

@Students: Nuclear science and technologies at the International Atomic Energy Agency (IAEA) - ensuring future energy and water security (IAEA)

Friday 9 December 2022 09:45 (40 minutes)

The International Atomic Energy Agency (IAEA), located in Vienna Austria, is an independent intergovernmental, science and technology-based organization, in the United Nations (UN) family, that serves as the global focal point for nuclear cooperation. Its mandate strapline is “atoms for peace and development.” The Agency’s development activity is focused on helping to achieve the sustainable development goals (SDGs), such as clean water and sanitation for everyone, affordable and clean energy, and climate action, through applications of nuclear technologies. Atoms for peace not only reflects the IAEA’s nuclear safeguard mandate, but also its decided contributions to peace by bringing people from around the world together to address global challenges.

The IAEA’s efforts to achieve SDGs is delivered through its Science & Technology pillar, defined by two of its technical departments, the Department of Nuclear Sciences and Applications (NA) and the Department of Nuclear Energy (NE) plus its 12 laboratories in Vienna, Seibersdorf and Monaco. The Division of Physical and Chemical Sciences (NAPC) bridges both NA and NE departments and supports the IAEA’s 174 Member States in building capacities and optimising benefits for safe and economical applications of existing nuclear technologies as well as in developing new, innovative nuclear technologies for the future. The four sections comprising NAPC are responsible for the IAEA’s Water Resource, Radioisotope Products and Radiation Technologies and Nuclear Sciences programmes.

The talk will briefly outline NAPC activities directed towards securing future clean energy and water resource, of particular importance to the African Continent. Specifically, the IAEA role in development of fusion energy, in chemical recycling of plastic waste to generate fuel and in managing water resource for energy, agriculture, industrial applications and human consumption will be highlighted. In addition, how activities collaboratively supporting Member States to achieve their development goals and joining forces to tackle global challenges contribute to atoms for peace will be discussed.

Presenter: Prof. DENECKE, Melissa (IAEA)