**OBJECTIVES**

By the end of this module, you should be able to:

* Dispel common misperceptions about structured decision making and adaptive management

**CONFUSING USES OF TERMINOLOGY**

* Co‐opted definitions of SDM and AM
* There is considerable confusion regarding the true definition of adaptive management
* “adaptive” may simply imply flexibility, such that a management plan is subject to change
* “trial and error” approaches which entail the implementation of a particular action until unsatisfactory consequences are revealed
* ARM is sometimes called “learning by doing”; that’s fine, but it invites a lot of other processes to co‐opt the name
* There is considerable confusing regarding what structured decision making really means
* There are many other processes out there that are “structured” and which result in “decision making”, but the question is whether they actually integrate all the insights from the field of decision analysis.
* Alternative processes are sometimes reactive in nature (SDM and ARM are proactive)
* Certain components of SDM, especially stakeholder and expert involvement, are often confused with decision analysis
* The act of involving stakeholders or experts in a decision‐making process does not in and of itself imply the practice of decision analysis (even if the expert is trained in decision analysis)
* Many similar processes with different names and acronyms can lead to confusion
* Army Corps: Computer‐aided dispute resolution
* USFWS: Strategic Habitat Conservation
* USFS & DOI: Structured Decision Making & Adaptive Resource Management
* TNC: Conservation Action Planning

**MISAPPLICATIONS OF THE PROCESS**

* Decision theory isn’t always the right tool
* Use the 6 decision classes to help ID when it is the right tool
* BUT, the dotted line in Figure 1 (below) indicates that the distinction of when to use SDM vs. Conflict Resolution is not always clear
* Some “conflicts” can be resolved with decision tools:
* Value‐based conflicts arise when there are real or perceived differences in objectives
* Conflict: Perceived conflicts may arise when means objectives are mistaken for fundamental objectives

Decision Tool:

* Conflict: Fundamental objectives are different

Decision Tool:

* Conflict: A lack of clarity (linguistic uncertainty) may lead to perceived conflicts about what people want

Decision Tool:

* Conflict: Conflicting or Competing objectives

Decision Tool:



**Figure 1.** Structured Decision Making (SDM) decision conditions along gradients of objectives and technical understanding (Runge et al. 2013). Dashed lines depict techniques (Conflict Resolution, Joint Fact Finding) which could aid the initial formulation of SDM by moving it into more favorable decision space, down and to the left. Dotted lines show integration of Scenario Planning into SDM and Adaptive Management.

* Conflicts that can be resolved with decision tools (continued)
* Science‐based conflicts arise when decision makers and/or stakeholders have different understandings of how the system works *and* these differences lead to different management decisions.
* Conflict: “Dueling” models of system dynamics can lead to conflict if alternate models are not considered
* Decision Tool: Explicitly represent alternative models in an adaptive management framework; evaluate uncertainty with EVPI
* Conflicts not described above generally fall into the “conflict resolution” decision space → SDM is not appropriate until other tools are used to transform the problem into a more SDM‐appropriate decision space
* Similarly, when the science is so uncertain that explicit alternatives of system dynamics cannot be articulated, joint fact‐finding may be a more appropriate tool to use prior to initiating the SDM process
* SDM is not a means for convincing someone to change their own decision
* Beware of “true” conflicts that are being masked as disputes about science

**MYTHS ABOUT SDM**

***Discussion:*** What had you heard about structured decision making and adaptive management before this course? Are these claims about SDM true? Have your perceptions changed?

Are these claims about SDM true?

* It takes too long
* It’s too risky
* It’s research
* Investment in learning distracts from management goals
* It’s only for big problems
* It always requires complex quantitative analytics
* We already do it

**REFERENCES**

Runge MC, Grand JB, Mitchell MS. 2013. Structured decision making. Pages 51‐72 *in* Krausman PR, Cain JW III, eds. Wildlife Management and Conservation: Contemporary Principles and Practices. Johns Hopkins University Press, Baltimore, Maryland.

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