

Assignment 7
Dealing with Risks & Uncertainty
And Mitigating Environmental & Social Impacts

1. Risk & Uncertainty in your project
 - a. Identify at least 4 types of risks and uncertainties that related to the project you are studying.
 - b. Discuss the ways that these problems were considered (or could have been considered) in the development of alternatives, the evaluation of alternatives, the selection and refinement of the best alternatives, and in the construction, operation and management of the project.
 - c. Using your spreadsheet from Assignment 6, show how different assumptions concerning costs or revenues or other aspects of performance would affect the evaluation of the project.
 - a. Create at least five scenarios relevant to your project. Each scenario should have several elements related to both costs and benefits (e.g. major cost drivers, unit costs, demand, time for construction, general economic conditions, ...). Scenarios could include a base case along with cases that are, say, pessimistic, worse than expected, better than expected, and optimistic. You could choose to vary some or all of the major elements of the project when you construct these scenarios.
 - b. Show results for each scenario.
 - c. Discuss the results and identify the most critical risks and uncertainties.
 - d. Identify steps that could be taken to reduce the most critical risks and uncertainties.
2. Environmental and Social Issues related to your project
 - a. Identify three major environmental or social issues related to your project
 - b. Discuss how the major alternatives for your project affect each of these issues
 - c. Discuss options that were taken or could have been taken to mitigate environmental or social concerns

NOTE: As in Assignment 6, you are encouraged to discuss the assignment within your group so that you can each address a different set of scenarios, conduct a different kind of analysis, or examine difference methods of reducing risks and uncertainties. If you have any questions about the assignment or how to divide the workload, please contact the TA or the instructor.

MIT OpenCourseWare
<https://ocw.mit.edu>

Resource: Project Evaluation: Essays and Case Studies
Carl D. Martland

For information about citing these materials or our Terms of Use, visit: <https://ocw.mit.edu/terms>.