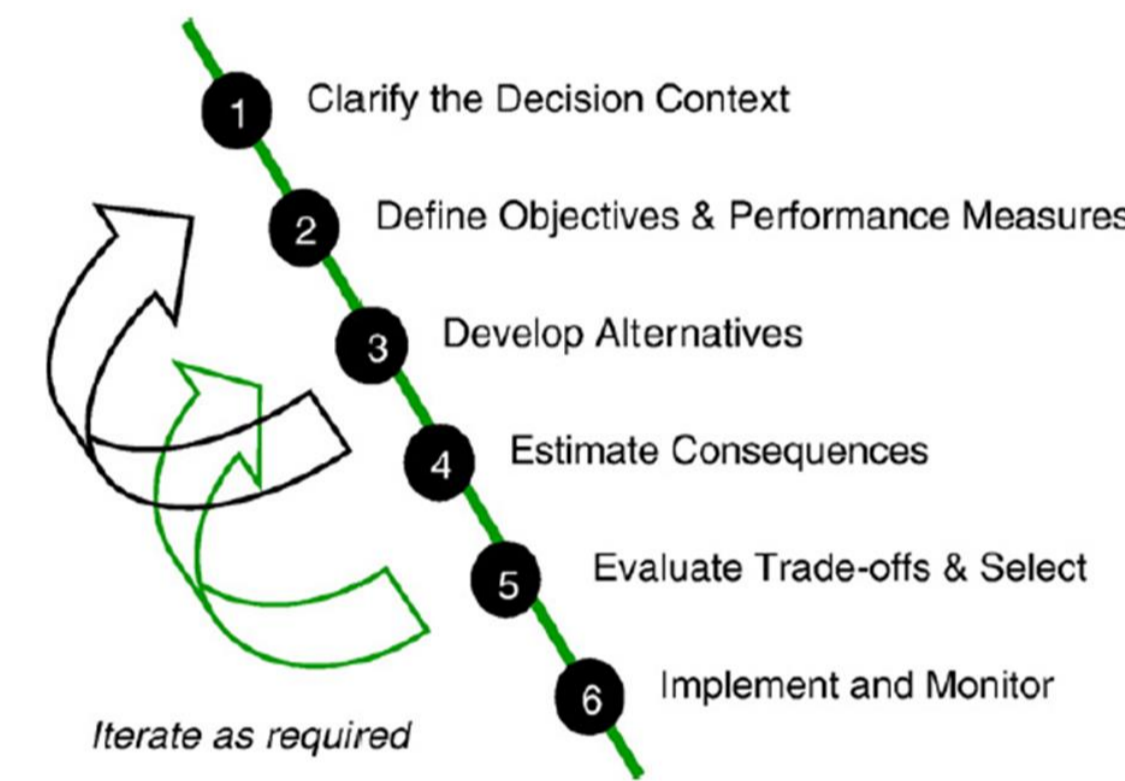




### Purpose/Utility of Research

#### Structured Decision-Making (SDM)

An organized approach to integrate Facts (Scientific Knowledge) & Values (What matters to Communities).

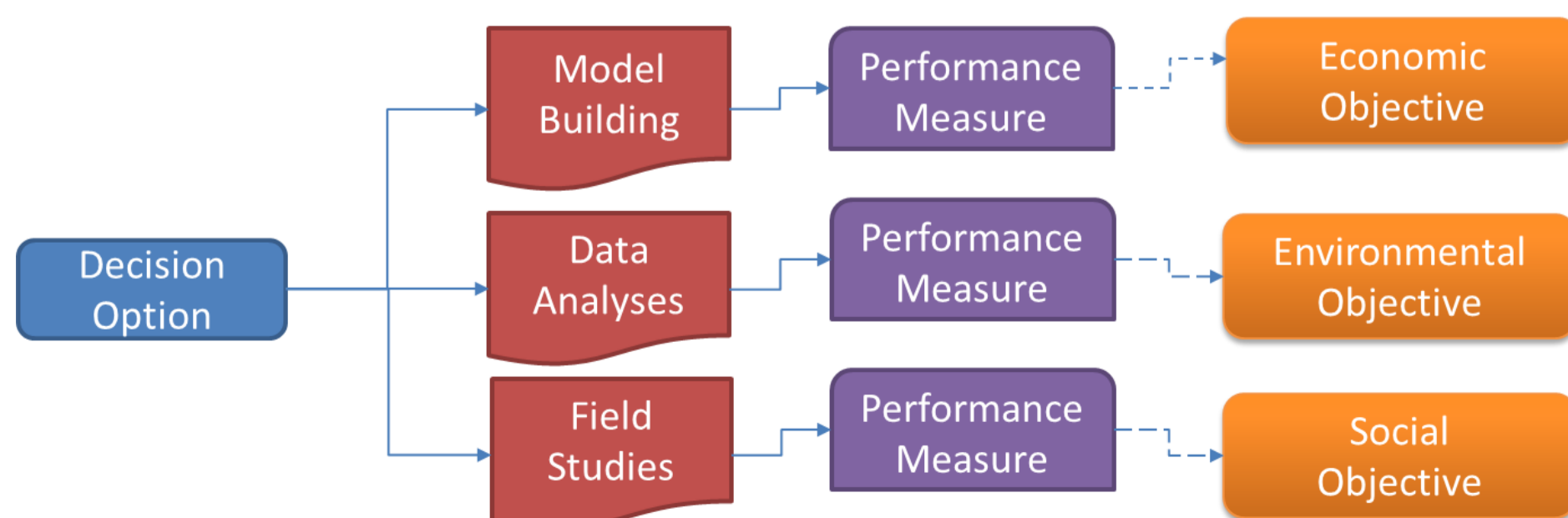


*“A formalization of common sense for decision problems which are too complex for informal use of common sense”*

- For finding solutions to “wicked problems”
  - Conflicting issues: economic, social, environmental
  - Divergent public values
  - Scientific uncertainty

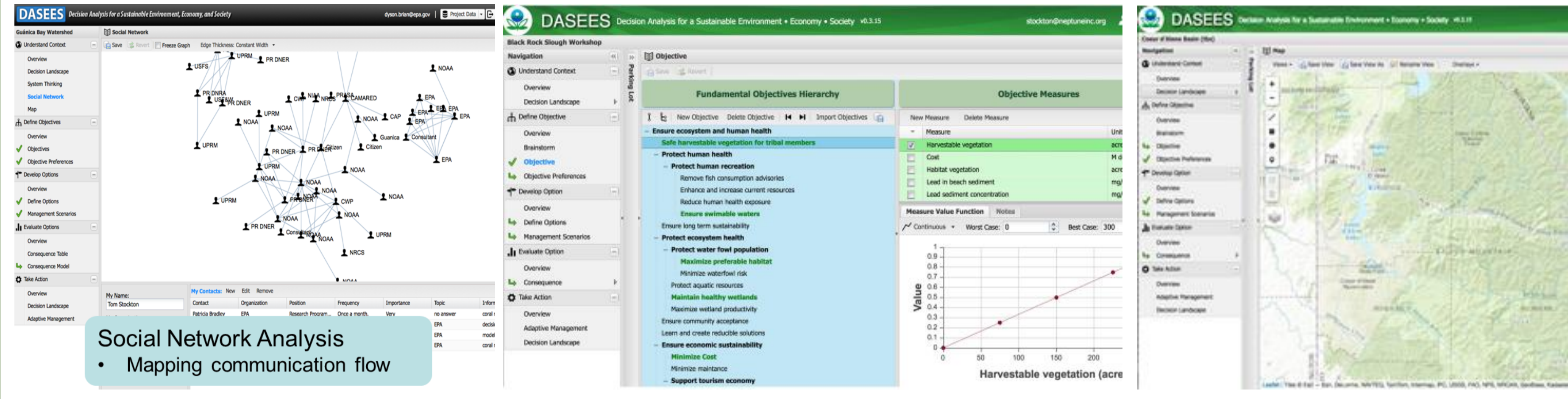
**DASEES** (Decision Analysis for a Sustainable Environment, Economy, and Society) is a tool for applying SDM to remedial decisions which:

- Helps identify needed tools and research supporting sustainability
- Provides structure supporting Remedial Project Managers tasked with implementing adaptive site management strategies.



### Highlights

- Web-based functionality allows geographically dispersed groups to work on a problem at the same time.
- Progress Tracking provides easy navigation
- Project-based implementation scope is flexible across multiple scales, locations, and issues
- Common platform for documenting, and sharing decision data and records
- Integrated, easy to use, system visualization tools (e.g. Social Network Analysis)
- Framework for integrating disparate metrics in decision making



### Application & Translation

#### Guánica Bay, Puerto Rico: Public Values Forum January 23-25, 2013 EPA 600/R-15/248

As part of a cross-agency effort, DASEES was used to support, organize, and analyze stakeholder information leading to:

- Identified stakeholder objectives and success measures for the Guánica Bay watershed
- Prioritized management actions for achieving multiple values
- Rapid analysis of stakeholder interactions and knowledge flow (See Network Analysis Above)

#### Coeur d'Alene, ID Community Remedial Decision Planning

A recently started effort to assist R10 and the Coeur d'Alene region in Superfund Remedial planning. Efforts include:

- Implementing a Structured Decision-making (SDM) process leading to:
  - Clarity on objectives, metrics, and priorities (Figure above)
  - Construction of management strategy for human and ecosystem health
  - Identification of relevant SHC resources supporting management analysis

### Intended End users

DASEES is useful for group decision-making in requiring communities involvement. The scope of application and stakeholders can vary. DASEES is user-friendly, but technical analyses brought to the tool for decision-making may require specialized expertise. Decision analysis with DASEES has supported and is in consideration for communities in several Regions:

- R4 Climate Resilience Dania Beach, FL
- R6 Small Dairy Farm Waste Management, Louisiana
- R6 Groundwater Resource Management, Oklahoma
- R10 and R2 Superfund Remedy Decision Making

### Lessons Learned

- SDM and tools like DASEES help to manage information and data; and integrate preference with technical analyses. They do not replace thinking or provide the “answer”. People still make the decisions.
- DASEES can effectively communicate information to stakeholders. Providing rapid feedback from group information e.g. Social Network Analysis gets stakeholders involved. They like to see their contribution lead to results. It promotes “buy in”
- Deliberate structuring of decisions is a learned skill. Understanding the process before using DASEES is necessary. Not difficult, but necessary.