

ICRS-13 & RPSD-2016

13th *International Conference on Radiation Shielding*
&
19th *Topical Meeting of the Radiation Protection & Shielding Division*
of the American Nuclear Society -2016

Speech of Dr. Daniel Iracane

Deputy Director-General - Chief Nuclear Officer
OECD – NEA
General Co-Chair



Ladies and Gentlemen, Distinguished colleagues,

I am happy and honoured to share the introduction of this 13th International Conference on Radiation Shielding (ICRS-13) and the 19th Topical Meeting of the Radiation Protection & Shielding Division of the American Nuclear Society-2016 (RPSD-2016)

The OECD/NEA is a Forum for Co-operation for the Most Advanced Countries in the World. NEA has been founded in 1958 and gathers 31 member countries. The NEA is continuously supporting member countries in maintaining and further developing, through international co-operation, the scientific, technological and legal bases required for a safe, environmentally friendly and economical use of nuclear energy.

Through its 7 Technical Committees and 72 working parties and expert groups, the NEA is providing shared authoritative assessments on key issues, as input to government decisions on nuclear energy policy. I have seen that the International Radiation Shielding Conferences, the ICRS cycle, started also in 1958, like NEA. We are strong here of a powerful and bright legacy of 58 years built on an effective international cooperation. But looking at the future, I would say that the international cooperation is even more necessary today than yesterday.

Why?

Nuclear technology is a quite mature technology. We are far from the pioneering phase. Nevertheless **this technology is facing several important challenges**, all of them being related to the confidence building.

- Confidence of the local populations
- Confidence of the investors and policy makers
- Confidence of the international community

By putting the experts of the experienced countries around the table, the NEA produces authoritative technical output in a wide range of topics. And, by putting around the table, not only the experts but also the leaders of related agencies and public organisations, the NEA committees' structure allows to get an endorsement from the member countries. This process contributes strongly to the collective definition of the state of the art in numbers of sensitive topics. As such, the process continuously contributes to the confidence building. Let us

point out few current examples where the confidence is at stake and where the international cooperation is bringing a valuable input for the policymakers.

- The Fukushima accident has created a significant loss of confidence in the Japanese population and a major concern in the international community.
 - The Committee gathering the regulatory body's leaders have deeply instigated the consequences of the Fukushima, including a self-assessment of the effectiveness of the regulatory bodies. The conclusion on the relevance of the defence in depth methodology is one of the several outputs that help the international community to keep confidence in the current regulatory process. Numbers of other topics have been addressed collectively to reach shared conclusion and actions have been implemented promptly in NEA member countries in a consistent way.
 - Regarding the radio-protection and public health, international discussion on the food safety and the management of the recovery process are very active topics of discussion within the international community.
 - Regarding the nuclear liabilities issues, the NEA and its member countries are quite committed in the monitoring of damage compensation in Japan as a practical implementation of principles set up by the international conventions in the real difficult situation created by an accident.
- But there are also other challenges for the decision makers, either the policy makers or the investors. The economy of the nuclear energy is challenged in different way.
 - Of course the fuel back-end and decommissioning are open issues that create uncertainties in the final cost of nuclear energy. Through its committees, NEA is strong investing these topics, with an increasing interest for decommissioning.
 - In addition, more recently the increased penetration rate of variable renewable energy raised a new concern in terms of the ability to invest in nuclear which is highly capitalistic. The renewable share increase has also an impact on the nuclear technology by requiring more flexibility.

These are few examples to illustrate the need of further exchanges at the international level to produce robust shared views that will help creating the necessary confidence to proceed. On a more scientific level, the NEA is also managing the Nuclear Data Bank and, together with the Science committee, produces a continuous input for the scientific community in terms of qualified nuclear data and computational codes. The trend in this field is dominated by the coupling between the different disciplines and the challenging experimental need for Multiphysics validation.

But the confidence is also built by maintaining and developing a high level of science and competences. And for that purpose, this conference is a cornerstone.

The agenda of the conference is very rich and illustrates the importance of the topic through numbers of stakes related to ALARA principles in several application fields such as nuclear energy systems, accelerator facilities, lasers, space, medical area, sensor optimisation or others.

We see also in the agenda that challenging scientific issues can still be overcome to provide more reliability and more performance to shielding calculations through faster computing, uncertainty control, improved capacities to handle singularities and extreme situations, etc.

So, such a conference appears to be an asset for the international community by promoting the best science in radiation transport, in order to support a robust radiological protection system that will sustain the right level of confidence among users and for the population.

Thank you for attention and I wish you a successful conference and fruitful outcomes