



What Challenges Can Structured Decision Making Help Me Overcome?

There are a number of commonly cited challenges for putting climate change adaptation into practice, including how to link science to decision making, how to turn planning into action, how to handle uncertainty, how to work with conflicting goals and objectives, and how to overcome a range of cognitive challenges in making difficult decisions.

Although these seem like new challenges to many when they start to consider adaptation, they are exactly the sorts of challenges for which the field of decision analysis was developed (Keeney, 1982).

Trouble getting to implementation: all planning and no action.

There are many factors that can keep plans from getting implemented.

- The actions in the plan may not be implementable by the planning group. Maybe they lack the decision authority. Maybe they lack funding or skills.
- The people needed to implement the plan may not feel committed to it. Perhaps they don't actually want anything to change, or the selected actions don't reflect their concerns, values, or priorities. Maybe they feel the process to develop the plan was unfair.

To minimize the risk of ending up in these situations, the key is to do a good job in the problem framing stage [see problem framing worksheet]. Among other things, this means being clear on what problem is being addressed, what decision needs to be made, who has the authority to make decisions, who implements or affects decisions, and what the process for implementation is.

Trouble getting to implementation: analysis paralysis.

There's always more information that we want. We can get stuck trying to dig up more targeted data, better data, doing more models, writing more white papers. How do we get out of this cycle? Structured decision making (SDM) offers several tools:

- Decision sensitivity analysis. How much would getting additional information change
- Value of Information analysis: if the information would change my decision, how much is it worth spending (in money, lost time or other resources) to get it?
- Include getting the information as an alternative, and compare the consequences of deciding now vs. spending time and money to acquire additional information and deciding later.

Mainstreaming climate adaptation/resilience into a variety of decisions.

We know how to plan and make decisions in general, but don't always know how to incorporate resilience into plans and decisions. By breaking the decision process into discrete elements, SDM provides a framework for thinking about the different ways climate change or other resilience considerations can come into the decision process. For example:

- Climate change or resilience may be a core element of problem framing; however, even if they aren't, climate change and resilience can still inform decision making.
- If resilience is an objective, the process of developing measurable attributes for it ensures that decision participants have a shared understanding of what it means in this decision context.
- Evaluating consequences for each objective in the near, medium, and long term can reveal which actions achieve objectives over which time frames

Bringing diverse voices to the table in a meaningful way.

We often hear about the importance of "co-benefits" or looking for "win-win" situations. The problem is, we may not know what "benefits" matter to others, or what counts as a "win" to them. SDM provides a framework in which all stakeholders can put their values on the table, see how those values are addressed by different alternatives, and be part of evaluating and negotiating risks and tradeoffs. The group does not have to agree on all objectives, nor does everyone need to value all objectives equally. The goal is consciously exploring what matters to different stakeholders and why, using that insight to build the best alternatives we can, and being transparent about how and why we reached the decision we did.



Solutions aren't keeping pace with the problems.

When it comes to big problems like climate change, a common concern is that our actions aren't making the difference we want them to. There are many reasons why this happens, including insufficient funding, lack of political will, and many other factors that may be beyond our control. That said, there are ways our approach to making decisions may be contributing to this problem. The key is to be clear on our objectives in the near and longer term, to develop an array of creative alternatives targeting those objectives, to evaluate how well each alternative meets each objective, and use that to decide what actions to take. Sounds simple, right? But we don't always do this! Common errors include:

- **Problem framing errors:** We try to tell other people what to do rather than focusing on what we can do ourselves. If we say the problem is that the federal government needs to have tighter emissions standards for cars and leave it there, we're trying to make a decision for the federal government. A better approach would be to say we want to reduce auto emissions, to consider different things we could do to influence emissions, and then compare those options. Maybe lobbying the federal government to do what we want is the best approach, but it certainly isn't the only one. We could design a very inexpensive scrubber that people could attach to their cars with a screwdriver, focus on making public transit free, or create new infrastructure that makes non-motorized transport easier.
- **Low-hanging fruit/familiarity bias:** In the desire to take action, we often start by doing things that are easy or that we know how to do, saying we'll get to the bigger or new stuff later. While the idea is that this will create momentum, the feeling of having done something often reduces the likelihood that we take other actions. By focusing on what is easy to do rather than what will move the needle on our fundamental objectives, we contribute to limited effectiveness.

*Structured decision making is not a silver bullet that will solve all our problems; it **can** help us increase our decision-making skills. The other resources we've created can give you an introduction to SDM, and point you to some options for learning more if you are interested.*