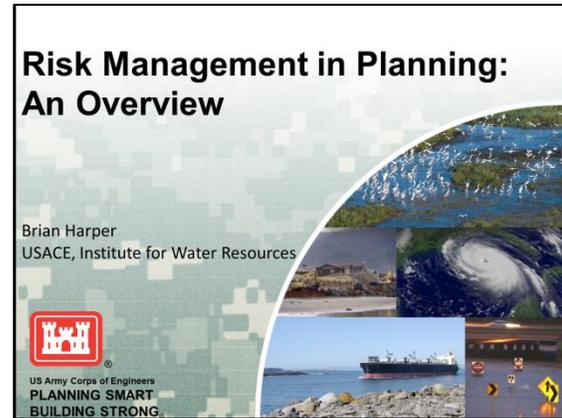


Q&A: Risk Management in Planning: Tools and Application
SMART Planning Webinar Series #4
May 16, 2013

Following the **Risk Management in Planning: Tools and Application** webinar presentation, Brian Harper, USACE Institute for Water Resources, took questions from the field via the “chat” function. The questions and responses below are not a direct transcript; they have been reordered and edited for clarity. Additional questions and feedback are always welcome via the SMART Guide comment form online at:

<http://planning.usace.army.mil/toolbox/smart.cfm?Section=10&Step=1>



There are a number of post-Katrina requirements that are very expensive and time consuming; can we defer any of them to PED? Whether or not to use LIDAR is a good example to address the question; it currently needs to be vertical datum compliant, a very expensive and time consuming requirement, and we haven't been able to get by Division without it.

This is the intent of the risk register – use it to evaluate the risks in key elements of your analyses and determine how and when to comply with policy. We've asked the PDTs to make risk informed decisions to manage the time and budget of a study, but at the same time we have application of policies that is not necessarily risk informed. Ultimately, as an agency, we are going have to circle back and address that – how do we ensure we are defining the policies in a way that allows for risk informed application? But, during your study, the best we can currently do is to capture these issues in the risk register entries. Why are your results sensitive/not sensitive to that particular requirement/activity, when is the appropriate time to address that policy requirement? With that information, the Vertical Team can provide their response on why that policy needs to be addressed at that time or not. The discussion is the way you get to that.

In an aim to get to the 100 page report, how are some of the studies incorporating assessments from the risk register/DMP into the actual reports?

Some of the wording used in the risk register is central to the story you are telling in the report, which is how the decision was made. From my point of view, some of those words that appear on the Risk Register are key parts of explaining how you assessed the uncertainty and determined that some of it needed more attention and other areas did not. The same is true for the DMP; it should be a relatively brief document that shows how you will use information, and lays out an outline for some of the content you will want in your report.

Any tips on how to balance PDT need to move ahead on decisions while also considering need for VT/other interests to engage in those decisions? Ideally, all involved; practically, not the case at this time.

We recognize it is difficult to quickly bring a group together and come together on an issue. One of the reasons I use the slide that paraphrases the role of the reviewers is because I think it is important for a PDT to put on the reviewer hat and think about the questions they will have about the information you are presenting. It helps to be objective about how you are using the information you have and where the uncertainties are. One of the first rules of decision making is ask the decision-maker what information they want or need to make the decision. The closest answer we have to that as an agency is

Assessors	Action	Risk and its cause	Consequence	Consequence rating	Evidence for consequence rating
PM, Section Chief and PDT Biologist, Geographer, Engineer and Landscape Architect (mainly PL-E)	Task: PDT uses existing data only to satisfy the necessary environment laws and regulations, agency reviews.	Existing data is not sufficient to satisfy resource agencies	We are delayed in reaching compliance with environmental regulation, resource agency approval, and obtaining permits to implement the project	Medium	Based on previous experience, we are typically required to gather site specific data.

the Planning Guidance Notebook, which is 700+ pages of guidance on how we make decisions and document them in a report. SMART planning is how can we practically do that, how you characterize the uncertainties and the risk in a clear fashion and communicate those, ask yourselves the hard questions.

Seek input through the PCXs or other technical centers, in lieu of IPR's with the vertical team. Many of our uncertainty and risk issues are technical rather than policy, so the technical specialists can be the objective set of eyes or share experience from other similar studies.

District Quality Control also certainly plays a part in considering things through the eyes of the reviewers.

Do risk registers get shared (at HQ level) with the dam safety community when the study impacts a Corps dam or levee?

The aspirational goal for the risk register is to become part of a larger risk management plan for the project, which evolves with it and evolves to manage risk through design, construction and operation.

For existing infrastructure, dams and levees, our linkage to the Corps dam and levee safety community when we do studies is ourselves; it happens at the district level as well as at the HQ level.

I just got a note that that information was shared for a project in the Seattle District, so yes that is happening.

Study risk versus project (performance) risk-- how much consideration of risk related to performance should PDTs consider during screening and narrowing to TSP?

When I say performance, I am generally referring to project outputs like economic benefits, ecosystem outputs, safety benefits, etc., so performance risk is about the uncertainty in realizing these outputs. At

the screening level, the uncertainty around that performance is often quite large, so performance may not be a distinguishing criterion, unless you're considering order-of-magnitude differences in benefits.

There are quantitative ways of considering uncertainty in performance outcomes in the plan selection, but I think those approaches are more useful when you are comparing amongst a narrow array rather than an initial array.

Another aspect of performance is the engineering reliability or integrity of infrastructure. This aspect should be reflected in the uncertainty around project outputs, so it should be considered in the context of output uncertainty.

Any advice on when to raise risk decisions to the vertical team?

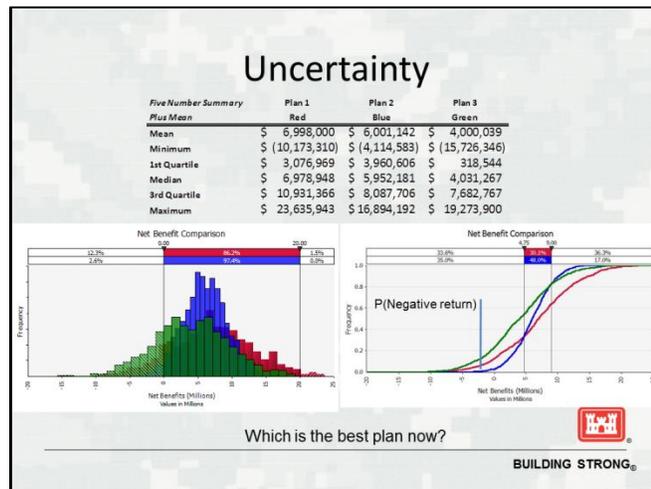
Early and often. My sense is this comes down to being explicit about which risks and decisions we are talking about. I was recently reminded that the PDT's are expected to make decisions as the analysis is underway. True, that is the only way we will efficiently complete studies. But the time to seek input from the Vertical Team is when the issue is big enough to threaten your ability to complete your study within your constraints. The PDT's are expected to make a recommendation, i.e. which option do they think is the appropriate one, but I personally think that Vertical Team discussion is healthy and necessary as choices are made about the decision information that will be developed for the study. One of the big opportunities for the agency is reestablishing technical mentoring, reaching out to the PCXs, to the Divisions for input on an uncertainty question – I think that should be happening frequently to get that perspective.

Have we developed QMS (Quality Management System) documents yet for the Decision Management Plan and Risk Register?

No, our team has not developed QMS documents for the Decision Management plan or the Risk Register.

Do we have tools to show net benefits with uncertainty?

No, the certified corporate models do not produce a display similar to what is shown in the slide. That was produced by another software package. Similar results can be created through the use of Crystal Ball or @Risk software packages. (Crystal Ball is used by the Cost DX to perform cost and schedule risk analyses and @Risk has been used in various applications, but most formally as a predecessor to the HEC-FDA model.)



These resources are available on the Corps' Risk Analysis Gateway:

<http://www.corpsriskanalysisgateway.us/riskreference-disp.cfm?topic=assessment>