Report back from
Working Group 2

Balancing security and safety
How to achieve an optimum solution

- *When justifying a particular practice, what account should be taken of the security requirements for the radioactive sources? Should it be possible to prohibit certain practices because of concerns about security? Or is there a danger that security requirements will discourage the safe use of radioactive materials?*
- *Is there a security equivalent to the ALARA principle? For example "As Secure As Reasonably Practicable"? If so, how is an optimum level of security achieved? Or does a different principle apply?*
- *Is it important to link the cost of security measures with the potential savings in both dose and cost? If so, how should this be done?*
- *Are there examples of where safety and security requirements conflict (for example, the posting of warning signs)? If so, how should these be resolved?*
- *A balance is needed between information exchange (for safety purposes) and confidentiality (for security purposes). How should this be achieved in practice?*

Justification of the planned exposure (practice) with regard to security of sources

- Justification of a practice is entirely safety judgement
- Security measures must not compromise the safety measures however a holistic approach is needed
- Security must be an additional part of the licensing process and is to be judged by regulators.
- Elements to be taken into consideration in security measures:
  - "attractiveness" of sources for terrorist uses
  - "attractiveness" of the material for economical theft (theft of valuable equipment is objective, not the radioactivity)
  - Socio-economic environment (e.g. level of development of a country)
  - Threat level

Is there an equivalent of the ALARA principle for security, for example “as secure as reasonably achievable” (1/2)

- 100 % security is not possible
- The level of security should be based on a risk based approach (Design Based Threat see also slide 2)
- Fixing a level for reasonable or adequate security is difficult because we are confronted with a lot of intangibles:
  - The threat level (a range of malevolent scenario's)
  - Attractiveness of the material for theft
  - The worker and public acceptance (can vary before or after an incident)
  - The aim of malevolent acts is not always maximum damage but rather maximum impact on the society (psychological effect)
- What is the liability of licensees and/or states when materials are stolen (due to a lack in security measures)
- Guidelines exists on the categorisation of sources and the level of security required (e.g. IAEA, UK), a graded approach

Is there an equivalent of the ALARA principle for security, for example “as secure as reasonably achievable” (2/2)

- The security measures should not be only technical. A positive attitude towards security should be promoted through training of the personnel (security culture)
- Security of sources should be considered in parallel with other security considerations (e.g. hospitals, laboratories, industrial facilities, …)
- General guidelines with a bespoke approach (e.g. industrial sites, hospitals, NDT, …)
- Good practices should be exchanged between professionals

Conflict between security and safety requirements

- Security measure increasing exposure times to sources is a risk for safety; overemphasis of security and administration to be avoided

- Attention should be given to the preparation of emergency response plans to avoid conflicts in safety and security (priority of intervention teams must be known beforehand (sometimes fixed in the legislation))

Information exchange and confidentiality

- The feeling is that this can be organised

- Relevant information on the radioactive sources and the associated risks should be readily available for emergency response (must be prepared beforehand, radiation protection authorities should be involved)

Different comments

- Is the investment in hospital security taking away means and attention from health care ?
- There is a willingness to pay for security taking into account the socio-economic aspects ?
- Security measures can reduce dose => prevention of the loss of sources.

Recommendations

- To operators ?
  - Security should consider all credible threats (e.g. theft, sabotage,…)
- To regulatory EU authorities ?
  - Definition of a harmonised security level (e.g. source security, EU unified approach to border control)
- To national authorities
  - Consider security in the licensing process and inspection
- To EAN ?
  - Security issues should be kept in focus for review

General Conclusion

- **To enable a sustainable future in the use of sources and nuclear material we need to take into account**
  - **Safety**
  - **Radiation Protection ALARA**
  - **Security**
  - **Non-proliferation**