國立臺北大學自然資源與環境管理研究所

102 學年度第一學期『環境工程科學概論』(在職專班)

課程講義(7)：環境風險評估
Environmental Risk Assessment

- INTRODUCTION
  - □ Violation of Exceeding the Standards vs. Probability of Exceedance (超越頻率)
  - □ Hazard, Risk, and Disaster/Catastrophe（危害、危機／風險、災害／巨災）
  - □ Adaptation: Vulnerability => Exposure, Sensitivity, and Adaptive Capability
  - □ Risk Analysis, Risk Assessment, and Risk Management
  - □ Quantitative Assessment, Comparative Ranking, and Qualitative Description
  - □ Health Risks (Human Life and Disease), Environmental/Ecological Risk, and Socio-Economic Risks

- RISK PERCEPTION
  - □ "Perception is Reality" => Perception vs. Cognition
  - □ Subjective Ranking of Activities and Techniques (Hazards) => Comparative RA
  - □ Stakeholders and Interested Parties
  - □ Description of Risks for Human Lives

- RISK ASSESSMENT: FOUR STAGES
  - □ Hazard Identification 危害確認
  - □ Dose-Response Assessment 劑量效應評估
  - □ Exposure Assessment 暴露量評估
  - □ Risk Characterization 風險特徵描述

- OTHER CONSIDERATIONS AND RISK MANAGEMENT
  - □ Health Risk: Acute Toxicity vs. Carcinogenic Toxicity
  - □ Risk Communication => Acceptable Risk, Cumulative Risk, Incremental Risk
  - □ Risk of Nuclear Power
  - □ Important Figures and Risk Calculation Procedure

- HOMEWORK ASSIGNMENT #3 (Due 11/23/2013)：
  1. 請應用電腦軟體（如 Microsoft Visio）繪製"健康風險評估審議規範"所界定之風險評估流程圖。
  2. 請評析該規範定義之「危害性化學物質」範圍，並討論空氣污染之細懸浮微粒 $PM_{2.5}$ 有否必要納入。