

CO-CHAIRS' SUMMARY REPORT

1. The 3rd Asia-Europe Meeting (ASEM) Seminar on Nuclear Safety has been convened in Yogyakarta, Indonesia on 4-6 November 2014, hosted by Indonesia and co-sponsored by China, France, India, Lithuania, Pakistan, Singapore, Spain, and the European Union. Australia, the Philippines, Thailand and Vietnam representatives were also present. The seminar's theme is “Effective, Transparent and Sustainable Nuclear Safety Infrastructure”, which aims to continue discussions on nuclear safety and to foster Asia-Europe capacity-building and cooperation in nuclear safety. The seminar was attended by representatives from national governments, nuclear regulators, energy companies, radiation protection and nuclear safety authorities, research institutions and universities.

2. The Seminar was co-chaired by Dr. Alfredo de los REYES, Head, International Programs, Spanish Nuclear Safety Council; Prof. LIM Hock, Director, Research Governance and Enablement, National University of Singapore; Dr. Philippe EURIN, Advisor, DCNS, France; Dr. As Natio LASMAN, former Chairman of Nuclear Energy Regulatory Agency (BAPETEN), Indonesia; Mr. Peter FAROSS, former Deputy Director-General on Energy, EC; and Mr. Khoirul HUDA, Deputy Chairman for Nuclear Safety Assessment, BAPETEN, Indonesia.

OPENING SESSION

3. **Mr. Khoirul HUDA**, BAPETEN Deputy Chairman for Nuclear Safety Assessment as Chief Organizer, extended a warm welcome and sincere gratitude for all the participants support and contribution. He restated the proposal to focus on identifying important elements of effectiveness, transparency, and sustainability of nuclear safety infrastructure, both at national and international levels.

4. **Amb. Ausra SEMASKIENE**, Ambassador-at-large, Lithuania, refreshed the topic of the 2nd ASEM Seminar last year – International Instruments for Ensuring Nuclear Safety – which was the reflection of the need to develop nuclear projects with due responsibility and respect to the highest international safety standards. A number of changes and improvements that had been discussed in Vilnius became reality by now. Efforts to use in full the possibilities of all the international conventions and maximize their synergies are already yielding results. She further noticed that international bodies also widely recognize that nuclear energy-related activities imply challenges due to great public concern and can lead to significant trans-boundary and long-range adverse environmental impacts. In this respect, Lithuania notes that lack of transparency and information about nuclear projects being developed close to its and EU border is disturbing. Implementation of the IAEA safety standards, adherence to the CNS norms, cooperation with specialized IAEA missions, during the whole lifetime of installation, starting from the site selection, should become inseparable from any nuclear power program. Lithuania, as a co sponsor of the event in Indonesia, is glad that nuclear safety issues remain high on ASEM agenda, and stays committed to further strengthening of the nuclear safety culture.

5. In his opening remarks, **Amb. Dian Triansyah DJANI**, Director General for America and Europe, Ministry of Foreign Affairs, as the ASEM SOM Leader of Indonesia, expressed the importance of this seminar and hoped to be continued annually. He urged for something tangible to be borne from the discussion. He also quoted that ASEM Leaders called for more connectivity between the two regions to achieve economic prosperity, sustainable development and promotes seamless movement of people, trade investment and information.

6. Speaking on behalf of the Minister of Research, Technology and Higher Education, **Prof. Jazi Eko ISTIYANTO**, Chairman of BAPETEN, emphasized the necessity of the implementation of Integrated Management System (IMS) and safety culture in the industry and the regulatory body. He mentioned that strengthening those two important things is indispensable to build the sustainability of nuclear safety in Indonesia.

FIRST PLENARY SESSION

Chaired by: **Mr. Alfredo de los REYES**

7. **Mr. Sigitas ŠLEPAVIČIUS**, Deputy Head for Nuclear Safety, State Nuclear Power Safety Inspectorate (VATESI), Lithuania, underlined the expectation from the Asia-Europe cooperation in strengthening nuclear safety. The importance of the cooperation through international peer reviews for capacity building, improvement in safety assessment and inspection practices, enhancing of national nuclear safety regulations and confidence building was noted.

8. **Prof. LUI Pao Chuen**, Advisor, National Research Foundation, Singapore, presented the initiatives for enhancing cooperation between European and Asian Countries for strengthening nuclear safety due to the potential transboundary impact of nuclear accidents. Among others, he strongly suggested that international trans-boundary information exchange, such as ASEANTOM, should be encouraged. He further noted the importance of the implementation of Nuclear Safety Convention, IAEA peer reviews, and other international information exchange.

Discussion

9. The floor agreed on the importance of international cooperation, especially with neighboring countries, to enhance the effectiveness and sustainability of nuclear safety infrastructure. This session noted that nuclear safety has also to be transparent since there are always questions in the public about the costs and benefit of NPPs. Therefore, it is essential to enhance public participation in the decision making process. Also it was raised that standards are only effective if properly implemented.

SECOND PLENARY SESSION

Chaired by: **Prof. LIM Hock**

10. **Dr. Rashid MAHMOOD**, Manager, Pakistan Atomic Energy Agency, presented Pakistan's nuclear power program and nuclear safety implementation. Besides the milestones and current status of nuclear power and human resource development, he highlighted the immediate, short-

term and long-term response to Fukushima accident. It was underlined that safety will remain on top priority in the nuclear power program.

11. **Comm. Fernando CASTELLO**, Commissioner, Spanish Nuclear Safety Council (CSN), described the establishment, functions and organization of CSN. **Dr. Alfredo de los REYES** continued the presentation by outlining the importance of international cooperation activities as effective means to share knowledge and experiences and to continually review regulatory standards and practices. Regulatory Authorities are unique organizations at national level. They can only gain experience by international relations. The international cooperation is implemented through the periodic exchange of experiences and best practices, international peer reviews and coordination of experts groups and research projects to develop new knowledge. However, it is important to ensure that the usefulness of international activities should be maximized and duplication of activities must be prevented.

12. **Mr. Muhammad Naeem ARSHAD**, Director, Directorate of Regulatory Affair, Pakistan Nuclear Regulatory Authority, spoke on the necessity to establish integrated management system and to nourish safety culture within regulatory body. The implementation of integrated management system and the nourishment of safety culture will further foster high and consistent levels of organizational performance and at the same time leads to significant improvement in organizational efficiency, effectiveness, and safety performance.

Discussion

13. When discussing the best type of reactors based on experience, participants agreed that the regulators are not in the position to judge which technology is better. Therefore, those countries interested to introduce NPPs should consult all the types available in the market. A discussion also happened on how best to disseminate information on the results of NPP review performed by regulatory bodies.

14. While it was agreed that self assessments by regulatory bodies on its safety culture are important, it was acknowledged that safety culture should be assessed on each of its attributes, rather than the overall situation. There was also a question on why there are so many different

European associations of regulators. It was acknowledged that there was a potential of overlap of function between the associations, and that such duplication should be avoided to maximize resources deployed for international cooperation.

THIRD PLENARY SESSION

Chaired by: **Mr. Philippe EURIN**

15. **Dr. Jean-Christophe GARIEL**, Institute for Radioprotection and Nuclear Safety (IRSN), France, shared French experience in monitoring environmental radioactivity. He explained that environmental radioactivity monitoring is an important component of nuclear safety in order to ensure the protection of people and the environment. Monitoring strategies vary from one country to another, yet it doesn't imply that one monitoring strategy is better than the others. He underlined that density of nuclear power plants, public opinion, worry about neighboring countries, governmental structures, regulation and history need to be considered in determining monitoring strategy. He concluded that quality of measurements and information to the public as part of transparency are two key issues that need to be properly addressed.

16. **Mr. QIN Legang**, Nuclear Technology Support Center of China Atomic Energy Authority, discussed safety reassessment with focus on periodic safety review (PSR) of NPPs and safety margin assessment on external events post Fukushima accident. The PSR is conducted every 10 years after beginning of commercial operation covering 14 safety factors in 5 categories; i.e. plant design, safety analysis, management, performance and feedback of experience and environment aspects. The importance of PSR in maintaining the safety of nuclear facilities in the operational state was emphasized.

17. **Mr. R. BHATTACHARYA**, Secretary, Atomic Energy Regulatory Board (AERB), India, touched upon India's nuclear power expansion program and the role of AERB. He also explained HRD program within AERB and also in accordance to IAEA's competency framework. Challenges ahead can arise from the lack of adequate technical knowledge on new reactor designs, reduction in competency levels due to attrition of experienced staff, lack of experience

on modern computerized systems for reactor controls, and public perception about safety performance of reactors.

18. **Prof. Djarot Sulistio WISNUBROTO**, Chairman, National Nuclear Energy Agency (BATAN), Indonesia, introduced nuclear power development program in Indonesia as a part of national energy policy and the national strategy on HRD in anticipating the first NPP. Indonesia National Energy Policy takes nuclear energy into consideration, although its usage should be the last alternative (NPP) will be necessary if the other energy sources can not fulfill the energy demand after optimizing other energy resources. He stressed the need for developing and establishing HRD competence standards. Thus, he noted that international cooperation is crucial in order to develop capacity building in nuclear power.

Discussion

19. Some questions arise regarding strategy to develop human resource in order to face the new designs of NPPs. It was underlined the importance of specific education on nuclear and physics, and also advanced trainings and fellowships to enhance the expertise, in addition to increasing the number of personnel for both regulatory body and utilities.

20. The question of whether site reassessment post Fukushima accident has been performed on the site candidates in Indonesia was raised. It was informed that the recent assessment in selecting NPP site has taken into account lesson-learned from Fukushima accident.

FOURTH PLENARY SESSION

Chaired by: **Dr. As Natio LASMAN**

21. **Mr. Marc DE CORT**, Project Leader for Radioactivity Environmental Monitoring, Joint Research Centre (JRC), European Commission (EC), overviewed the role of EC in developing regional networking in emergency preparedness. In legal terms, the role of EC is limited to early exchange of information and community emergency foodstuff regulations. However, in practice, EC has also the tasks for providing information to the public through the media, responding to

information and assistance requests, preparing for political action, promoting research and co-operation, and organizing exercises. He also explained the current technical implementation systems for information exchange, i.e. WebECURIE and EURDEP, and the activities conducted post Fukushima accident. This experience should be useful in the context of the upcoming feasibility study on EPR in South East Asia (DG DEVCO).

22. **Mr. SUHARYANTA**, Director for Emergency Preparedness, BAPETEN, Indonesia, gave an overview of regional approaches to civilian nuclear activity management in South-East Asia Indonesian. He also explained Indonesian activities related to emergency preparedness and response (EPR) and the establishment of Indonesia Center of Excellence for Nuclear Security and Emergency Preparedness (I-CoNSEP). The regional challenges in developing regional networks include establishing regional cooperation on sharing monitoring data and information in the South-East Asia and Asia regions, encouraging national capacity to contribute to international community through IAEA’s Response and Assistance Network (RANET), and conducting Table Top Exercise on EPR in the South-East Asia and Asia regions.

Discussion

23. It was noted that the plan for regional exercises was raised during the ASEANTOM meeting. It is agreed among ASEANTOM countries that such exercise will take place in 2016. The technical mechanism will be discussed further.

24. It was also noted that the International Radiation Monitoring Information System (IRMIS) was established and being developed by the IAEA. The system will routinely and reliably enable the exchange of monitoring data and make it available to the member states.

CONCLUDING SESSION

Co-chaired by: **Mr. Peter FAROSS** and **Mr. Khoirul HUDA**

Participants reiterate their support for continuing dialogue on nuclear safety within the ASEM process. They proposed the Seminar to continue to be held annually. The participants also



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“*Effective, Transparent, and Sustainable
Nuclear Safety Infrastructure*”



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proposed the following topics to be addressed in the next ASEM Seminar as follows:

- a. Continuing discussion on development of emergency preparedness and response with focus on:
 - i. developing EPR cooperation amongst Asia countries, learning from the experience of the European region.
 - ii. enhancing public awareness on nuclear energy development and safety.
- b. Format and approach to be taken on periodic safety reviews for non-power reactors.
- c. Technical support for regulators on licensing, review, and assessment, as well as international or regional consultancy assistance for regulatory bodies of embarking countries.
- d. Knowledge transfer of European experience on decommissioning of nuclear installations.
- e. Use of risk-informed decision making in regulatory process.

The results of this Seminar will be reported to the ASEM Senior Officials. All participants expressed their appreciation to Indonesian Government for the successful hosting of the Seminar and look forward to the next Seminar which will be held by one of the European ASEM partners.

On his concluding remarks, Prof. Jazi Eko ISTIYANTO expressed his expectation that the Asia-Europe discussion on nuclear safety will continue in the future. He also extended his appreciation for the support and contribution of all the participants.