



## Risk Assessment Training and Experience (RATE): Basic Understanding and Application of Risk Assessments

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### Abstract

Risk Assessment plays a unique role in serving the needs of various international programs through incorporating, integrating and coordinating the use of scientific information as a foundation for regulatory decision-making. Risk assessment is an ever-evolving process that significantly impacts human health, food safety, economics, ecological health, and social decision-making. US-EPA's National Center for Environmental Assessment (NCEA) is a global leader in conducting state-of-the-science health risk assessments and its assessments are often the first to apply new Agency risk assessment guidelines, scientific methods and data.

The course will offer hands on training in the primary areas of risk assessment (i.e., hazard identification, dose-response assessment, exposure assessment, risk characterization) and in risk communication because outreach to the public and other stakeholders is essential to the successful implementation of risk assessment. This training course will represent the culmination of knowledge sharing among science experts in the field of risk assessment. The full day course consists of eight modules. Real cases of application of risk assessment in various challenges will be discussed through these seven modules.

### Course objectives

- to provide participants with a basic introduction to the fundamental concepts and terminology associated with risk assessments (e.g., human health, ecological, microbial, etc.).
- to provide participants with information on how the risk assessment process is related to and informs risk management policies
- to provide participants with knowledge of the specific legal and regulatory underpinnings of the federal risk assessment paradigm, especially as they relate to the U.S. EPA and other federal agencies such as FDA and USDA.
- to provide participants with a basic overview and understanding of the types of available reference values developed by the Federal government, state governments, and national and international associations.
- to provide participants with understanding in greater depth the four fundamental components in the human health risk assessment process and how they are applied.
- to provide participants with a basic overview and understanding of the basic components of dose-response assessment and the differences between the current default approaches for developing risk and reference values for cancer and noncancer human health effects.
- to provide participants with hands on training on how to apply risk assessment to estimate the risks of a real challenges of air, soil, water and food.

**Course level** Introductory