Bundesministerium für Umwelt, Naturschutz, Bau und Reaktorsicherheit

Auswärtiges Amt

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Safety and security of radioactive sources – are the
security provisions of the Code of Conduct effective?

International Workshop | 13 - 15 September 2016 | Federal Foreign Office in Berlin

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Safety and security of radioactive sources – are the security provisions of the Code of Conduct effective?
Workshop offered in the context of the Nuclear Security Gift Basket "Enhancing Radiological Security"

Proposals for subject areas in the breakout sessions

Objective

The Code of Conduct on the Safety and Security of Radioactive Sources (CoC) and the supplementary Guidance on the Import and Export published by the IAEA are essential and worldwide recognized recommendations to improve safety and security of radioactive sources. 131 Member States of the IAEA have made a political commitment for the implementation of the CoC.

The effective and universal implementation in particular of the provisions with focus on security of sources has a high priority in national and international actions to ensure that radioactive sources throughout the world are properly protected against unauthorized access and malicious use.

The goal of the workshop is a review on how effective the provisions on security are implemented globally. It is necessary to know the gaps, the challenges and the best practices to establish a valuable support – on a national level as well as bilaterally and internationally.

In order to intensify the discussion and to focus on identified important topics it is arranged that the work on the second day of the workshop be carried out in topical breakout sessions. This document is supposed to provide for questions, statements and directions discussion. Some are felt to be at the core of the international consensus, while others might be controversial. None of the following is supposed to form statements or proposals by the German authorities involved in the organization of the Workshop.

The participants are invited to comment on these proposals in the run-up to the workshop. Please send your professional feedback by email to

rczarwinski@bfs.de
uhaeusler@bfs.de

General questions

- Which security provisions of the CoC are seen as most important and implemented in national legislations?

- Which security provisions of the CoC have been more difficult to implement?

- Is there an ongoing discussion on expanding the CoC to cover unsealed sources as well as to cover sources with lower activity (Cat3 being the minimum activity level to implement additional security measures when following the recommendations of upcoming reviewed NSS11)?

- What has changed since the CoC was adopted that might imply amendment to the CoC or the need for further supplementary guidance? Is the publication of reviewed NSS11 a milestone for a future revision of the CoC?

- What are actionable recommendations?
  – For States?
  – For regulatory bodies?
  – For operators/licensees?
  – For manufacturers and suppliers?
  – For the IAEA?
  – For multilateral and bilateral assistance programs?

Topical areas

1.   **International framework for the security of radioactive sources**
The existing international framework comprises international institutions (IAEA etc.), multilateral initiatives (Nuclear Security Summit, NTI, GICNT, CBRN etc.) and international services (e.g. illicit trafficking database ITDB). Discussion may focus on strengthening the international network, promoting a system of reporting, establishing further international services or information databases, and on the need for further standards as well as on the implementation of a holistic approach to the security of sources.

Specific topics/questions might be:

- Are complementary international instruments necessary and supportive (e.g. ICSANT/Joint Convention)? Do we need legally binding commitments? Pro's and Con's

- Which impact has the implementation of those IAEA Nuclear Security Series Guidance relevant for security of sources worldwide?

- How can the practical implementation of IAEA NSS standards and guides be strengthened?

- Which international support measures can be considered in order to establish an effective national threat analysis?

- Considering the positive experience in the EU MS is there a practical way to harmonize the format of the national registers of radioactive sources globally for a higher efficiency in information exchange?

- Which role has the private sector to play?

- How can sufficient resources be assured (e. g. human, money, power)?

2.   **Security culture and reporting**

The CoC states in its Basic Principles (7b) that every State should take the appropriate measures necessary to ensure the promotion of safety culture and of security culture with respect to radioactive sources. The State should ensure that the regulatory body promotes the establishment of a security culture among all individuals and in all bodies involved in the management of radioactive sources which includes the enhancement of awareness on security of radioactive sources. In all matters of security - not only concerning radioactive sources - the human being is at the same time the weakest and the strongest "chain link". Human behavior plays an essential role in security culture. The perception of the individual responsibility is therefore a core issue for a high level security culture. Often key players are mindless of this obvious fact.

In this context States may report about measures that are undertaken to maintain or improve security culture. Discussion topics might cover personal and financial resources, education and training programs, the performance of self-assessments, the realization of public campaigns and specific needs e.g. for the scrap processing facilities. Furthermore, the engagement with civil society should be discussed including the public information vs confidentiality.

Practical examples where safety and security requirements have been met might be interesting. Discussion may include contradictions between safety and security requirements and specific regulations concerning security concerns.

Specific topics/questions might be:

- What are the specific roles/responsibilities of the various stakeholders?

- Are stakeholders/individual licensees aware of issues related to security of sources?

- Do stakeholders and competent authorities get special education and training? What does it consist of?

- Example: EU-SECTRA training at ITU is a good example for international best practice for this kind of training.

- Which criteria are essential for an integrated approach to safety and security?

- Are there special requirements for cyber security concerning radioactive sources?

- Are there national campaigns in order to promote the safe and secure use of radioactive sources? Are there specific campaigns for the scrap recycling industry to improve awareness concerning orphaned sources?

- How can sufficient resources be assured (e. g. human, money, decision power etc.)?

3. **Regulatory control concerning the security of radioactive sources**

According to Provision 8 of the CoC States should have an effective legislative and regulatory system to control radioactive sources and according to Provision 21 the regulatory body should be equipped with adequate personal and financial resources. States may provide an overview on how and to which extent they have implemented regulations of the CoC into their national legislation. Discussion may focus on specific national provisions, deviations from rules of the CoC and reasons for this, structure and authority of the regulatory body, education and training programs, management of loss/theft of radioactive material and strategies for gaining/regaining control over orphan sources. Discussion topics might be personal and financial resources, education and training programs, realization of public campaigns and specific needs for scrap processing facilities or significant nodal transport points.

Specific topics/questions might be:

- Do regulatory bodies generally have adequate authority to address the security of radioactive sources? Are the necessary regulations in place? How is the regulatory supervision set up in federal systems?

- Are security requirements subject to inspection and enforcement? Do inspectors have the necessary authority (power and security expertise)? Can safety inspectors with an additional security education also undertake security inspections?

- Is there a national threat assessment? Is it regularly updated? Is there a cooperation – on a national level – with relevant police authorities?

- How is information regarding loss over control or incidents during import / export shared?

- What do the national security strategic concepts imply? Are they comparable?

- How are security measures categorized / prioritized? Are the criteria comparable?

- How is the handling of physical protection vs security of radioactive sources?

- How can sufficient resources be assured (e. g. human, money, power etc.)?

- How can a country's performance concerning the security of sources be measured? Which indicators exist and are used?

4.	**Security of radioactive sources in transport and mobile use including export/import aspects**

There are no specific regulations in the CoC concerning sources in transport and mobile use. However, provisions 28 and 29 of the CoC refer to the international transport regulations and several general regulations are applicable to sources in transport too. The supplementary guidance on the import and export of radioactive sources provides several additional recommendations.

Because vehicles transporting radioactive material can be accessed relatively easy security problems whilst the transport of sources are considered as most significant. States may report about their national regulations and strategies to ensure the security of sources in transport and mobile use. Discussion may focus on national assessments, tracking systems, education and training of transport staff and the necessity of specific regulations for mobile use.

Specific topics/questions might be:

- Are there specific national regulations concerning security at transport?

- Is there a national database on loss of control or theft of sources? Will the information be shared with international partners (e.g. IAEA ITDB)?

- Which lessons have been learned (or remain to be learned) from thefts of sources intended for mobile use?

- How the tracking of sources is technically realized in practice (Geographic: GPS; Administrative: personnel lists, authorities…)? Is tracking necessary during transport only or during mobile use as well?

- Do transport people have a special education on security? What does the education consist of (e.g. radioactive material, hazardous goods etc.)?

- How can sufficient resources be assured (e. g. human, money, power etc.)?

5.   **Management of disused sources**

According to Provision 14 of the CoC States should encourage the reuse and recycling of sources. According to Provision 18b of the CoC States should have a national legislation that provides for effective control of sources. The comprehensive knowledge of the sources used within a States territory is essential and the existence of a national source register is considered as a precondition.

Despite regulations for the end-of-life-management of a source are set up, a major problem from a practical point of view is that disused sources simply get forgotten by the former user. Thus, further regulations might not be necessary, but an increasing awareness for a secure and safe management of disused sources might be necessary. Discussion may focus on practicability and promotion of reuse and recycling, the need for further specific regulations and issues with exporting/re-importing disused sources for recycling purposes.

Specific topics/questions might be:

- Are there effective national policies / programs for disused sources?

- Is there a national register and what is part of it? What is the role of the regulator in this case?

- Are the transboundary shipment procedures between EU Member States sufficient concerning the security of radioactive sources?

- Which funding mechanisms for the management of disused sources are/could be most effective (national experiences)? What part does the private sector have to play in ensuring the availability of adequate funding?

- Is recycling part of the end of life management?

- Do you observe regulatory impediments (national/international) concerning the return of sources/contaminated material detected in scrap?

- How can sufficient resources be assured (e. g. human, money, power etc.)?

Working group organization

The procedural way is to split into breakout session groups. Every working group session will be introduced by brief presentations or statements (5-10 min) to prepare for a fruitful and profound discussion. The working groups are assisted by a chairman and a rapporteur. The technical tools provided for the working groups comprise projector and flipchart. The results of the discussion in each working group will be presented and discussed on the third day (15 September 2016) of the workshop. Conclusions and recommendations of the workshop will be presented at the IAEA International Conference on Nuclear Security in Vienna in December.