

PANEL DISCUSSION TALKING NOTICE

Background

- The African Regional Cooperative Agreement for Research Development and Training Related to Nuclear Science and Technology (AFRA) is an intergovernmental agreement established by African member States to enhance the use of nuclear sciences and technologies in Africa for fostering social economic development of the continent for the eventual achievement of the national development goals;
- Established in 1990, it operates under the umbrella of the IAEA that provide technical and scientific backstopping but not party to;
- The agreement is renewed every 5 years by notifying the DG IAEA of the MS desire to continue participating;
- The last extension 4/04/2005 till 3/04/2010;
- The current membership is 34 countries;
- We have activities in areas Human Health, Food and Agriculture, Water resources management, Sustainable energy and development, Industrial applications and quality,

management, Information Communication Technology
(ICT), Radioaction Waste Safety and Nuclear Security ect

AFFRA ACHIEVEMENT FOR THE PAST 20 YEARS

Human Health

- 40 radiotherapy centers in 18 African countries have been upgraded and more than 250 practitioners in Radiotherapy have been trained;
- Emphasis has been on facilitating Member State (MS) increased HR capacity developing through TC projects;
- A harmonized curricula developed under AFRA has been utilized in at least 6 countries in Africa.
- Networking of scientists through conferences e.g. the biannual congress of African Radiation Oncologists (AFROG}
- Support in efforts to strengthen regional capabilities in clinical nuclear medicine;
- Auditing of nuclear medicine facilities using specialized teams so as to identify major constraints and improvements required;

Food and Agriculture

- Member States assisted in the use of modern reproductive techniques e.g. Artificial Insemination to improve productivity and reproductive efficiency of livestock;
- 17 MS are working on improvement of neglected crops;
- Development of drought tolerant crops resulting to 6 new crop varieties;
- Several other countries have promising mutant materials at advanced stage;
- Fully established Tissue culture laboratories developed in almost all participating countries;
- Linkages with food industry for development of new crop varieties have been stimulated in some countries;

Industrial Applications and Quality Management

- To maximize resource utilization in NDT a regional approach has been used using the South African Institute of Welding SAIW and Centre Technique des Industries Mecaniques et Electriques CETIME in Tunisia Regional Designated Centers (RDC);
- Capacity to train and certify NDT practitioner to level III has been attained in the region;

- Over 100 level II new certification NDT practitioners from about 14 MS have been certified in conformity with ISO 9712
- Strengthening capacity and competence of nuclear institutions over Quality Management (QM) has been achieved;
- Facilitated regional networking and promoted certification of nuclear laboratories in several countries;
- Lab certification aim at improving QM, implementation of ISO Standards and boosting international trade;

Information Communication Technology

- Established sustainable national and regional capacities on the use of ICT for training in the fields of NST;
- ICT tele-centers have been established by AFRA in several countries;

Radioactive Waste Safety

- In cooperation with South Africa Atomic Energy Commission (NECSA) AFRA has developed the Borehole Disposal for Sealed Radioactive Sources
- Secure disposal of disused sealed radioactive sources;

- Developed mobile hot cell facility to manage spent highly Active Radioactive Sources (SHARS)

Nuclear Security

- Nuclear Security (NS) consistently increased by working in cooperation with the IAEA;
- National NS programme strengthened through HR capacity development and in establishing NS support center;
- More than 850 personnel have been trained in NS
- MS good practice and networking strengthened through regional workshops on illicit trafficking, information management and coordination;
- Growing support for international convections by MS reflect commitment to NS;

WHERE ARE WE NOW

Management

- Through Aswan declaration the AFRA managerial procedures have been improved for increased effectiveness and efficiency and to promote full ownership of AFRA programmes by MS.
- With effect from this September governance will change from a single AFRA-Field Management Committee to three committees that will address high priority needs of managing the AFRA Programme (Knowledge management, Resource mobilization and management);
- MS voluntary contributions to AFRA Fund to facilitate implementation of the AFRA projects are due this financial year as we endorsed during the 19th AFRA Meeting of Representative here in Vienna in October 2008;

FUTURE OPPORTUNITIES

Human Resource Development

- HR development remains one of our key area of focus
- Today we have designated 2 regional center for Higher Education in nuclear Sciences, The Ghana School of Nuclear Sciences and Alexandria University to start with;
- Efforts will continue to designate new centers especially from the Francophone sector and
- MS will be assisted to strengthen national training institutions in NST and where applicable they can use the AFRA developed Nuclear Sciences curricula;

Resource Mobilization

- MS are committed to increase ownership of AFRA programmes through voluntary contribution unanimously endorsed in 2008 meeting of representative;
- The establishment of AFRA Partnership Building and Resource Mobilization Committee in the management team will enhance AFRA capacity to raise funds from development partners for its activities;

Energy

Given the current bottlenecks of energy demand over the continent AFRA is challenged to provide a platform for a continent wide energy strategy by facilitating MS in terms of

- Energy planning;
- HR development training of engineers;
- Assisting MS in meeting milestone requirement for introducing nuclear energy;

In human health

- Need for continued assistance in MS applying nuclear technologies in combating diseases such cancer programmes;

Agriculture

- Continued efforts in use of modern reproductive techniques for improved productivity and reproductive efficiency of livestock and crops;
- Strengthening efforts to improve crop varieties using seed mutation and biotechnology
- Increased use of nuclear technology in combating post harvest loss and treatment of food crops using food irradiation

- Continued strengthening capacities for diagnosing and control trans boundary diseases

Water resource management

- Building capacity in isotope hydrology in for the better water resources and environmental management;
- Strengthening MS capacity in using nuclear techniques for dam safety;