

# Summary Report

## ANSN Topical Group on Radioactive Waste Management (RWMTG)

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

Virtual, 4 – 7 April 2022

#### Background

Many Member States in the region of Asia are facing the decommissioning of facilities. In some cases, an adequate national strategy, as well as legal and regulatory framework for protection and safety are not yet in place. In other cases, these are in place, but are oriented towards operational activities. This Regional workshop will be of assistance to the participating Member States in appraising the adequacy of their existing national policies and regulations, the role of the national regulatory body and intends to serve as a reference for those Member States that are developing strategies and regulations for the first time.

#### Objectives

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.
- Highlighting needs and gaps, aiming at improving cooperation between the national policy makers, governmental authorities and regulators.

#### Work Done

##### Day 1

The first day the workshop was held in plenum. The Scientific Secretary and

representative of the IAEA Ms. Lilián del Risco Norr lid presented an overview on the safety standards as pertain to decommissioning, focusing on the need for a governmental, legal and regulatory framework. The key features for this framework are:

- Statements providing with clear allocation of responsibilities for decommissioning
- Regulatory infrastructure and adequate resources should be in place to ensure proper implementation of regulatory functions and proper control of compliance with regulatory requirements for decommissioning
- Application of a graded approach to the safety requirements for decommissioning is essential

IAEA Safety Standards and supporting publications provide a good starting point for development of regulatory framework in the Member States, but there are other services provided by the Agency such as Experts visits, TC mechanisms, peer review services, international projects, etc.

Ms. del Risco Norr lid presented and discussed the Fundamental Safety Principles are relevant to decommissioning of nuclear facilities:

- Provide protection of people and the environment both now and in the future
- Long term commitment to ensuring that sites and waste are properly managed,
- Efficiency in the use of resources,
- Open and transparent interactions with stakeholders and that the public should be able to participate in decision making, where relevant,
- The needs of the present must be met without compromising those of future generations (sustainable development) and local conditions.

Ms. del Risco Norr lid presented the position of the IAEA with regards to entombment. GSR Part 6 identifies the decommissioning option entombment:

*Para 1.10. Entombment, in which all or part of the facility is encased in a structurally long-lived material, **is not considered a decommissioning strategy and is not an option in the case of planned permanent shutdown.** It may be considered a solution only under exceptional circumstances (e.g. following a severe accident)*

During the presentation the arguments against this choice were discussed, including those related to sustainability. Decommissioning defined as the dismantling, decontamination and management steps leading to the release of a nuclear facility from regulatory control, don't entitle entombment as a decommissioning strategy.

The Expert representative from UK's Nuclear Decommissioning, NDA was Mr. Simon Boniface, and he brought a useful overview on the development of decommissioning policies and strategies in the UK. They may be summarized as avoiding deferrals as much as possible. Mr. Boniface presented with the examples in more than 30 years of nuclear decommissioning in the UK which are the disadvantages of deferring the dismantling and decommissioning of nuclear facilities and the lessons that have been collected from some deferred projects in the past, clearly pointing out as this choice as not recommendable.

This workshop day was divided in a plenum part and a group's session part. In the plenum, the country representatives from China and Vietnam were presenting the status and situation of the countries with respect to the regulatory infrastructure and national policies.

The representative from China was Ms. Di WU, from the Ministry of Ecology and Environment of the People's Republic of China. She presented the relevant portions of the Chinese Nuclear Safety Act, where the policies with regards to decommissioning are found. Ms. WU discussed certain gaps and current developments for this framework to be better aligned with the international standards. Ms. WU concluded that the Chinese framework lacks guidance for how to establish sound and robust criteria for approval of start decommissioning actions and that there is a need on both sides, regulatory and licensees, for better description of the requirements on licensing documents, such as EIA, SAR, Site release reports among others.

The representative from Vietnam was Mr. Pham Quang Huy, from Nuclear Research Institute at Vietnam's Atomic Energy (VINATOM). Mr. Quang Huy developed the elements of the Art. 40 of Vietnam's Atomic Energy Law, which addresses decommissioning and decontamination of nuclear facilities, in order to bring the information on policies in this regard. He presented the specific case of the facility Dalat Nuclear Research Reactor, for which a decommissioning plan is being extensively reviewed and updated. Mr. Quang Huy described the situation of no availability to a national policy and resources (infrastructure, financial, competence) for a national plan on radioactive waste management and long-term storage of radioactive waste. Mr. Quang Huy also pointed out in the side of policies for very low-level radioactive waste, that there is no clear consensus over re-use, recycling of material neither appropriate criterion for free release.

For the group session, Ms. Del Risco Norrlid introduced the Practical Exercise 1. The participants were divided in two groups, each mixed up with representatives of all the participants MS.

The practical exercise consisted in identifying the gaps and problems in an imaginary country: the national situation with respect to nuclear decommissioning was presented for this imaginary country and the participants had to discuss the facts and identify how the national infrastructure could be improved. They would gather the elements that a government and central regulatory body may be adding to strengthen protection and safety for decommissioning. The results of the group's discussions and conclusions were presented on Day 4.

### Day 3

This workshop day was divided in a plenum part and a new group's session part. In the plenum, Malaysia and the Philippines presented the situation in their countries. Ms. Suhana Jalil from the Radiation Control and Supervision at the Malaysian Atomic Energy Licensing Board (AELB), discoursed about legislative infrastructure in the country (Act 304, from 1984). Ms. Jalil discussed the overlapping with other governmental authorities (Environmental, Health and Safety, Transport, etc.) in the area of regulations for decommissioning. She shared the Malaysian experience with decommissioning and disposal project (2003 - 2018) that involved facilities for processing NORM.

The representative from the Philippines was Ave Ann Nikolle Garalde from the Philippine Nuclear Research Institute (PNRI). Ms. Garalde presented the situation in the Philippines, the progress made in implementing a sound regulatory framework for

decommissioning and she discussed the gaps in relation to the international standards

The Expert representative from the National Radiation Protection Institute, Czech Republic, Mr. Lietava presented the national overview on decommissioning strategies from nuclear and non-nuclear facilities in the Czech Republic. He focused on the national policy and strategy on radioactive waste and spent nuclear fuel management and presented the status of strategy selection for some of the licensees.

In a second presentation Mr. Lietava comprehensively discussed the Czech regulatory framework for decommissioning and the review process in his country. This process is aimed to consider whether the safety assessment provides an appropriate basis to support the proposed decommissioning strategy, plan, and activity; to support the authorization process for the decommissioning strategy, plan and activities; to identify any regulatory limits and conditions to be applied during decommissioning or before commencement of a special decommissioning activity; and to provide input to the process of releasing a site from regulatory control.

Mr. Lietava also brought to the audience from the ANSN important lessons learned in the course of regulatory framework development. Czech Republic has gradually aligned the framework with the other EU countries (and consequently with the IAEA GSR part 6), this to reflect elements that were not considered previously, such as safety requirements for the workplace in decommissioning, requirements for the safe management of radioactive waste, among others.

Mr. Lietava took the opportunity to present the Western European Nuclear Regulation Association (WENRA) work with so-called safety reference levels to apply in decommissioning; and the IAEA TECDOC Series 1816 for developing regulations in all aspects of decommissioning (planning, conducting, completion and termination).

In connection with this last presentation, the Practical Exercise 2 was described. For this exercise the groups were made of participants of the same country, so three working groups were created Group 1 for China, Group 2 for Vietnam and Group 3 for Philippines and the representative of Malaysia. The Practical Exercise 3 was to conduct an appraisal of a selection of safety reference levels (SRL) according to WENRA. The results of this exercise were presented by every group in Day 4.

#### Day 4

The working groups of Day 2 and Day 3 were given the time to prepare their respective presentations, for Practical Exercise 1, the groups had to present their understanding about imaginary country and how to improve its national framework for decommissioning; for Practical Exercise 2, the national groups would appraise the own situations to make a preliminary compliance analysis against the safety reference levels proposed by WENRA in the area of decommissioning. In total 5 presentations (two mixed groups in Day 2 and three national groups in Day 3) were given.

### Workshop achievements / Recommendations

The workshop achieved:

- 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;
- Progress towards establishing action plans for improvement of the national infrastructures

The inputs from this event for planning of future ANSN's activities on decommissioning, were clearly to continue promoting exchange in between the regulatory bodies of the region and for the IAEA to continue supporting maintenance and fostering of competence. The subject of the workshop is to be periodically revisited in form of training, seminars, or regional discussion.

Further document to be submitted to the PMO separately:

- a) Final agenda
- b) List of participants
- c) Group photo
- d) Presentations as listed in the Agenda

All above contained in the Teams Sharepoint of the event. By the pen for this report,  
Lilián del Risco Norrlid, Vienna, April 22th 2022.



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