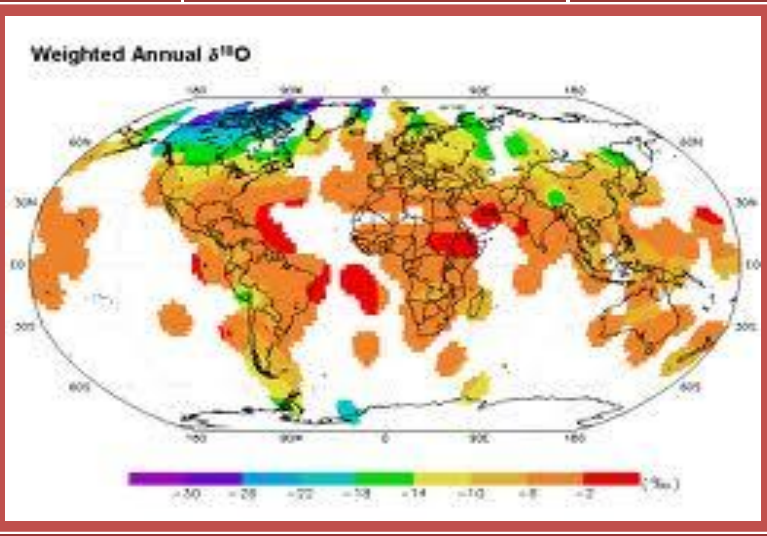
MIT Association of International Relations and Model United Nations

IAEA 2012
Background Guide

2012



IAEA2012@MITMUNC.ORG

Letter from the Dais

Dear Delegates,

As the chair of the IAEA, it is my pleasure to welcome you to MIT for the fourth MIT Model UN Conference. My assistant chair, Abdulhamid Haidar, and I will chair the sessions of the IAEA.

A little bit about us: I (Aditi) am a senior in the Department of Nuclear Science and Engineering. I love the multidisciplinary nature of Nuclear Science and Engineering, the sheer size and complexity of nuclear energy systems and the potential for many new discoveries in an exciting field that, despite being less than a century old, has made enormous progress. Joining me at the dais, Abdulhamid Haidar is a freshman intending to major in Computer Science and Engineering, and minor in either Economics or Management Science. He is very interested in Middle Eastern politics, international relations, and educational reform.

Both of us have participated in and organized several Model UN conferences and we will do our best to make this committee both educational and enjoyable for you. Technology and policy are inextricably intertwined and technological developments are influenced by policy decisions and vice versa. The topics chosen for this committee encompass both technology and policy and we hope that you like them.

You are encouraged to use this background guide as a starting point for your research in preparation for this conference. Active participation in committee discussions will make this an enjoyable experience for you and I encourage you to speak whenever the opportunity presents itself!

I hope that our discussions over the course of three days will result in well-informed and innovative solutions to the problems that we have put before you. We are happy to answer your questions before and during the conference. Please write to us if you would like additional guidance, sources of information or clarification of details or questions in this guide.

We look forward to seeing you in February.

Sincerely,

Aditi Verma

Chair,
International Atomic Energy Agency,
MITMUNC IV 2012
iaea2012@mitmunc.org

Topic 1:

An International Repository for Ultimate Storage of High Level Nuclear Waste

Introduction

Climate change concerns have created growing interest in carbon free energy sources and nuclear power has emerged as a front-runner carbon free energy technology that can meet base-load energy demand. More than 50 countries have approached the IAEA and expressed interest in setting up nuclear power programs. 433 power reactors are in operation, 65 more are under construction and several others are likely to be deployed over the next decade. However, the question of ultimate disposal of nuclear waste remains to be answered in most member states.

In this committee the member states of the IAEA will discuss the possibility of constructing a single international repository or several such repositories for the ultimate storage of high-level waste produced in all the member states. It is expected that considerations of citing cost size technology repository design life proliferation concerns transportation of radioactive waste across international borders and other benefits as well as disadvantages of a centralized repository will be taken into account. The question of the ultimate storage of radioactive waste produced by nuclear reactors has been put off for several decades but particularly in light of recent events in Japan this question now needs to be resolved in order to improve the public acceptance of nuclear power and ensure its continued expansion.

Background

What is Radioactive Waste?

Today's nuclear reactors only utilize a fraction of the uranium loaded as fuel. Therefore, although referred to as 'waste', nuclear waste can serve as a resource, if reprocessed and used to fuel thermal or fast reactors. If you are interested in learning more about how radioactive waste can be used as a fuel, take a look at this video: *http://www.youtube.com/watch?v=AAFWeIp8JT0* in which MIT graduate students talk about a new reactor that they have invented.

Table 1 in the Appendix below explains the classification of radioactive waste.

This committee will concern itself with developing strategies and policy recommendations for HLW.

How Much is There: Nuclear v. Coal?

A typical light water reactor producing 1000 MWe – Pressurized Water Reactor (PWR) or Boiling Water Reactor (BWR) – produces 20 tons of spent fuel per year. A coal plant of the same capacity produces 400,000 tons of fly ash.

All the nuclear power plants in the US put together produce around 2000 tons of spent fuel per year. Coal plants in the US generate about 2,000,000,000 tons of carbon dioxide per year that is released into the atmosphere. [3]
The nuclear energy industry, unlike most other energy industries, takes full responsibility of the waste that it is produces. Unlike for coal and gas industries, the social cost of disposing this waste is included the cost of electricity.

Technologies for Waste Management

Waste management methods can be divided into intermediate storage and long-term disposal methods.

Intermediate storage can be in the form of:
Spent fuel storage pools (see Figure 1 in Appendix)
or Dry cask storage (see Figure 2 in Appendix)

There is international consensus that the geological disposal should be adopted for long-term waste management. Disposal in outer space was considered but has largely been abandoned due to the high risk of a launch failure.

Stable geological formations are needed for the long-term disposal. Some long-term disposal methods are:

- Very Deep borehole disposal
- Disposal in clay
- Disposal in salt formations
- Disposal in ice sheets

This committee will focus on strategies for ultimate geological disposal of nuclear waste and delegates are encouraged to explore the above and possible technology options for waste disposal.

Delegates are asked to consider the following questions:

- Is there consensus in your country for the use of a particular disposal method?
- Has your country invested in researching waste disposal methods?

Country Blocs: National Policies for Waste Management

Waste management decisions at the national level depend on the fuel cycle adopted by a country.

Table 2 in the Appendix outlines national policy decisions on reprocessing and disposal.

If your country is not among the ones listed in this table, we ask you research further and to consider the following questions:

Is your country considering building nuclear reactors?

Does your country have stable geological formations suitable for the permanent disposal of HLW?

All delegates should consider the following questions:

- What is the public opinion of nuclear energy in your country?
- Does your country have stable geological formations suitable for the permanent disposal of HLW?
- What would be the economic advantages or disadvantages of building a HLW repository?
- Would your country be willing to host such a repository?

Committee Goals and Questions

Ethical Considerations

The long lived nature of high level radioactive waste necessitates building waste repositories having very long design lives that could range from several hundred to several thousand years. This brings up the question of security and surveillance.

- Should waste repository be designed such that it requires surveillance and monitoring throughout its life?
- Does mandating surveillance pose a significant burden on future generations?

Another question to consider is the location of the repository. Does making the location of the repository publicly available make it susceptible to attach by terrorists or enemy states? Should the location of the repository remain undisclosed for security reasons? How is building the repository in a secret location likely to have an impact on its public acceptance?

And given that what is today considered as 'waste' could one day be used as fuel for new generations of reactors – should the repository be built such that it is retrievable?

Ownership of the repository and the waste must also be considered: If the repository is built to store high level waste generated in multiple countries – who owns and is responsible for the waste once it has been placed in the repository?

Transporting Nuclear Waste

In the event that an international repository is sited, radioactive waste will need to be transported over long distances and across national borders by land, air or sea.

In proposing a site for a prospective repository, you are asked to consider the question of transportation of nuclear waste:

- Are there regulatory or physical limits on how much waste can be transported at a time?
- What are the safety or security implications of transporting radioactive substances?
- What are the costs of transportation and would these, if taken into account, significantly increase the cost of electricity produced by nuclear power plants?

Conclusions

Several questions that are regarded by both scientists and policy makers as being crucial to citing and building a waste repository are raised in this background guide. Please keep these in mind while writing your position paper. You are expected to respond to as many of these questions as possible (from your country's perspective) in the position paper. A rudimentary knowledge of nuclear waste and its classification as well as technology options for waste disposal is necessary for active participation in committee discussions. Please write to the chairs if you would like guidance on additional readings or sources of information. We hope that as a committee, we will be able to generate innovative policy solutions to the complex question of nuclear waste management!

References

MIT, "The Future of the Nuclear Fuel Cycle"– Waste Management *http://web.mit.edu/mitei/research/studies/documents/nuclear-fuel-cycle/The_Nuclear_Fuel_Cycle-4-6.pdf*

IAEA – Classification of Radioactive Wastes *http://www-pub.iaea.org/mtcd/publications/pdf/pub950e_web.pdf*

WNA Radioactive Waste Management *http://world-nuclear.org/info/inf04.html*

C.W.Forsberg - Waste Management and SNF disposal, Seminar in NSE September 2011 (with thanks to and permission from Dr.Forsberg) *http://web.mit.edu/aditive/Public/Waste_Management_Seminar_in_NSE-28Nov2011.pdf*

Images from *http://www.iaea.org/newscenter/focus/radwaste/*

Waste Management for used fuel and HLW from nuclear power reactors *http://world-nuclear.org/info/inf04.html*

IAEA – developing multinational waste repositories *http://www-pub.iaea.org/MTCD/publications/PDF/te_1413_web.pdf*

Additional Sources of Information and Videos:

Prof.Richard Lester, Mark Massie and Leslie Dewan on Nuclear Energy and the Waste Annihilating Molten Salt Reactor *http://www.youtube.com/watch?v=AAFWeIp8JT0*

Into Eternity: a documentary that explores the ethical issues of nuclear waste management *http://www.youtube.com/watch?v=x2EtAoZDmoI*

Further Readings

IAEA: managing spent fuel and radioactive waste *http://www.iaea.org/newscenter/focus/radwaste/*

http://www-ns.iaea.org/tech-areas/waste-safety/disposable.asp

IAEA safety standards: Geological Disposal of Radioactive Waste
http://www-pub.iaea.org/MTCD/publications/PDF/Pub1231_web.pdf

WNA – Environmental and Ethical Aspects
http://world-nuclear.org/info/Environmental_Ethical_Aspects_inf04ap5.html

Treatment and conditioning of Nuclear Wastes
http://world-nuclear.org/info/inf04ap1.html

Principles of radioactive waste management
http://www-pub.iaea.org/MTCD/publications/PDF/Pub989e_scr.pdf

Progress towards geological disposal, where do we stand
http://www.oecd-nea.org/rwm/reports/1999/progress.pdf

Radioactive waste disposal: An environmental perspective
http://www.epa.gov/rpdweb00/docs/radwaste/

NEI – nuclear waste disposal
http://www.nei.org/keyissues/nuclearwastedisposal/

Materials issues in nuclear waste management
http://www.tms.org/pubs/journals/JOM/0009/Yim-0009.html

NRC- radioactive waste
http://www.nrc.gov/waste.html

WNA – national policies
http://world-nuclear.org/info/inf04ap3.html

WNA – national funding
http://world-nuclear.org/info/inf04ap4.html

Blue Ribbon Commission on Nuclear Waste: Missing opportunity for lasting reform
http://www.heritage.org/research/reports/2011/08/blue-ribbon-commission-on-nuclear-waste-missing-opportunity-for-lasting-reform

BRC on America's nuclear future:
http://brc.gov/

BRC disposal subcommittee report:
http://brc.gov/sites/default/files/documents/draft_disposal_report_06-01-11.pdf

What are spent fuel pools
http://mitnse.com/2011/03/16/a-primer-on-spent-fuel-pools/

MIT Nuclear Fuel Cycle study, waste management:
http://web.mit.edu/mitei/research/studies/documents/nuclear-fuel-cycle/The_Nuclear_Fuel_Cycle-4-6.pdf

Appendix

Very Low-Level Waste	Waste that has very low radiological hazards (1-100 Bq/g) and may be disposed at a facility that does not require a nuclear license. It is primarily generated in large volumes from decommissioning activities. No disposal distinction is made based on waste decay time
Low-Level Waste	Waste with low radioactive content (100-100,000 Bq/g). Wastes with short-lived radionuclides are primarily large volumes of contaminated paper, plastic and scrap metal. Long-lived materials are wastes from mining and milling operations of uranium and other ores that contain naturally occuring radioactive materials. Disposal methods are tailored based on half lives.
Intermediate Level Waste	Waste with a higher radioactive content (100,000-100 MBq/g) than LLW, but whose heat generation does not limit the design of storage or disposal facilities. Waste is generated primarily from operations and maintenances of nuclear facilities. US defined TRU waste is an example of long lived ILW.
High-Level Waste	Waste with a high radioactive content (~10 Billion Bq/g), whose heat generation limits must be accounted when designing of storage or disposal facilities. Waste is mainly SNF and fission-product-containing waste from reprocessing operations that have been immobilized in glass. Disposal requires significant shielding and remote handling operations. Disposal requires a deep geological facility.

* Nuclear Energy Agency: Organization for Economic Co-operation and Development, Nuclear Energy Outlook 2008

Table 1

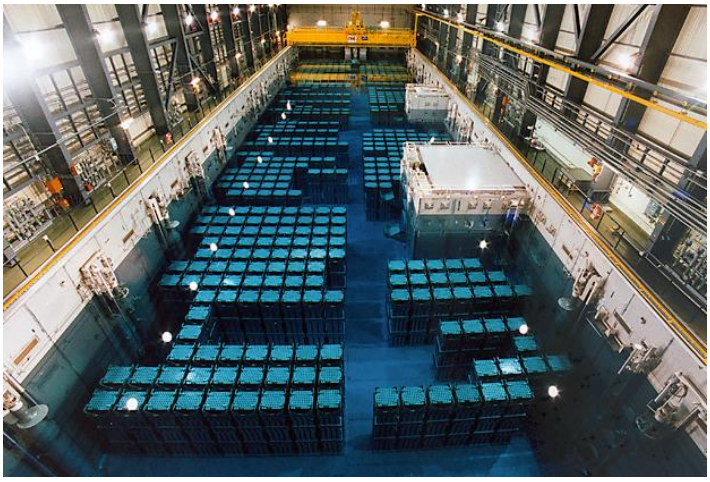


Figure 1: Spent fuel storage pools

Figure 2: Dry cask storage

Country	Policy	Facilities and progress towards final repositories
Belgium	Reprocessing	▸ Central waste storage at Dessel ▸ Underground laboratory established 1984 at Mol ▸ Construction of repository to begin about 2035
Canada	Direct disposal	▸ Nuclear Waste Management Organisation set up 2002 ▸ Deep geological repository confirmed as policy, retrievable ▸ Repository site search from 2009, planned for use 2025
China	Reprocessing	▸ Central used fuel storage at LanZhou ▸ Repository site selection to be completed by 2020 ▸ Underground research laboratory from 2020, disposal from 2050
Finland	Direct disposal	▸ Program start 1983, two used fuel storages in operation ▸ Posiva Oy set up 1995 to implement deep geological disposal ▸ Underground research laboratory Onkalo under construction ▸ Repository planned from this, near Olkiluoto, open in 2020
France	Reprocessing	▸ Underground rock laboratories in clay and granite ▸ Parliamentary confirmation in 2006 of deep geological disposal, containers to be retrievable and policy "reversible" ▸ Bure clay deposit is likely repository site to be licensed 2015, operating 2025
Germany	Reprocessing but moving to direct disposal	▸ Repository planning started 1973 ▸ Used fuel storage at Ahaus and Gorleben salt dome ▸ Geological repository may be operational at Gorleben after 2025
India	Reprocessing	▸ Research on deep geological disposal for HLW
Japan	Reprocessing	▸ Underground laboratory at Mizunami in granite since 1996 ▸ High-level waste storage facility at Rokkasho since 1995 ▸ High-level waste storage approved for Mutsu from 2010 ▸ NUMO set up 2000, site selection for deep geological repository under way to 2025, operation from 2035, retrievable
Russia	Reprocessing	▸ Underground laboratory in granite or gneiss in Krasnoyarsk region from 2015, may evolve into repository ▸ Sites for final repository under investigation on Kola peninsula ▸ Various interim storage facilities in operation

Table 2: Waste Management for used fuel and HLW from nuclear power reactors

Topic 2:
The IAEA's Role in Information Exchange and Knowledge Transfer: Striking a Balance between Transparency and Confidentiality

Background

The International Atomic Energy Agency was established in 1957 with the aim of advancing nuclear technology in the world and keeping it peaceful. Although independent and autonomous, it reports to the UN Security Council, the only UN body with the power to enforce resolutions, as well as the General Assembly. The IAEA in a way is the middle-man between the UN and the world when it comes to nuclear technology, energy, and in some cases, weapons.

Nuclear weapons are weapons of mass destruction, and are a threat to the existence of humanity. Indeed – the world is agreement on the necessity of decreasing – and perhaps eventually eliminating – the presence of nuclear weapons. Preventing the proliferation of nuclear weapons is of utmost importance – as the number of nations with access to nuclear WMD increases, the chances of them falling into the wrong hands also escalate. The IAEA is responsible for monitoring the world's nuclear activity and protecting it from such catastrophes. Specifically, the discussion on this topic will be of greatest relevance to the Department of Safeguards.

Country Blocs: The Nuclear World

The United Nations officially recognizes and accepts five nuclear-weapon states: The United States, the United Kingdom, France, Russia, and China. There are, however, four other nations that are believed to possess nuclear weapons: Pakistan, India, North Korea and Israel. Note that these four are the ones that are not currently signatories of the Nuclear Non-Proliferation Treaty (NPT). While the first three have admitted that they have nuclear weapons, Israel follows an official policy of 'ambiguity': they neither confirm nor deny possession of WMDs.

There has been suspicion soft nuclear weapon development in other nations. Most notable is Iran, which until today faces allegations of non-peaceful intentions regarding its nuclear program, which it claims to be peaceful. Syria as well has been accused of attempting to develop nuclear weapons. In the past few years, Myanmar, Venezuela and others have also received some attention. In the more distant past, nations such as Libya, Iraq, and South Africa were under the spotlight. Today, the IAEA is concerned primarily with the nuclear program of Iran. Following are Syria and Israel, which together with Iran play critical roles in the geo-political hotbed that is the Middle East. Also of importance is the program

of North Korea, which has been generally viewed as hostile by the west.

The following is a brief introduction into the most critical issues and their respective states, in no particular order:

Israel

Israel is widely believed to possess nuclear weapons. The IAEA itself, under El-Baradei, assumed Israel to be a nuclear state. However, Israel has adopted a policy of nuclear ambiguity – it will neither confirm nor deny any possession of nuclear weapons. It is not a signatory of the NPT (the only other nations who share this status are North Korea, Pakistan and India, which happen to be the other non-permanent 5 nuclear states).

The Dimona facility (see Figure 1 in the Appendix), very widely believed to be a nuclear facility and a source of weapons-grade nuclear material. It was uncovered to the world partly by Mordechai Vanunu, who at one point was a technician there. (This led to him being kidnapped from Italy by Israel's intelligence service and being imprisoned for 18 years). Israel for a long time has been pressured by the international community to sign the NPT, but such pressures have been ignored.

Syria

The issue of nuclear activity in Syria has recently escalated. It was first brought to attention in 2007 when an Israeli airstrike destroyed what was claimed to be a nuclear facility. Similarities between it and North Korean facilities lead to speculations of North Korean help. Syria maintained that the facility was non-nuclear. Investigations did not start until mid-2008, and during that period it is claimed that Syria's rebuilding efforts included efforts to hide any evidence of nuclear activity. Nevertheless, the IAEA did find some suspicious evidence. Following 2008, the IAEA had little to no access to the site. Overall, IAEA investigations were non-conclusive, due to reported non-compliance by Syria. In 2011, however, the IAEA concluded that the destroyed facility (see Figure 2 in the Appendix) was "very likely" a nuclear facility, and should have been declared. This violation led to a report to the United Nations Security Council.

Much more recently, the IAEA has identified a new facility, which it says may have been planned to be used to develop nuclear technology. There is no evidence of it ever being operational, but it is worrisome nevertheless. Added to that are reports of connections between Syria and AQ Khan, the figure of nuclear proliferation, who has been involved in the past with several nuclear programs – or at the very least – is claimed to have been involved.

It must be noted that the facility (see Figure 2 in the Appendix) is currently a textile/cotton mill, and several western researchers and experts have discredited IAEA fears, saying that the facility has always been a textile mill and nothing more.

Recently, the IAEA has been attempting to initiate dialog with Syria. In particular, there have been requests to access the destroyed facility yet again. Syria, however, is too busy to deal with the IAEA at the moment. An uprising that started in the spring is still strong. Every day, government forces clash with peaceful protestors and armed groups and army defectors alike. Over 3500 have been killed by government forces so far, most of them civilians. Syria is under immense international pressure and sanctions, and is on the brink of civil war. The UN has reported widespread crimes against humanity. Its situation is changing every day, and must be taken into consideration.

Iran

The nuclear program of Iran began in the 1950's with US support. For a long time, the west aided Iran in its program, and even supplied nuclear material. This came to a halt following the revolution of 1979, in which a US-backed regime was overthrown. The US ceased support and supply of nuclear fuel. France and Germany, which were involved in the program as well, followed, partly due to US pressure. At that time, the Iranian government wanted to move forward with their program, and turned to the IAEA, which planned to assist Iran, notably in surpassing technical difficulties. However, such plans were quickly dropped, largely due to US pressure. Iran effectively lost all support for their much-valued nuclear program, and could only make up for part of it with deals with Argentina. Moreover, Iran lost much of its financial investments. Although some was later restored (with France in 1991), Iran developed tension and distrust with the IAEA and the west.

The early 1990s saw the beginning of a new relationship between Iran and Russia. A joint research organization was formed, through which technical expertise and technology was shared. On the other hand, the US had succeeded in pressuring Argentina into backing off. With serious attempts to continue and advance its nuclear program, Iran received much attention, and there were speculations about undeclared nuclear activities. Iran, however, invited in the IAEA, giving inspectors full access to its its facilities, including previously undeclared ones. The IAEA was satisfied, and inspections supported the declared peaceful attributes of the program.

In 1995, Russia agreed to work on and continue building the Bushehr plant. This was a major step forward. China, although successfully pressured by the US out of building a uranium conversion plant for Iran, did provide blueprints for this facility. The IAEA was kept in the loop. Despite the west's opposition, Iran and its nuclear program seemed to be in good shape.

The situation became precarious in 2002, when Iran announced the existing construction of two new nuclear facilities: a heavy water facility (in Arak) and a uranium enrichment facility in Natanz. Naturally, the West wasn't pleased (although there were allegations that they had already known about the facilities). The IAEA quickly became involved, asking for access and information. From a

legal perspective, Iran was not required then to host IAEA inspectors. France, Germany, and the UK, known as the EU-3, joined forces in a diplomatic effort to clarify the situation. An agreement was reached, known as the Tehran Declaration, but by the end of 2003 the IAEA had reported that Iran had failed a multiple of times in reporting nuclear activity and abiding by the obligations it had accepted. A report released in the following year (2004) shows specific breaches.

Regardless, by the end of 2004, Iran had agreed, as a confidence-building measure, to temporarily stop all enrichment while talks with the EU-3 continued. This was part of the Paris Agreement. Unfortunately, the talks were ineffective, and in August 2005 the program was continued. The EU-3 offered Iran a collection of political, economic, and nuclear benefits, if Iran would agree to permanently halt its enrichment process, but to no surprise, Iran refused. It had already stated many times its total unwillingness to give up on nuclear enrichment, which is viewed as a technological and scientific milestone.

So far, IAEA reports, although having found no proof of a nuclear weapons program, could not conclude with confidence the pure peaceful nature of Iran's nuclear program. This is due in large to a lack of full cooperation and breaches of the IAEA's safeguards agreements. The IAEA finally officially reported Iran to the United Nations Security Council in 2006. In response, Iran cancelled all efforts that were not mandatory and required by law – such as previous 'confidence-building' measures, and the Additional Protocol.

A period of tension and attempts of negotiations began. Directly following the report to the UNSC was a deal that proposed that Iran limit its enrichment and import nuclear fuel from Russia, which Iran agreed to consider. Alas, only a month later, the US rejected any enrichment in Iran, and thus this proposition went down the drain. Of course, Iran continued to powerfully defend its lawful right to enrichment and the 'full nuclear power cycle'. Soon enough, Iran gained the capability of enriching Uranium, and was refusing talks with anyone who rejected the right of Iran to enrich nuclear material.

The first UNSC resolution against Iran, Resolution 1696, was adopted in July of 2006, demanding and legally requiring the suspension of Iran's nuclear enrichment program. Afterwards, Iran agreed to return to talks and negotiations, but refused to completely suspend its enrichment processes. Unsatisfied, and backed with IAEA's reports of non-compliance, a second resolution was adopted in December of the same year (Resolution 1737), which demanded full cooperation with the IAEA and introduced economic sanctions against a several Iranian individuals and organizations.

In 2007, another resolution surfaced (1747), which intensified and expanded the sanctions. Offers of improved relationships in return for an end of the enrichment process continued to be pursued this time by the 5 UNSC

Permanent Members and Germany, but Iran continued to defend its right to enrichment.

In 2008 came yet another 2 resolutions. Resolution 1803 extended the sanctions, added travel restrictions and stronger trade restrictions. Resolution 1835 served as a reminder of the past 4 resolutions. The next resolution, numbered 1929, came in 2010 and brought with it a complete and comprehensive arms embargo against Iran and a multitude of economic sanctions and freezing of accounts. A "Panel of Experts" was created to further look into Iran's activities and non-compliance with the IAEA and UN. Resolution 1984, adopted in June of 2011, extended the panel's activities for another year.

During these years, the IAEA was constantly in between the UN (particularly the Security Council) and Iran. In 2007, there were reports that Iran was blocking IAEA inspectors from their facilities, but that was negated by the IAEA. Inspections were moving forward, but still there were still "lots of question marks". The US provided the IAEA with intelligence gathered about Iran's nuclear program, but the IAEA declared it to be inaccurate and not very useful. Israel accused Iran of being pro-Iranian. IAEA intelligence regarding "alleged studies" regarding nuclear weapons was dismissed by Iran, who claimed that these documents were fabricated and forged. Year after year, the IAEA would report that it did not have conclusive evidence of any efforts of creating nuclear weapons, but at the same time could not rule out the possibility.

A few bumps on the road were the discoveries of Qom, a previously undeclared facility (see Figure 3 in the Appendix) and purchases and tests of missiles and related technologies that could be linked to nuclear weapons.

But the climax of the story is right now. The IAEA has moved from a position of uncertainty to reporting that Iran "has worked on developing a nuclear weapon design, and testing and other research relevant for nuclear arms, and some of the activities may still be going on." This is the closest that the IAEA and the world has come towards accepting a program of nuclear weapons. Note, however, that the report is not conclusive. It cannot be assumed at all that Iran is working towards nuclear weapons, but there is now evidence – if the IAEA is to be believed – that there have been efforts in this direction.

Iran rejects the report, and accuses the IAEA of being politically motivated and claims that the report is inaccurate and unbalanced. It has threatened to cease cooperation with the IAEA. The US and the west welcomed the report, and hoped it would be stronger and more conclusive. There has already been discussion of new, tougher sanctions. China and Russia, on the other hand, are more moderate, and aren't quick to jump into another set of sanctions. Russia particularly is reluctant.

North Korea

North Korea withdrew from the NPT in 2003, and conducted its first nuclear weapons test in 2006. A second test followed in 2009, shortly after the IAEA and experts expressed that North Korea had become a 'fully-fledged nuclear power". The west expressed very serious concerns regarding these tests, and there have been many talks and attempts of talks, including Six-party talks (2003-2007) which haven't been very productive. Although North Korea agreed for a while to shut down its facilities, following a UNSC condemnation in 2009, North Korea has backed out of Six-party-talks and continued fully with its nuclear enrichment program. It also no longer allows nuclear inspectors.

Besides North Korea's developing nuclear weapons program, and what is perceived often as increased hostility, there are worries of North Korea proliferating nuclear technology and/or materials. The US particularly, an ally of neighboring South Korea, has been recently vocal about these worries.

Today, North Korea's enrichment program is moving forward. Very recently, it announced producing enriched uranium for a light-water reactor, which led to further concern and hostility, with Russia urging North Korea to a complete stop in its increasingly worrisome nuclear activities.

Conclusion and Committee Goals

More than ever, now, it is necessary to look at the works of the IAEA. The IAEA and the world continue to stress the importance of increased Iranian cooperation, but with accusations and new sanctions, how will this be achieved? The IAEA isn't giving Iran much motivation to work with it. Instead, it is trying to persuade it through intimidation and pressure – and there has been no progress.

From another perspective, with Iran's lack of transparency and its decision to only do the minimum it can do, it is not gaining the world's trust. And with the newest reports, the world has a reason to be worried. The problem therefore lies in reaching a compromise – a way for Iran to feel comfortable with the IAEA. But that will never happen until the IAEA loses its image in Iran as a western-run and politically motivated organization. The politics of the entire Middle East cannot be ignored, as they further complicate things. Syria and Iran are the strongest of allies, and are among the few enemies of Israel, and are threatened by its nuclear power. Both nations accuse the west of having double standards in focusing on Iran and forgetting about Israel. In return, Israel is threatened by a possible nuclear-armed Iran, and the world uses that as justification for its own nuclear program. It is a vicious cycle.

There have been talks of establishing a Nuclear-Free-Zone in the Middle East, but Israel is unlikely to give up anything, and only recently did it agree to participate in a panel that raised this topic. With each of the three countries being not as transparent and cooperative as the IAEA would like them to be, and each of them

claiming that the IAEA is biased towards the other side, the situation is very complex, and is leading only to decreased trust and increased tension. The same applies to North Korea, which has near-completely isolated itself from the world and the IAEA, and is behaving as it sees fit with no regard given to the international community and their pressures.

Also, how the IAEA treats its information is vital. Must every report, small or large, be shown to the world? Was the IAEA quick to come to its conclusions, or late? By reporting uncertainties, is it pushing towards more tension and sanctions, or is it carrying out its duty of keeping the world informed of potential dangers? If both, where must the limits and boundaries lie?

Note that the issue of dealing with non-compliance and hostility will be discussed, not the issue of Iran specifically, or the Middle East, or North Korea. Rather, the IAEA's direction and strategy in solving such conflict as a whole is on the table. Note, however, that Iran today is the IAEA's biggest challenge, and the aforementioned countries seem to be the core of the issue. This must be kept under consideration. Any proposed policy change must lead to a positive change in IAEA relationships with Iran, the Middle East and North Korea, as well as with the international community. Any strategy that will not account for these countries will most likely not be successful, and it is for this reasons that it is important to look at these countries.

Resources

IAEA Basics
http://en.wikipedia.org/wiki/International_Atomic_Energy_Agency
http://www.iaea.org/OurWork/SV/Safeguards/
http://www.iaea.org/About/statute_text.html

Annual Report 2010
http://www.iaea.org/Publications/Reports/Anrep2010/anrep2010_full.pdf

Syria
No progress in Syria nuclear talks, IAEA chief says
http://www.jpost.com/DiplomacyAndPolitics/Article.aspx?id=245984

That secret nuclear facility in Syria? It's a textile factory, researchers say in new report
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Appendix

Figure 1: Dimona facility

Figure 2: Destroyed facility in Syria

Figure 3: Qom

Figure 4: New facility in Syria