Actionable Science for Communities

DASEES

(Decision Analysis for a Sustainable Environment, Economy, and Society)

SHC 1.61– Decision Science and Support Tools, Task 5 – Next Generation Tools

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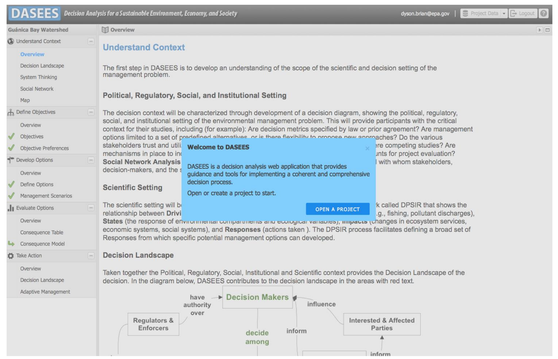
Purpose/Utility of Research

DASEES (**D**ecision **A**nalysis for a **S**ustainable **E**nvironment, **E**conomy, and **S**ociety) is a web-based tool supporting community decision-making. It facilitates the application of Structured Decision Making (SDM) through organizing and processing information used for identifying common goals, and creating, evaluating, and implementing alternatives for complex environmental management and policy problems.

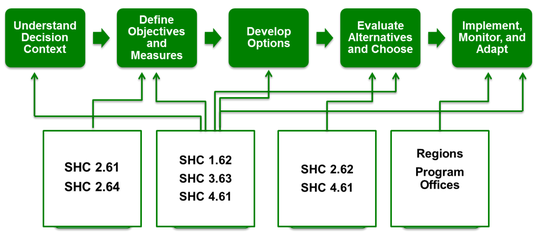


Connection to SHC Portfolio

The five-step DASEES process integrates SHC information and tools

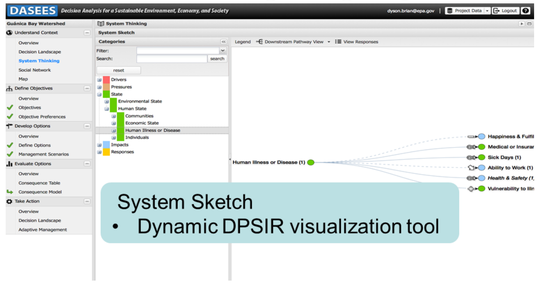
DASEES Function and Philosophy:

•Open source, web-based interactive framework of decision analysis tools
•Guides use of SHC tools/models/information external to DASEES needed for decision
•Maintains consistency and clarity in assessing alternatives with multiple objectives

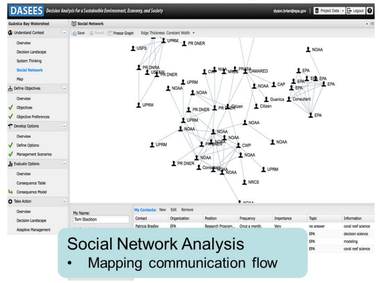


Highlights

- Web-based functionality allows geographically dispersed groups to work on a problem at the same time.
- Progress Tracking provides a "TurboTax" user experience
- 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
- Framework for integrating disparate metrics in decision making



System Sketch
- Dynamic DPSIR visualization tool



Social Network Analysis
- Mapping communication flow

Application & Translation

Guánica Bay, Puerto Rico: Public Values Forum January 23-25, 2013

As part of a cross-agency effort, DASEES was used during the Forum 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)

Dania Beach Coastal Community Resilience Planning

A recently started effort to aid the community of Dania Beach and the larger Southeast Florida region in coastal resilience planning. Efforts include:

- Implementing a Structured Decision-making (SDM) process leading to:
  - Clarity on objectives, metrics, and priorities
  - Construction of management strategy for resilient community growth
  - Identification of relevant SHC Tools supporting management analysis

Intended End users

DASEES is useful for group decision-making in communities. The scope of application and community 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 at several levels including:

- Neighborhood – Slavic Village, Cleveland, OH
- Community – Dania Beach, FL
- City – Rockefeller 100 Resilient Cities Initiative
- Regional: Guánica Bay Watershed, Puerto Rico

Lessons Learned

- SDM and tools like DASEES help to manage information, data, and 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.

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