

**ADAPTIVE MANAGEMENT WORKSHOP**  
**October 30, 2004**

**SUMMARY**

**WORKSHOP TOGOALS & OBJECTIVES**

A workshop on adaptive management was held last Saturday, October 30 in Craig, CO for NWCOS members and other interested citizens. The goal of this informational workshop was to provide NWCOS participants with a common definition and understanding of adaptive management so that they can make informed decisions about whether and how to use adaptive management in their activities. Specific objectives of the workshop were to 1) clarify the definition of “adaptive management,” distinguish among the different ways the term has been used, and discuss the benefits and challenges of adaptive management, 2) provide real-life examples of adaptive management of natural resources, 3) discuss how adaptive management relates to NEPA and the BLM planning process, 4) provide the opportunity for participants to experience the challenges of implementing adaptive management through a hands-on group learning activity, and 5) discuss next steps for NWCOS with regard to adaptive management. All of the presentations made at the workshop will be posted on the NWCOS ftp site that Keystone maintains, so that people who were unable to attend will have access to the information.

**MAIN THEMES AND DISCUSSION POINTS**

Two main aspects of adaptive management were highlighted by the presentations. First, Maria Fernandez-Gimenez stressed that adaptive management was originally conceived as a way to learn from our management experiences by applying the principles of science to the implementation of management practices on the ground. This learning then helps reduce the uncertainty that managers face when they make decisions about complex and unpredictable ecosystems, and enables them to more rapidly determine which management approaches are most effective. Second, Tim Salt emphasized that adaptive management is a structured decision-making process that begins with clear and precise management objectives or outcomes, well-defined indicators that are linked to these outcomes, and a process for monitoring indicators and using this information to adjust management. These two perspectives on adaptive management are compatible. Science can be used to help implement management and monitoring so that learning can happen quickly and the information is as reliable as possible, providing the best available basis for adaptive management decisions.

The case studies provided a range of practical examples of how adaptive management has been applied to different resources (forests, wildlife and rangelands) at different spatial and time scales. It is important to recognize that adaptive management can be carried out at small scales and over short time periods (“little boats”) as well as over large spatial extents and very long time periods (“big boats”). All of the presentations highlighted a number of challenges associated with successful implementation of adaptive management.

Several main themes emerged from the discussions that followed the presentations and the interactive group activity. First, many participants had questions about the specifics of the adaptive management process. **The group seemed to be in agreement that clearly defined objectives are a key component of adaptive management, but remained uncertain about what constitutes a measurable objective or outcome at the project, activity and land-use plan levels.**

Second, adaptive management is a cyclical process that must remain flexible to adapt to few found knowledge. **Therefore the group emphasized the need for flexibility at higher levels of decisions.** In other words, higher-order decisions, such as the land-use plan, must allow for flexibility at lower levels, such as activity and project plans. **The group questioned how AM can remain flexible enough to work, yet specific enough to have clear and measurable outcomes.**

Third, there were **questions about accountability for management actions that are based upon admitting our uncertainties about ecological processes.** The group agreed that learning from management actions is an integral part of a successful AM plan. However, this process required clearly defined objectives and performance standards, accompanied by a carefully designed and executed monitoring plan. **Managers must justify their actions (including goals, objectives, indicators, etc.) in an adaptive management context. If a particular management action that is proposed as a learning opportunity poses an ecological risk, that risk should be acknowledged, justified, and approved up front.** Taking these steps will help managers and members of adaptive management advisory groups to resist pressure from within the agency and from other interests. In addition, **specifying what actions may be taken in the future if there is a need to “change course” helps ensure that a new EIS or EA will not be required. However, if unforeseen actions are needed in the future to adapt to new conditions or information, these actions must be analyzed in a new NEPA process.**

Finally, the group expressed **concern about the lack of resources available to design and implement long-term monitoring,** a critical component of successful adaptive management.

## **DISCUSSION ABOUT NEXT STEPS FOR NWCOS WITH ADAPTIVE MANAGEMENT**

Case study presentations at the workshop emphasized the importance of starting with a small project (i.e. a “little boat”) first. **Participants mentioned that the AM process involves creating objectives, indicators, monitoring, etc. and it is a lot of work, therefore NWCOS should ride in the “little boat” first.**

Institutional constraints also emerged as an issue NWCOS will have to deal with in the future. For example, NEPA issues must be “solved”. Members would like to understand how NWCOS can move ahead with the AM process without being halted later when the time comes to adjust management. **It was suggested that NWCOS focus on RMP-level decisions that can be implemented as AM projects down the road.** Participants

agreed that success will require involvement and foresight of every participant every step of the way. Furthermore, innovation and creativity are needed to surpass institutional obstacles (for example creative thinking to identify long-term funding sources).

**Many participants reminded the group that adaptive management is a useful tool, but may not always be appropriate.** The “adaptive management filter” should be applied to assess whether AM is appropriate.

**The group should focus on its ability to take the time to discuss, come to agreement, and solve problems. Many participants commented on the importance of objectives and the need for NWCOS to identify shared values and clearly defined and agreed upon objectives.**

## FLIP CHART NOTES: COMMENTS AND QUESTIONS ON AM

--What are measurable outcomes (management objectives) at project, activity, and land-use plan levels?

--Is analysis done on outcomes or actions? In what sequence?

--Need for flexibility at higher levels of decisions (higher order decisions must allow for flexibility at lower levels).

--How can AM remain flexible enough to work, yet specific enough to have measurable goals?

--Performance standards: (measurable) agreed on by AM group.

--If AM depends on performance standards, is there accountability?

--Must be built-in, requires commitment, money, and a fall back plan in case there is lack of those.

--Include learning as outcome: monitoring is integral to the process because monitoring informs decisions.

--To fight “action pressure,” you must clearly define performance objectives and standards.

--How to deal with uncertainty? Use science (existing), probability, careful design and monitoring, justify everything (goals, actions, indicators), multiple treatments, little boats.

--Meaningful objectives that are agreed upon by all—KEY! Actions are negotiable, objectives less so.

--Mitigation for mistakes is part of the AM design.

--Take into account levels of risk and uncertainty when planning.

--How to deal with uncertainty? Learn, adapt, move on, repeat.

--Lack of resources will be an issue. Just deal with it, share.

--Response will be long-term.

## FLIP CHART NOTES: LEARNING & NEXT STEPS

- 1) AM is learning. Next steps include objectives, indicators, monitoring, . . . lots of work. NWCOS should ride in the “little boat” first.
- 2) Need to focus on 1 small part. NWCOS hasn’t done this.
- 3) What size boat is NWCOS going to take?

### --Institutional Constraints

- 4) How can NWCOS move ahead with the AM process and not be stopped? The NEPA issues need to be “solved.”
- 5) Focus on RMP-level decisions that can be implemented as AM projects down the road.
- 6) “This bureaucratic situation is paralyzing. But I am going to join NWCOS anyway.”
- 7) Involvement and foresight of every representative at every step. How can NWCOS be involved?
- 8) This new management tool seems promising. NWCOS needs to make an innovative and creative plan (e.g., thinking for long-term funding).

### --AM Filter

- 9) Apply filter every few meetings: is AM appropriate? There are technical/ regulatory issues—NWCOS needs the guidance of the BLM.
- 10) AM not always appropriate—don’t force it. Proceed carefully.
- 11) AM won’t always be necessary. Use it judiciously.
- 12) AM is a tool. May or may not be appropriate. Focus on your ability to take the time to discuss, come to agreement, and solve problems.
- 13) AM is not a cure-all process, proceed carefully. Don’t force AM.
- 14) Where do we apply AM, if anywhere.

### --Objectives

- 15) NWCOS needs to decide on objectives, define what we are and where we are going.
- 16) Need to define objectives.
- 17) There is no right answer. Develop personal relationships. Find shared values. Be objective-based.
- 18) Monitoring is key (and also the BLM’s shortfall). Clear goals and objectives are key to management, whatever you call it.
- 19) Clarity in setting goals and objectives—These are cornerstone of effective management.
- 20) AM is a better management option because it is more comprehensive. Clear objectives and monitoring are necessary.
- 21) Establish clear, measurable objectives. Develop sound monitoring.
- 22) All species (the ecosystem) are stakeholders and are at risk. Work on general ecosystem objectives and site-specific objectives. Combine inductive and deductive.
- 23) Develop objectives at a useful level of detail—not too vague, not too detailed.
- 24) NWCOS needs clear goals to set the stage for AM.

--Additional Comments

25) Excitement to try 2<sup>nd</sup> AM project.

26) Go back to 40 land use plans and research acceptability, success.

27) NWCOS—stay steadfast on human environment, not just natural environment.

28) Let's educate ourselves before we commit ourselves.

29) Let's be the first group to apply AM from the beginning to end.