



Radiation Protection Administrations

Analysis based on the ERPAN General Questionnaire (15 June 2009)

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Introduction



- The development of radiation safety administrations in a state depends on a historical development of a state administration in a country as well as on the **radiation and nuclear safety country profile** i.e. existence of nuclear industry, mines, production of radioisotopes etc.
- Many nuclear and radiation safety administrations and in particular “nuclear safety administrations” were established after Chernobyl accident in 1986.



http://www.nuclearflower.com/21_21.htm



Introduction



- As a rule radiation safety administrations are linked and sometimes a part of other state organisations e.g. military organisation, health or sanitary institutions or ministries, environmental agencies, ministries responsible for emergency preparedness, nuclear safety administrations.

Safety Administration



Other State Institutions

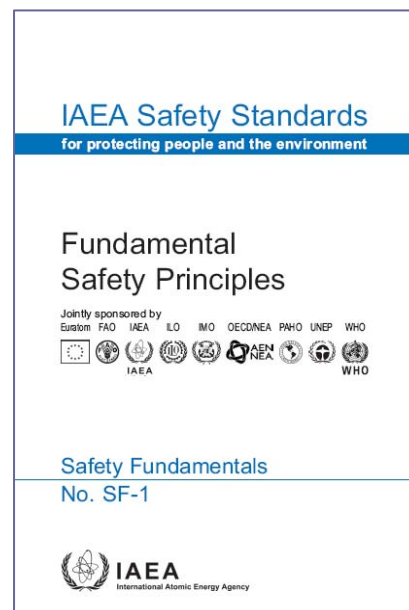
- Functioning of radiation safety administrations depends on a general legislation of a state, i.e.
 - relation to TSOs or QEs
 - procedures for preparing legislation, authorisation and inspections
 - procedures related to databases...





- As a rule radiation safety issues became an integral part of other safety issues e.g. the Fundamental Safety Principles (IAEA, 2006) was published. The harmonisation of all issues including security is required.

IAEA Fundamental Safety Principles



Introduction



- The ERPAN questionnaire launched in June 2009 focused on basic characteristics of administrations i.e. regulatory bodies (RB) participating in the ERPAN network at that time.
- The aim of the questionnaire is to find “lessons learned” in order to achieve an effective control over a use of ionising sources.
- Important notes:
 - Countries with very different **radiation and nuclear safety country profile** can not be a subject of any kind of comparison.
 - A state administration of a particular country could be a subject of changes.
 - A participation of administrations in the ERPAN network can change.
 - All data required in the questionnaire were not available easily.



Analysis of the ERPAN Questionnaire



- Selection of six questions was given in the questionnaire.
- Altogether 13 answers were received from 12 countries:
 - Belgium
 - Czech Republic
 - France
 - Germany
 - Greece
 - Ireland
 - Luxembourg
 - Slovenia
 - Spain
 - Sweden
 - Switzerland
 - United Kingdom (2)



European Radioprotection Authority Network (ERPAN)
General questionnaire (15 June 2009)

The questionnaire is intended to give a brief description of the ERPAN member institutions. A field *Remarks* is intended to allow putting any additional information or clarification which could be relevant to a specific question.

1. Full name of the institution and full address of the headquarters including the web site address with links to annual reports of inspection units and legislation as appropriate:
_____(to insert a text)

Remarks:
_____(to insert a text)

2. Responsibility of the institution related to inspections (underline):
- nuclear installation
- waste management facility
- industry
- medicine
- veterinary medicine
- research
- education
- defence or civil protection institutions
- transport

Remarks:
_____(to insert a text)

3. Which organisation is responsible for following Directives:
- Council Directive 96/29/Euratom (BSS)
- Council Directive 97/43/Euratom (MEDICAL EXPOSURE)
- Council Directive 2003/122/Euratom (HASS)
- Council Directive 89/618/Euratom (EMERGÉNCY)
- Council Directive 90/641/Euratom (OUTSIDE WORKERS).
_____(to insert a text)

4. Number of inspectors in the institution:
_____(to insert a text)

Remarks:
_____(to insert a text)

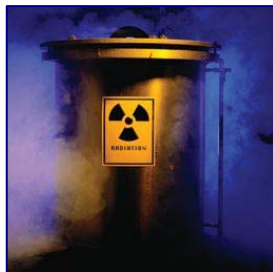
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Question I.

Responsibility of the institution related to inspections



cradle

grave



Question I cont.

Responsibility of the institution related to inspections

- nuclear installation
 - waste management facility
 - industry
 - medicine
 - veterinary medicine.
 - research
 - education
 - defence or civil protection institutions
 - transport
- Four (4/13) RBs are responsible for all areas.
 - Three (3/13) RBs are responsible for all areas except a control over defence and/or civil protection institutions.
 - Four (4/13) RBs are not responsible for nuclear institutions, probably three of them because of a specific country profile etc.





Question II Responsibility related to the EU Directives



- Council Directive 96/29/Euratom (BSS)
 - Council Directive 97/43/Euratom (MEDICAL EXPOSURE)
 - Council Directive 2003/122/Euratom (HASS)
 - Council Directive 89/618/Euratom (EMERGENCY)
 - Council Directive 90/641/Euratom (OUTSIDE WORKERS).
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- Only present requirements from directives are taken into account.



Question II cont.

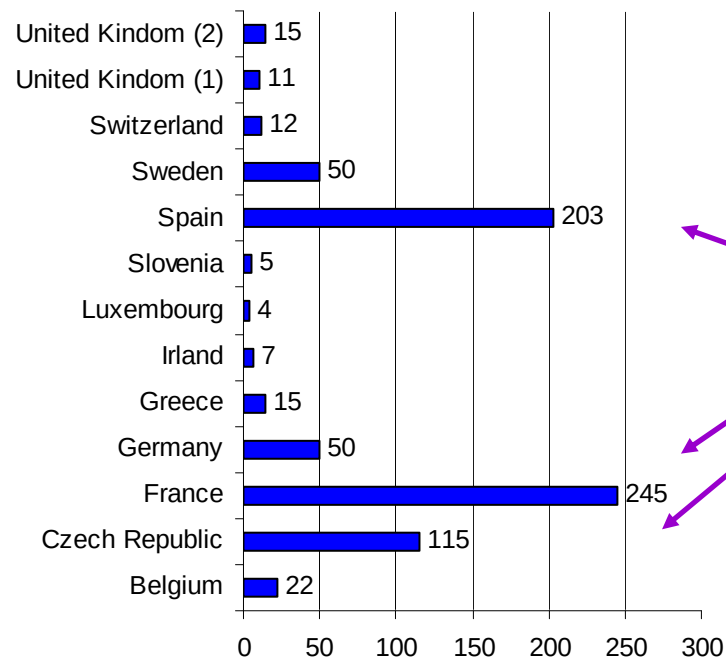
Responsibility related to the EU Directives

- Council Directive 96/29/Euratom (BSS)
 - Council Directive 97/43/Euratom (MEDICAL EXPOSURE)
 - Council Directive 2003/122/Euratom (HASS)
 - Council Directive 89/618/Euratom (EMERGENCY)
 - Council Directive 90/641/Euratom (OUTSIDE WORKERS).
-
- Four (4/13) RBs are responsible for implementation of all directives.
 - Six (6/13) RBs share responsibilities with one or two institutions mainly in medical or emergency area.
 - Two RBs share responsibilities with more than 2 institutions.



Question III

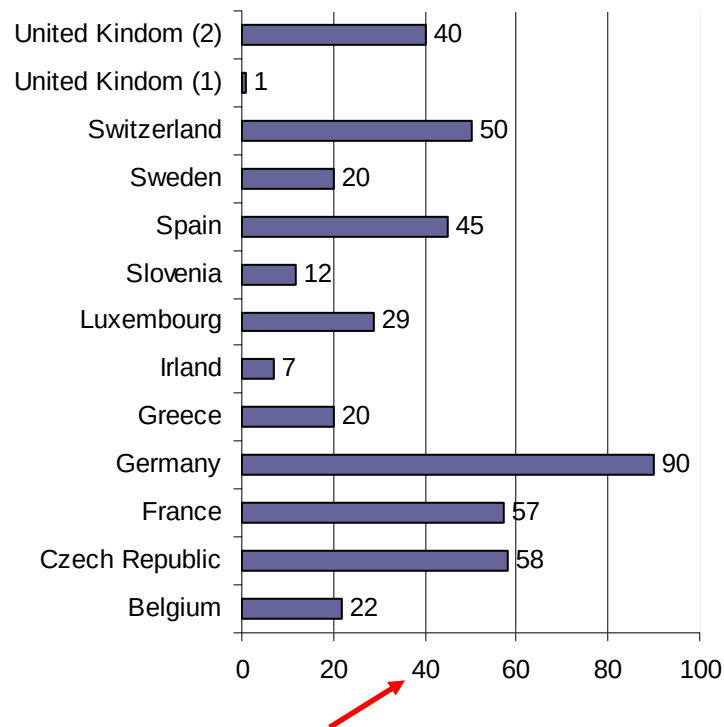
Number of inspectors in the institution



- One country reported about inspectors “without juridical power”.
- Some countries have inspectors dedicated to a specific area.



Question IV Percentage of inspectors in the institution



- In some cases the percentages could be different if larger or smaller organisations are taken into account e.g. a whole ministry.



Question V

Other regulatory authorities in the state, agencies, technical support organisations or qualified experts

- A huge variety of answers exists due to a very different radiation and nuclear safety country profiles as well as due to the different development of the radiation safety in the past e.g. some countries established nuclear institutes after the Second World War.
- A role of QEs is not harmonised so that a role of QEs and TSOs are also not very well defined.
 - Luxembourg reported that no TSOs and QEs other than those at the RBs exist.
 - In Sweden there is around 250 QEs and about 200 of them work in hospitals.
 - In France one TSOs exist, namely IRSN, but there are "approved inspection organisations" for different tasks e.g. radon measurements, dosimetry service, radiation protection technical checks.





Question VI

Implementation of ISO standards in the institution

- ISO 9001:2000
- ISO 9001:2001
- ISO 9001:2008
- ISO 17020 (e.g. for inspection activities)
- ISO 14001:2001
- ISO 17025 (DIN/EN/ISO IEC 17025)
- Two types of certification are reported i.e. technical and managerial.
- As a rule laboratories are certified using the ISO 17025.
- Some RBs are not certified. As a rule they are in a process of certification, e.g. related to ISO 17025, and they follow ISO and IAEA standards for management as appropriate.

Conclusions



- The communication between RBs in Europe is facilitated if structures of RBs in all countries are comparable or at least transparent and harmonised.
- A successful communications is also based on knowledge of each RB characteristics, e.g. HERCA (Heds of European Radiation Control Authorities) was established.
- At present the structures of RBs in participating countries show huge variations.
- Usually a number of RBs responsible for a control of radiation safety is less than four and standardisations of management systems or other standardisation is taking place if it is not applied yet.
- The analysis can help RBs to easily applied “lessons learned” using successful models from countries with comparable **radiation and nuclear safety country profile**.



Conclusions



Thank you for answering the Questionnaire.

