

Progress Report 2021

Asian Nuclear Safety Network, ANSN

Project short name	ANSN
Project status	Ongoing
IAEA Programme	Programme code 3.0.0.1
IAEA Sub-Programme	Sub-Programme code and title, AIPS code 3000163
Implementing Division/Section	NS Office of Safety and Security Coordination - Networks Management and Partnership Section
Technical Officer	Mr Guo, Linguan, Ext: 26429
Project Start Date	
Expected Project End Date	
Total project duration	

1) ACHIEVEMENTS DURING REPORTING PERIOD

Summary of Progress and Outcomes (Results to date)

According to the ANSN mid-term plan confirmed in 2019, a total of 19 events were scheduled to be held in 2021. However, as most countries around the world, including Asia, are locked down due to the COVID-19 pandemic, only 8 of those events could be held as virtual conferences. The remaining 11 events are carried over and will be held in 2022 and 2023. Of the 8 events held this year, 6 events were regional workshops and 2 were Consultancy Meeting and Steering Committee Meeting.

As most of the ANSN regional workshops generally include field trips, demonstrations and practices, a physical meeting has been considered a more effective way than virtual meeting. This was one of the main reasons why many regional workshops were postponed to next year rather than being held virtually, as the pandemic made it difficult to hold face-to-face meetings.

The Table 1 shows the title of 6 regional workshops held in 2021 and the numbers of participants from each Member State, which are considered a quite large or appropriate number of participants for all events. However, since the number of applicants was too small by the nomination deadline for each event, the due date was extended several times and many emails were sent all Member States to urge participation.

Table 1. The title of events in 2021 and number of participants from each Member State.

Topical Group	Date	Title of Event	Total No. of Part.	Number of Participants											Supp. Count.
				Bagladesh	China	Indonesia	Japan	Kazakhstan	Korea	Malaysia	Philippines	Singapore	Thailand	Viet Nam	
STG	6-10 Sep.	Regional Workshop on Safety Requirements for Site Evaluation and Reviewing Safety Analysis Report for Siting	30			6			1	2	4	12	4	1	
RITG	4-7 Oct.	Regional Workshop on Regulatory Inspection and Enforcement Program for Nuclear Installations by Regulatory Bodies	12			1				2	4		3	2	
CTG	4-8 Oct.	(21) Regional Workshop to Share Communication-Related Experience, Including on the Implications of Pandemic Situations	18	2		3				2	4		5	2	
SMRRTG	11-15 Oct.	Ninth Annual Meeting of the Regional Advisory Safety Committee for Research Reactors in Asia and the Pacific (RASCAP)	17	2		2				2	4		3	3	1
ETTG	11-15 Oct.	Regional Workshop on Strategies for Attracting and Retaining Highly Qualified Personnel at Regulatory Bodies	20			4	1		1	3	4	4		3	
SATG	29 Nov. ~ 3 Dec.	Regional Workshop on Deterministic Safety Analysis for Nuclear Power Plants	24		4	1				4	4	3	4	4	

In addition, the participation is concentrated in several Member States, and more importantly, China, Japan, and Korea, which are considered to be the most experienced Member States, rarely participated in the ANSN workshops. Considering that one of missions of the ANSN is to share knowledge and experiences with other Member States, active cooperation of these Member States is essential.

According to the recommendation from the Consultancy Meeting held in 2020, it was intended to hold a face-to-face consultancy meeting for in-depth discussion on improving the efficiency and effectiveness of ANSN activities. However, as it was difficult to hold face-to-face meeting due to the COVID-19 pandemic, a virtual meeting was held for two days in November to discuss changes to the ANSN activity plan and ways to improve effectiveness and efficiency. Also the contents of Technical Report as a results of Self-Assessment Coordination Group and the ANSN membership application from Pakistan were discussed.

The results of Consultancy Meeting were summarized and presented in the 31st Steering Committee Meeting for approval. Recently, a total of 15 Steering Committee Members were nominated for 2021~2023 and Mr Kubota of Japan was elected as the next chairperson. There were no disagreements or special comments from the SC member on the revised activity plan for 2022 and 2023, and ANSN's events will be performed in consideration of pandemic circumstance according to the recommendations from the last Consultancy Meeting.

All information on ANSN's activities and plan for next year can be found on the following ANSN web page.
<https://ansn.iaea.org/default.aspx>

Financial Summary

The ANSN is implemented under the umbrella of the Global Nuclear Safety and Security Network (GNSSN). Extra-Budgetary contributions for included networks are target towards one or more of the following networks or fora: the ANSN, the Arab Network of Nuclear Regulators (ANNuR), European and Central Asian Safety Network (EuCAS), Forum of Nuclear Regulatory Bodies in Africa, (FNRBA), GNSSN, and Technical and Scientific Organization Forum, (TSOF). The GNSSN networks received Extra-Budgetary contributions in the total amount of €..... in 2021. The Extra-Budgetary contributions to cover staff cost for three Cost Free Experts working fully or partially for the implementation of the networks was received in previous years and is therefore not included in the 2021 contributions. Additional funding in the amount of € was received from the IAEA Regular budget.

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)

☐ Consultancy Meeting of the Asian Nuclear Safety Network

- The purpose of the event is to review the Asian Nuclear Safety Network's performance during 2021 and plans for 2022, and to discuss the results of the Self-Assessment Coordination Group's activities.
- Time and Date : 08:00 ~ 10:00 a.m. Vienna Time, 24~25 November 2021
- Results and conclusions :

In the introduction part of the Consultancy Meeting (CM), the overview and recommendations of the last CM were presented. One of the most debatable issues was a way to increase the efficiency and effectiveness of the ANSN activities, and the recommendations can be summarized as follows.

- Reduce the number of events
- Development of activity reports to strengthen the contents of activities
- Reorganize the Topical Groups to improve the effectiveness and efficiency of activities
- Include technical materials into the ANSN Technical Report

☐ 31st Meeting of the Steering Committee of the Asian Nuclear Safety Network

- The purpose of the event is to review the progress of the activities of the Asian Nuclear Safety Network (ANSN), and to approve the revised ANSN activity plan for 2022.
- Time and Date : 08:00 ~ 10:00 a.m. Vienna Time, 08 December 2021
- Results and conclusions :

Most of the recommendations from the Consultancy Meeting were introduced in the SC Meeting. In addition, the regional workshops held in 2021 and activity plan for 2022 and 2023 were presented for approval. There was no specific objection to the activity plan, and most of recommendations of the CM were approved.

At this meeting, 15 SC members newly nominated from each Member State were introduced and most importantly, Mr. Kubota from Japan was elected as Chairperson for the next three years.

Output 2/ Task 2016.71 ANSN Platform (IT): Strengthened platform for the exchange of technical knowledge (incl. management of nuclear safety knowledge, Nuclear Safety Knowledge Base) (IT)

- 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.
- Publication of “Upcoming Events” in the ANSN home page.
- Coordination of the ANSN Webex meeting during the COVID-19 pandemic.

Output 3/ Task 2016.72 ANSN Competence: Enhanced competence in nuclear safety and security (incl. national and regional training courses and WS)

☐ Regional Workshop on Safety Requirements for Site Evaluation and Reviewing Safety Analysis Reports for Siting

- The purpose of the event is to review and discuss safety requirements for site evaluation and safety analysis report reviews for siting nuclear power plants.
- Venue and Date : Virtual Meeting, 06~10 September 2021
- Participants : a total of 30 applicants from 7 Member States (See Table 1)
- Results and conclusions :

The workshop provided a forum for sharing of experience from IAEA experts on relevant IAEA safety standards, site licensing process, necessary regulations, application of review and assessment process for the

site evaluation report, application of inspection process for the site characterization activities for nuclear installations.

The workshop addressed the key aspects of site licensing for nuclear installations based on IAEA safety standards and good practices. Participants showed interest in various aspects of the subject.

During discussions it was recognized by participants:

- Complexity and safety relevance of the technical aspects related to site evaluation for NPPs.
- The technical expertise and experience needed for application of inspection processes for site characterization activities for nuclear installation including data collection, site investigation studies etc. The technical expertise and experience also needed for application of review and assessment process on site evaluation report including review of hazard modelling, hazard analysis, derivation of hazard parameters and impact assessment of nuclear installation on people and environment etc.
- Importance of using well established process based on IAEA safety standards and best MS practices.

IAEA Team received positive feedback from the participants. Discussions with all participants from different member states were very informative and contributed to fulfil the objective of this workshop. IAEA Team appreciates very much active contribution of all participants in technical debates. In conclusion the objectives of the workshop have been achieved.

☐ Regional Workshop on Inspection and Enforcement of Nuclear Installations by Regulatory Bodies

- The purpose of the event is to provide the participants with knowledge of the IAEA safety standards and country-specific examples of invited experts related to the development and implementation of inspection and enforcement programmes for nuclear installations.
- Venue and Date : Virtual meeting, 04~07 October 2021
- Participants : a total of 12 applicants from 5 Member States (See Table 1)
- Results and conclusions :

The workshop implementation was coordinated by Mr. Zia Hussain Shah, IAEA Technical Officer. He gave presentations on IAEA Safety standards, related to functions and responsibilities of the regulatory body for regulatory oversight of NPPs, Overview of NPP Licensing process, Regulatory inspection and enforcement by the regulatory body based on IAEA Safety Standards, Regulatory inspection report, contents, issuance and follow-up and Important aspects of Regulatory enforcement. In addition, Mr. Seonjae KIM from Republic of Korea, and Mr. Khawaja Ahsan Qadeer from Pakistan were the external experts. The experts presented their specific country perspectives for Inspection and Enforcement of Nuclear Installations, Regulatory framework for regulatory oversight in country. The experts also coordinated the group exercises and discussions/interaction with the participants. Following topics were broadly covered in the workshop:

- Overview of IAEA safety standards related to regulatory framework for safety
- Regulatory framework (Regulations, Regulatory Guides etc.) for regulatory oversight Licensing process for nuclear installations
- Licensing process of nuclear power plants including Essential Documents to be submitted by the Applicant/Licensee During Various Licensing Steps
- Inspection program for NPP during construction including basis, contents of the inspection program
- Development and implementation of Inspection Plan during construction (Selection of regulatory control points)
- Performance/Conduct of regulatory inspections, preparation and issuance of inspection report and follow-up

- Regulatory enforcement examples during construction, commissioning and operation of NPP
- Group Exercise to prepare contents of Inspection Program
- Country Specific group Presentations by participant

☐ Regional Workshop to Share Communication-Related Experience, Including on the Implications of Pandemic Situations

- The purpose of the event is to share and discuss experiences regarding the national implications of the COVID-19 pandemic in relation to communication with interested parties, including the public.
- Venue and Date : Virtual Meeting, 04~08 October 2021
- Participants : a total of 18 applicants from 6 Member States (See Table 1)
- Results and conclusions :

From all the reports of the Member-State representatives, common experiences regarding communication in relation with the pandemic include tasks being slowed down, and then either stopped or shifted to virtual mode. Everyone had to learn to embrace the online platforms to reach stakeholders, a change which is not very comfortable for both communicators and stakeholders because: 1) face to face is still the most effective and advantageous; and 2) there are technology/technical issues. However, in the face of the pandemic, virtual/online is still the safest and most effective mode.

Common challenges that MS representatives mentioned in the area of communication include adopting to new technology, timeliness of service, and health and mental well-being concerns. Among the lessons learned are the need to be more creative in developing information materials, the use of all forms of media to reach stakeholders, and initiate better cooperation with other agencies, the stakeholders, and the public. The MS-representatives also identified good practices such as the use of online media for communication activities (except in areas with older population who are not social media-savvy, weak Internet connection, or low access to gadgets), development of new guidelines and procedures to immediately address clients' needs during pandemic, and the conduct of quantitative and qualitative surveys.

In the way forward group discussions, the participants said that expert missions, workshops, questionnaires/self-assessment should be continued. However, other stakeholders such as licensees should also be invited to participate so they would learn and appreciate the communication process. Proposed topics for future workshops are the following: communication planning, communication strategies, support for countries embarking on new nuclear power program, education and training on safety processes, technical assistance on network knowledge, siting, updated ideas on regulatory work communication activities, and public safety communication. Finally, the participants underscored that physical CTG meeting is much better than webinar, so they expect CTG meetings to be personal in the future.

☐ Regional Workshop on Strategies for Attracting and Retaining Highly Qualified Personnel at Regulatory Bodies

- The purpose of the event is to present the latest developments in attracting, developing and retaining highly qualified personnel, and to discuss case studies on talent management in national nuclear institutions for the benefit of regulatory bodies.
- Venue and Date : Virtual Meeting, 11~15 October 2021
- Participants : a total of 20 applicants from 7 Member States (See Table 1)
- Results and conclusions :

The moderated discussion revealed a potential need for IAEA support to Member States in developing their national strategies on capacity building in nuclear and radiation safety.

Additionally, the importance of an organizational strategy on capacity building was highlighted during the discussions – specific IAEA support would be welcome by the Member States on the process and methodology of developing capacity building policies at organizational level as well.

□ Ninth Annual Meeting of the 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.
- Venue and Date : Virtual Meeting, 11~15 October 2021
- Participants : a total of 17 applicants from 7 Member States (See Table 1)
- Results and conclusions :

The 9th Annual Meeting of the Regional Advisory Safety Committee for research reactors in Asia and the Pacific (RASCAP) was attended by seventeen participants from seven Member States of the IAEA and the Asia Nuclear Safety Network (Australia, Bangladesh, Indonesia, Malaysia, Republic of Philippines, Thailand and Vietnam). Most participants were senior members of their operating organizations or members of their respective research reactor safety committees. The IAEA was represented by Mr Kaichao Sun (RRSS/NSNI). The list of participants is provided as Annex 2 of this report.

The meeting was opened with introductory remarks by Mr Amgad Shokr (NSNI/IAEA) who welcomed participants to the meeting. In the brief opening session, Ms Kanokrat Tiyaapun (TINT) welcomed the participants as current Chair of RASCAP and Mr Kaichao Sun presented the meeting objectives and expected results. Mr Mark Summerfield (Australia) volunteered to be the rapporteur. Mr Lorenzo Stefanini (Netherlands) was invited by the IAEA to the meeting as an external expert on the topic of ageing management of research reactors.

□ Regional Workshop on Deterministic Safety Analysis for Nuclear Power Plants

- The purpose of the event is to review, through lectures and practical exercises, practices for carrying out deterministic safety analyses.
- Venue and Date : Virtual Meeting, 29 November ~ 03 December 2021
- Participants : a total of 24 applicants from 7 Member States (See Table 1)
- Results and conclusions :

Through this workshop, all Member States have become familiar with IAEA Standards and have improved their understanding of the contribution of standards to achieving the highest level of nuclear safety in the world. In addition, this workshop provided the opportunity to learn practices and methodological approaches for the safety assessment of NPPs, with learning from related IAEA Safety Standards.

Output 4/ 2016.73 ANSN CB Approaches: 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 10/ Task 2016.79 ANSN PM: ANSN Project management and implementation

Overall for the ANSN

- Staff cost for staff administering virtual arrangements for participants and experts in the ANSN meeting and workshops, for staff developing and maintaining the ANSN website
- Staff cost for staff administering virtual 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 meeting is expected to impact as an opportunity to facilitate communication between Member States or within each Member State in the era of the COVID-19 pandemic.

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

- 11 Member States: Bangladesh, China, Indonesia, Japan, Kazakhstan, Korea, Malaysia, Philippines, Singapore, Thailand, Viet Nam
- 4 Supporting Countries: Australia, France, Germany, USA
- 1 Associate Country: Pakistan.

Difficulties encountered during implementation Changes introduced in implementation

As mentioned several times above, it was very hard to hold face-to-face meetings due to the COVID-19 pandemic, which has resulted in all meetings being converted to virtual meetings. Virtual meetings have the advantage of allowing many participants without paying costs, but they are accompanied by many inconveniences such as insufficient meeting time due to time difference between IAEA and Asia and difficulties in online communication.

For this reason, not only the Technical Officer organizing the meeting, but also most TG members of each Member State prefer face-to-face meetings to virtual meetings.

One of the most difficult challenges in the COVID-19 circumstance is to improve participation in virtual meetings. In particular, experts from Member States with a lot of experience and expertise in nuclear area, such as China, Japan, and Korea, need to actively discuss and share their experiences with other Member States. If the COVID-19 pandemic does not end soon, increasing the participation in virtual workshops will be the biggest challenge next year, and to overcome this cooperation of all MSs is absolutely required.

3) FUTURE OUTLOOK AND PROJECT SCHEDULE

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

The number of events scheduled to be held in 2022 and 2023 is shown in Table 2 below, and as mentioned earlier, a total of 11 events that could not be held due to the pandemic will be carried over to 2022 and 2023. This plan is established on

the assumption that the COVID-19 pandemic could end in the near future and that most Member States could return to their normal lives before the pandemic. Therefore, if a face-to-face meeting can not be held because the pandemic has not ended soon, the activity plan must be revised according to the situation. This was also pointed out in the last Consultancy Meeting and considering the COVID-19 situation, it was recommended that the total number of events should be reduced and the proportion of virtual conferences should be increased.

Table 2. The number of activities planned for 2022 and 2023.

Remarks	2021	2022	2023	Total
No. of Activities	8	19	23	50
Face-to-face	0	18	20	38
Virtual	8	1	3	12

Taking into account the various possibilities and uncertainties associated with the pandemic, the number of events and the ratio of virtual-to-physical meetings will be flexibly determined. However, at this time of planning, it has been assumed that most events will be conducted in a way of face-to-face meeting considering the effectiveness and efficiency of meeting. This is also to recover and enhance communication and unity among members of each Topical Group, which was not possible during the pandemic. The title of events are as follows.

Activities planned to be held in 2022

- Regional Workshop on Communication and Consultation Regarding Issues Related to Radioactive Waste Management
- Regional Workshop on the Method for Developing Arrangements for Response to a Nuclear or Radiological Emergency
- Regional Workshop on Nuclear Safety Knowledge Management Programmes for Regulatory Bodies
- Regional Workshop on the Management of Training Systems for Nuclear and Radiation Safety
- IAEA-KINS Basic Professional Training Course on Nuclear Safety
- Regional Workshop on Review and Assessment of Nuclear Power Plant License Applications by Regulatory Bodies
- IAEA-Fukui Workshop on Safety Culture Self-Assessment for Regulatory Bodies
- Regional Workshop for Central Governments and Regulatory Bodies on the Development of National Strategies and Regulatory Requirements for Decommissioning
- Seminar on the Use of Human Factor Engineering at Nuclear Power Plants
- Regional Workshop on the Application of Level 1 Probabilistic Safety Assessment
- Regional Workshop on Managing the Interface Between Safety and Security for Research Reactors
- Regional Workshop on Operating Experience Feedback for Research Reactors
- Tenth Annual Meeting of the Regional Advisory Safety Committee for Research Reactors in Asia and the Pacific (RASCAP)
- Regional Workshop on Safety Requirements for Site Evaluation and Reviewing Safety Analysis Report for Siting
- Regional Workshop on the Management of National Dose Registries
- Regional Workshop on Safety Requirements for Transport Safety
- Ninth Meeting of the Self-Assessment Coordination Group

- Consultancy Meeting of the Asian Nuclear Safety Network
- Steering Committee Meeting of the Asian Nuclear Safety Network

Activities planned to be held in 2023

- Regional Workshop on Communication and Consultation Regarding Issues Related to Radioactive Waste Management
- Regional Workshop on Preparation, Conduct and Evaluation of Exercises to Test Preparedness and Response for a Nuclear or Radiological Emergency
- Regional Workshop on Radiation Monitoring and Use of Operational Intervention Levels (OILs) for Radiological Emergencies
- IAEA-KINS Workshop on Radiation Safety and Emergency Response in Medical or Industrial Use of Radiation
- Regional Workshop on Nuclear Safety Knowledge Management Programmes for Regulatory Bodies
- Regional Workshop on the Management of Training Systems for Nuclear and Radiation Safety
- National Workshop (upon request of an ANSN Member States) or Regional Workshop on Systematic Assessment of Regulatory Competence Needs (SARCoN)
- Regional Workshop on Establishing a Technical and Scientific Support Organization
- Regional Workshop on the Development and Implementation of Effective Integrated Management Systems for Nuclear Facilities and Activities (based on GSR Part 2)
- Regional Workshop on Nuclear Safety Culture Self-Assessment based on the New Methodology
- Regional Workshop on the Development of National Strategies and Regulatory Requirements for Spent Fuel Management
- Regional Workshop on the development and implementation of a radioactive waste management program, focusing on closure and post closure
- National Workshop on the Management and Oversight of Supplemental Staff at Nuclear Power Plants
- Technical Meeting on the Practice on Prevention of CFSI (Counterfeit, Fraudulent and Suspect Items) for Nuclear Power Plant
- Regional Workshop on Self-Assessment of Research Reactor Safety
- Ninth Annual Meeting of the Regional Advisory Safety Committee for Research Reactors in Asia and the Pacific (RASCAP)
- Regional Workshop on Safety Requirements for Site Evaluation and Reviewing Safety Analysis Report for Siting
- Regional Workshop on Radiation Protection on nuclear embarking countries
- Regional Workshop on optimization of Radiation Protection (Setting the levels)
- Advisory Meeting for Improvement of Radioactive Material Transport Regulatory Infrastructure of RTTG Member State
- Regional Workshop on Practical Regulatory Activities for Radioactive Material Transport Safety
- Consultancy Meeting of the Asian Nuclear Safety Network
- Steering Committee Meeting of the Asian Nuclear Safety Network

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Comments/Feedback to the donor
ANSN appreciates the financial support provided from all donors and KINS support. In order to ensure continuous support for strengthening of nuclear and radiation safety capacities in ANSN Member States, financial and technical support by the donors is still needed.