

Funded by Extra-Budgetary contributions from the Republic of Korea
REPORTING PERIOD: 2022

Project short name	ANSN
Project status	
IAEA Programme	Programme code
IAEA Sub-Programme	Sub-Programme code and title, AIPS code
Implementing Division/Section	NS Office of Safety and Security Coordination - Networks Management and Partnership Section
Technical Officer	
Project Start Date	
Expected Project End Date	
Total project duration	

1) ACHIEVEMENTS DURING REPORTING PERIOD

Summary of Progress and Outcomes (Results to date)
ANSN successfully completed a total of 10 events in 2022, including the 32nd Steering Committee Meeting, which was held in IAEA Vienna in a face-to-face meeting. In addition, the Technical Report on ANSN Self-Assessment was submitted as a result of gap analysis of Member States conducted by the Self-Assessment Coordination Group over several years. The quality of the report was improved significantly through the review of SC members and third party, and the publication of Technical Report was approved at the SC meeting. The main objective of this technical report is to support the understanding of the methodology of Self-Assessment of nuclear installation in the Member States, and it is expected that the report can be used as a useful reference to help the Member State to identify and understand the needs, resources and gaps in its capacity building programme. According to the feedback from participants in the 2022 ANSN regional workshops, supporting activities of ANSN have been very informative and beneficial in improving their knowledge and expertise, which will greatly contribute to promoting capacity building in the Member States.
Financial Summary

2) REPORT ON OUTPUTS ACHIEVED

Output 1/ Task 2016.70 ANSN Networking: Enhanced networking and cooperation within and among Member States and networks (incl. development of new networks, steering committee meetings, Practical Arrangement meetings, Inter-Regional WS)
32nd Meeting of the Steering Committee of the Asian Nuclear Safety Network The purpose of the event was to review the progress of the activities of the Asian Nuclear Safety Network (ANSN), and to approve the revised ANSN activity plan for 2023. 20-21 October 2022, face-to-face meeting at IAEA Vienna, 13 participants (11 SC members and 2 Attendances from Donor Country) / France, Germany, Indonesia, Japan, Republic of Korea, Malaysia, Philippines, Thailand, Viet Nam

Results and conclusions :

- Implementation status of ANSN activities in 2022 was reported, and activity plan for 2023 was reviewed and approved at the meeting.
- The ANSN Technical Report which has been developed by Self-Assessment Coordination Group was reported, and the publication of the report was approved.
- Ways to improve effectiveness and efficiency of ANSN Activity were discussed, and it was suggested to review re-structuring of Topical Groups at the Consultancy Meeting 2023.
- At the meeting, Mr. Alan M. Boras from Philippines was elected as Vice-Chairperson.

Output 2

- Maintain the existing website for ANSN members (user access, upload of past events content in public and restricted area)
- Updates for ANSN Steering Committee member details as well as ANSN topical group member details.
- Publication of ANSN Event Record Sheets or Summary Report.
- Publication of “Upcoming Events” in the ANSN home page.

Output 3 Enhanced competence in nuclear safety and security (incl. national and regional training courses and WS)

Overall for the ANSN

- Regional Workshop for Central Governments and Regulatory Bodies on the Development of National Strategies and Regulatory requirements for Decommissioning

The objective of the event was to provide the participants with practical knowledge on the development of national strategies and regulatory requirements for decommissioning by presenting approaches, experiences and lessons learned from countries with advanced decommissioning programmes, discussing responsibilities and the national institutional and technical infrastructure for decommissioning, regulatory requirements for planning, implementation and completion of decommissioning, and highlighting needs and gaps, aiming at improving cooperation between the national policy makers, governmental authorities and regulators.

4~8 April, virtual, 15 participants from 4 Member States (including IAEA staff)

Results or Achievements:

- Increased awareness of the importance of timely arrangements for safe decommissioning of nuclear facilities at a national level
- Sharing information on the international perspectives related to national strategies and regulatory frameworks for decommissioning
- Sharing examples through case studies
- Identifying gaps in the national frameworks for decommissioning; Identifying gaps in the national frameworks for decommissioning
- Progress towards establishing action plans for improvement of the national infrastructures; Progress towards establishing action plans for improvement of the national infrastructures

- **Resional Workshop on Managing the Interface between Safety and Security of Research Reactors**

The objective of the workshop was to provide the participating Member States with practical information to better understand and manage the interface between safety and security of research reactors. The workshop also served as a forum for sharing information and exchanging knowledge and experience among the participating Member States on strategies to manage the interface between safety and security at research reactors.

6 ~ 10 June, virtual, 19 participants from 7 Member States (including IAEA staff)

Results or Achievements:

- Various sessions of the Workshop provided an opportunity for the participants from regulatory and operating organizations to share their knowledge and experience, good practices, innovative methods and approaches to manage interfaces between safety and security of research reactors.
- It was noted in many workshop discussions that IAEA-TECDOC-1801 is an excellent source of information on managing the interface between safety and security.
- A number of presentations addressed the importance of communication means, procedures and compatibility as interface issues with external response organizations responsible for contingency and emergency response.
- While addressing the safety and security cultures, participants noted that safety and security are often in differing organisational departments, and safety culture tends to be very open whereas security culture is typically on a need-to-know basis resulting in cultural challenges.

- **Regional Workshop on Nuclear Safety Knowledge Management Programmes for Regulatory Bodies**

The purpose of the workshop was to provide the participants with the skills and competencies for developing nuclear safety knowledge management programmes at both the national and organizational levels. It is expected that the knowledge and expertise gained during the workshop will allow the participants to initiate and further develop existing nuclear safety knowledge management programmes in their respective organizations.

12 ~ 15 July, virtual, 17 participants from 5 Member States (including IAEA staff and International Experts)

Results or Achievements:

- According to the evaluation made by the participants the workshop achieved its objectives described above.
- Following the evaluation made by the participants another regional workshop was recommended in the subject for 2023 with the objectives to deliver advanced information on specific aspects of knowledge management, to identify achievements, gaps, good practices with regard to regulatory knowledge management system and to develop country specific action plans to improve knowledge management.

- **Regional Workshop on the Application of Level 1 Probabilistic Safety Assessment**

The purpose of the workshop was to provide a forum for the participating Member States to share knowledge and exchange information on Level 1 PSA and its application. Special attention was placed on PSA related requirements and recommendations reflected in IAEA safety standards along with recent developments in the PSA area including PSA usage in applications. In addition, national experiences and current challenges in the field of PSA and its applications was planned to be discussed.

5 ~ 9 September, Bangkok Thailand, 20 participants from 5 Member States (including IAEA staff and International Experts)

Results or Achievements:

- Three and a half days were devoted to giving lectures on Level 1 PSA and its application as well as lectures on integrated risk informed decision making framework for nuclear power plants. Lectures were given by two external experts and by one lecturer from IAEA staff. Also, short national presentation s from 5 participating countries

(Indonesia, Thailand, Philippines, Malaysia and Viet Nam) on PSA status in national nuclear safety practices were presented and discussed.

- One full day was devoted to training participants in practical usage PSA models for finding safety problems on hypothetical NPP and in development risk informed assessment of possible solutions. Participants were split into three groups, each of the group led by expert or by IAEA staff member was provided with notebook with pre installed PSA software (Risk Spectrum PSA Professional 1.3) and PSA model of hypothetical NPP.

- The 10th Annual Meeting of Regional Advisory Safety Committee for Research Reactors in Asia and the Pacific

The purpose of the event is to provide a forum for the safety committees of research reactor operating organizations in the Asia and the Pacific region to share knowledge and experiences related to research reactor safety. The work plan of the next RASCAP will be also developed during the meeting.

13~16 September, Sydney Australia, 14 participants from 7 Member States (including IAEA staff and International Experts)

Results or Achievements:

- The meeting noted progress made on the previous RASCAP meetings recommendations. All participants considered that their safety committees were operating effectively and it was noted that most are now in the state where further improvements constitute optimisation of their performance rather than the significant changes seen over previous meetings. Most participants noted that attendance at RASCAP meeting has continued to have a beneficial impact on the 5 operation of their own safety committees, particularly making them more active in a number of cases, as well as for members of regulatory bodies who attended.

- IAEA-KINS Basic Professional Training Course on Nuclear Safety

The purpose of the event is to provide a broad overview of all the safety concepts and their application to nuclear power plants and research reactors. Its nature and scope are primarily oriented to junior professionals in nuclear safety-related activities, but also appropriate for the trainers who want to teach their staff and the specialized professionals who want to expand their view on nuclear safety.

19~30 September, Daejeon KOREA, 33 participants from 18 Member States (including ANNuR and FNRBA MSs)

Results or Achievements:

- Participants from three regional networks, such as ANSN, ANNuR, FNRBA shared their country's national status related to nuclear safety and exchanged experiences and lessons-learned with participants from other countries. In addition, the hosting country, Korea, shared practical regulatory knowledge and experiences which has been accumulated through long experience of regulatory activities on designing, constructing and operating of nuclear power plants. As main achievement, all participants have strengthened their capability for nuclear safety through knowledge and experience sharing of nuclear safety.

- Regional Workshop on Radiological Environmental Impact Assessment for Nuclear Installations

The objectives of the meeting are to enhance the understanding and competence of regulatory bodies, future operators, and research organizations regarding investigation of site characteristics and assessment of radiological environmental impact for nuclear installations

24-28 October, Manila Philippine, 18 participants from 6 Member States (including IAEA staff and International Experts)

Results or Achievements:

- Participants recognized that technical aspects related radiological EIA for nuclear installations is a complexity and safety relevance. The technical expertise and experience were needed for development of EIAR for nuclear

installations including data collection, modelling, analysis, overall impact assessment of nuclear installations on people and environment and also reviewing of the EIAR.

- **Regional Workshop on Communication and Consultation Regarding Issues Related to Radioactive Waste Management**

The objective of the event is to assist participating countries improving the communication, exchange and consultation of national organisations with interested parties, including regulatory bodies on issues regarding safe radioactive waste and spent fuel management.

25-28 October, Bangkok Thailand, 13 participants from 4 Member States (including IAEA staff and International Experts)

Results or Achievements:

- The regional workshop addressed, through lectures, discussion sessions and application exercises, the approaches for communication, exchange, and consultation of the different steps (pre-treatment, treatment, conditioning, storage, disposal) of the safe management of radioactive waste. The workshop also addressed the importance of safety and its demonstration in radioactive waste management for communication, exchange, and consultation with public and other interested parties and how such a demonstration of safety has to adapt to the audience.
- The workshop was an opportunity to stimulate exchange between the participants and the experts in the field of communication but also in the safety of radioactive waste management. The event aimed at supporting capacity building of the participants in the communication, exchange, and consultation with interested parties for the safe management of radioactive waste.

- **Regional Workshop on the Development of Nuclear Safety Knowledge Management Programme for Regulatory Bodies**

The primary objective of the meeting was to present latest developments and share experiences in managing training system in nuclear and radiation safety, in particular on development and updating of training programs, identification and certification of trainees, evaluation of training effectiveness.

14-18 November, Manila, Philippines, 12 participants from 4 Member States (including IAEA staff and International Experts)

Results or Achievements:

- In the workshop, the latest developments were presented and the experiences in managing training system in nuclear and radiation safety were shared. The invited experts delivered presentations on the development and updating of training programs, identification and certification of trainees, evaluation of training effectiveness. Education and training related information were shared among the participants. The case study session gave an opportunity to exercise in practice the activities related to management of training.
- The meeting focused on the application of principles of Systematic Approach to Training and management of training within an integrated management system, the development of training schemes for different job positions including initial, refresher and other specialized training programmes, practices of personnel certification in nuclear and radiation safety. Role of different learning techniques were discussed like e-learning, mentoring, on-the-job training, etc., and the roles of national, regional and international training courses and training centres.

Output 4 Harmonized capacity building approaches (incl. annual meetings, TMs, attending conferences, Fukushima lessons learnt, etc.)

Overall for the ANSN

- outputs fully or partially paid by the NSSC contributions *
 - outputs fully paid via other contributions
- (Name/Title of Output: e.g. Series of workshops on Plus list dates and places in bulleted form)

(Achievements, Description of above Output: e.g. include details related to number of people trained, benefits, etc or link to webpage)

Output 5 ANSN Project management and implementation

Staff cost for staff administering virtual and in-person arrangements for participants and experts in the ANSN meeting and workshops, for staff developing and maintaining the ANSN website, and for staff administering and reporting on extrabudgetary contributions*

Note: Outputs fully or partially paid by the NSSC contributions are marked with *

Impact in Member States – What is the situation as a result of IAEA activities

Information sharing and communication through ANSN activities held as virtual and face-to-face meetings is expected to impact as an opportunity to facilitate communication between Member States or within each Member State. These ANSN activities are of great help in strengthening the capabilities of all participating countries in the safety and security, and continuous support is needed to ensure the robustness of their safety and security infrastructure.

Beneficiaries to date (*Information on which countries the project has impacted to date, and is anticipated to impact*)

- All ANSN Member States: Bangladesh, China, Indonesia, Japan, Kazakhstan, Korea, Malaysia, Philippines, Singapore, Thailand, and Viet Nam, and four Supporting Countries: Australia, France, Germany, USA

Difficulties encountered during implementation

Changes introduced in implementation

With the pandemic continuing into the first half of 2022 in most Asian Member States, many face-to-face meetings were concentrated in the second half, with the exception of a few virtual workshops. This concentration of events in a short period of time not only resulted in excessive administrative works but also made it difficult to recruit proper international experts and decide a host country. For this reason, some events planned to be held in 2022 have inevitably been postponed to 2023 or later.

As in last year, one of the major challenges for ANSN activities is to diversify the participants concentrated in some Member States. In particular, experts from China, Japan, and Korea, who have abundant experience and expertise in the nuclear field, need to actively discuss and share their experiences with other Member States.

3) FUTURE OUTLOOK AND PROJECT SCHEDULE

Future Project Outlook - Where do we go from here? / What is still needed to be done?

A total of 19 ANSN events are planned to be held in 2023, including the 33rd Steering Committee meeting. The title of events are as follows, and the dates and places of events may be changed.

- IAEA-KINS Workshop on Radiation Safety and Emergency Response in Medical or Industrial Use of Radiation, 19-23 June, Korea

- Regional Workshop on Nuclear Safety Knowledge Management Programmes for Regulatory Bodies, 24-28 July, Malaysia
- Regional Workshop on the Management of Training Systems for Nuclear and Radiation Safety, Q4, Philippines
- Regional Workshop on Review and Assessment of Nuclear Power Plant License Applications by Regulatory Bodies, 17-21 July, Philippines
- Regional Workshop on Establishing a Technical and Scientific Support Organization, 24-28 July, Viet Nam
- Regional Workshop on the Development and Implementation of Effective Integrated Management Systems for Nuclear Facilities and Activities, Q3, Indonesia
- IAEA-Fukui Workshop on Safety Culture Self-Assessment for Regulatory Bodies, 27 February-3 March, Japan
- Regional Workshop on the Development of National Strategies and Regulatory Requirements for Spent Fuel Management, Q3, China
- Regional Workshop on the Development and Implementation of a Disposal Programme for Radioactive Waste Focusing on Closure and Post-closure, Q4, China
- Regional Workshop on the Management and Oversight of Supplemental Staff at Nuclear Power Plants, Q3, Bangladesh
- Regional Workshop on Operating Experience Feedback for Research Reactors, Q4, Bangladesh
- 11th Annual Meeting of the Regional Advisory Safety Committee for Research Reactors in Asia and the Pacific (RASCAP), 7-10 November, Thailand
- Regional Workshop on Site Evaluation for Small Modular Reactors, Q3, China
- Regional Workshop on the Management of National Dose Registries, 20-24 March, Thailand
- Regional Workshop on Radiation Protection in Nuclear Embarking Countries, Q3, Indonesia
- Regional Workshop on Safety Requirements for Transport Safety, Q2, Viet Nam
- Technical Meeting on the Improvement of Regulatory Infrastructure for the Transport of Radioactive Material, Q4, Malaysia
- Ninth Meeting of the Self-Assessment Coordination Group, Q4, Austria
- 33rd Meeting of the Steering Committee of the Asian Nuclear Safety Network, Q2, Austria

Comments/Feedback to the donor

The IAEA and ANSN Member States appreciate the technical and financial support of all donors and kindly ask for continued support to strengthen the nuclear and radiation safety capabilities of ANSN Member States.