on the 27th of November 2009. This resolution can be found on the IAEA website and delegates are recommended and encouraged to read both it and Iran's response which can be found alongside.

## 7.3. Illicit Trafficking of Nuclear Material

From January 1993 to December 2008, a total of 336 incidents involving unauthorized possession and related criminal activities were confirmed to the ITDB. Incidents included in this category involve illegal possession, movement, or attempts to illegally trade in or use nuclear materials or radioactive sources. Fifteen incidents in this category involved high enriched uranium (HEU) and plutonium.

In addition, 421 reported incidents involved the theft or loss of nuclear or other radioactive materials and 724 cases involved other unauthorized activities, such as the unauthorized disposal of radioactive materials or discovery of "orphan sources". In the remaining 81 cases the reported information was not sufficient to determine the category of incident.

Information reported to the ITDB shows a persistent problem with the illicit trafficking in nuclear and other radioactive materials, thefts, losses, and other unauthorized activities.

USA has taken a lead in ensuring the nuclear materials globally are safeguarded. The two organizations listed below have also played a significant role.

- Cooperative Threat Reduction (CTR): The CTR program provides funding to help Russia secure materials that might be used in nuclear or chemical weapons as well as to dismantle weapons of mass destruction and their associated infrastructure in Russia.
- Global Threat Reduction Initiative (GTRI): Expanding on the success of the CTR, the GTRI will expand nuclear weapons and material securing and dismantlement activities to states outside of the former Soviet Union.

# 8. Questions to Consider

Delegates are requested to keep the following things in mind while doing their research and writing position papers:

- What, according to your nation, constitutes a rogue nuclear program?
- Does your nation have a civilian or military nuclear program?
- If your nation has a civilian military program, do your research reactors and power plants comply with IAEA safeguards? Are they subject to routing inspections?
- Does your country deem the inspection of its nuclear facilities as a violation of its sovereignty?
- Has your nation ever been faced by the problem of nuclear terrorism and if yes, what measures were taken to avert such a threat?
- What, in your opinion, can the IAEA do to eliminate nuclear programs?
- Does your nation believe that it is the unalienable right of every nation to have a civilian nuclear program?
- Has your country benefitted from an INSSP?

- Has your nation signed and ratified the CTBT and NPT. If not, why?
- Does your nation deem the threat from rogue nuclear programs to be immediate and worth addressing? If not, why?
- Has your country in any way assisted the IAEA in securing this threat? If yes, in what manner?
- What diplomatic relations does your country have with Iran and DPRK?
- What are your country's views on nuclear disarmament and non-proliferation?

## 9. References and Links

- IAEA and DPRK ( a complete timeline): http://www.iaea.org/NewsCenter/Focus/IaeaDprk/fact_sheet_may2003.shtml
- Nuclear Safety information coordination and analysis: http://www-ns.iaea.org/security/coordination.htm
- IAEA safeguards: http://www.iaea.org/Publications/Factsheets/English/sg_overview.html
- IAEA and Iran: http://www.iaea.org/NewsCenter/Focus/IaeaIran/index.shtml
- Nuclear Terrorism prevention: http://www.iaea.org/NewsCenter/Features/NuclearSecurity/terrorism.html
- Illicit trafficking of nuclear material: http://www-ns.iaea.org/security/itdb.htm
- IAEA nuclear safety plan 2006-2009: http://www-ns.iaea.org/security/nsp_2009.htm