Coming to judgment: drawing on policy and decision sciences to inform the planning rule



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Starting premise #1

National forest planning is comprised of value judgments for managing linked social-ecological systems in the face of risks, uncertainty and constrained budgets and time.

Planning rule provides framework for coming to judgment

NFMA specifies types of choices/judgments to be made within multiple-use framework

Starting premise #2

National forest planning assumes alignment between plan development/implementation and institutional infrastructure

i.e., An original motivation for RPA/NFMA: budgets follow plan priorities…



Starting Premise #3

National Forest plan development and implementation is a shared burden

Forest Service has insufficient capacity to address “wicked problems” associated with NF stewardship

Networks of formal & informal partnerships are necessary

“Good” plan decisions

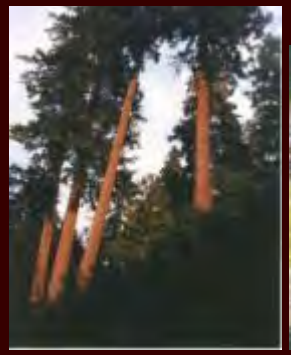
Prevailing assumption of rational comprehensive planning

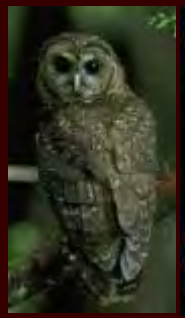
Good science/information → good decisions

More good science → better decisions

Alternative assumption – from policy & decision sciences

Good decisions = ***f***(well-structured process for coming to judgment, institutions that sustain these processes)




“Good” plan decisions

Risk assessment vs. risk decision-making

Risk: (probability of occurrence)x(magnitude of consequences)

Whose consequence?

Risk decision-making: ***f***(risk preference, values of consequences, cognitive biases; institutional biases)

Bell, Raiffa, & Tversky 1988; Bazerman 2008; Fischhoff 1983; Kahnemann, Slovic, & Tversky 1982



“Good” plan decisions

Participants’ risk preference, values & motivations

- Not just about ecological or resource conditions and trends

Uses	Identity	Professional career
Access	Cultural traditions	Funding/budgets
Ways of life	Reputation	Social/political implications

Decisions about which science/models to use in the first place will include and exclude certain values and consequences!



Adapted from Daniels & Walker 2001

Features of a "good" decision process

Multi-layered accountability

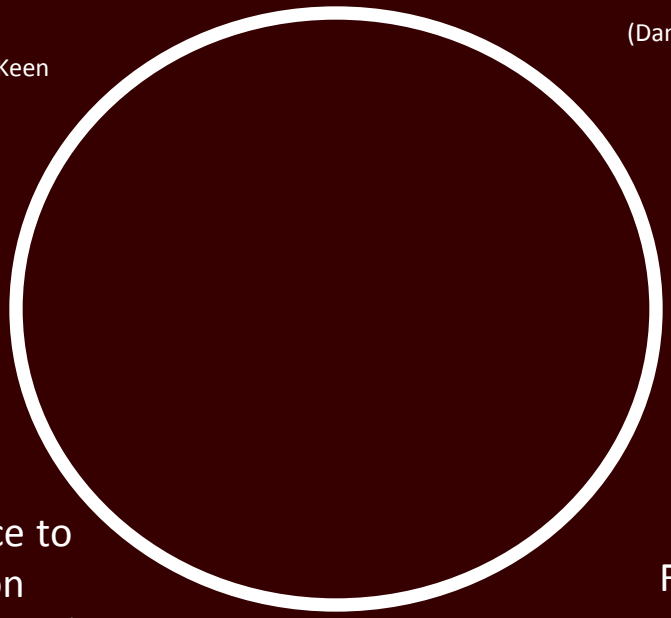
(Kramer et al. 1993; Tetlock 1985; Weber 2003)

Monitoring, social learning and evaluation

(Berkes 2009; Bouwen & Taillieu 2004; Keen et al. 2005; Solomon 2006)

Defining the decision space

(Daniels & Walker 2001)



Inclusive, transparent & fair

(Beierle 2002; Lawrence et al. 1997; Webler et al. 2001)

Identifying and pooling implementation needs

(Bingham & O'Leary 2008; McGuire 2006)

System thinking and analyses

(Daniels & Walker 2001; Folke et al. 2005; Morren and Wilson 1990)

Developing and analyzing mgmt. options in reference to system view & deliberation

(Daniels & Walker 2001; Morren & Wilson 1990)

Focused deliberation of range of desired, feasible system conditions

(Daniels & Walker 2001; Eckersley 2002; Webler & Tuler 1999)

Deliberation about risk preferences, values, uses & interests

(Fisher, Ury & Patton 1991; Susskind & Cruikshank 1987)

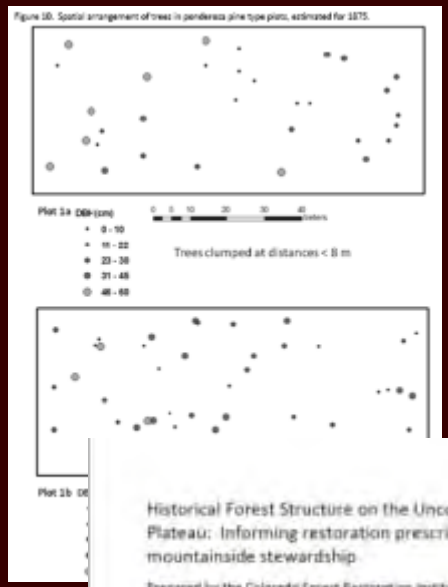
National Collaboration Cadre: peer-learning approach to help units and their partners organize for collaboration. Also: National Partnership Office, National Forest Foundation, USIECR…

UP Mesas Forest Restoration

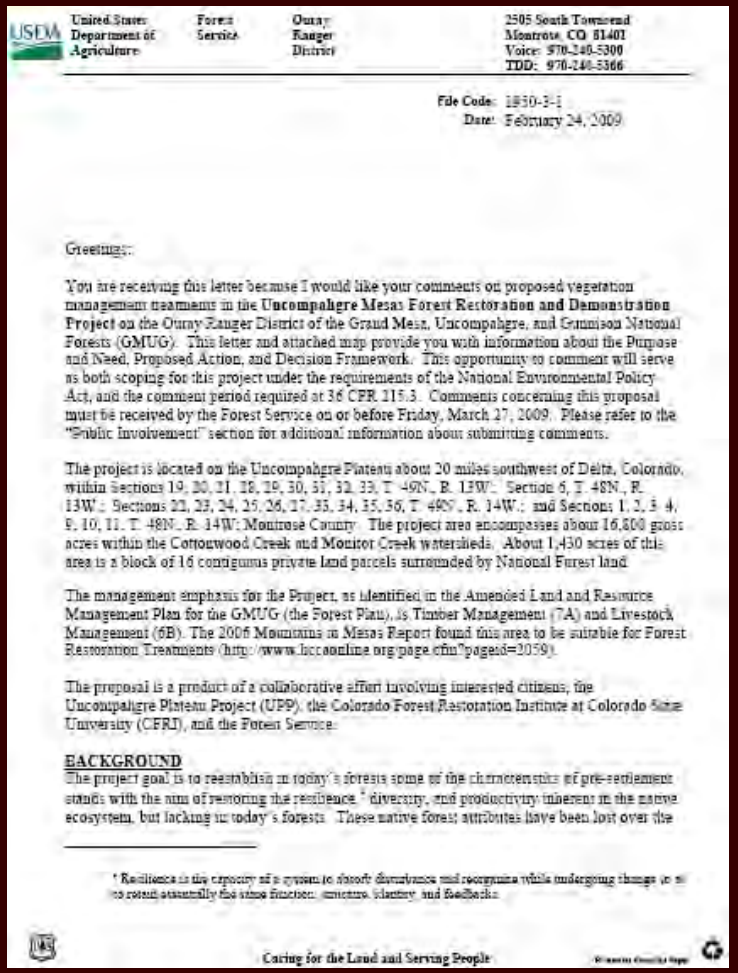
- Multiple agencies, public groups, industry, users, scientists
- Systems view & assessments: RMLANDS, FS geographic area assessment, PLP community assessment
- Defined broad need for restoration w/in context of community livelihoods
- Needed to “scale down” to specifics

“Localizing” science – convened by Colorado Forest Restoration Institute at Colorado State University

Historic stand structure and fire regimes



Data analysis and synthesis report



United States Department of Agriculture — Forest Service — Ouray Ranger District
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Montrose, CO 81401
Voice: 970-240-5300
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File Code: 1950-3-1
Date: February 24, 2009

Greetings:

You are receiving this letter because I would like your comments on proposed vegetation management treatments in the **Uncompahgre Mesas Forest Restoration and Demonstration Project** on the Ouray Ranger District of the Grand Mesa, Uncompahgre, and Gunnison National Forests (GMUG). This letter and attached map provide you with information about the Purpose and Need, Proposed Action, and Decision Framework. This opportunity to comment will serve as both scoping for this project under the requirements of the National Environmental Policy Act, and the comment period required at 36 CFR 215.3. Comments concerning this proposal must be received by the Forest Service on or before Friday, March 27, 2009. Please refer to the "Public Involvement" section for additional information about submitting comments.

The project is located on the Uncompahgre Plateau about 20 miles southwest of Delta, Colorado, within Sections 19, 20, 21, 28, 29, 30, 31, 32, 33, T. 49N., R. 13W.; Section 6, T. 48N., R. 13W.; Sections 22, 23, 24, 25, 26, 27, 35, 34, 35, 36, T. 49N., R. 14W.; and Sections 1, 2, 3, 4, 9, 10, 11, T. 48N., R. 14W; Montrose County. The project area encompasses about 16,800 gross acres within the Cottonwood Creek and Monitor Creek watersheds. About 1,430 acres of this area is a block of 16 contiguous private land parcels surrounded by National Forest land.

The management emphasis for the Project, as identified in the Amended Land and Resource Management Plan for the GMUG (the Forest Plan), is Timber Management (7A) and Livestock Management (6B). The 2006 Mountains to Mesas Report found this area to be suitable for Forest Restoration Treatments (http://www.hccaonline.org/page.cfm?pageid=2059).

The proposal is a product of a collaborative effort involving interested citizens, the Uncompahgre Plateau Project (UPP), the Colorado Forest Restoration Institute at Colorado State University (CFRI), and the Forest Service.

BACKGROUND

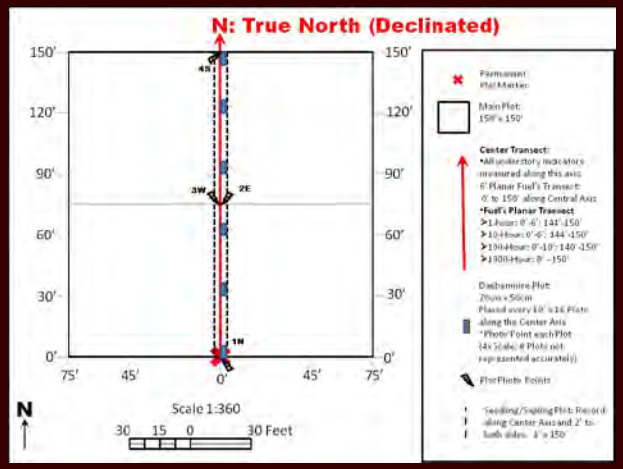
The project goal is to reestablish in today's forests some of the characteristics of pre-settlement stands with the aim of restoring the resilience * diversity, and productivity inherent in the native ecosystem, but lacking in today's forests. These native forest attributes have been lost over the

* Resilience is the capacity of a system to absorb disturbance and reorganize while undergoing change so as to retain essentially the same function, structure, identity, and feedbacks.

Caring for the Land and Serving People

Collaboratively-developed proposed action and treatments – broad decision space for achieving desired, feasible conditions

“Localizing” science – convened by Colorado Forest Restoration Institute at Colorado State University



Multi-party ecological and socio-economic monitoring: citizen science combined with landscape-scale analysis – structured MOU

Decision Notice

& Finding of No Significant Impact

Uncompahgre Mesas Forest Restoration and Demonstration Project

USDA Forest Service
Ouray Ranger District, Uncompahgre National Forest
Montrose County, Colorado

Decision and Reasons for the Decision

Background

I am pleased to announce that we have completed the analysis process and environmental assessment (EA) for the Uncompahgre Mesas Forest Restoration and Demonstration Project. As District Ranger for the Ouray Ranger District, I have made the completion of the EA for the Uncompahgre Mesas Forest Restoration Project a priority as it is important in fulfilling our commitment to our many partners who have worked with the Forest Service on the Project. The proposed action seeks to restore many of the key characteristics of native stands that are lacking in today's forests. These native forest attributes have been lost over the past century as a result of natural and settlement-related changes, including (but not limited to) the absence of natural fire, road development, livestock grazing, and timber harvest. As a consequence, forests in the project area are more vulnerable to uncharacteristic stand-replacing fire. Treatment design was based on historic forest structure data (pre-1880), collected by the collaborative working group from local stands and analyzed by the Colorado Forest Restoration Institute at Colorado State University. The project aims to develop a healthy forested landscape that is resilient in the face of change while contributing to the human communities that benefit from the forest's production of water, wood, forage, wildlife, recreation, and beauty.

A special thanks to our collaborative working group including: the Uncompahgre Plateau Project (UP Project), Colorado Forest Restoration Institute at Colorado State University (CFRI), Colorado Wild, Western Colorado Congress, timber industry representatives, a number of citizens having interest in public lands management and our ranch permittees who worked closely with the team and helped develop solutions to issues. I also want to thank members of the public that provided comments to this analysis. These comments recommended solutions as well as provided questions that helped the Forest Service Interdisciplinary Team (IDT) address issues.

Decision

I have selected the proposed action with some modifications as recommend during the public scoping and comment period in February of 2009. The Purpose and Need for the project is described as follows:

The purpose of this initiative is to develop the forest structure and composition in the project area that will likely respond favorably to natural fire. Project activities will be designed and

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- Evidence "library" for EA
- Record of Decision: no appeals or litigation
- Committed district & SO leadership!
- FLRA proposal

- Restore stand conditions – density, species comp., landscape structure
- Restore fire regimes
- Economic benefits to local industry
- Sustain uses and values into future

Features of a "good" decision process

CEQ Regulations, Admin. Procedures Act, court rulings

- Clear standards for avoiding "arbitrary and capricious" decisions
- Information sufficient to make a reasoned choice
- Decisions flow logically and transparently from evidence presented
- Evidence used is fully disclosed
- If science conflicts, explain rationale for choosing one over the other
- If information is lacking, clearly state so…

It's all about the **process** for coming to judgment




Features of supportive institutions

Good process is not enough – need institutional framework (Ostrom 1990)

- Budgets, performance measures, and consequences (+/-) tied to plan outcomes – incentives for investing in meaningful monitoring
- Committed leadership
- Formal and informal networks of organizational partners (Armitage et al. 2007; Davidson-Hunt 2006; Folke et al. 2005)
- Nested institutions – local → national – linked by clear authority, accountability and coordination mechanisms (Ostrom 1990)



Features of supportive institutions

• Boundary spanning/bridging organizations, i.e., SW Ecological Restoration Institutes (Berkes 2009; Guston 2001)

• Open-access information systems – databases, science "libraries"

• Structures and mechanisms for learning loops

Single loop learning: did the intervention work?

Double loop learning: are assumptions of how the system works valid?

Is the institutional infrastructure to support national forest planning <u>and</u> plan implementation, monitoring and adaptation sufficient?



Thank you

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