Summary of WG2
Reference approaches to modelling for management and remediation of "NORM and legacy sites"

Astrid Liland, NRPA, Norway
WG2 Working Group Leader

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Participation

- 31 participants + IAEA representatives
- 24 countries
- All continents
- Very active group
- All countries have NORM and/or legacy sites that are in need of remediation
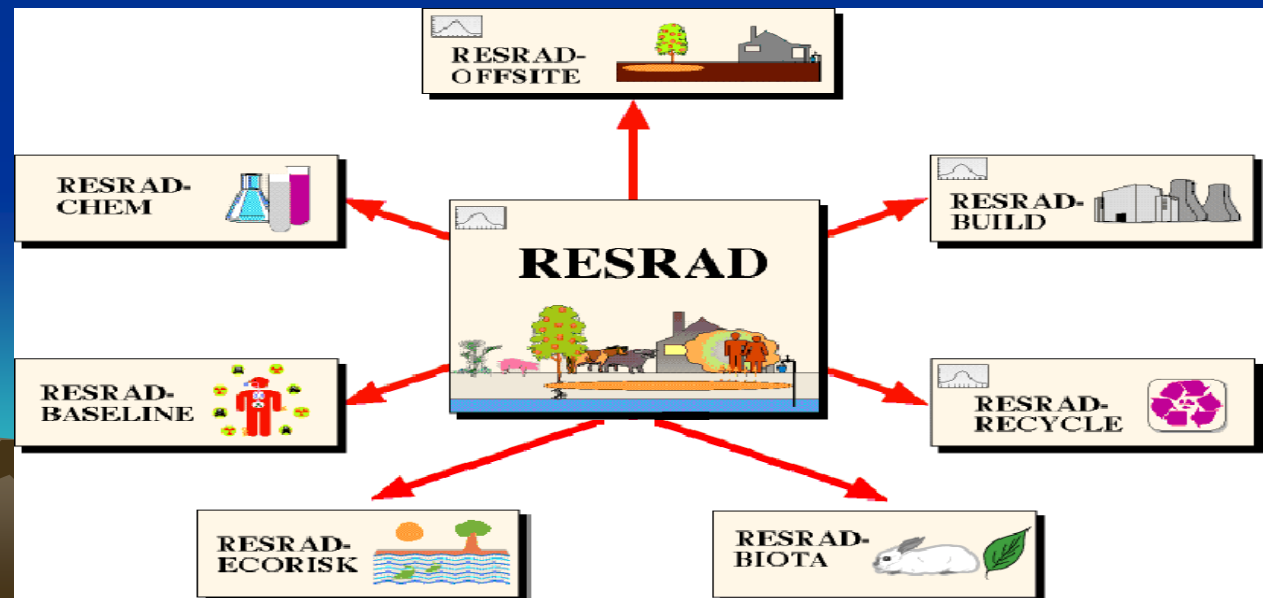
Presentations of sites in

- Ukraine (Uranium Mining Facilities at the Pridneprovsky Chemical Plant)
- Spain (Compostilla II Coal Fired Power Plant)
- France (Crouzille Uranium Mine Division in Limousin)
- Belgium (Tessenderlo, Olen, Ghent, Puurs-Willebroek, Oostende)
- Bulgaria (Iskra Uranium Mining Site)
- Italy (Gela Phospogypsum Site)

Modeling

- Presentation of the draft IAEA TECDOC "Mathematical Models for Assessing Remediation of Radioactively Contaminated Sites"

- Presentation of the RESRADfamily of codes
  - Offsite in particular

Draft General Assessment Methodology Process

- Problem formulation, protection criteria
- Site characterisation
- Screening assessment
- Establish clean-up levels
- Detailed assessment
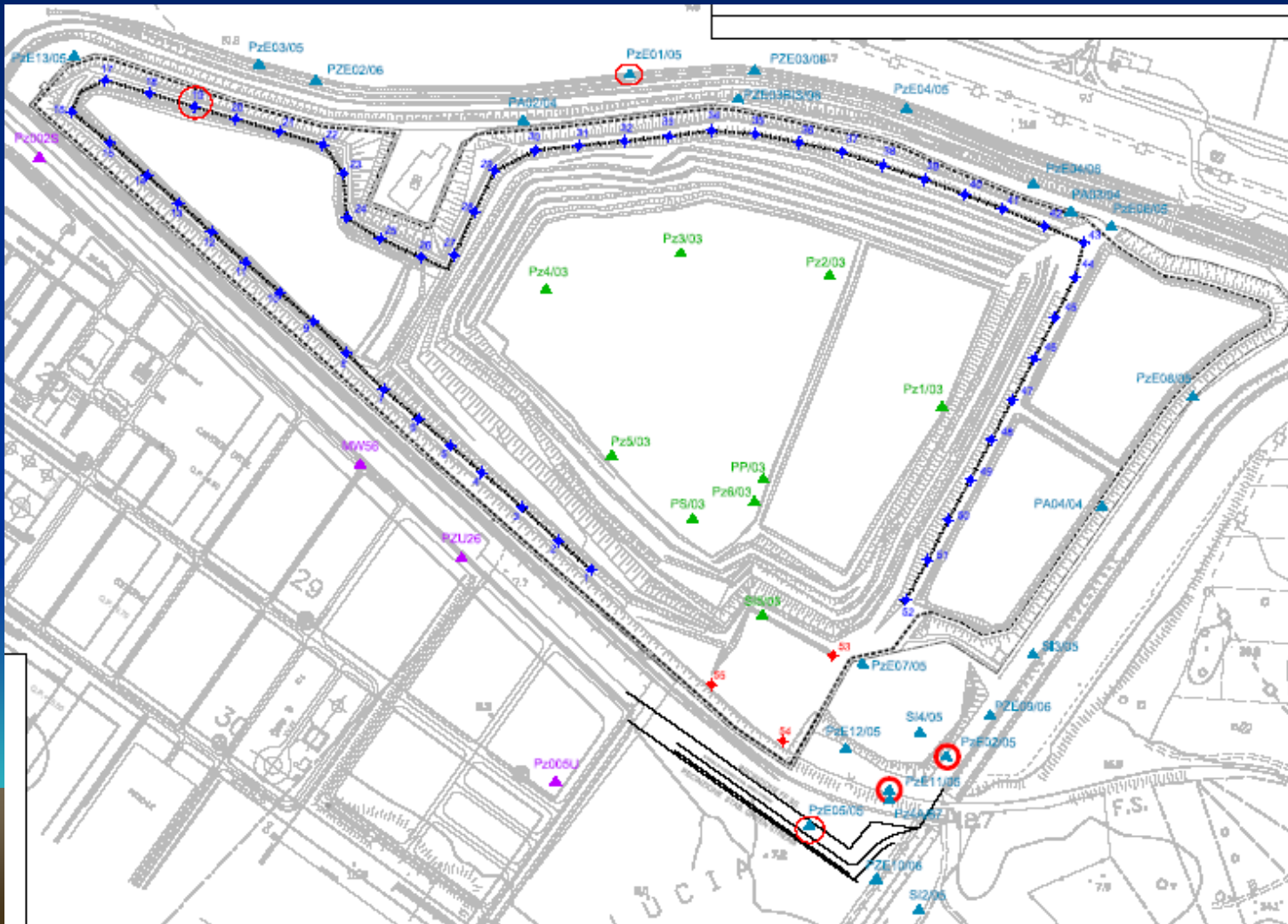- Remediation optimisation
- Communication with decision-makers

Available models and modelling tools

- – RESRAD-Offsite; PC-CREAM; CROM; COMPLY; ROOM; CARAIBE; CITRON; PRG for Radionuclides; IAEA SRS-19; ERICA Tool; ReCLAIM

- – AMBER; ECOLEGO

- – Developed for different purposes
- – Varying limitations and applicability

Testing with simple scenario
Gela - phospogypsum stack disposal site

Further testing with sites chosen by participants

- Nuclear legacy sites in Australia, Russia, USA, …
  - Nuclear weapons test sites
  - Nuclear power plant sites
  - Nuclear waste sites
- NORM sites in many countries
  - Phosphogypsum stacks
  - Phosphate and other industry sites
  - Uranium mining and milling sites
  - Other mining sites
  - Coal production sites
  - Oil&gas production sites
  - Radium production sites

Foreseen results

- General Assessment Methodology Process
- Guidance on suitability and limitations of models
- Examples from real sites