

Decision Analysis for Environmental Problems

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Environmental management problems are often complex and uncertain. A formal process with proper guidance is needed to understand the issues, identify sources of disagreement, and analyze the major uncertainties in environmental problems. This course will present a process that fosters awareness of opportunities for better decisions. Throughout the course, the DASEES- Decision Analysis for a Sustainable Environment, Economy and Society- method will be applied. The steps in DASEES include characterizing the decision problem, selecting objectives to describe what stakeholders care about, choosing measures, and weighing objectives. The trade-offs between economic, social, and ecological values will be clarified in these steps. Techniques for deriving new alternatives to achieve objectives and considering the uncertainties are also incorporated in the DASEES process. Quantitative models that examine risks and uncertainties will be illustrated using case studies and hands-on applications. The DASEES process can be used to understand what stakeholders care about and combine local knowledge with expert beliefs and scientific data to improve environmental management. By the end of the course, attendees will be able to adapt what they learned to identify and develop better opportunities in their own decisions.