Radiation Protection Paradigm

Topical Session II.1.2

National Infrastructure

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(IAEA)
TS II.1.2: National Infrastructures

Chair: Hermenegildo I Maldonado Mercado, Mexico
Co-chair: Eulinia Valdezco, Philippines
Rapporteur: Khammar Mrabit, IAEA
Technical Secretary: Dora Vidal, Argentina

Keynote Lecture: Mohammad Shakilur Rahman, Pakistan

Contributions

42 Contributions, including oral presentations

16 National Infrastructures
07 Management of safety
06 Public communication
04 Regulatory Bodies effective independence
03 Radiation protection laboratories
02 Radioactive waste management
02 Implementation of ICRP recommendations
02 Networking
16 Contributions: (Albania, Armenia, Bangladesh, Brazil, Bulgaria, Canada, Cuba, Estonia, Finland, Moldova, Montenegro, Qatar, Romania, Tajikistan, IAEA)

Essential elements of safety infrastructure:

✓ legislative & statutory framework;
✓ Regulatory Body;
✓ Sufficient financial resources;
✓ Effective system of emergency preparedness & response;
National Infrastructures (2)

Essential elements of safety infrastructure (Cont’d):

- Facilities and services;
- Appropriate means for informing the public;
- Regulatory information management;
- ...and...most importantly...
- People with “know-how”!
Common: Evolution of national safety infrastructure:
✓ Originally safety of medical and industrial practices
✓ Expansion to nuclear installations (nuclear power countries) and radioactive waste management
✓ Administrative separation or effective separation between Regulators, Users and Licensees, Research and Technical Support
✓ Support form international organizations and & in particular from the IAEA
Management of safety

07 Contributions: (Argentina, Cuba, Paraguay, Peru, Spain, Malaysia)

✓ Reference made to ISO-9004: 2000, INSAG and GS-R-3 “The management system for facilities and activities”
✓ Safety audit & safety culture: study in Malaysia in 2006 in institutions facilities resulting in better working conditions and feedback for radiation protection community
✓ QA/QM in laboratories based on ISO/IEC 17025 “General requirements for the competence of the calibration and testing laboratories”
✓ Experience in Argentina in QMS in health services showed that it should be designed by professionals with a thorough understanding of the processes and detailed medical diagnosis and treatment
✓ Examples on use of RAIS as management tool was also mentioned
06 Contributions: (Argentina, Belarus, Cuba, France)

- Perception of risk should be compatible with the scientific hypothesis to avoid conflict with the public and to ensue control by those who can modify the risk
- Trust is key factor in influencing perception of risk
- Communication programme of ARN established an environment which facilitate effective communication in both normal and abnormal situations
- Examples from Cuba on a course on “radiation and life” and from Belarus on uniform information system showed good public acceptance and increased public awareness
- Results of three surveys in France were described to understand how the French population perceives the risk
Regulatory Bodies effective independence

04 Contributions: (Brazil, Romania)

- The RB should not be subject to political influence or pressure in taking regulatory decisions & should have the authority and responsibility to discharge its roles & responsibilities
- The RB should have independent technical expertise available to it in the areas relevant to its role & responsibilities
- Paper form Brazil described the core competencies of the RB and when it should contract a TSO and keep its effective independence
- A Romanian paper described the graded and evolutionary approach to effective independence
03 Contributions: (Argentina, Germany)

- Paper from Germany described a method developed for official use of electronic dosimetry systems and a network established between customers and monitoring services.
- Due to ARN requirements, a higher number of instruments is to be calibrated for which the capabilities of the Radiation Protection Laboratory (in the process of accreditation) are in condition to offer such service.
Radioactive waste management

02 Contributions: (Philippines, IAEA)

- Paper from the IAEA describes the national policy and strategy for managing its spent fuel and radioactive waste
- A Technical Report will be published containing fuller development of the topic
- The paper from the Philippines describes the siting activities for a waste repository as well as related public acceptance issues
Implementation of ICRP recommendations

02 Contributions: (Korea, Spain)

- Paper from Korea describes the implementation of the 2007 ICRP recommendations that is being conducted until 2012
- Paper from Spain on the implementation of principle of optimization and ALARA. Appreciation of approach between experts and stakeholders with possible introduction of risk-taking analysis involving public participation and acceptance of risk
Networking

02 Contributions: (UK, USA)

✓ Paper from UK on the Society for Radiological Protection incorporated by Royal Charter
✓ Conference of Radiation Control Program Directors (CRCPD) which is a model for networking and sharing of information, knowledge and experience, and mutual leaning for continuous improvement of radiation protection
Conclusions

- National safety infrastructure is a national responsibility
- International cooperation has been playing key role in continuously improving national and regional safety infrastructure by:
  1) establishing international standards;
  2) providing for harmonized application of such standards;
  3) facilitating and servicing relevant internal instruments (i.e. Conventions and Codes of Conduct);
  4) strengthening capacity building; and
  5) promoting regional and international networking.