Ongoing Work in Connection with Radiological Protection of the Environment for Regulatory Applications

SPANISH SITUATION

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Radiological protection of the Environment:

**Spanish situation**

- In Spain there are **not specific regulations** regarding the protection of the environment from radioactive substances.

- As a member of the European Union, Spain acts in accordance with the existing regulations in Europe, and participates in the development of new regulations for environmental protection (Group of Expert art. 31-EURATOM; European BSS; European R+D).

- To date, radiation protection regulations in Spain are those of the **Basic Safety Standards Directive (96/29/EURATOM)**.

Radiological protection of the Environment: Spanish situation

An impact assessment of radioactivity in ecosystems was required only in one case:

- ENRESA (National Company for Waste Management) needed to construct a Waste Treatment and Disposal Facility. To get authorization, the Ministry of Industry required an assessment of the impact of radioactivity on ecosystems (planned and accidental conditions), which was made by CIEMAT.

- There were no guidance nor agreed criteria nor methodologies. The assessment was based on IAEA Technical Report Series 332, using scenarios representatives of the site and the installation.

- Results showed that doses and dose rates were far below those reported in TRS 332 as unlikely to cause measurable detrimental effects in biota.

There are no other cases and for the near future Spain is not planning the construction of new nuclear installation.
Radiological protection of the Environment:
Spanish situation

Since 2000 CIEMAT has participated in R+D Projects funded by EU (FASSET, ERICA).

**FASSET (2001-2003)**
Framework for Assessment of Environmental Impact

**ERICA (2004-2007)** Environmental Risk from Ionising Contaminants: Assessment and Management

http://www.project.facilia.se/erica/download.html
Radiological protection of the Environment: Spanish situation

✓ EMRAS-II: Environmental Modelling for Radiation Safety. IAEA (2009-2013)

Reference approaches to evaluate doses in humans

WG1: Reference methodologies for "Controlling Discharges" of routine releases

WG2: Reference approaches to modelling for management and remediation at "NORM and Legacy Sites"

WG3: Reference Models for "Waste Disposal"

Reference approaches to evaluate doses in biota:

WG4: Biota Modelling

WG5: Wildlife Transfer Coefficient Handbook

WG6: Biota Dose Effects Modelling
Radiological protection of the Environment:
Spanish situation

Other activities related with RP of the environment:

- CIEMAT participates in different international expert groups dealing with the RP of the environment: ICRP, IAEA, NEA.

- In Spain, the Regulatory Body (CSN) follows the European and IAEA developments, and ENRESA has/is funding several projects.

PROMEDIA: Radiological Protection of the Environment (2009-2011)

- Analyse the approaches developed by different Countries and organizations for RP of the Environment

- In relevant scenarios for Spain, use the different assessment tools available, and compare the estimations obtained.
Radiological protection of the Environment: Spanish situation

European Alliance in Radioecology

Bring together part of their respective R+D programmes into an integrated, sustainable, trans-national programme that:

• Maintains and enhances radioecological competences and infrastructures in Europe, with an international perspective.

• Addresses scientific and educational challenges related to the assessment of the impact of radioactive substances on humans and the environment.

“Strategic Network for Integrating Radioecology”

SCK-CEN (Belgium)
STUK (Finland)
IRSN (France)
BfS (Germany)
NRPA (Norway)
CIEMAT (Spain)
SSM (Sweden)
CEH (United Kingdom)

NoE, FP7-Fission-2010
Special emphasis in RP of wildlife