



A Look into the

Safeguards and verification is going through a sea change. The IAEA is convening an international symposium to examine how to prepare for future verification challenges.

The nuclear landscape is evolving, offering both challenges and opportunities to the IAEA and its Member States. Global interest in nuclear power generation is increasing. This expansion will bring additional nuclear activities, facilities and more nuclear material under safeguards around the globe. It also suggests growing international nuclear cooperation and trade in nuclear and related equipment, items and materials. All this is likely to significantly increase the IAEA's safeguards activities.

With technological progress, the IAEA will need to be prepared to safeguard new, more advanced and larger scale nuclear fuel cycle facilities. At the same time, future nuclear technology and facilities may be designed to be more proliferation resistant and safeguards friendly. Scientific and technological progress can also help improve the evaluation of information and enhance detection capabilities, as well as provide further opportunities to improve both safeguards implementation and organizational effectiveness and efficiency.

As the world gives more attention to nuclear disarmament, so the IAEA may also be requested to take on further verification tasks, for example, in relation to fissile material declared as excess to defence requirements.

Of course, just as it rightly considers challenges yet to come, the IAEA will still need to continue addressing those it already faces today. In recent years, a number of developments have tested the nuclear non-proliferation regime and have placed increasing expectations on the IAEA safeguards system. Proliferation risks related to globalisation — such as covert supply of nuclear and related technology as well as the greater availability of proliferation-sensitive information through the media — are likely to grow. The importance placed on the IAEA's ability to provide credible assurances of the peaceful use of nuclear energy seems sure to rise.

The Home Front

In addition to external challenges, the IAEA will also need to confront its own organizational challenges. It is already striving to achieve greater efficiencies in its work. But in the years ahead, with its financial resources remaining under strain, the efficiency demands upon the IAEA look set to grow. Competing with Member States in the recruitment of expert staff from a shrinking pool of nuclear professionals poses a further test. The IAEA will also

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(Photo: D.Calma/IAEA)

by Olli Heinonen

Future

An International Forum

The Symposium on International Safeguards: Preparing for Future Verification Challenges is hosted by the IAEA in cooperation with the European Safeguards Research and Development Association (ESARDA) and the Institute of Nuclear Materials Management (INMM). It will be held from 1-5 November 2010 in Vienna, Austria.

need to find better ways to retain the knowledge of staff when they leave the IAEA.

All these developments highlight the evolving nature of the IAEA's operating environment and the importance of adapting to change and continually improving both the effectiveness and the efficiency of the safeguards system. They also underscore the importance of preparing more actively for the future.

An international safeguards symposium to be held in November 2010 aims to provide an opportunity for stakeholders jointly to explore possible solutions to the various current and future challenges outlined above in support of the IAEA's nuclear verification mission.

The Programme

The purpose of this event, staged every four years, is to foster dialogue and information exchange between the IAEA and experts from Member States, the nuclear industry and the broader nuclear non-proliferation community. The focus of this year's symposium is how best, from a technical perspective, to prepare for future verification challenges during this time of change.

The symposium programme will consist of approximately 25 sessions over five days and will be held in the new conference building at the Vienna International Centre. It will begin with opening plenary sessions, continue with parallel topical sessions on succeeding days and conclude with another plenary session on the fifth and final day.

A variety of topics will be addressed. In the context of the wider non-proliferation regime, participants will explore how to enhance the IAEA's detection capabilities and build confidence in compliance with safeguards obligations. The symposium will also explore ways to improve cooperation between the IAEA and Member States when implementing safeguards, so as to enhance their effectiveness and efficiency. It will also address the newer proliferation challenges posed by an increasingly interconnected world: for example, covert trading in nuclear know-how and technology. Moreover, participants will consider possible IAEA verification roles in support of arms control and disarmament.

Interaction with other verification and non-proliferation regimes will be another area considered as will possible synergies between safety, security and safeguards.

Looking into the future, participants will be asked to examine how best to prepare for the global nuclear expansion. The symposium will address how to build proliferation resistance into the design of advanced new types of nuclear facilities, as well as how best to deal with innovative fuel cycles. There will be discussion about how the IAEA can cope with the expected increase in its safeguards workload. The symposium will also address the question of whether refining the implementation of the State-level concept and integrated safeguards is part of the answer, along with, for instance, greater use of remote data-driven inspections.

Technology is sure to continue to play a key role: for verifying nuclear material and activities; for detecting undeclared nuclear material and activities; and for the collection, analysis and integration of information. At the same time, the contribution made by personnel will remain vital. Husbanding intellectual resources is vital right across the professional lifespan of staff, whether through staff training, maintaining expertise, or managing and preserving knowledge.

Conclusion

By bringing together the leading experts in the field from across the world, this symposium will examine the key nuclear verification challenges ahead with the aim of preparing how best to meet them. ☸

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