

4. Activities & Achievements

4.1 The Background of the Activities and the Present Targets

(1) Overall Objective of the Project

Safe handling of radioactive waste (RW) is an important issue in nuclear applications development in FNCA countries, as public interest is enhanced relative to waste issues generally.

Accordingly, it was necessary to promote an international consensus on the safe management of radioactive wastes, to promote regional cooperation in this field and to further strengthen existing technologies among participating FNCA countries. The project was initiated in 1995 to exchange information and to share experiences among the FNCA countries.

(2) Historical Background

During the 5th International Conference for Nuclear Cooperation in Asia (ICNCA) held in Tokyo in March 1994, Indonesia proposed taking up a new theme, that of nuclear safety and radioactive waste management. At the 6th ICNCA, it was agreed that the radioactive waste management project would be implemented to promote the safe utilization of nuclear energy in Asia, and to develop a common understanding of radioactive waste management issues and concerns.

(3) Summary of Activities and Results

- a) From 1995 to 1997 Workshops (then called Seminars), participants focused on exchanging information on RW issues in the Asian region, and organized a systematic discussion of such information.
- b) 1998 Workshop – based on the results of the previous three – participating countries decided to hold Sub-Meetings, concurrently with the main Workshops, to have a more focussed discussion of specific issues and concerns in radioactive waste management in the region. The Sub-Meetings were also designed to have young specialists who may have special interests in the discussion topics to participate and contribute positively in the possible resolution of such issues.
- c) At the 1999 Workshop, under the new FNCA framework, information was exchanged and the first Sub-Meeting on spent sealed source management was held. Delegates from FNCA countries discussed the results of activities in this specific area under the general area of radioactive waste management and formulated the activities to be undertaken relative to this.
- d) At the 2000 and 2001 Workshops, activities continued according to the procedures agreed to at the 1999 Workshop. The FNCA countries agreed to publish a Consolidated Report of the status of radioactive waste management in each country and have consequently agreed on a format and editing procedures to be followed.
- e) List of Workshop Venue (Workshops held and planned)

- | | | |
|----|------------------|-------------------------|
| 1) | 1995 RWM Seminar | Japan (Tokyo) |
| 2) | 1996 RWM Seminar | Malaysia (Kuala Lumpur) |
| 3) | 1997 RWM Seminar | China (Beijing) |

- | | | |
|-------|-------------------|----------------------------------|
| 4) | 1998 RWM Workshop | Thailand (Bangkok) |
| 5) | 1999 RWM Workshop | The Philippines (Manila) |
| 6) | 2000 RWM Workshop | Australia (Sydney) |
| 7) | 2001 RWM Workshop | Vietnam (Dalat) |
| 8) | 2002 RWM Workshop | Korea (Daejeon) |
| ----- | | |
| 9) | 2003 RWM Workshop | Indonesia (Jakarta) |
| 10) | 2004 RWM Workshop | (to be decided in 2003 Workshop) |

f) Participants: 253 Persons (cumulatively up to 2002)

g) Highlights of Accomplishments

- i. Information was exchanged and shared on RWM in general. Specific topics included "Current State of Radioactive Waste Management in Each Country, and Problems," "General Concepts in Radioactive Waste Management," "Radioactive Waste Management Education/Training" and "How to Carry Out Cooperative Activities in Radioactive Waste Management in Asia."
- ii. In order to have an in-depth discussion of priority issues unique to the host country of the particular Workshop, Sub-Meetings were held with the participation of specialists from a broad range of related fields.
- iii. A detailed reporting of RWM Status in the FNCA Countries was carried out by the use of a questionnaire type survey.
- iv. RWM Newsletters were published, a web-site was created, and a list and database of related participants was developed.
- v. Since 2001, a task group on "spent radiation source management" has been established as part of the RWM Project. Task group activities were initiated with discussion/survey meetings held in the Philippines and Thailand as volunteer countries of 2001. And for 2002, task group activities continued the discussion/survey meetings held in Indonesia and Korea, where experts from the Philippines and Thailand, respectively, participated and contributed actively.

4.2 The Activities for the Year 2002/2003

(1) Promotion of Mutual Understanding Among Countries and Commitment to an International Framework;

Through the previous seven Workshops, the state of RWM in nine Southeast Asian countries has become clear and mutually understood, and a common commitment to an international framework has been promoted.

(2) Regular Publication of Radioactive Waste Management Newsletter;

The RWM Newsletter is published twice a year. Publication alternates between Japan (odd-numbered editions) and the current Workshop host country (even-numbered editions).

To date, editions No. 1 to No. 10 have been published in that manner and will be continued.

(3) Creation of Web-site and Database;

Articles on the RWM Project in the FNCA web-site have been enhanced, and lists of

Workshop participants have been recorded in a data-base.

FNCA web-site : <http://www.fnca.jp/english/>
(to protect individual information, accessing participants lists
requires use of a password)

(4) Publication of Consolidated Report

A consolidated report including data on RWM in all countries is being prepared for publication now. Final draft of the report was distributed to each participating country during the last RWM Workshop held in Korea.

(5) Activities of the Spent Radiation Source Management Task Group ;

Based on agreement at the 1st FNCA Meeting and the 2nd FNCA Coordinators Meeting, the Task Force began its activities in 2001.

In the first year, Discussion/Survey Meetings were held in and with the cooperation of the Philippines and Thailand, as voluntary countries.

Participants discussed what was useful and necessary based on actual cases in those countries and how issues were handled in other countries.

From the results, they recognized that the Task Group activities were useful.

At the 2001 Workshop, held in December 2001, in Vietnam, an interim report on the results of SRSM discussions in 2001 was prepared and discussed, and it was agreed that Discussion/Survey Meetings would also be held in Korea and Indonesia in 2002 with the possible participation of the Philippines and Thailand experts.

4.3 The FNCA 2002 Workshop

The FNCA 2002 Workshop on Radioactive Waste Management was held in Daejeon City, Korea, November 18-22, 2002. Workshops consist of presentations by each country and Round Table Discussions. In the presentations, each country reports on its current situation and problems. At the Round Table Discussions, proposed solutions to each country's problems are discussed. In conjunction with the Workshops, Sub-Meetings are held, where situations, problems and proposed improvements taken up in the Workshops are discussed both in regulatory and technical contexts.

Following each Workshop, Project Leaders and specialists continue exchanging information and consolidate results prior to the next Workshop.

(1) Country Report

Country reports were presented on the present status and progress of radioactive waste management activities in each FNCA country. A number of countries reported on the status of control and regulation against transfer of radioactive materials across borders.

(2) Consolidated Report on RWM

The final draft of the Consolidated Report on Radioactive Waste Management and the way to effectively implement the findings in order to reach the following consensus:

- Since the final draft of the consolidated report was confirmed at the Workshop, it will be published immediately after the necessary minor revisions are placed. Each country will receive 20 hard copies and the same number of CD-ROMs.
- Considering the importance of radioactive waste management, effective utilization

should be designed in order to promote deeper appreciation among policy makers and to promote public understanding.

- In order to contribute internationally, the FNCA is ready to consider wider ranging activities by making available the results obtained in the FNCA countries to such bodies as the IAEA to ensure greater recognition of the FNCA aims and objectives
- To provide a forum for nuclear cooperation within the region to allow a greater understanding and acceptance of the importance of radioactive waste management to the general public
- To improve the safety awareness in radioactive waste management.

(3) Sub-Meetings on RW from Decommissioning, Waste Characterization, and TENORM

* TENORM: Technologically Enhanced Naturally Occurring Radioactive Materials

These included radon exposure levels, exemption levels for radioactive components including current IAEA guidelines and the need for a more comprehensive safety assessment and a worldwide agreement on the best way to address the TENORM issues. A number of other issues were highlighted for further evaluation, and following points were agreed upon:

- Assess validity of IAEA Draft Safety Guide 161.
- Further develop the understanding of TENORM related issues in the region
- Investigate possible movement of TENORM wastes across borders
- Discuss further inconsistent standards and regulations

(4) Results of the Spent Radiation Source Management (SRS) Task Group

SRS Task activities carried out by the Philippines, Thailand, Indonesia, Korea, and Japan, were reported including the ways to strengthen the SRS management in the region. The following were agreed upon:

- It was confirmed that the activities of this Spent Radiation Source Management Task Group were extremely significant, by exchanging frank views on ways to respond to problems technically and institutionally, and on any remaining issues, based upon practical experiences of the above voluntary countries.
- A concise report is under preparation by participating countries to the Task Group, and it is planned to distribute the report after this Workshop, in order to best utilize the results effectively in the FNCA countries.
- It is important to discuss further on what the FNCA is able to do in deepening understanding on the importance of spent radiation source management in each FNCA country, and also in strengthening the safety awareness and management including stakeholders involvement.
- The FNCA is ready to provide the concrete and practical results of the achievement of the Spent Radiation Source Management Task Group, to the IAEA section responsible for spent sealed source issues.
- FNCA countries should be made aware with relevant IAEA documents on

management of spent sealed sources such as the Code of Conduct on the Safety and Security of Radioactive Sources.

(5) Three Year Work Plan on Radioactive Waste Management

Under the FNCA framework, ways to conduct review of the results were discussed with consensus reached as follows:

- “Three Year Work Plan” should cover fixed three years starting this fiscal year, and a systematic way to modify its contents annually should in principle be abolished. However, next preceding year should be in-principle be agreed on by each FNCA RWM workshop meeting.
- At the FNCA 2004 Workshop on Radioactive Waste Management in two years time, discussion will be held over ways to assess the result of this project to allow the effective implementation of the project activities following the project review.
- The FNCA workshop participants should continuously review suggested topics for discussion, knowledge sharing and mutual understanding.

Participants of this Workshop confirmed Indonesia as the next venue for holding the FNCA 2003 Workshop on Radioactive Waste Management.

Candidate host country of FNCA 2004 Workshop on Radioactive Waste Management will be determined later.

4.4 Proposed Activities in and after the Workshop in Korea

(1) Continuing Information Exchange toward Mutual Understanding

: The Workshop in Indonesia will be held this year.

(2) Information Exchange Network

: Development of the newsletter and web-site will be continued.

(3) Consolidated Report

: Information on each country’s RWM will be updated.

(4) Task Group Activities

: Task Group activities on TENORM will start.

At the RWM Workshop, held in November 2002, in Korea, it was agreed that Sub-group activity should be continued for TENORM.

And it was agreed that Discussion/Survey Meetings on TENORM would be held in Australia and Vietnam in 2003. Following recent developments of visiting Australia already, cooperation by Malaysia instead of Australia is now expected.

(5) Plans for the Next Workshop

At the 2002 Workshop held in Korea, it was agreed to hold the 2003 workshop in Indonesia.

Main theme: Correspondence to International Trend including ICRP, and “Joint Convention on Safety of Spent Fuel and Radioactive Waste Management”

Emergency Responding Plan/ Risk Management including that to

Lost/Orphan Source, or Terrorism

- Sub-Meeting: 1) Disposal of LILW including waste acceptance criteria
2) Management of waste arising from decommissioning of small to medium scale nuclear facilities

4.5 Future Cooperation Activities in the Area of RWM

- i. Workshops with Sub-Meetings will be held once a year and activities will be continued to help countries in better understanding the RW management conditions and problems in Asia.
- ii. Production of a common RWM manual for all FNCA countries will be considered.
- iii. Developing and updating databases (including consolidated reports and information on radioactive waste, and related parties and organizations lists) will be done.
- iv. Developing the information exchange network (newsletter, web- site) will be maintained
Creation of a TENORM Task Group will be considered.