

South East Asia Regional Radiological Security Partnership:

Overview of 2008 and 2010 Review Meetings

**Technical Meeting of Technical and Legal Experts for Sharing of
Information as to States Implementation of the Code of
Conduct on the Safety and Security of Radioactive Sources
and its supplementary Guidance,
Vienna , 17-21 May 2010**

By

**Eulinia Valdezco & Dang Thanh Luong
(Philippine) (Vietnam)**

Outline of Presentation

- Introductory Remarks
- Collaborating Organizations and Participating Countries
- SEA Regional Project Objectives
- Topical Areas of Cooperation
- Method of Cooperation
- Highlights of the Regional Project Review Meetings, Conclusions and Project Accomplishments
- Challenges
- Way Forward
- Summary

Collaborating Organizations and Participating Countries

- IAEA Office of Nuclear Security
- ANSTO Regional Security of Radioactive Sources Project
- US NNSA Office of Global Threat Reduction
- South East Asian Nations Nuclear Regulatory Authorities and Technical Support Organizations



SEA Participating Countries

Bali Meeting (2008)

- Brunei Darussalam,
- Cambodia,
- Indonesia,
- Malaysia,
- Myanmar,
- Philippines,
- Singapore,
- Thailand, and
- Vietnam
- New Zealand (observer)
- ARPANSA (observer)

Dalat Meeting (2010)

- Bangladesh,
- Cambodia,
- Indonesia,
- Laos,
- Malaysia,
- Nepal,
- Philippines,
- Singapore,
- Thailand, and
- Vietnam
- New Zealand (observer)
- ARPANSA (observer)

The Objectives of South East Asia Radiological Security Partnership

- To prevent the intentional misuse (e.g. by terrorists) of radioactive sources by strengthening legislative and regulatory controls to include security provisions for radioactive sources;
- Applying international standards, requirements and IAEA guidance for the physical protection of radioactive sources;
- Developing capability and expertise by the provision of radiation detection equipment and training in physical protection, orphan source searches and for emergency response;
- Identifying and addressing situations involving vulnerable or orphan radioactive sources
- To reduce threat to regional countries and to other countries;
- To support implementation of the IAEA Code of Conduct & Action plan; and
- To link with non-IAEA States

Topical Areas of Cooperation

- Regulatory development
- Search & secure , including provision of specialized radiation detection equipment
- Orphan, unwanted source remediation
- Step ladder training courses on Physical Protection and Security Risks Management
- Physical protection upgrades of Category 1 /Security Level A Facilities
- Development and implementation of facility security plans and procedures
- Train-the-trainer workshops

Method of cooperation

- **Review the situation**
 - Radioactive source use in medicine, industry & research
 - Radiation safety & security assessments
 - Regulatory infrastructure including import/export control
- **Expert visits to each country**
 - Identification and assessment of any problems
 - Assistance with developing National Strategies & action plans
 - Specific advice and assistance on searching / locating orphan sources
 - Assistance on physical protection and securing sources

Method of cooperation

- **Capacity building**
 - In-country training and/or regional training programs
 - Preparing regulations, security plan
 - Provision of radiation monitoring equipment
 - Provision and installation of security devices
 - Training on emergency response
 - Provision of computer database and inventory management support
 - Support for IAEA Action Plan and RaSSIA, INSServ, IPPAS missions
- **Regional Review meeting**
 - Held every two years

Regional Review Meetings



Bali, Indonesia July 2008
hosted by BAPETEN



Dalat, Vietnam March 2010
hosted by VARANS



Boracay, Philippines 2012
to be hosted by PNRI

The objectives of the Regional Review Meeting within the RRSP

- To review the status of radioactive source security arrangements, including regulatory arrangements, of each country within the RRSP, consistent with subscribing to and implementing the IAEA Code of Conduct on the Safety and Security of Radioactive Sources (CoC);
- To discuss and identify common issues in developing and implementing radioactive source security arrangements, with a view to promoting regional cooperation;
- To discuss and identify priorities, resources and actions; and
- To agree on regional and national activities to enhance radioactive source security.

Current status

Highlights of the Bali Review Meeting

- National Presentations
- Thematic Presentations and Discussions:
 - a. Regulatory infrastructure
 - b. Physical Protection
 - c. Operational, Management and Oversight Considerations
 - d. Training

National Presentations

- Radioactive sources' practices
- National regulatory systems, infrastructure and resources
- Status of national programs regarding implementation of the IAEA Code of Conduct on the Safety and Security of Radioactive Sources (including its Supplementary Guidance on the Import and Export of Radioactive Sources);
- Follow-up and implementation of any recommendations from relevant IAEA advisory missions or services (e.g. RaSSIA, InSServ, IPPAS);
- Development, implementation and outcomes of any activities under the ANSTO RSRS or US NNSA programs for radioactive source security;
- Emergency preparedness and related activities
- Suggested areas for future cooperation

Thematic Presentations & Discussions

Theme 1 : Regulatory Infrastructure

- Regulatory infrastructure is an essential precondition for the improvement of security, particularly in terms of sustainability
- The main tasks in establishing or strengthening source security regulations include establishing the necessary foundation, developing a regulatory framework, drafting the regulations and implementation
- Source categorisation is an essential component of source security, as it enables the adoption of an informed risk management approach.

Thematic Presentations & Discussions

Theme 2 : Physical protection

- All parts of a security program are equally important – people, equipment and plans/procedures
- Managing and keeping programs running correctly and sustainably requires the building of capacity in-country, which requires sustained investment in people and in planning

Thematic Presentations & Discussions

Theme 3 : Operational, Management and Oversight Considerations

- Implementation of source security requirements at the operational level
- Development of regulatory compliance assessment and inspection for source security
- Development of necessary specific expertise and related training programs
- Integration with radiation safety and regulatory practices

Thematic Presentations & Discussions

Theme 4 : Training

- A train-the-trainer approach and the development of appropriate training modules are necessary for security programs to be sustainable
- Significant training in areas, such as; physical protection, development of a regulatory framework, orphan source detection and emergency response, has been provided to a number of countries under the RRSP. ay of practical exercises, including actual orphan source searches and emergency response exercises.

Conclusions

Bali Review Meeting

- Multilateral cooperative approach in the region within the US NNSA, ANSTO RSRS and IAEA programs is improving local and regional capabilities to implement and sustain security measures
- The practical assistance is built on national source security plans which identified particular needs, thus enabling assistance to be country specific and therefore, most effectively focused.
- The assistance provided by the RRSP was greatly appreciated – particularly by Indonesia, the Philippines and Vietnam, where the cooperation is most mature and extensive. These countries have developed regulations through RRSP cooperation.
- The use of milestones or performance indicators to measure the implementation of each state's program is important.

Conclusions

Bali Review Meeting

- While the regulatory infrastructure of many countries in the region has been upgraded in recent years, it is noted however that the availability of sufficient resources to carry out the range of necessary regulatory activities over the long term is a concern in some countries. Cooperation with neighbouring states was suggested.
- Where legislation had not been amended, creative approaches to utilising existing authority, such as the addition of security-specific licence conditions had been adopted.
- Sustainability of the enhanced security measures is vital.

Highlights of the Dalat Review Meeting

- Presentations on the IAEA activities relevant to the security of sources, on the Code of Conduct
- Presentations on the Regional Partnership
- National Presentations on recent developments in national legislation and regulations and activities under the RRSP since the Bali review meeting
- Round table discussions on specific issues

Main achievements of RRSP

- Participants emphasized the importance of a cooperative approach within the region and also with the US NNSA, ANSTO RSRS and IAEA programs;
- The cooperation is improving local and regional capabilities to implement and sustain security measures;
- Enhancing development of legislation and regulations, assessment and inspection practices to include source security; and
- Train-the-trainers is an important feature of the cooperation to date.


Main achievements in the Region under RRSP

- The upgrading of security at 63 facilities of category 1 sources in the Region;
- The conduct of eight security awareness seminars and training courses for senior decision-makers, regulators and operators and the enactment of specific security regulations by three countries (with others in drafting and review);
- A number of participant countries in the Region are well advanced in implementation of the Code of Conduct;
- It could be said that the Region is a leader, in general, in terms of implementation of source security measures and of the Code of Conduct.

Meeting Conclusions

- The level of implementation of enhanced security measures varies considerably across the region.
- Although experience has shown that significant progress can be made even without a formal declaration of support for the Code of Conduct. However, regional states which have not yet made a formal declaration of support for the Code of Conduct were encouraged to write to the Director-General, thereby emphasizing again the leading role of the region in this regard
- The importance of a cooperative approach within the region and also with the US NNSA, ANSTO and IAEA programs was reaffirmed by the participating regional states

Challenges/Difficulties

- To get a high priority / commitment from the leadership at both of national and facility levels;
- Development of national coordinated threat assessment and application of design basis threat ;
- Border control and monitoring, 
- Use of appropriate radiation detection equipment with required sensitivity and discrimination, particularly for orphan source searches and border monitoring purposes
- Return of sources to suppliers;
- The management of disused sources;
- Constraints on release and sharing of information, which can diminish public awareness and public participation in fighting against a radiological terror as well;
- Limitation of resources, manpower, knowledge will affect sustainable development.

Way Forward

International Safety & Security Regime

- Leaders of 47 countries and 3 International organizations have adopted a Communiqué and Working Plan at the April Washington Nuclear Security Summit;
- Participating states recognized that Nuclear and Radiological Security is not only national concern but also international one;
- Although Nuclear and Radiological Security is, first and foremost, the responsibility of each nation, closer international cooperation is also required;
- Coordinating role of the IAEA was highlighted;
- The importance of Nuclear and Radiological Security was strongly supported by many international agencies (EU, IAEA) and other states (US, Australia, Russia ...)
- 99 states have committed to implement IAEA's CoC;
- Participating states in the Region effectively utilized expertise, technical assistance from sponsors.
- The model approaches and method of cooperation in this regional partnership may be adopted

Security of Categories 1 & 2 sources

- Significant enhancements of the security of Category 1 sources in most countries, but continuing attention is needed to ensure effectiveness and sustainability at facility level
- Attention now will also be given to category 2 sources;
- US NNSA program and Australian RSRS project under the RRSP will assist the Region by extending their technical assistance to cover certain category 2 sources, which could include training and related assistance;
- Specific provisions for the security of Category 2 sources need to be developed and implemented both at the national and at the facility level;
- A pilot workshop on the application of security requirements to Category 2 sources - focusing on industrial radiography and brachytherapy sources - will be held later in 2010.

Specific features in the Region

- Big difference between states in economic development, use of radioactive sources and in level of development of national infrastructure for radiological safety and security
- Multi-language region
- Differences in culture
- *All these specific features may have the potential to affect effectiveness of accelerating and strengthening security building capability in the Region.*

Specific States in the Region

- Some States participating in the meeting have few sources and little experience- at least government level- in radiation protection, much more relating to the security of sources.
- Those states have therefore not yet developed a regulatory systems which would allow them to demonstrate effective implementation of the provisions of the Code of Conduct, and on which proper security regulation can be built.
- Starting point for those States would be the using relevant IAEA guidance materials. Once a basic legislative infrastructure is in place, the RRSP can then assist in addressing source security issues

To link with non-IAEA States in the Region

- Some states in the Region are ready to share experiences with non- IAEA States through sponsors, IAEA or bilateral cooperation:
 - Malaysia - Brunei
 - Vietnam – Laos
 - Thailand - Laos

Elements of a sustainable source security regime at the national level

- Commitment from high-level national decision-makers;
- Legislation creating a regulatory body, consistent with IAEA standards;
- Regulations giving the regulatory body authority in a range of areas, including security issues;*
- Regulatory guidance for preparing a security plan, including procedures; and
- Regulatory guidance for reviewing security plans, inspection procedures and other relevant documents.

* *Although it was noted that even in the absence of such regulations, appropriate use of licence conditions or other mechanisms on an interim basis could achieve the same objective.*

Elements of a sustainable source security regime at the national level

- An inspection and enforcement regime;
- National source register;
- Coordinated threat assessment (DBT);
- Response system (coordinating with other relevant agencies);
- Protocols for incident reporting and assessment; and
- Training programmes, including awareness raising for senior decision makers,
- Train-the-Trainer courses for regulatory body staff and general staff development.

Elements of a sustainable source security regime at the facility level

- Commitment from the top managers of facilities
- Site security plans, with clearly defined procedures and allocation of responsibility for security management;
- An alarm response plan, which is regularly exercised;
- Security system maintenance, including necessary resources;
- Performance testing program;
- Training program at site level; and
- Staff qualification, including succession planning.

Summary

- The security of radioactive sources in the Region have generally improved in the last 5 years;
- The South East Asia Region is a leader, in general, in terms of implementation of source security measures and of the Code of Conduct, more generally;
- Cooperation, unique & innovative approaches in implementation and better communication among participating and collaborating/donor countries in the Region has continuously improved and will ensure the realization of the regional project objectives ; and
- It will be driving us to one common goal, that is secure region - region free from radiological weapons and threat of radiological terrorism;

Summary

- The positive outcome of this regional project cooperation on strengthening the security of radioactive sources in the region may be considered an international best practice;
- The regional cooperation should be continued further to overcome all challenges ,thereby ensuring sustainability of project accomplishments
- The cooperation among and between regional States are noted with appreciation
- The important role of ANSTO, US DOE NNSA and the IAEA in providing their expertise, technical support & assistance in enhancing source security in the SEA region is gratefully acknowledged.

Pictures on some activities in the Region

Orphan Radioactive Source Search Methods and Equipment Workshops



Meetings for Improving Regulatory Infrastructure for Source Security



The South East Asia Regional Radiological Security Partnership



Thank you for your attention