

**Minutes of
FNCA 2013 Workshop on
Radiation Safety and Radioactive Waste Management**

10th - 13th September, 2013

Ulaanbaatar, Mongolia

1) Outline of Workshop

i) Date	10-13 September, 2013
ii) Venue	Ulaanbaatar, Mongolia
iii) Host Organizations	Ministry of Education, Culture, Sports, Science and Technology of Japan (MEXT), Nuclear Energy Agency of Mongolia (NEA)
iv) Participants	16 from 11 countries (Australia, Bangladesh, China, Indonesia, Japan, Kazakhstan, Malaysia, Mongolia, The Philippines, Thailand, and Vietnam)
v) Program	Annex 1

2) Programme

The FNCA 2013 Workshop on Radiation Safety and Radioactive Waste Management (RS&RWM) was held from September 10th to 13th 2013, in Ulaanbaatar, Mongolia. This workshop was co-hosted by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) of Japan and Nuclear Energy Agency of Mongolia (NEA).

Sixteen representatives from eleven FNCA member countries involved in the policymaking, regulatory, operations and research and development of radiation safety and radioactive waste management attended the workshop. They include Australia, Bangladesh, China, Indonesia, Japan, Kazakhstan, Malaysia, Mongolia, The Philippines, Thailand and Vietnam. The program for the workshop is attached as **Annex 1**.

[Opening Session]

Prof.Suren.Davaa, Director of Nuclear Research Center, National University of Mongolia, FNCA Coordinator and Mr.G.Manlaijav, Director of Nuclear and Radiation Regulatory Authority, Nuclear Energy Agency declared the opening of the workshop with welcoming speeches. They heartily welcomed all the participants to Mongolia and, wishing that foreign participants and Mongolian specialists would gain valuable information and knowledge on nuclear safety, nuclear safety monitoring, and radioactive waste management. Professor Toshiso Kosako, Professor, Nuclear Professional School, Graduate School of Engineering, The

University of Tokyo expressed his deep appreciation to the NEA for generously hosting the workshop and encouraged all participants to have a good communication regarding Radiation Safety and Radioactive Waste Management (RS&RWM) in their respective countries. He also emphasized the importance of considering not only benefit but also risk management brought by the use of radiation, radioactive material and nuclear material. This is followed by the introduction of each participant of the workshop. The list of participants at the workshop is attached as **Annex 2**.

[Session I] Country Report Presentation

-Public Exposure(Normal and Emergency Situation)/ Revision of Consolidated Report on Radiation Safety drafted in 2010-

Eleven country reports were presented, detailing the public exposure in normal and emergency situation. Additional information, mainly in the area of regulatory framework, radiation emergency, and national monitoring systems were provided for the updating of the drafted 2010 FNCA consolidated report. The brief summary of each report is attached in **Annex 3**.

[Session II] Summary and Discussion on Consolidated Report on Radiation Safety

An updated report consolidating drafts from the member countries was presented by the secretariat. To check and review the latest report, member countries were divided into 3 groups and each group discussed areas to improve comparing their reports. Each group presented the result of their discussion and agreed to edit their report by the end of October 2013.

[Session III] Status of Radioactive Waste Disposal/Treatment at Research Institutes

Representatives of eleven countries delivered a presentation on radioactive waste disposal and treatment at research institutes. The summaries are attached in **Annex 3**.

[Session IV] Technical Visit to Central Geological Laboratory and Discussion for further Improvement of the Nuclear Facilities in FNCA countries

A technical visit to the state owned Central Geological Laboratory (CGL) was conducted in the afternoon of 11 September 2013. The CGL is the lead organization in Mongolia that offers a comprehensive range of mineral analysis techniques as well as environmental testing. Its main activities include analysis of mineral resources and coal, production of reference materials and certified reference material, environmental testing, determination of materials constituents and mineral processing technology tests. Initially, the FNCA participants were given a presentation that described the abovementioned activities including its various cooperation with other professional organizations both local and international and its accreditations. This was followed by a guided tour of various facilities and laboratories

where the participants got to observed and discussed the state of the art equipment and analytical procedures implemented by the CGL highly competent staff. After a short break, a roundtable discussion was carried out wherein the participants provided their impressions, comments and recommendations that would further support the activities of the CGL. Everybody agreed that the laboratory has impressive activities, manned by highly qualified staff and equipped with state of the art equipment. Professor Kosako of Japan recommended that it is very important for the laboratory to have a sustainable human resources program and develop communication with the general public and the higher echelons of the government to get wider support for all its activities.

[Open Seminar] Radiation Safety Control and RI Analysis/Control in FNCA Member Countries

An open seminar on Radiation Safety Control and RI Analysis/Control in FNCA Member Countries was held on 12 Sep. It was attended by around 60 local students and lecturers from universities, researchers, radiation safety inspectors from nuclear related institutes in Mongolia. The opening remarks was made by Prof.Suren Davaa and he welcomed all the participants and wished the seminar will benefit the audience. Prof. Toshiso Kosako also gave an opening remarks. He expressed his deep gratitude to National University of Mongolia and Nuclear Energy Agency of Mongolia for their excellent arrangement of the meeting. Both Prof.Suren Davaa and Prof.Toshiso Kosako showed their expectation to the young generation in order to promote the nuclear power utilization.

Prof.Toshiso Kosako then briefly explained outlines and history of FNCA RS&RWM projects. Presentations on current situation of radiation safety control at research institutes/NPP and Human Resources Development in the field of RS&RWM were given by Thailand, Kazakhstan, and Japan. Mongolia, Malaysia, and Vietnam then presented on the status of radioactive isotope analysis at research institutes (system, instrument etc.) followed by discussion on challenges faced by the FNCA member countries in the area of radiation safety control and human resources development in the field of RS&RWM.

The afternoon session started with a presentation on the importance of radiation safety and protection, delivered by Prof.Kosako. Ms.Lynn Tan of Australia explained the ICRP Recommendations and IAEA Safety Standard. Presentations on the control of NORM and NORM residue management were given by Mongolia and Indonesia. Bangladesh and Philippines reported on the RI control for medical use in their country. Panel discussion on the capacity of technical support for radiation safety control in the FNCA countries was moderated by Prof.Toshiso Kosako and Dr.D.Orlokh, Head of Radiation Control and Calibration Laboratory, NEA. The seminar was closed with remarks from Prof.Toshiso Kosako, Dr.D.Orlokh and Ms.Oyuntulkuur Navaangalsan, Adviser to the Director General on Regulatory Affairs, Nuclear Energy Agency (NEA). The summaries of the open seminar are attached in **Annex 4**.

[Session V] Wrap-up Discussion -Summary of Workshop and Review of Project Activities(2011-2013) -

Participants reviewed the project activities implemented during phase 4(2011-2013) and agreed to cooperatively work towards the completion of a consolidated report on RS and the publication of the newsletter.

Member countries proposed several subjects to be discussed for the next three years. These include emergency response and preparedness, radioactive waste disposal, decommissioning, disused radiation source management, transportation, storage of spent fuel, uranium mining, NORM waste etc.

Prof.Kosako summarized the discussion and proposed the theme for the next phase -Progress of radiation safety of the general public during emergency and radioactive waste disposal situations. All member countries agreed to continue the project with this theme.

Kazakhstan was proposed as the next workshop venue.

[Closing Session]

With the closing remarks from Mr.G.Manlaijav and Prof. Toshiso Kosako, the workshop was officially adjourned.

Attachment

Annex 1 – Program

Annex 2 – List of Participants

Annex 3 – Summary of Each Session

Annex4 – Summary of Open Seminar