

Dear Mr Amano, Director General of the IAEA,

Dear Mr Tero Varjoranta, Deputy Director General for Safeguards

Dear Ambassadors from the different Member States,

Ladies and Gentlemen,

Let me start by saying how very pleased I am to share with you today the EC view on research and development tailored to safeguards implementation.

In the next few minutes, **I would like to raise the following issues:**

1. Nuclear Energy in Europe
2. Euratom Nuclear safeguards system
3. EU current support to IAEA in the field of nuclear safeguards
4. The importance given by EU to International cooperation and coordination
5. Looking at the Future.

1. Nuclear Energy in Europe:

- In the EU, the whole nuclear fuel cycle is fully monitored, from uranium enrichment, to fuel production, power reactors, including the two largest plants for reprocessing of spent fuel in the world and final disposal

It goes without saying that the European Union sees nuclear safety, security and safeguards as one of its utmost priorities.

- Nowadays, around 27% of the EU electricity is produced by nuclear energy; nuclear energy contributes to not only to energy security but also to greenhouse gas emissions cuts.
- The role for the EU in ensuring safe and sustainable use of nuclear energy across Europe has been foreseen already by the 1957 Treaty establishing the European Atomic Energy Community (Euratom).

2. Euratom Nuclear safeguards system:

- The Euratom treaty introduced a strict system of safeguards throughout the EU to ensure that nuclear materials are used only for declared, peaceful purposes.
- The European Commission's Safeguards Service - better known internationally as Euratom - is a global and quite unique safeguards actor with exceptional enforcement powers.
- With a highly qualified and well-trained staff of approximately 200 - amongst which roughly 160 accredited nuclear inspectors - the Commission's Safeguards Service, inspects around 1000 nuclear installations scattered in the EU territory.
- The Commission's Safeguards Service maintains the EU accountancy database on civil nuclear materials. During 2013, approximately 8,600 accountancy reports, corresponding to approximately 1.9 million accountancy records, from all EU operators, were received and evaluated. This database, together with other databases, supplies the information for all declarations to the IAEA required under the Safeguards Agreements and their Additional Protocols.
- Inspections in the Non-Nuclear Weapon States and in certain installations in the two Nuclear Weapon States of the EU, France and the UK are carried out jointly by Euratom and IAEA inspectors. More generally, Euratom and IAEA safeguards activities complement each other, which requires close cooperation. In 2013, 1300 inspections took place in the EU in accordance with the Comprehensive Safeguards Agreement in place for the Non-Nuclear Weapon States of the EU and the voluntary Safeguards Agreements for UK and France.
- In this regard, it is important to mention that Euratom has historically supported all measures aimed to strengthen the effectiveness and efficiency of the Agency's safeguards system, and currently this is the case with the IAEA's State-level Concept. State-level Approaches are being used by the IAEA for a couple of years for all non-nuclear weapon EU member states; these should now be further developed by putting more emphasis on utilizing the unique features of the Euratom regional system of safeguards.

3. EU current support to IAEA in the field of nuclear safeguards:

- The obligation for the European Commission to safeguard a large variety of nuclear facilities, which are becoming ever more sophisticated, requires the use of adequate instruments and technologies. With the aim of contributing to an effective and efficient system of international safeguards, the EC strongly supports technical development for safeguards and is an important partner for the IAEA Safeguards Support Programme.

- With currently 47 ongoing research and development tasks the European Commission cooperative support programme inter alia addresses areas such as:
 - Measurement techniques: including Containment, surveillance and sealing/identification techniques;
 - Development of reference materials and particles targeted to IAEA safeguards needs;
 - Information technologies for non-proliferation studies – e.g., information collection and trade analysis;
 - Training of inspectors: jointly with Euratom inspectors or targeted to IAEA needs.

Approximately 30% of these tasks are executed jointly or in close collaboration with other Member States Support Programmes.

- In recent years, five JRC developments were approved for IAEA safeguards use – also known as category A equipment:
 - COMPUCEA (COMBined Product for Uranium Concentration and Enrichment Assay);
 - 3DLR: 3D Laser Range Finder;
 - Ultrasonic Seals;
 - Laser Item Identification System;
 - LMCV: 3D Laser Surface Mapping of Canister Closure Welds.

Last week a new seal technology has been approved for Safeguards use (Category A equipment) by the IAEA: Ultra-Sonic Optical Seal (IAEA Code name: UOSB).

A total of six JRC developments are now being used by IAEA which is in my opinion "a success story" of our joint cooperation.

- The EU support also includes the analysis of nuclear materials, analysis of environmental particle samples, and provision of reference/QC materials. These activities are performed by JRC's laboratories in the frame of IAEA's Network of Analytical Laboratories (NWAL).

- Also, I should not forget the human element which remains the key to the correct implementation of nuclear safeguards. ***Through the JRC***, the EC is proud for its continuous support to IAEA training needs covering the nuclear fuel cycle. EC installations are made available and specific courses are designed to meet IAEA requirements.

- The EU financial contributions provided to the IAEA, over the last 10 years, amount to approximately 140 million €. This includes contributions for nuclear safeguards. As an example, the EU supports, since 2010, the IAEA ECAS project: *Enhancing the Capabilities of the International Atomic Energy Agency Safeguards Analytical Services* with a financial contribution of 10 million € from the European Commission's Instrument for Stability.

4. The importance given by EU to International cooperation and coordination

- At the international level, a number of nuclear cooperation agreements between Euratom and third states such as the USA, Canada, Japan and Australia cover the supply of nuclear materials and fuel cycle services, whilst ensuring that the supplies are covered by adequate safeguards, export controls and security measures.

- EU outreach activities in nuclear safeguards initiated in 90's under the Technical Assistance to the Commonwealth of Independent States, TACIS support program (1994-2006), continue presently under the EC Instrument for Nuclear Safety Cooperation with around 22 million € allocated for the period 2014 - 2020 to promote effective nuclear safeguards globally.

5. Looking at the Future:

- DG JRC is fully committed to continuing the development of Safeguards-related instruments and methods.

- In line with the title of this Symposium, activities should be seen under a global framework. The evolution of safeguards, i.e., its instruments, methods and approaches, should be based on a clear vision of what will happen in the future. Safeguards Implementation should continuously comply with new and novel technologies as “the bar keeps rising”.
- Our laboratories at the JRC institutes and your laboratories in Seibersdorf need to work together in a strategic manner, preparing and anticipating the future safeguards needs.

- Safeguards are not a commercial niche. As such, improved cooperation is needed between MSSPs (Member States Support Programmes) to meet the needs expressed by the IAEA. The European Commission Support Programme as one of the biggest programme is ready to play a central role in this regards. (This goes/fits with our mandatory support to the implementation of Euratom Safeguards).

- According to a study made by a JRC Human Observatory, in the next years there is a need for 7,000 experts in the nuclear field. Though not quantified, a large number of people will be needed for Safeguards. The European Commission and the JRC in particular will continue to support IAEA on training. In this regard, the ESARDA course on Safeguards and Non-Proliferation contributes to the creation of a generalised safeguards culture.

- In what concerns the negotiation on the Iran dossier, we understand the huge effort the IAEA will have to deploy for the implementation of effective safeguards once the full agreement is reached between the Iran and the international community. This effort shall include technical support and resources. The European Commission is pleased to ensure you of its ongoing support.

[We have been permanently supporting the IAEA in terms of funding, training and analytical capabilities, with the Commission's Joint Research Centres playing a central role.]

- Everywhere the resources are becoming scarce. To this end we encourage the IAEA to fully employ the existing IAEA/Euratom legal framework and exploit all the opportunities it can offer. We have invited the IAEA to make full use of the results of the Euratom Safeguards system, thus avoiding a duplication of efforts, while still allowing the Agency to draw their independent conclusions. IAEA has the opportunity to make important savings in Europe and focus more on areas of higher proliferation sensitivity than the EU.

- Safeguards is not an isolated activity. It links strongly with Safety and Security. We actively work for a balanced relation between the three 'S'. We have established several mechanisms enabling the practical cooperation with the IAEA:
 - **Memorandum of Understanding in Nuclear Safety**

 - **Practical Arrangement on Nuclear Security**, benefitting from JRC's expertise in relevant areas, such as the detection of undeclared activities, detection of the diversion of nuclear material or theft of radioactive sources associated with illicit trafficking of such material or sources, as well as related training.

We should not forget the third pillar of the Non-Proliferation Treaty, i.e., The Peaceful Use of Nuclear Energy, is also being supported by the European Union. Specifically, I am pleased to inform on a forthcoming joint EC-IAEA Workshop on this topic to be organised by the Joint Research Centre, at its Ispra site, Italy beginning of next year. We look forward to increasing cooperation with the IAEA in developing nuclear applications.

Before I conclude, let me kindly invite you to **visit our EC stand**. My colleagues will be very pleased to tell you more about our activities, and eventually engage in some sort of cooperation with your country or organization.

Thank you.