

Conclusions and Recommendations of the 18th FNCA Coordinators Meeting

1. The Coordinator's Meeting ("the meeting") appreciated that the FNCA activities were effectively implemented in JFY 2016 and have achieved significant outcomes benefiting member countries.
2. Regarding the importance of making contributions to sustainable development by utilizing nuclear science and technology to mitigate the effects of climate change, and the importance of tackling the issue of the safe management and disposal of radioactive waste, based on the Joint Communiqués of the 16th FNCA Ministerial-Level Meeting (MLM) and the 17th FNCA MLM respectively, the meeting agreed to
 - a) launch a new research project on climate change using nuclear and isotopic techniques in 2017, which will assist member countries with the application of nuclear and isotopic techniques for understanding the vulnerability and resilience of ecosystems and landscapes to climate change.
 - b) enhance the radiation safety and radioactive waste management project especially regarding the construction of waste storage and disposal facilities, and the promotion of radiation safety and safety culture.
3. The meeting implemented End-of-project evaluation on six projects, namely a) Radiation Oncology, b) Research Reactor Network, c) Safety Management Systems for Nuclear Facilities, d) Radiation Safety and Radioactive Waste Management, e) Human Resources Development, and f) Nuclear Security and Safeguards, which will terminate at the end of March 2017. The evaluation results and comments on those projects are follows,
 - a) Radiation Oncology

To establish optimal treatments for the predominant cancers in Asia, this project has been conducting several clinical studies of radiotherapy and chemotherapy for more than 20 years. From the results of the clinical studies, some treatment protocols have become standard ones in the FNCA member countries.
 - b) Research Reactor Network

This project has established a national network for medical isotope production and stable supplies in each member country and established an FNCA regional network for the stable production and supply of medical isotopes. It also helped to share information about technologies for producing Mo-99 and new R&D activities for producing medical isotopes.

c) Safety Management Systems for Nuclear Facilities

This project performed six peer reviews of facilities in Indonesia, Malaysia, Korea, Bangladesh, Vietnam, and Thailand between 2010 and 2016. Reviewed facilities enhanced their safety management systems regarding safety monitoring, document control, aging management, and housekeeping according to suggestions for potential improvement, and the project has contributed to enhancing nuclear safety effectively in FNCA member countries by sharing good practices and knowledge. The meeting encourages current efforts to put good practices for enhancing safety management systems on the FNCA web page and to widely share them among FNCA member countries.

d) Radiation Safety and Radioactive Waste Management,

Reports outlining the status of participating countries and other papers have been published, and a better mutual understanding of the approach taken for radiation safety and waste management at research institutions and other organizations between countries has helped to promote safety culture in FNCA regions.

e) Human Resources Development

This project has successfully established national nuclear HRD networks in member countries and helped promote secondary school education for radiation science. The meeting suggests that the utilization of existing mechanisms for sharing information about needs and HRD program among FNCA member states such as ANTEP should be enhanced in each country. It also recommends that the issues of HRD should be discussed at MLM for the further promotion of human resource development in FNCA member countries.

f) Nuclear Security and Safeguards

The 3-year-long activities of this project produced excellent outcomes including raising awareness about the importance of nuclear security and safeguards, facilitating the sharing of information about nuclear security and safeguards, promoting capacity-building for nuclear security and safeguards, and nuclear security and safeguards regimes through workshops and open seminars.

4. With improved procedures for evaluating project proposals endorsed at the 17th MLM, all FNCA coordinators performed ex-ante evaluation of 6 project proposals from project leaders in terms of relevance, effectiveness, efficiency, impact, and sustainability. As a result the meeting agreed to launch two new three-year projects, namely Research on Climate Change Using Nuclear and Isotopic Techniques and Research Reactor Utilization (Integration of Research Reactor Network Project and

Neutron Activation Analysis Project), and begin new phases of three projects for three years, namely Radiation Oncology, Nuclear Security and Safeguards, and Radiation Safety and Radioactive Waste Management, with the following comments.

a) Radiation Oncology

- It is strongly expected that the optimal treatment protocol of radiotherapy and chemotherapy for cervical cancer (CERVIX-V), including state-of-the-art techniques of radiotherapy, will be established and disseminated in three years.
- Physical quality assurance (QA) and quality control (QC) of radiotherapy at the participating facilities are important and should be conducted as planned.
- At least two delegates from each country should participate in the workshop to meet the need for adequate representation of three types of cancers as well as representation of both clinicians and medical physicists.

b) Research on Climate Change using Nuclear and Isotopic Techniques

- Through this project, technical levels of the application of nuclear and isotopic techniques to environmental research in FNCA member states are expected to be enhanced.
- It is strongly expected that technical partnerships among member states for research on topics such as soil and water quality, soil erosion, coastal erosion and marine systems will be initiated in three years.

c) Research Reactor Utilization

- As this project divides its topics into several sub-topics ranging from NAA to HRD, it is expected that this project will effectively improve technical skill level of researchers as well as technicians and research infrastructure of each FNCA member state.
- In order to improve researchers' technical skill levels in relation to research reactors, it is important that MEXT nuclear researchers exchange program will be utilized to train researchers.
- It is desirable that workshop meeting each year should focus on a few topics to discuss among proposed areas.
- Project and Co-Project Leader need to be assigned from each country. One will be from the organization that is responsible for operation and management of research reactors, and the other will be a researcher who is responsible for NAA. Research activities currently performed in the NAA project should continue until March 2019.

d) Radiation Safety and Radioactive Waste Management

- Since almost all countries in the FNCA are planning to construct low-level radioactive waste disposal facilities/long-term storage facilities, this project should

assist the member countries with safety improvement related to radiation safety and radioactive management of low-level radioactive waste repositories.

e) Nuclear Security and Safeguards Project

- Nuclear forensics, cyber security, and the security of radioactive sources should be intensively discussed for three years in order to build an effective international mechanism for nuclear materials security in Asia, which is urgently expected in the world.
- Human resource development in nuclear security is strongly expected to be promoted through this project.

5. The meeting also monitored three radiation utilization developments projects, namely, Mutation breeding, Biofertilizer, and Electron Accelerator Application, and acknowledged that the projects were successfully implemented in the fields of agriculture with the effective cooperation of member countries.
6. The meeting agreed to make a review of the new procedure for evaluating project proposals at the coming 19th CDM to improve evaluation activities.
7. It was agreed that the FNCA should continue its cooperation with the IAEA/RCA on specific projects on mutation breeding, radiation oncology, and radiation processing for possible synergy and experience sharing with non-FNCA RCA member states.
8. Concerning establishing new Terms of Reference (TOR) for FNCA, the meeting discussed the contents of draft TOR in order for 18th MLM's endorsement. The Draft TOR was agreed. There was a proposal to add an attachment where coordinators and other FNCA meeting members are listed. Any other comments if any should be submitted to FNCA secretariat by the 21st March 2017. The SOM scheduled on 19th and 20th of July in 2017 will finalize the draft TOR.
9. Concerning the introduction of the "FNCA Award" scheme endorsed at the 17th Ministerial Level-Meeting, the meeting discussed a draft of implementation guidelines including the nomination and application procedure. There were comments and questions concerning selection process, such as the power of SOM and MLM in the winners' decision, degree of relevance of the proposed criteria to certain projects. The meeting concluded that it would launch the scheme as proposed and continue to discuss improvement of the process. The upcoming SOM in July will

review and finalize the award winners and the MLM in October will be the first occasion of the FNCA Award.

10. The meeting agreed that the project workshops would be hosted by the respective member governments as shown in Annex in JFY 2017. Joint workshops are to be held for the Electron Accelerator Application and Biofertilizer projects, in anticipation of effective and efficient discussions and synergistic project outputs. Prospective host governments should confirm their availability as soon as possible.
11. It was agreed that the summary report (draft) would be e-mailed to the coordinators for comments within two weeks of the meeting, and each coordinator should make comments in another two weeks, and that the Secretariat would make the final version of the report to be adopted by the delegates.