

**International Radiation Protection Association
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IRPA 12

Concluding Plenary Session II

**Developing Protection Policies, Criteria,
Methods and Culture**

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Developing Protection Policies, Criteria, Methods and Culture

TS II 2.1 Scope of Radiation Protection

TS II 2.2 Protection of the Public & the Environment

TS II 2.3 Occupational Protection

TS II 2.4 Protection of Patients

Refresher courses

RC-9. <i>Environmental surveillance programs and dose assessment.</i> Characterization of individual members of the public.	<i>Merle Lust. Estonian Radiation Protection Centre (Estonia)</i>
RC-10. <i>ALARA and professional networks. Promoting optimisation of protection through professional networking</i>	<i>étude sur l'Evaluation de la Protection dans le domaine Nucléaire - CEPN. (France)</i>
RC-5. <i>Diagnostic reference levels in medical practice.</i> Establishing diagnostic reference levels in medical practice.	<i>Michel Bourguignon. Commissaire Autorité de Sûreté Nucléaire (France)</i>

Scope of Radiation Protection

ICRP60 replaced by ICRP 103 in 2007 – a challenge for radiation protection
(including supportive documents)

There is a need to share understanding of emerging challenges for radiation protection among scientific and regulatory communities, public and other concerned stakeholder and develop a pluralistic evaluation of the issues at hand. (NEA workshop Helsinki 2008, next planned for end 2009)



Scope of Radiation Protection

**Who can take actions to protect from radiation, where their empowerment comes from and what knowledge they need to act appropriately?
(information needs for radiation protection)**

Nuclear energy – approaches to seek social consensus building and to gain the public trust and confidence (stakeholder involvement)

Protection of the Public and the Environment

- **Radiation Protection of environment (non-human species) is progressing at national and international level**
- **Nevertheless it should be noted that the radiological protection of the environment is not an urgent or important issue in developing countries, that obviously have other priorities.**
- **Safety criteria and safety guides are being developed**



Protection of the Public and the Environment

- It is of interest to mention that there is some evolving work in monitoring and techniques derived from improvements in instrumentation and software or requirements in decommissioning of installations including the legacy of old uranium mines.
- Important development of methodologies and tools to assess the protection of animals and plants, pointing up the presentation of the tool developed within the European Project ERICA.

Occupational Protection

- **UNSCEAR:**
Except for medical applications the occ. exp. related to manmade sources have decreased;
in the medical field interventional procedures identified as critical;
estimated collective dose due to natural sources about 8 times higher (high average effective dose and large number of workers, largest component from mining)
- A number of countries reported on the implementation of a radiation protection program and national dose distributions and trends
➡ need for RP support in developing countries
- Development of harmonized safety standards and guides



Occupational Protection

- **Important issue for practical RP: application of constraints**
Good examples were given for design and operation phases
- **A prerequisite for the application of the principle of optimization of occupational RP is information exchange on methods for dose reduction through networking**

Radiation Protection of Patients

UNSCEAR 2008 data for medical exposures are alarming

Accidents in the medical area: examples from France and how to communicate with patient and public (a scale for rating)

Medical imaging has become the largest controllable source of radiation exposure

Improving the radiation protection of patients requires engagement of all involved parties to strengthen cooperation

Error reporting systems are required and should be both graded and harmonized



Radiation Protection of Patients

Reducing dose in CT is important and can be achieved by tailoring the protocols for the level of acceptable noise according to
*the clinical indication and * the size of the patient

Diagnostic reference levels (DRL's) should be used appropriately as a tool for optimization after engagement by professional bodies (demand to reduce)

Training should be undertaken (e g before the transition from film/screen to digital imaging)

Aim: broaden and sharing the knowledge of RP to professionals involved

Justification of medical exposure (quantitative assessment of detriment versus benefits?)