Can Organizations Learn?
Adaptive Management, Confident Decisions and Science

University of Washington Conference
Brian J. Boyle

December 2-4, 2001
Pacific Northwest National Laboratory
One of Battelle’s Major Technology Centers

National Renewable Energy Laboratory
Golden, Colorado

Corporate Headquarters
Columbus, Ohio

Pacific Northwest National Laboratory
Richland, Washington

Oak Ridge National Laboratory
Oak Ridge, Tennessee

Battelle Europe
Geneva, Switzerland

Brookhaven National Laboratory
Long Island, New York

U.S. Department of Energy
Pacific Northwest National Laboratory
Richland Research Complex
Adaptive Management

- Adaptive management relies on an accumulation of credible evidence to support a decision that demands action.

- Adaptive management is designed for situations where there is uncertainty and a need for action.

  • From Dr. Ron Thom, Battelle PNNL Sequim Marine Sciences Laboratory, 2001
Framing the discussion

- Success and How Organizations Succeed
- Some Indicators of Success
- Some Indicators of Political Failure
- How We can Successfully Organize for Salmon Conservation, and Manage Adaptively
- Collaborative Problem Solving Environments and Adaptive Management Breakthroughs
Data and Adaptive Management

Oceans of Data

Rivers of Information

Streams of Knowledge

Droplets of Wisdom
The “Flip Side” of Success: Political Failure

- Not wanting to revisit a decision
- Not clearly explaining the process
- Not having clear goals
- Not knowing how decisions are made
- Not knowing who makes decisions
- Not knowing how to build consensus or if essential
- Being trapped in process
- Getting stuck in the past
- Losing track of useful research
How Science and Technology help “Unstick” the Complex Challenge

Complex Systems Mgmt Challenge

- Multiple Ecological Dimensions & Variables
- Multiple Uses & Values
- Competing Management Objectives
- Requirements & Constraints

Stakeholder “Compact”

Science/Information Value-Infused Decision Process

- Scenarios
- Tradeoffs
- Priorities

Adaptive Management

- Decide
- Monitor
- Evaluate
- Adapt

Data Layers
- Social-Cultural-Economic
- Biophysical

U.S. Department of Energy
Pacific Northwest National Laboratory
Community-focused Collaborative Problem Solving Environments

- Virtual organization of policy makers, scientific experts, and communities
- Provide communities, scientists, and policy makers with a shared understanding of the problem.
- Increase public awareness of complexities of the problem and increase communication between public and policy makers
- Use collaborative technologies to engage all stakeholders in problem definition & solution