

46th JAIF Annual Conference

**Strengthening nuclear safety and security globally
a continued international challenge**

23-25 April 2013

Nissho Hall, Tokyo, Japan

Denis Flory

Deputy Director General

Head of the Department of Nuclear Safety and Security

International Atomic Energy Agency

Good morning Mister Chairman, Ladies and Gentlemen, my dear colleagues. I was very pleased to be able to answer positively to President Hattori's invitation to 46th JAIF, back in December in Washington. Yesterday was already a very good start for the Conference, I am convinced that today will be as packed with challenging presentations and discussions as yesterday.

I was appointed to the IAEA as Deputy Director General and Head of the Department of nuclear safety and security 32 months ago, and looking in my files, I found that only a handful of my speeches dealt with nuclear security during these months. Taking advantage that Japan's new Nuclear Regulation Authority embraces security as well as safety, I shall address first some elements of the vision, the work and the mission of the IAEA in the field of nuclear security before moving to nuclear safety, and the activities of the Agency in the frame of the IAEA Action Plan on Nuclear Safety.

Nuclear Security history:

though there was nothing Nuclear in the terrorist attacks on September 11, 2001, they violently shook the Nuclear Security Community around the world. I vividly remember that day, while looking live at the events in New York, when I stopped one by one all category I and II transports of nuclear material in France as soon as they reached a secure location.

However the active nuclear security history probably started in the early 90s, with the end of the Soviet Union. Hints about weak security at nuclear facilities made the headlines, back in August 1994, when elements of illicit trafficking of Nuclear Material were discovered in Germany, coming from the East. These trafficking events, as well as the numerous ones entered later in the database created by the IAEA, the ITDB, pointed to the weaknesses of the security systems. It showed that a global threat needed a global response.

After 9/11, the perceived risks to be fought shifted with an added focus on the risk of voluntary release of radioactivity, either through the theft of radioactive material followed by its dispersal, or through the sabotage of a nuclear facility. This is indeed one of the lesser voiced lessons of TEPCO's Fukushima Daichi accident: that terrorists could provoke a severe black out at a NPP, with catastrophic consequences. This recognition of the risk of sabotage makes somewhat more clear, today, that the objective of nuclear security is not so much protecting facilities or material, than protecting people, the environment and society from harmful effects of ionizing radiation. This is indeed the shared ultimate goal between nuclear safety and security. Another common factor for both Security and Safety, is the need to develop and maintain a Culture: Safety Culture enshrined in the Convention on Nuclear Safety, or Security Culture, recognised as a fundamental element of nuclear security.

When, today, an important effort is being made on nuclear safety post Fukushima, efforts need also to be pursued on nuclear security. In the wake of the accident indeed, some of our Member States have decided to bring together Safety and Security under a unique regulator. This is the case of Japan, this was also the case of the Republic of Korea as soon as the end of 2011. Nuclear security is a national, sovereign responsibility, but, as the theory of the weakest link holds, and as radioactive releases know no borders, it is also a common, shared, responsibility.

This common responsibility is built upon a platform of international instruments, and we, at the Agency, provide support to MSs in achieving worldwide, effective security wherever nuclear or other radioactive material is in use, storage and/or transport.

This assistance is provided inter alia through Security advisory missions such as the International Physical Protection Advisory Service (IPPAS), and also through Integrated Nuclear Security Support Plans (INSSP).

Under the newly established Nuclear Regulation Authority, I trust that Japan will play a more active role in global efforts to strengthen nuclear security, and I understand that Japan has been working seriously to improve its national regime, for example by applying measures recommended in Nuclear Security Fundamentals and INFCIRC/225/Rev.5.

One of the challenges that Japan and the NRA might want to tackle as soon as possible in this area is the ratification of the 2005 Amendment to the CPPNM, and possibly request for an IPPAS mission. Since 1996, 58 States received IPPAS mission and there has been a growing number of requests from Member States for this service.

This call for a global response to the global nuclear security threat would not be complete without mentioning that the IAEA will hold the International Conference on Nuclear Security in July this year in Vienna. I believe that this will be a great opportunity for all our Member States, and particularly for Japan, to share lessons learned from Fukushima in the area of nuclear security and lead the discussions on the future direction of global nuclear security. I hope Japan's Ministerial level participation in the Conference.

Nuclear Safety after Fukushima

I was a young French nuclear Attaché in Moscow, Soviet Union, on 26 April 1986, 27 years ago but a day, when the Chernobyl accident shook the world, and I joined the International Atomic Energy Agency 6 months and 2 weeks before the March 2011 accident at TEPCO's Fukushima Daiichi Nuclear Power Plant.

Both these accidents were terrible experiences for the affected people; during both these accidents there were heroic acts accomplished to protect the public against worse consequences; both these accidents were grim reminders that nuclear accidents can happen, and do happen. It reminded us that safety can never be taken for granted but is a work in progress and not a status reached once and forever.

IAEA Action Plan on Nuclear Safety (NSAP)

As a collateral benefit of the Fukushima accident, enhancing nuclear safety has become one of the priorities of Governments and the industry around the world. In September 2011, the Agency's Member States unanimously approved the IAEA Action Plan on Nuclear Safety to guide both our actions and our Member States' actions. In broad terms, it is aimed at strengthening the safety of nuclear power plants, through actions with operators and regulators; it is aimed at learning lessons from the accident, it is also aimed at strengthening emergency preparedness, radiation protection, communication and the legal framework.

Many Member States have made significant efforts to prepare their National Action Plan, and some have even mirrored the IAEA Action Plan on Nuclear Safety at their national level, showing the way for a good practice that we expect to spread to others.

Since the adoption of the Action Plan much progress has been made, in many areas of Nuclear Safety such as the assessments of safety vulnerabilities of nuclear power plants , strengthening Agency peer review services, emergency preparedness and response, capacity building and developing self-assessment tools for Regulators. The Agency uses a number of opportunities and ways to identify and share lessons learned from the accident with the nuclear community. Towards this endeavour, the International Experts' Meetings (IEMs) we have organised to date, have addressed reactor and spent fuel safety, communication in the event of a nuclear or radiological emergency, protection against extreme earthquakes and tsunamis, and remediation and decommissioning. The next IEM will be held this coming May in Vienna on Human and Organisational factors, and other upcoming IEMs will cover Radiation Assessment in the Aftermath of the Fukushima Accident, and Severe Accidents.

One of the important additional ways the IAEA will develop and share for the wider community lessons learned from the Fukushima accident, will be the preparation of a comprehensive IAEA report on the Fukushima Daiichi accident, to be published towards the end of next year. Last month, after establishing inside the Secretariat the Core Group that will supervise the report, we launched the first meetings of the five Working Groups, each

composed of 15-20 experts, who will address the five main themes of the report: description and context of the accident, safety assessment, emergency preparedness and response, radiological consequences, and post-accident recovery. We also brought together the Members of an International Technical Advisory Group (ITAG) established to assist in achieving a high scientific and technical level of the report.

Strengthening Regulators

Regulatory oversight is an essential element of maintaining and improving nuclear safety, whether it is for nuclear power plants, research reactors or for the use of sources in medical, agricultural or industrial applications.

The global characteristics of an effective regulator are well known – independent of the promotion of nuclear power, with adequate resources, both human and financial, competent, and with the legal authority and the power to carry out its responsibilities.

The two most important actors of nuclear safety at the national level are the regulator and the licensee. Their relation is increasingly under the public scrutiny, but I would like to quote our IAEA safety standards: “The regulatory body shall establish formal and informal mechanisms of communication with authorized parties on all safety related issues, conducting a professional and constructive liaison”. And “The regulatory body shall foster mutual understanding and respect on the part of authorized parties through frank, open and yet formal relationships, providing constructive liaison on safety related issues”. These requirements are part and parcel of the need for independence, and require also from the side of the licensees a proactive approach. There is a role here for the newly created JANSI.

The International Conference on Effective nuclear regulatory systems held in Ottawa two weeks ago was the first major conference for regulators following the accident at the Fukushima Daiichi NPP. Reinforcing again the message that nuclear safety is a shared, common, responsibility, one of the main conclusions of the President of the Conference addresses the importance of using fully all aspects of IAEA peer reviews, including in the process of the review meetings of the Convention on Nuclear Safety.

The Integrated Regulatory Review Service (IRRS) is the main IAEA mechanism that contributes to increasing the effectiveness of regulatory bodies by providing opportunities for continuous improvement of regulatory bodies. A tailored module to address the regulatory implications of the Fukushima accident has been uniformly used in the eight IRRS missions conducted since the accident, and updated in June, together with the IRRS Guidelines.

Significant progress has also been made in reviewing the Agency’s safety standards, which continue to be widely applied by regulators, operators and the nuclear industry in general,

with increased focus on strengthening GSR Part 1 Governmental, Legal and Regulatory Framework for Safety, but also on requirements and guides on the Site Evaluation for Nuclear Installations, the Safety of Nuclear Power Plants: Design, and also Commissioning and Operation.

Work is progressing in the area of strengthening the legal framework through the working group on effectiveness and transparency created in the frame of the Convention on Nuclear Safety, with the task of reporting on a list of actions to strengthen the CNS and on proposals to amend, where necessary, the Convention.

NSAP in Action: Newcomers and Operators

In line with the general mandate of the Agency, we have continued in assisting "Newcomer" Member States in building their nuclear safety infrastructure, and in strengthening and maintaining their capacity building through improved training and education programmes. In the area of emergency preparedness and response, we developed for them a specific guidance document on "Considerations in emergency preparedness and response for a State embarking on a nuclear power programme" and associated training materials. As a rule, National and interregional training courses on this subject are offered to assist in implementing our guidance.

Until recently, the Agency was perceived, wrongly, to be quasi uniquely focussed towards regulators. As another collateral benefit of the Fukushima accident, the IAEA-WANO cooperation has been strengthened, and visibly so. As mentioned yesterday by the WANO Chairman, during the 56th IAEA General Conference, IAEA and WANO have signed a new Memorandum of Understanding to reflect increased cooperation between the two organizations. The new agreement enables both of us to work more closely together to support the safe and reliable operation of nuclear power plants worldwide, and to enhance information exchange on operating experience and other relevant areas. I am pleased to note that last week, for the first time ever, the IAEA received communication of one of WANO's Significant Operating Experience Report

Regulatory Cooperation Forum

I mentioned earlier the role of the Agency towards Newcomer countries, I want to stress here specifically the important regulatory development since the 2009 conference in Cape Town, where discussions on how to better support regulators of countries embarking on nuclear power in a more cooperative and collaborative manner gave birth to the creation of the

Regulatory Cooperation Forum. The RCF has the objective to maximize knowledge and experience sharing among regulators, using international standards and best practices, while optimizing the use of limited resources when assisting embarking countries.

The RCF, open to all IAEA Member States, has today 24 members, and is reaching out to all Members States encouraging those embarking on nuclear power to participate in its activities. The RCF began its cooperation with Jordan and Vietnam, Poland is expected to be the next RCF country to receive support.

Another conclusion of the Ottawa Conference bears a particular importance when talking of developing nuclear programmes: it stresses on the responsibility of the regulatory body of a vendor country towards the regulatory body of an embarking country in providing assistance in the licensing process of a NPP.

Emergency Preparedness and Response

In the area of emergency preparedness and response (EPR), programmes have been reviewed and strengthened. The IAEA is developing tools that place the health hazard in perspective for measured quantities or calculated doses in a simple and understandable format for use in communicating with the public prior and during an emergency, answering the principle concern: "Is me and my family safe?".

We are also responding to our strengthened mandate to be able to provide Member States, international organizations and the general public with timely, clear, factually correct, objective and easily understandable information during a nuclear emergency on its potential consequences, including analysis of available information and prognosis of possible scenarios based on evidence, scientific knowledge and the capabilities of Member States.

I want to stress here that implementation of international Safety Standards in the area of emergency preparedness and response at the national level would greatly contribute to harmonization of protective actions in an emergency, and consequently would participate to building the public trust in the adequacy of Response plans.

Conclusion

In conclusion, the IAEA Action Plan on Nuclear Safety has provided renewed impetus to make nuclear power ever safer. On-going commitment by all parties to implement the activities under this plan is vital. The IAEA will continue to provide support and assistance in this regard.

The IAEA peer reviews are an essential tool for strengthening nuclear safety and security worldwide. No later than last week, an IAEA team completed the initial review of Japan's Mid-and-Long-Term Roadmap towards the Decommissioning of TEPCO's Fukushima Daiichi Nuclear Power Station, while, at the same time, we were launching a two week long mission in Warsaw, Poland, for an Integrated Regulatory Review Service. The IRRS programme is a unique worldwide opportunity to enhance openness and transparency of regulatory programmes and to build public confidence in the effectiveness of national regulatory systems.

And I shall end in reminding once more that nuclear security shares with safety the ultimate goal of protecting the public and the environment. They are just two sides of a single coin.