

ROLE OF USGS SCIENCE IN STRUCTURED-DECISION MAKING PROCESSES

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PARADIGM SHIFT

Resource Management

From expert opinion to defensible process

Emerging Trends

Link science more tightly with decisions

Structured Decision-Making (SDM) is the Tool to Link Science with Management

Splits complex decision into small parts to provide opportunity for more informed choice

STRUCTURED DECISION- MAKING

ProACT

Define Problem

Identify Key Objectives

Create Alternatives

Assess Consequences

Address Tradeoffs

Uncertainty

Risk

Link Decisions to Future States

TYPES OF STRUCTURED DECISION-MAKING

Multiattribute Decision Analysis

Decision Support Systems

Adaptive Management

Joint Fact Finding

USGS AND STRUCTURED DECISION-MAKING

Solid science is essential to SDM

Assessing consequences

Addressing tradeoffs

Incorporating uncertainties and risks

Modeling future states

What other agency/organization is better qualified to contribute to SDM?

Closer linkage identified as area for improvement for USGS.

WHAT IS THE VISION?

**APPLYING
SCIENCE TO
DECISIONS IN A
CHANGING
WORLD**

NOAA COASTAL Services Center

Support environmental, social and economic well-being by linking people, information and technology.

Client Driven

Results Oriented

National Scope; Local Approach

Aligned with Partners

BENEFITS OF SDM TO USGS

Increased Visibility to Public

Increased Scientific Relevancy/Utility

**Credibility/Justification to Management
Decisions**

Develop New Skills

Increased Funding Opportunities

Gain Acceptance

Common Practice

Integrate

BUSINESS PLAN

Paradigm Shift

Market

Embrace

Develop

Formalize

BUSINESS PLAN

Industry

Marketing Analysis

Marketing Plan

Operational Plans

Management Plans

Financial Plans

MARKETING

Internal

Grass roots acceptance plus other levels.

External

Identify collaborators/customers.

Develop outreach plan.

OPERATIONAL PLANS

Timeframe for implementation.

High ROI Projects

Organizational System

MANAGEMENT PLANS

Management system.

Staff needs.

Funding needs.

Facility needs.

Funding plans.

IMPEDIMENTS

No Internal Buy-In

Resist change

Current RGE system inappropriate

Inadequate Resources

Funding, Staff

Upper Level Inertia

No champion at DOI (yet)

Risk aversion

External Disinterest

Small market

No external funding

OVERCOMING RISK AVERSION

Internal Education to Generate Buy-In

Provide Incentives – Make Safe

Implementation Strategy - Start Small and Grow Outward

NEXT STEPS

Complete Business Plan

Choose from among alternatives

IMPLEMENTATION OPTIONS

The CSC Model – start small & grow outward

Pros:

Minimizes buy-in needed

Easy to staff

Minimizes resources

Increased likelihood of validating SDM

Reduces risk

Cons:

Lack of communication, consistency

Limited reach in early years

IMPLEMENTATION OPTIONS

Other alternatives:

Many places at once

**Passive approach – funding opportunities,
no requirement**

Outsource and graft on to USGS

Status quo – no formal SDM program

WRAP UP

Opportunity and need for organizational growth

Expected outcomes

Visibility

Relevance

Funding

Growth over time

SDM is the opportunity to unify all USGS disciplines that will make a difference in a changing world.