# 56th IAEA GENERAL CONFERENCE
# SENIOR REGULATORS' MEETING
# 20 September 2012

## CHAIR'S SUMMARY

The Senior Regulators' meeting, with around 150 participants, was a success. This demonstrates the advantage of taking the opportunity of the annual IAEA General Conference for regulators to exchange experience in addressing the numerous challenges that they are facing. This meeting also offers an opportunity for all IAEA Member States to be represented and it is the largest such forum for senior regulators.

IAEA Director General Yukiya Amano opened the meeting. He stressed the need for the implementation of the Nuclear Safety Action Plan in full. This requires joint efforts and full commitment from the Secretariat, Member States and other stakeholders. He highlighted the key driving role that senior regulators have in the implementation of the Action Plan so as to enhance the safety of nuclear installations.

He also reminded the meeting of important conclusions of the second Extraordinary Meeting of the Contracting Parties to the Convention on Nuclear Safety, which took place in August, and particularly the conclusions that relate to regulatory authorities, namely the facts that :

- The Contracting Parties, at the initiative of their regulatory authorities, have undertaken comprehensive reassessments of natural hazards to identify measures to improve nuclear safety on the basis of lessons learned from the Fukushima Daiichi accident;
- The Contracting Parties agreed that nuclear power plants should be designed, constructed and operated with the objective of preventing accidents and, if an accident does

occur, of mitigating its effects and avoiding off-site contamination.

The Director General further noted that, as introduced last year, we now have as a standing structure of the programme for the Senior Regulators' meeting, with discussion of both safety and security challenges. Member States' representatives from both the safety community and the security community were explicitly invited to take an active part. Discussing nuclear safety and nuclear security and possible synergies is crucial. Nuclear safety and nuclear security practitioners share the common goal of protecting people and the environment from harmful effects of ionizing radiation.

In this regard the Director General reminded the meeting that earlier this year he had decided to establish a Nuclear Security Guidance Committee as a standing body of senior experts to make recommendations on the development and review of the IAEA Nuclear Security Series publications. The intention is to contribute to greater transparency, coherence and consistency of the Series.

Finally Director General Amano mentioned a number of forthcoming international conferences and particularly the Ministerial Conference on Nuclear Safety that will be organized by the IAEA and the Government of Japan and will take place from 15 to 17 December 2012 in Fukushima Prefecture in Japan. The principal objectives of this international ministerial conference will be to provide another opportunity to share lessons learned from the Fukushima Daiichi accident so as to contribute to strengthening nuclear safety worldwide.

He also highlighted the International Conference on Regulatory Effectiveness, which will be organized by the IAEA and hosted from 8 to 12 April 2013 in Ottawa, Canada, by the Canadian Nuclear Safety Commission, and the International Conference on Nuclear

Security: Enhancing Global Efforts, which will take place in Vienna on 1–5 July 2013.

As Chair I also provided brief remarks in opening the meeting, stating that the primary objective should firstly be to avoid the need for remediation following an accident by means of preventive safety measures, starting at the design phase. But then, when remediation is necessary, I highlighted the crucial importance of the involvement of all stakeholders in the decision and implementation processes. Thirdly, I highlighted that, in view of the difficult challenges that regulators are facing, it is fundamental to continue to use the opportunities of such meetings in order to share our experience.

**Sessions I and II and the panel discussion on remediation**

Regulators in countries that do not have a 'full scope' nuclear programme may find it challenging to regulate the remediation of a legacy site such as a former uranium production site. If a country has a 'full scope' programme (i.e. a nuclear power programme), it will have a large, well-staffed regulatory body that is supported by a technical support organization that has technical experts who will understand the complexities of a remediation project. The IAEA promotes and support Member States' participation at the International Forum on Regulatory Supervision of Legacy Sites, dealing currently mainly with uranium production sites. The IAEA also encourages other types of legacy sites to be addressed by the Forum.

While much of the Senior Regulators' Meeting was about remediation for existing exposure situations, regulators have a strong role to play to avoid creating new situations that will require remediation. In other words, we need to avoid 'future legacies'.

Legacy site remediation is a particular challenge for regulators because each legacy site is unique. The challenge arises because generic guidance on remediation has to be applied in unique

situations. There may not be a precedent for what needs to be done. Technical documents (TECDOCs) and training material are being developed for specific situations in order to further exchange experience.

It might be a huge challenge to obtain sufficient funds to remediate legacy sites. This may have an impact on the range of possible options. Selecting an option that does not adequately address all relevant issues may result in persistent difficulties.

Every country would benefit from having a national policy and strategy for remediation. In fact, this could be combined with a national policy and strategy for management of radioactive waste and decommissioning. For remediation it is often very useful to have a list of national priorities. This would identify all of the contaminated sites in a country that need remediation and prioritize management of the risks that these sites present (i.e. what hazards they present). In this regard, assistance may be provided on request by the IAEA with setting priorities after an inventory of sites has been established.

In some instances, a long term care and maintenance programme needs to be put into place after remediation is completed. Regulators may be challenged to ensure that such a programme is established and maintained.

Remediation is a complex process that needs to appropriately consider and balance a number of different factors. These include establishment of radiological criteria, technical feasibility, economic impacts, social implications and acceptance by the people affected. Crisis management in sectors other than the nuclear sector shows similar features. We can learn from the management of these other crises as well as continuing to learn from the Chernobyl and Fukushima Daiichi nuclear accidents. In some presentations it was mentioned that factors other than radiation protection aspects had a predominant weight in decision making. This highlights the crucial

importance of stakeholder involvement and public communication, which was addressed in all presentations. The revision of the IAEA Safety Guides is an opportunity to make further progress in taking all these factors into account. It is also an opportunity to provide further recommendations on how to apply the principles of justification, limitation and optimization in specific situations and how to establish appropriate radiological criteria and explain them to the public.

Implementation of remedial actions in post-accident situations requires in particular a careful and open dialogue with the public. Plain language should be used to explain sources of exposure, to communicate the related radiation risks, and to discuss the advantages and disadvantages of possible remedial actions.

We have to be careful in not delaying the implementation of remedial actions as this could result in further deterioration of the situation. Several factors could result in delays — including over-analysis. Therefore better planning in advance is a useful help in avoiding undue delays.

An example of such a priori planning for the management of post-accident situations was presented. The potential need for guidance on how to handle the transition from the emergency phase to the post-accident phase was also mentioned.

The IAEA safety standards provide guidance on how to plan, implement and verify the success of remedial actions. The standards are based on scientific findings and they are developed and approved with the consensus of Member States. They have evolved with feedback of experience and should continue to evolve. The establishment and application of internationally harmonized assessment tools and criteria — including reference levels for exposures and activity concentrations in commodities — could help to avoid misperceptions, confusion and other complications.

## Session III on Challenges in Nuclear Security

*Overview*

This discussion and the forthcoming Conference to be hosted by the USNRC in December this year are timely considerations of key questions that confront a State in the context of its approach to the regulation of nuclear security:

- How does a regulator consider or reconsider the security of facilities and materials in the context of new threats such as cyber-attack and the potential for an insider to sabotage the systems of a facility with a view to compromising those systems?
- How do we move from protection systems based on physical means to a more integrated approach addressing all other challenges, including cyber-security?
- How should regulators interact with other nuclear security stakeholders both domestically and internationally?
- Can we say that a comprehensive national regulatory programme for security has been established in many States?
- How is the requirement for confidentiality, which pervades much of nuclear security, being reconciled with the aims of transparency and openness?

*General*

Our three panellists tackled these important issues and raised a considerable number of issues to challenge the senior regulators here today. How many of the regulators in this room regulate both safety and security? Or regulate both security and safeguards? Or regulate all three? Do your perspectives on these key issues for regulation of nuclear security differ depending on your regulatory responsibilities?

Nuclear security needs to be integrated and be seen as a ‘package’ involving, among other things, physical measures, security culture, personnel security measures, cyber security, identification and protection of sensitive information, and investigation of security events. The package should be regularly tested, including through exercises.

The advance of computers and their use in all aspects of operations, including security, at nuclear facilities has changed the security paradigm. Computer security must also be considered a component in the overall security plan of nuclear facilities. This is a challenge as computer technologies and the associated threats are dynamic and rapidly changing.

On stakeholder involvement, the large number of stakeholders is such that it requires a sound overarching nuclear security infrastructure. Such an infrastructure needs to clearly define the roles and responsibilities of all competent authorities (including regulatory bodies involved in nuclear security) and in particular mechanisms for cooperation and coordination within the State. There should also be well defined mechanisms for international cooperation and assistance. The need to carry out exercises to test the performance of the cooperation mechanisms was also addressed, together with the need for a comprehensive training programme on nuclear security.

Finally, the challenge of transparency in nuclear security was addressed, indicating why it is important to improve transparency, to promote a learning attitude or to enhance confidence building. Some good practices and possible additional options and incentives were exchanged on how to cope with the limitations of transparency and to report on regulatory activities without revealing vulnerabilities.

The issue of interactions between safety and security and the associated challenges was also discussed during the session.

It is clear that it is important to reach out to the international community of nuclear security regulators to advance discussions on these important topics and others that are key regulatory challenges. The discussions will be assisted in these cases by work that is being done for publication in the IAEA's Nuclear Security Series and activities that support it. This will engage the community of nuclear security regulators and other key national and international counterparts in order to advance guidance and key cooperation in this area.

Thank you to all the speakers and to the participants at the meeting and also for the support from the Secretariat.