Ecological Risk Assessment Software for Radioactive Waste Management Facilities





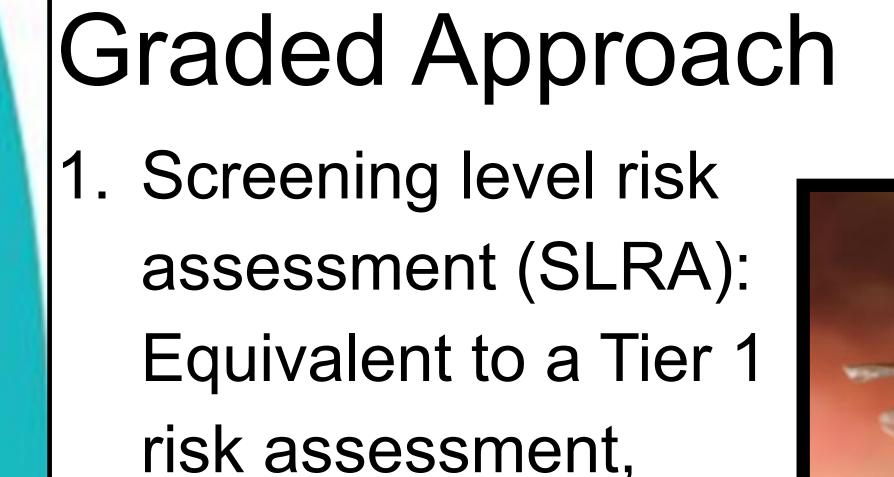
Introduction

- AICER— new software for Ecological Risk Assessment.
- Designed for radiological and non-radiological contaminants.
- Capabilities comparable to RESRAD-BIOTA and ERICA
- Complies with CSA N288.6 standard "Environment Risk Assessment at Class I Nuclear Facilities and Uranium Mines and Mills" (2012)
- Developed in accordance with QA standard CSA N286.7

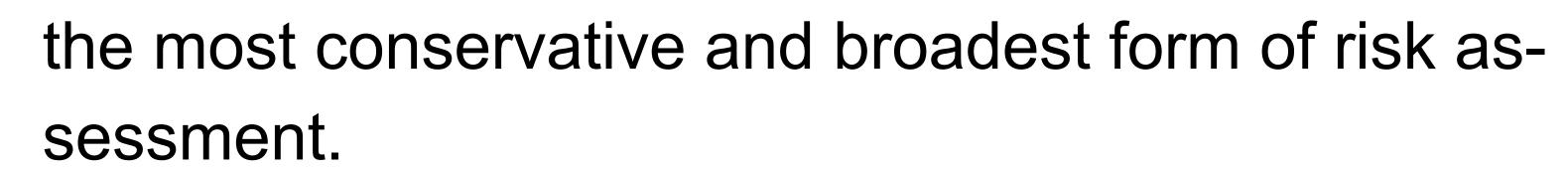
Assessment Steps

- Selection of receptors and characterization
- Selection of radionuclides of concern
- Selection of over exposure pathways
- Development of conceptual assessment model
- Calculation of dose to non-human biota
- Comparison with the appropriate benchmark values





SLRA represents the less detailed assessment and serves as



- 2. Preliminary quantitative risk assessment (PQRA):
 Equivalent to a Tier 2 risk assessment, PQRA is carried out based on available site concentration data to produce a preliminary estimation of exposure and risk for each receptor
- 3. Detailed quantitative risk assessment (DQRA): Equivalent to a Tier 3 risk assessment, a DQRA can involve a refined exposure assessment and risk characterization, or can consider other lines of evidence. At this level of assessment, additional site-specific monitoring data or more sophisticated modelling to estimate more realistic exposure concentrations can be used to reduce uncertainty about exposure, dose and risk.

Functionality ⇒ Step 1: Select Species ⇒ Step 2: Provide concentrations Radionuclide Air Concentration (Bq/m3) Water Concentration (Bq/L) Soil Concentration (Bq/Kg wt) Surface Soil Concentration (Bq/m2) Concentration (Bq/kg wet) ⇒ Step 3: Display the results

