

# Evolving Roles

## Future Challenges for Radiological Protection

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## The 28 NEA Members

- The 15 European Union members before recent enlargement
- Czech Republic, Hungary and the Slovak Republic
- The European Commission
- Switzerland, Norway, Iceland and Turkey
- The United States, Canada and Mexico
- Japan, Korea, Australia

## The NEA Mission

- To assist its member countries in maintaining and further developing, through international co-operation, the scientific, technological and legal bases required for a safe, environmentally friendly and economical use of nuclear energy for peaceful purposes.
- To provide authoritative assessments and to forge common understandings on key issues, as input to government decisions on nuclear energy policy, and to broader OECD policy analyses in areas such as energy and sustainable development.

## Motivation for Change

- Globalisation
- Growing Importance of Local Contexts
- Sustainability and Intergenerational Awareness
- Good Public Health linked to Healthy Environment.
- RP increasingly viewed within the broader sphere of public health.
- Science only part of “the truth” with respect to judgemental decisions affecting “safety”, “security” and “the environment”
- RP Science is raising new questions

## Emerging Challenges

### RP Science

- The scientific underpinning of the current system may not be as generically applicable as currently believed

### Modern Risk Governance

- The roles and responsibilities of the RP specialist in radiological protection decision making are changing

## Possible Challenges from Radiation Biology Research

- Summing of different types of exposure (e.g. internal and external, high LET and low LET, doses to different organs, etc.) MAY be questionable – does the Sievert represent detriment?
- Non-targeted, adaptive response and delayed effects MAY translate into a “practical” threshold of dose below which risk is zero (or even negative) – should dose limits be changed?
- Some individuals MAY be genetically more susceptible to radiation-induced cancer than others – should protection be multi-tiered?

## Adapting to Stakeholder Involvement

- The focus of the RP specialist is the use of radiation protection science to clarify results, implications and nuances of various protection options.
- The identification of the “best” protection option, which will be recommended to the “decider” as the preferred solution, will be very judgemental in nature.
- The judgements of the other relevant stakeholders (e.g. exposed groups, non-decisional governmental offices, etc.) will equally be important.

## Stakeholder Issues

- Stakeholder concerns (e.g., doses to children, doses to future generations, property values, policy ramifications, etc.) will in many cases be those that ultimately drive the risk and benefit assessment.
- Stakeholder judgements (e.g. of their benefits, of the various assessment parameters chosen, of the acceptability of any residual risks, etc.) will in many cases be those that are most highly considered by the “decider” in making the final decision.

## Implications for the RP Professional

### The RP professional must:

- Address stakeholder concerns
- Apply state-of-the-art RP science
- Develop and present results that are understandable and relevant to stakeholders and the situation at hand

### The decider still decides, but:

- The boundary between “the decider”, who is a government official or a corporate officer, and those providing information “to inform” the decision, must be clearly maintained in the process

### This implies that the RP professional must:

- Be trained to communicate to both technical and non-technical audiences to correctly assimilate essential messages into decision-making processes
- Accept the essential nature of Stakeholder Involvement

## Conclusions

- The evolving role of the RP professional, and of stakeholders, must be reflected in policy and regulations
- Structural and regulatory changes may be needed to facilitate stakeholder interactions in decision making processes
- Development processes for RP principles, standards and regulations should be revisited in light of stakeholder involvement