

Editorial on Ecological Risk Assessments

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Ecological Risk Assessments are most often performed during the Remedial Investigation/Feasibility Study (RI/FS) phase of the Superfund response process. These risk assessments provide information regarding the interaction of stressors with the biological community at a site. During the ERA process, scientists develop exposure profiles to identify ecological receptors, such as tissues, organisms, populations, communities, and ecosystems. This receptor information is incorporated with available habitat and exposure pathways. The sources and distribution of stressors in the environment also are characterized.

The framework for an ERA consists of three phases (problem formulation, analysis, and risk characterization). The analysis consists of characterizing both the exposure and the effects to the environment. USEPA outlines the following eight steps as part of the ERA process:

- Screening Level – Problem Formulation and Ecological Effects Evaluation
- Screening Level – Preliminary Exposure Estimate and Risk Calculations
- Problem Formulation
- Study Design and Data Quality Objective Process
- Verification of Field Sampling Design
- Site Investigation and Data Analysis
- Risk Characterization
- Risk Management
- ERAs enable decision-makers to make better informed decisions about the management of ecological resources.

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