Enhancing human resource development and nuclear knowledge management

The challenge...
There is a critical regional shortage of human resources educated and trained in nuclear science and technology in Africa. The absence of nuclear knowledge, its application and management in many sectors poses a serious development challenge for the continent. This shortage is due to the absence of a high level educational programme in this field and a lack of supporting national policies and strategies on developing skills and knowledge on nuclear management.
However, the need for nuclear expertise and related sciences is increasing due to the rapid progress of the peaceful uses of nuclear energy and related technology in the region. Establishing institutions related to nuclear education is a key concern of the continent. Investing in human capital in the field of nuclear knowledge is a great investment in Africa’s development.

The project...
The regional AFRA project aims to educate and train personnel in African countries through fellowships awarded for a Master’s degree in Nuclear Science and Technology and a Postgraduate Diploma in Radiation Protection. The programmes are carried out in academic institutions in the region recognized as AFRA regional designated centres (RDCs). This project will serve most of the areas of great importance to Africa, as specified in AFRA’s Regional Cooperative Framework (RCF) 2014-2018. They include human health, energy, isotope hydrology, radiation safety and nuclear security and industrial applications.

The project will emphasize high quality educational and training, supported by the IAEA and donors. The educational programmes will be conducted using both conventional and virtual means of instruction. Virtual training is expected to develop autonomous capacity and a sustainable mechanism to provide nuclear related education across the region. Furthermore, virtual training is expected to contribute to strengthening the role of the AFRA-Network for Education in Nuclear Science and Technology (AFRA-NEST) in facilitating operation and networking in higher education, as well as the viable provision of training and related research in nuclear science and technology in the Africa region.
The impact…

Through the project, a number of International Nuclear Information System (INIS) centres have been upgraded with equipment. In addition, over 200 professionals and young scientists have acquired core skills in nuclear science and technology. Educational and training infrastructures have been strengthened in the region by identifying RDCs in Algeria, Egypt, Ghana and Morocco.

The creation of a AFRA-Network for Education in Nuclear Science and Technology, in 2005, has been recognized as a cost-effective approach for promoting technical cooperation among developing countries.

Furthermore, a new cyber learning platform was installed in Ghana to support future e-learning and distance learning through the AFRA-NEST web site, created in 2011. A major expected output from the project in human resource development and nuclear knowledge management, is the establishment of a sustainable and independent regional body, capable of providing educational training in nuclear technology and various nuclear techniques.