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Subject: decision-making under deep uncertainty

I worked for many years on California water problems. For about 20 years I taught a course, The Management of Water in California. I've thought a lot about decision-making in the face of uncertainty. Here are a few thoughts.

1. You cannot wisely make long-term decisions in the face of deep uncertainty about the future if the decisions being made are inconsistent with some of the plausible versions of the future. There are some exceptions to this.
2. You must identify the range of future conditions, and this range must include all of the plausible futures.
3. You can rank these futures in terms of their likelihood of occurrence, but the uncertainty in these rankings must be carried along in the decision-making process; their uncertainty should not be forgotten once the rankings are made. The more objective data that can be used to rank futures, the better. You must guard against ranking based on subjective judgments ("I got a feeling...").
4. You must be humble enough to realize that you may be making decisions only for the short term unless you can come up with a short-term plan that will accommodate all of the plausible futures or a plan whose social-economic-environmental costs are low enough to justify the possibility that some plausible futures would make this plan unnecessary or worse, require its correction. You should realize that as future information changes the relative plausibilities of futures, any inflexible decision you make is likely to be wrong. That's where the need for humility comes into play.
5. You are looking for a short-term decision that is flexible enough to accommodate each plausible future. If you can find one that also happens to be a long-range decision or is not, but whose costs are cheap, have some sort of team celebration, realizing that's the best you can do

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