GHANA'S STATEMENT DELIVERED BY HON. MAHAMA AYARIGA - MINISTER, MINISTRY OF ENVIRONMENT, SCIENCE, TECHNOLOGY AND INNOVATION AT THE 59TH REGULAR SESSION OF THE IAEA GENERAL CONFERENCE HELD IN VIENNA, AUSTRIA, FROM 14-18 SEPTEMBER, 2015

Mr. President,

Director-General of the International Atomic Energy Agency,

Excellencies,

Distinguished Ladies and Gentlemen,

The Ghana delegation joins other speakers, to warmly congratulate you and your bureau on your election to lead this session. We commend you and your bureau for the professional conduct of this meeting, so far, and assure you of our full support and cooperation. Ghana also congratulates and welcome the Government and People of Turkmenistan on their membership to the IAEA and assure them of our support.

Mr. President,

Ghana seeks to derive maximum benefits from nuclear science and technology while ensuring the safe, secured and peaceful utilization of these nuclear technologies. For over fifty years, Ghana has employed radioactive sources and nuclear materials in a number of sectors of national development such as health care, mining, construction, industry,

agriculture and research. Alongside these, Ghana is also currently working to include nuclear power into its energy mix.

In accordance with best practice and fulfillment of its international obligations, Ghana is constantly working to improve on the legal and regulatory framework within the country that govern all issues that concern irradiating devices, radioactive sources and nuclear material. Such a robust framework will ensure the safety of practices, workers, and the environment, as well as the security of the radioactive sources and nuclear materials in use in Ghana. The legal and regulatory framework will safeguard the nuclear materials in the country while assigning clear responsibility and liability to the various stakeholders in the nuclear field within the country.

A comprehensive legislation covering the 3 thematic areas of concern, namely, **SAFETY, SECURITY** and **SAFEGUARDS** has been passed by the Parliament of Ghana. The Act was passed on the 25th of June 2015, and received Presidential approval on 14th August 2015.

This Act, among others, seeks to establish an independent Nuclear Regulatory Authority and to provide safety and security for nuclear materials used in Ghana through the regulation and management of all related activities and practices. The Authority will also ensure effective implementation of the country's international obligations.

In addition, Ghana has ratified 3 International Nuclear Conventions: The Convention on Assistance in Case of a Nuclear Accident or Radiological

Emergency; The Convention on Early Notification of a Nuclear Accident; and, The Convention on Supplementary compensation for Nuclear Damage.

There is also an ongoing nationwide project aimed at confirming and updating the inventory of radioactive sources and nuclear material by searching and securing them. Inventory of radioactive sources are maintained in a Regulatory Authority Information System (RAIS). Again, with the collaboration and support of the IAEA, Ghana has initiated and is implementing its Integrated Nuclear Security Support Plan (INSSP).

Together with international partners like the IAEA and the Government of the United States of America, there are ongoing studies and initiatives to convert the core of the Ghana Research Reactor-1 (GHARR-1) from Highly Enriched Uranium (HEU) to Low Enriched Uranium (LEU) fuel. Additionally, Ghana maintains a physical protection system at the Ghana Research Reactor-1 (GHARR-1) Centre, Nuclear Radioactive Waste Management Centre; Gamma Irradiation Facility; Radiotherapy Centres at two teaching hospitals; and, scanners at major entry points in the country.

The key objective of these initiatives is to safeguard nuclear material and radioactive sources in the Country. Ghana is very grateful to the IAEA for the many opportunities and resources it avails to us to participate and even sometimes host national, regional and international workshops, technical cooperation meetings, and conferences. This invaluable support assists Ghanaian personnel to interact with leading experts in the nuclear science

and technology field to share ideas, experiences and challenges which obviously enhances our application and regulatory processes.

As a nation, we are committed to the peaceful utilization and advancement of nuclear technology. We understand clearly, that to achieve this, it will take a very deliberate, systematic and coordinated effort between highly trained and skilled stakeholders like regulatory bodies, security agencies, judiciary and law enforcement agencies, operators, licensees, and emergency response practitioners, among others.

As a State we will endeavor to supervise and strengthen the coordination and harmony of policies and programmes of nuclear science, technology and associated regulations. And we will also continue to stand together and cooperate with the international community on all matters that relate to the peaceful use of Nuclear Energy as we have always done.

Mr. President,

Implementation of the IAEA developed Borehole Disposal Concept for disposal of disused sealed radioactive sources generated in the country is on-going. The site earmarked for the concept located within GAEC premises is being characterized. The site characterization process includes geological, hydrogeological and geochemical investigations. A site characterization report and safety case are being developed with assistance from the IAEA for submission to the National Regulatory Authority. Successful implementation of the concept in the country will not only provide a disposal option for disused sealed radioactive sources generated in the country but also enable Ghana acquire the necessary technical

capabilities to play pioneering roles in the West Africa Sub-region and in Africa in borehole disposal technology. Regarding Ghana's nuclear power development, the needed arrangement for the infrastructure is still in progress. A national roadmap for the entire development of Ghana's nuclear programme has been drafted and undergoing review. Work is also in progress on other fronts such as the stakeholder engagement, management system development, and candidate area selection for a site, among others. For further cooperation in developing the nuclear programme a Memoranda of Understanding and Agreement have been signed with our development partners.

Also, the Ghana Atomic Energy Commission (GAEC) has pursued the use of nuclear technology to complement conventional breeding of cassava and other staple food crops in Ghana. The putative mutant line resistant to the African Cassava Mosaic Virus (ACMV) with high starch and low cyanide content is now awaiting multi-locational trials prior to release. GAEC has also developed high beta content mutant lines. These mutant lines are, as well, ready for multi-locational trials. The Commission has also produced cassava hybrid with high tuber yield and resistant to the African Cassava Mosaic Virus ACMV.

Mr. President,

Ghana's National Science Technology and Innovation Policy document identifies education, energy, and nuclear science and technology sectors as key pillars for the country's development plan. In view of this, the country attaches great importance to nuclear education and training at the

Graduate School of Nuclear and Allied Sciences of the University of Ghana. It is, therefore, heartwarming to note that the School which is an IAEA African Regional Designated Centre (RDC) for Professional Training and Higher Education in Nuclear Science and Technology, and Radiation Protection, has recently received another endorsement for Medical Physics Education.

Ghana acknowledges the pivotal role played by the IAEA in implementing the Human Resource Development (HRD) initiatives and Nuclear Knowledge Management (NKM) programme at the Graduate School of Nuclear and Allied Sciences (SNAS). We are grateful to the IAEA for this opportunity and seek extension of the Practical Arrangements between the Ghana Atomic Energy Commission (Graduate School of Nuclear and Allied Sciences) and the IAEA in the area of Nuclear Knowledge Management which expire in September 2015.

It is worth noting, that through the IAEA's Fellowship Programme, a number of Ghanaian students have graduated from various PhD programmes at the School. Other African countries have also benefitted from this fellowship through the Postgraduate Certificate Course and Master of Philosophy programmes of the School. These fellowships have aided Member States, enormously, in the AFRA region to build capacity in the nuclear industry, especially for regulatory activities and research in nuclear and radioactive source usage, safety, security and safeguards. It is also gratifying to note that the fellows and alumni of the School have and

continue to constitute the core personnel to preserve and expand nuclear knowledge in their respective countries.

In Ghana, Mr. President, we are happy to inform you that most of the Ghanaians who benefitted from the IAEA's PhD "Sandwich" programmes have joined the academic faculty of the Graduate School of Nuclear and Allied Sciences.

Currently, radiation and nuclear experts in the country are developing a National Certification curricula to be used for the education and training of professionals in the nuclear industry. This is aimed at enhancing their skills and improving the safety and security of their practices. Again, regulatory guides and codes of conduct for the transportation, use and storage of radioactive materials and other various practices are being reviewed and, where non-existent, entirely new ones are being produced by the appropriate Committees. This positive development in the country has advanced the course of gradual transition of nuclear knowledge and expertise from the older generation to the younger ones, and we look forward to further cooperation in this area.

GAEC has developed a vibrant management and administrative support systems to embark on promoting sustainability. To enable the Commission achieve this target, GAEC has established a Technology Transfer and Marketing Centre to bridge the gap between scientific achievement and the commercialization of such achievements for the benefit of industries in the private sector to stimulate economic development. The Centre is in charge of training, educating and bringing to fore the best means to market the

research results for the benefit of all. Many thanks to the Agency for instituting the TC Project RAF/0/042 'Promoting the Sustainability and Networking of National Nuclear Institutions for Development'. Ghana's participation in this project has helped the Commission in diverse ways due to the educative training Workshops held so far. We believe the project will go a long way to ensure that GAEC achieves its goals and objectives.

Mr. President,

I would like to conclude by assuring you of Ghana's continued support to the IAEA in the discharge of its mandate.

I thank you.