

# Recent Verification Experiences In Iran

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13 January 2003

# Introduction

- The IAEA's experience in Iran has shown that intrusive inspections in non-nuclear weapon states are now the norm.
- The agreement between Iran and EU foreign ministers is a useful reminder of how more effective inspections, greater transparency, and constraints on a nuclear program can be achieved as part of a broader political settlement.
- The decision by Iran to agree to greater transparency has led to economic opportunities, and opened the door for direct discussions with the United States which were previously impossible.

# Overview of Recent Events In Iran

- IAEA began in February 2003 to carry out expanded safeguards inspections in cooperation with Iran to answer questions about secret nuclear facilities and its nuclear program in general.
- As part of this effort, Iran accepted the implementation of safeguards measures beyond its legal requirements under the traditional IAEA safeguards agreement, and in some cases beyond the model additional protocol.

# Extra Safeguards Measures Applied in Iran

- Environmental sampling
- Provision of foreign procurement information
- Broader declarations
- Requesting access to non-declared sites

# Environmental Sampling In Iran

- Inspectors took environmental samples at the centrifuge facility at Natanz.
- Samples indicated the presence of highly enriched uranium at the facility which was inconsistent with Iran's declarations about what activities had been carried out there.
- This led the IAEA to take samples at both declared and undeclared sites that were thought to be related to undeclared uranium enrichment program activities.

# Lessons of Sampling in Iran

- Environmental sample results can confirm or conflict with the state's declaration.
- The IAEA is still working with Iran to verify Iran's explanation for the presence of the HEU. Nonetheless, Iran has revised its declaration including more uranium enrichment and plutonium separation activities.
- Sampling sensitivity has become both more accurate and reliable during the last few years, but interpretation of the results of environmental samples can be difficult.

# Sharing Procurement Information

- The IAEA had many questions about Iran's initial statements that it had developed the capability to make centrifuges on its own.
- Iran subsequently revised its declaration to include extensive foreign procurement activities for its centrifuge program.
- The IAEA is currently investigating this new information.

# Lessons of Sharing Procurement Information

- The information Iran has provided about its foreign procurement has been critical in answering many outstanding issues and building support that Iran is complying with the NPT.
- The IAEA found that absent foreign procurement information, it could not verify Iran's declaration.



# Expanded, Revised Declarations

- Throughout the last year, Iran has offered new and more complete declarations about its nuclear programs in a cooperative, iterative process with the IAEA.
- These amended declarations included newly-declared facilities, new historical information, and an updated material balance.
- Declarations are examined for both *correctness* and *completeness*, which means the declaration is verified to make sure all that is reported is true and that no activities have been left out.

# Lessons of Expanded, Revised Declarations

- Broader declarations than those required under traditional IAEA safeguards are necessary for an effective verification process.
- Revising declarations is expected and manageable as part of the cooperative verification process.
- Follow-up by the IAEA was common, and the IAEA needed the flexibility to go to new places or talk to new people without re-opening a political discussion of the scope and rights of inspections.

# Requesting Access to Non-Declared Sites

- The IAEA used information from open sources, environmental sampling, and procurement information to ask additional questions of Iran.
- Some of these inquiries led to targeted, specific requests to visit sites or facilities.
- Iran allowed the visits, but did not initially consent to environmental sampling at the new sites.
- When sampling was allowed at certain sites, inspectors found evidence of enriched uranium.

# Lessons of Investigating Non-Declared Activities

- Advanced inspection tools combined with open source information led to a better overall picture of a Iran's program. The picture was not always consistent with the state's initial declarations.
- The IAEA requested additional information and asked to visit specific sites. When the reason for the request was transparent, Iran was under great pressure to grant the IAEA's request.

# Why did Iran See Cooperation in its Best Interest?

- Risked loss of international economic cooperation across many sectors, particularly with the EU.
- Saw an opportunity to expand economic ties internationally.
- Saw an opportunity to put to rest years of suspicion.
- Needed continued Russian assistance to complete the civilian nuclear project at Bushehr.

# A New Standard Operating Procedure for the IAEA

- Use of available information to look for undeclared activities, materials, and facilities, including any uranium enrichment, plutonium production and separation, or nuclear weaponization efforts.
- Emphasis on obtaining detailed declarations and use of tools to verify these declarations to ensure their correctness and completeness.
- Detailed questioning of nuclear officials about their entire nuclear fuel cycle activities, including historical, current, and planned activities.

# New Standard Operating Procedure (cont.)

- Taking of environmental samples at many sites, both declared and undeclared.
- Conducting a relatively open process.

# Lessons from Iran

- Iran found it risky to give partial answers, incomplete declarations, or false statements to the IAEA.
- The inspection process has been highly effective at detecting undeclared activities or at least indications of such activities, particularly when member states supported the IAEA's effort.
- In some cases, verification activities went beyond what is provided for in the additional protocol.



# Lessons from Iran, cont.

- The IAEA's Board of Governors accepted revised declarations by Iran and decided not to refer Iran's non-compliance to the UN Security Council. These discussions were based on Iran's continuing commitment to answer the IAEA's questions and bring the protocol into force, at least provisionally.

# Conclusions

- The IAEA's experience in Iran has shown that intrusive inspections in non-nuclear weapon states are now the norm.
- Verification is a process through which the state and the verification organization build trust over time.
- Effective verification can be accomplished objectively, professionally, and in a timely manner.
- It is never too late for a state to come clean, and establish an effective verification regime that brings it into compliance with the NPT.

# Conclusions (cont.)

- Accomplishing effective verification in Iran occurred in the context of a broader agreement among states that created a path to settling the outstanding verification issues.
- The verification process has to be cooperative, both sides must see the value in completing the task.