

## **Statement by ROMANIA**

### **at the IAEA Ministerial Conference on Nuclear Science and Technology: Addressing Current and Emerging Development Challenges Vienna, 28 - 30 November 2018**

*Delivered by the Secretary of State from the Ministry of Research and Innovation, Mr. Ciprian Preda, head of the Romanian delegation*

**Mr. Chairman,  
Mr. Director General,  
Distinguished Delegates,**

Romania fully aligns itself with the statement made earlier by the representative of the European Union, and welcomes this opportunity to reaffirm, in national capacity, its commitment in promoting and developing the nuclear science, technology and applications for peaceful uses.

Romania highly appreciates the IAEA's efforts and achievements under the leadership of H.E. Mr. Yukiya Amano, the Director General of the Agency, that contribute directly to the progress in attaining several of the 17 Goals of the 2030 Agenda for Sustainable Development. We also view this Conference as a direct contribution to promoting the peaceful uses of nuclear energy as provided in Article IV of the Nuclear Non-Proliferation Treaty (NPT), the key multilateral instrument for strengthening international peace, security and stability.

The Ministerial Conference on “Nuclear Science and Technology: Addressing Current and Emerging Development Challenges” is yet another proof of the central role of the IAEA in promoting the peaceful uses of nuclear energy and nuclear technology, given their essential part in several fields such as the socio-economic development, science, innovation and technology thus contributing to the achievement of the Sustainable Development Goals (SDGs).

**Mr. Chairman,**

Romania is committed, together with the other IAEA members, to participate in the implementation and achievement of the sustainable development objectives, setting out in this respect the National Strategy for Sustainable Development, to which contributes also the Scientific Research, Development and Innovation Strategy under the coordination of the Ministry of Research and Innovation.

Several institutions contribute to the success of the implementation of the mentioned Strategies: the Ministry of Energy, the National Commission for Nuclear Activities Control/CNCAN, the Nuclear Agency and for Radioactive Waste/ANDR, along with research institutes that operate in the atomic and nuclear field such as the “Horia Hulubei” National Institute for Research and Development in Physics and Nuclear Engineering (IFIN-HH-Magurele), the National Institute for Research and Development in Cryogenic and Isotopic Technologies-(ICSI-Ramnicu Valcea) or the National Institute for Research Development in Laser, Plasma and Radiation Physics-(INFLPR-Magurele). The representatives of some of them are part of the Romanian delegation at this Conference.

I will refer in the following minutes to a few key-projects that bring concrete contributions to reaching the objective of the Sustainable Development Goals (SDGs), in particular related to **building resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation and ensuring access to affordable, reliable, sustainable and modern energy for all.**

The Extreme Light Infrastructure - Nuclear Physics (ELI-NP), part of a wider European project, under construction and housed by the IFIN-HH, is going to focus on the study of photonuclear physics and its applications. With the future 10 PW Laser and 20 MeV Gamma Beam System, the following emerging techniques and technologies will be tested: fundamental research on the interaction of the high power laser with matter, nuclear photonics and unique emerging techniques and technologies on: obtaining new pharmaceuticals; establishing the combustion degree of nuclear fuel assemblies in reactors; the non-destructive detection of nuclear materials in shipping containers; medical and industrial imaging; a new concept regarding the provision of oncological treatments using accelerator and laser technologies.

Further on, taking into consideration the European R&D progress in Lead Fast Reactors (LFR) and the existing relevant experience in the nuclear field, the Romanian authorities support the building the Advanced Lead Fast Reactor European Demonstrator ALFRED at Institute for Nuclear Research Pitesti facility, in Mioveni, near Pitesti. In this respect the cooperation with the IAEA TC is of paramount importance on providing support for fulfilling the prerequisites steps prior to the inception of the construction and licensing. The disposal facility will be constructed and operated in accordance to the international best practice and the recommendations of the International Atomic Energy Agency.

Other achievements:

The National Institute for Research Development in Laser, Plasma and Radiation Physics/ INFLPR is the owner of electron beam facilities that are built exclusively in its Accelerators Laboratory. The main applications are focused on the development of e-beam technologies for materials processing as: rubber curing, cross-linking and degradation of natural polymers (collagen, dextran, chitosan, starch), waste water treatment, fiber optic radiation detectors and cross-linking of natural and synthetic polymeric blend in order to produce hydrogels for the medical field.

The Center of Technology and Engineering for Nuclear Projects/CITON is involved constantly in the Research and Development (R&D) Programs supporting the National Nuclear Program in the

energy and environment protection field. The most important domains of CITON R&D Programs are: nuclear safety, radioactive wastes and spent nuclear fuel management, environmental protection, process systems and equipment instrumentation and control operating events analysis, ageing assessment, environmental qualification and extension of operating lifetime for the advanced nuclear reactors that use heavy water and tritium.

Romania, based on more than 60 year experience, has demonstrated a strong commitment to nuclear safety and has significantly strengthened its regulatory framework for nuclear and radiation safety, making important progress related to the management of radioactive waste and nuclear spent fuel, a progress certified by IAEA experts in 2017. Gaining expertise in the field of nuclear safety and security, both on theoretical and practical terms, has helped Romania become a relevant and reliable provider of training and assistance bilaterally or through the IAEA Technical Cooperation (TC) Program, the key mechanism to deliver IAEA services. Romania is a consistent counterpart designated for regional TC projects focused on capacity building activities, strengthening and maintaining capacities in the safe, peaceful and secure use of nuclear technology.

Considering the vast experience gained in the field of nuclear safety and security, Romania declares its readiness to share its theoretical and practical knowledge with other IAEA Member States in order to build and improve their systems and personnel.

**Finally, Mr. Chairman,**

Romania would like to thank the IAEA Secretariat of full cooperation in the framework of the Agency's continuous effort for promoting and developing nuclear science, technology and applications for peaceful uses, and on their delivery to the international community.

Thank you.